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Health Communication Divisions of the German Communication Association (DGPuK) &
the European Communication Research and Education Association (ECREA)

15 – 17 November 2023

Book of Abstracts

UNIVERSITY OF KLAGENFURT
AUSTRIA

Book of Abstracts

European Conference on Health Communication (ECHC) 2023

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Communicating with care. Offline and online health communication for/with vulnerable people

KEYNOTE

Julia van Weert
University of Amsterdam

In this keynote address, Julia van Weert delves into the critical intersection of health communication and vulnerability. Dr. van Weert explores the multifaceted realm of vulnerability and the unique communication challenges that it poses. The keynote begins by defining vulnerability and discussing the communication dynamics between patients and healthcare providers, emphasizing the importance of shared decision-making models and the incorporation of discussions about values in communication with vulnerable individuals.

The presentation moves forward to illuminate how technology can augment these offline communication efforts, bringing forth real-world examples from significant projects. These case studies highlight the potential of technology in enhancing the quality of healthcare communication and decision-making processes.

Dr. van Weert concludes by charting a path forward. This keynote not only underscores the pressing need for compassionate and effective healthcare communication but also provides an insightful journey that combines theory, practical applications, and a vision for the future of health communication in the context of vulnerability.

Julia van Weert is Professor of Health Communication and head of the Department of Communication Science of the University of Amsterdam (UvA). She is founding director of the Amsterdam Center for Health Communication/ACHC. More recently, she studies digital theory- and evidence-based health information interventions for underprivileged and high risk, vulnerable groups (e.g. people with low health literacy, older patients, migrant people), with a specific interest for the added value of AI-based technologies to optimize health outcomes.

Emotions in Health Communication

Empathy in Flux: Understanding Empathetic Communication in a Cancer Live Chat

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Empathy is a critical component in patient-provider interactions. Empathy in healthcare has traditionally been described as a three-fold process, which includes: a) cognitively understanding patients' perspectives and feelings, b) communicating this understanding, and c) acting on this understanding (Ekman & Krasner, 2017). These processes are generally carried out in face-to-face interactions, encompassing both verbal and non-verbal communication (van Vliet & Back, 2021). The digital age has significantly transformed the healthcare landscape, introducing ever-evolving technologies that alter patient-provider relationships and the expression of empathy. One example are digital health chats, which are facilitated or even fully operated by technologies and combine physical and virtual realms. This necessitates a reevaluation of the role and execution of empathy in digital health chats.

Since 2021, name of institution blinded (CIS) – a government-funded institution that provides free, evidence-based information on cancer-related topics for the public – has been developing a live chat launched in June 2023. CIS physicians answer inquiries from the public about familial cancer. Given that cancer is associated with many uncertainties for the person involved, empathy has proven to be key to cancer-related communication (Sanders et al., 2021). Therefore, before launching the cancer chat, we explored how chat respondents can empathetically understand, communicate, and act upon the inquirer's perspective. Based on these findings, we applied and reviewed techniques to express empathy in chat encounters.

Our longitudinal qualitative study spanned over a period of 18 months and included the perspectives of inquirers and of the responding physicians. We started with focus group discussions with n = 42 potential live chat users and n = 7 interviews with physicians from the CIS in October/November 2021. From the focus groups, we recruited an advisory group with n = 9 participants with whom we met three times from April to October 2022. Finally, we conducted two rounds of trial chats with potential users in January and April 2023, followed by interviews and reflections with the inquirers (n = 18) and respondents (n = 9). The data were audio recorded, transcribed, and analyzed with qualitative content analysis, wherein coding categories were based on the three-fold processes of empathy. Data for the trial chats and interviews were collected and will be analyzed in time for the conference.

Results show that participants believed that a) understanding and recognizing the (emotional) needs of the inquirer were prone to misinterpretations in a live chat due to the absence of non-verbal cues, yet key to responding with empathy. While several interviewees from the CIS believed they would nonetheless be able to discern the emotional state of the inquirers by the way they wrote, focus group participants viewed it as their responsibility to express their needs to the respondent more explicitly than they would do in other settings. The b) communication of this understanding was a contested matter among all parties. The participants in the advisory group estimated that the probability of wrongly perceived emotions (e.g., fear) was high and acknowledging this perception could evoke anxiety among inquirers in already vulnerable situations. Other participants felt that recognizing their difficult situation was a fundamental aspect of "feeling seen". When discussing the c) enactment of empathy, it became apparent that participants identified different forms of empathetic expression. Those participants who had been diagnosed with cancer emphasized that they saw "factual, comprehensive information" as a form of empathy. Others perceived follow-up questions, taking time to respond to inquiries, and avoiding empty phrases as empathetic communication acts.

As our study reveals, empathy remains a complex and nuanced concept, even more so in the digital realm. The absence of non-verbal cues and the reliance on written communication in live chats can hinder the accurate perception and transmission of empathy. Our study also underscores the spectrum of empathetic expressions, from emotional to factual, and the diverse preferences among participants. Their emphasis on evidence-based information as a form of empathy is notable. It suggests that in the digital healthcare context, providing thorough and understandable information can be as important as emotional support.

In conclusion, our study demonstrates that while the digital age has reshaped healthcare encounters, the fundamental need for empathy remains unchanged. The challenge lies in adapting traditional forms of empathetic communication to digital mediums. It is crucial for healthcare providers to be aware of the potential difficulties and to continuously strive to understand patients' needs effectively, even in a text-based environment. As digital healthcare continues to evolve with AI technologies that are trained to imitate empathetic communication, so too must our understanding and practice of empathy within this realm.

REFERENCES

Ekman, E., & Krasner, M. (2017). Empathy in medicine: Neuroscience, education and challenges. Medical Teacher, 39(2), 164–173. https://doi.org/10.1080/0142159X.2016.1248925

Sanders, J. J., Dubey, M., Hall, J. A., Catzen, H. Z., Blanch-Hartigan, D., & Schwartz, R. (2021). What is empathy? Oncology patient perspectives on empathic clinician behaviors. Cancer, 127(22), 4258–4265. https://doi.org/10.1002/CNCR.33834

van Vliet, L. M., & Back, A. L. (2021). The different faces of empathy in cancer care: From a desired virtue to an evidence-based communication process. Cancer, 127(22), 4137–4139. https://doi.org/10.1002/cncr.33833

Affective needs of ethnic minority cancer patients

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Background

During the past decades, the number of non-Western ethnic minority groups living in Western countries has increased rapidly (Aelbrecht et al., 2016; Arnold et al., 2010). As a result of acculturation and ageing, the number of (older) migrant cancer patients is expected to rise. As a consequence, encounters between Western healthcare providers and cancer patients from non-Western ethnic minority groups are on the increase. Especially for first generation migrants, the language and cultural barriers they often experience put them in a vulnerable position.

A cancer diagnosis entails not only a physical but also a psychological burden for patients (Mazor et al., 2013). Hence, health communication that is tailored to patients' affective preferences and needs, and that mitigates the language and cultural barriers is vital in oncology, as this can lower psychological distress and increase patient satisfaction (Fujimori & Uchitomi, 2009). eHealth, and more specifically multilingual tools, might contribute to mitigating the language barrier in health communication (Kreuter & McClure, 2004; Ritterband et al., 2009). However, what ethnic minority patients' affective (i.e., psychosocial) needs exactly entail, and whether these needs can be met by the implementation of a multilingual eHealth tool remains unknown.

The current study concerns the development and pilot-evaluation of a multilingual eHealth tool, The Conversation Starter, that consists of question prompt lists and patient education videos. The Conversation Starter aims to mitigate the language barrier between Turkish-Dutch and Moroccan-Dutch cancer patients and their healthcare providers.

Methods

We conducted two consecutive studies to gain insight into the affective needs of first generation Turkish-Dutch and Moroccan-Dutch older cancer patients and survivors, healthcare professionals' experienced barriers to fulfilling these needs, and the potential of a stand-alone oncology eHealth module (The Conversation Starter) to address these needs.

In study 1, we conducted semi-structured interviews with Turkish-Dutch (n=10; mean age=69.10) and Moroccan-Dutch (n=9; mean age=69.33) older cancer patients/survivors, and held two focus groups with general practitioners (GPs; n=7; mean age=45.14) and oncology nurses (ONs; n=5; mean age=49.60). Data analysis was based on grounded theory. Data extraction and synthesis enabled the development of the content (i.e., Question Prompt Lists (QPLs) and scripts for patient education videos) of The Conversation Starter.

In study 2, we pilot-evaluated The Conversation Starter on its potential to meet patients' affective needs. A total of 27 older Turkish-Dutch and Moroccan-Dutch cancer patients visiting their healthcare professional used The Conversation Starter prior to their consultation session, and filled out a questionnaire about, among others, whether their affective needs were being met. The consultations were video-taped to enable analysis of the doctor-patient interaction.

Results

Results of study 1 showed that the two main unfulfilled affective needs were psychosocial support and an affective doctor-patient relationship. Patients/survivors reported a need for (more) professional psychosocial support for both themselves and their close family members. Besides, they reported a need for informal support in the form of peer support groups. Healthcare professionals, on the other hand, reported uncertainty about the extent to which patients/survivors wanted psychosocial support. As for the doctor-patient relationship, participants reported that they wish to be taken more seriously or be respected more, and that they wanted to be seen as a "complete person" instead of a mere statistic or case. Healthcare professionals, however, mentioned that they take patients/survivors seriously, but that it is not inherent to the Dutch culture and practice to show much (non-verbal) affective behaviours.

In study 2, 26% of the patients/survivors selected the QPL about psychosocial support to discuss the topic during the consultation. Also, 41% (females) to 48% (males) watched the patient education video about psychosocial support. Although the videos were reported to be useful in meeting the affective needs, the selection of the QPLs did not lead to more questions being asked about this topic during the consultation. Nevertheless, overall patients/survivors were highly satisfied with their consultation, and perceived their providers to be informative and supportive. According to patients/survivors, The Conversation Starter influenced the consultation positively, making them want to use the tool in the future.

Conclusion

Altogether, the findings of our studies showed that Turkish-Dutch and Moroccan-Dutch cancer patients/survivors have several unfulfilled affective needs. These needs can, to a certain extent, be met by The Conversation Starter.

Practical implications

The Conversation Starter is a promising tool to mitigate (at least a part of) the language barrier. However, it should be noted that this tool should be considered as a supporting tool rather than a tool that could bridge all language and cultural barriers faced during intercultural medical encounters.

REFERENCES

Aelbrecht, K., Pype, P., Vos, J., & Deveugele, M. (2016). Having cancer in a foreign country. Patient Educ Couns, 99(10), 1708-1716. https://doi.org/10.1016/j.pec.2016.05.010

Arnold, M., Razum, O., & Coebergh, J. W. (2010). Cancer risk diversity in non-western migrants to Europe: An overview of the literature. Eur J Cancer, 46(14), 2647-2659. https://doi.org/10.1016/j.ejca.2010.07.050

Mazor, K. M., Beard, R. L., Alexander, G. L., Arora, N. K., Firneno, C., Gaglio, B., Greene, S. M., Lemay, C. A., Robinson, B. E., Roblin, D. W., Walsh, K., Street, R. L., Jr., & Gallagher, T. H. (2013). Patients' and family members' views on patient-centered communication during cancer care. Psychooncology, 22(11), 2487-2495. https://doi.org/10.1002/pon.3317

Fujimori, M., & Uchitomi, Y. (2009). Preferences of cancer patients regarding communication of bad news: A systematic literature review. Jpn J Clin Oncol, 39(4), 201-216. https://doi.org/10.1093/jjco/hyn159

Kreuter, M. W., & McClure, S. M. (2004). The role of culture in health communication. Annu Rev Public Health, 25, 439-455. https://doi.org/10.1146/annurev.publhealth.25.101802.123000

Ritterband, L. M., Thorndike, F. P., Cox, D. J., Kovatchev, B. P., & Gonder-Frederick, L. A. (2009). A behavior change model for Internet interventions. Ann Behav Med, 38(1), 18-27. https://doi.org/10.1007/s12160-009-9133-4

Does Science-Related Populism Mediate Vaccination Campaign Evaluations? – Evidence from an Austrian study

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Theoretical background

Vaccinations are a proven tool for combating and eliminating life-threatening infectious diseases, reducing individuals' vulnerability to infectious diseases (WHO, 2020). However, concerns about vaccination have always existed and, as the use of vaccines has increased, so have concerns about their safety (Larson et al., 2011). Modern communication platforms contribute to the faster spread of fears about vaccinations, with some groups being reluctant to receive vaccinations, delay their administration or refuse them altogether. This phenomenon is known as "vaccine hesitancy" (ECDC, 2017).

As the COVID-19 pandemic has sadly shown, the decision against vaccination is often linked to political ideologies and populist messages (Novak, 2021). The "profound distrust in elites and experts" (Kennedy, 2019: 513) among marginalized segments of the population, which drives vaccine hesitancy (Edwards et al., 2021). Social media presents populists with platforms to voice their opinions and these outlets are often used to create a distrust in both mainstream news media and science (Gerbaudo, 2018). These anti-science sentiments can be described as science-related populism (Mede & Schäfer, 2020).

The role of media in debunking myths associated with vaccines has also been recognized (Hastall et al., 2022). In order to counteract the negative information prevailing in the present-day vaccination communication environment, health campaigns are used to reach large segments of the national population (Bonfadelli & Friemel, 2020).

However, as trust is in vaccination and science in general are decreasing as a result of the COVID-19 pandemic (Wissenschaft im Dialog, 2020), "anti-science sentiments" (Krämer & Klingler, 2020) have managed to gain a foothold. A study by Kohler & Koinig (2022) found that science-related populism has an effect on individuals' responses towards some vaccinations. Hence, we also expect science-related populism to influence individuals' evaluations of vaccination campaign messages, given that populists presume screwed interests to prevail, which do not necessarily serve the common good (Morgan et al., 2018).

We therefore pose the following research questions:

RQ1: Does science-related populism mediate the relationship between individuals' antecedents to vaccination and individuals campaign evaluations?

RQ2: Does the mediating impact of science-related populism vary depending on the vaccination type?

Model development:

In this paper, we propose a conceptual model that tests whether individuals' behavioral predispositions towards vaccinations have a direct influence on their evaluation of vaccination campaign message. The 5C antecedents of vaccination scale postulates individuals' (1) confidence, (2) complacency, (3) calculation, (4) collective responsibility, and (5) constraints to drive or hinder vaccination uptake (Betsch et al., 2018). We insert science-related populism as a mediator, which is likely to reduce vaccination confidence (H1) and collective responsibility (H5). On the other hand, we presume that science related populism might enhance perceived constraints (H2), complacency (H3), and calculation (H4). Finally, we presume that science-related populism is negatively related to the vaccine campaign evaluation (H6).

Stimulus material: In our experimental study, respondents were asked to evaluate one of four campaign messages (between-subject design). Campaign messages either promoted, COVID-19, TBE, meningococcal disease (MD) or HPV vaccination. These vaccines were discussed to varying intensity in the news, according to the LexisNexis database for journalistic news[1]. COVID-19 produced over 10,000 results, whereas the other vaccines had a considerably lower news coverage (TBE ~4.000; HPV ~2.600; MD ~1.300).

Method & Study Population: A quantitative online survey utilizing a structured questionnaire was employed, which was based on established psychological and health scales. Sociodemographic questions concluded the questionnaire. Over a 4-week period, 871 subjects were recruited. Respondents were between 18 and 69 years old (M= 37.4 years) and female/male participation was evenly distributed (f=51 %; m= 49 %). Answers to all questions were reported on a 7-point Likert scale[2] ((1) 'I do not agree at all' to (7) 'I fully agree').

Results: All hypotheses were tested simultaneously as part of a structural equation model using IBM SPSS AMOS Version 28. Model estimation was performed by use of maximum likelihood estimation (MLE). The model shows acceptable global fit measures (see Table A1).

In general, both our research questions can be answered with yes. Out of the six hypotheses, we were able to confirm the science-related populism reduced individuals' collective responsibility for all vaccinations (H6) and vaccination confidence for TBE and HPV, but not MD and COVID-19 (H1). Science-related populism also reduced individual complacency for all vaccination (H3), but neither had an impact on perceived constraints (H2) nor calculation (H4). Overall, results support the proposed relationships and indicate that science-related populism influences responses towards some vaccination types, while it does not for others (see Table A2). Results are only in parts explains by the prominence of news coverage for the respective vaccine.

[1] We used the German term for each vaccine without a time frame and limited the results to Austria and Germany.

[2] Questionnaire items were derived from established scales who have been adapted to the purpose of the study.

REFERENCES

Betsch, C., Schmid, P., Heinemeier, D., Korn, L., Holtmann, C., et al. (2018). Beyond confidence: Development of a measure assessing the 5 C psychological antecedents of vaccination. PLOS ONE, 13(12), e0208601. doi: https://doi.org/10.1371/journal.pone.0208601

Edwards, B., Biddle, N., Gray, M., & Sollis, K. (2021). COVID-19 vaccine hesitancy and resistance: Correlates in a nationally representative longitudinal survey of the Australian population. PLOS ONE, 16(3), doi: https://doi.org/10.1371/journal.pone.0248892

Engesser, S., Ernst, N., Esser, F., & Büchel, F. (2017). Populism and social media: how politicians spread a fragmented ideology. Information Communication & Society, 20(8), 1109–1126. doi: https://doi.org/10.1080/1369118X.2016.1207697

Gerbaudo, P. (2018). Social media and populism: an elective affinity? Media Culture & Society, 40(5), 745–753. doi: https://doi.org/10.1177/0163443718772192

Guay, M., Gosselin, V., Petit, G., Baron, G., & Gagneur, A. (2019). Determinants of vaccine hesitancy in Quebec: a large population-based survey. Human Vaccines and Immunotherapeutics, 15(11), 2527–2533. doi: https://doi.org/10.1080/21645515.2019

Kennedy, J. (2019). Populist politics and vaccine hesitancy in Western Europe: An analysis of national-level data. The European Journal of Public Health, 29(3), 512–516. doi: https://doi.org/10.1093/eurpub/ckz004

Mede, N. G., & Schäfer, M. S. (2020). Science-related populism: Conceptualizing populist demands toward science. Public Understanding of Science, 29(5), 473–491. doi: https://doi.org/10.1177/0963662520924259

Novak, M. (2021). Impfen ist auch eine Frage der politischen Einstellung [Vaccination is also a question of political opinion]. AERZTE Steiermark, 07–08/2020. https://www.aekstmk.or.at/507?articleId=9570 [retrieved June, 12, 2021]

APPENDIX

Table A1. Measures of global fit for the measurement model (CFA model and SEM)

	χ2	df	χ2/df	RMSEA	IFI	CFI	
Sample n=871							
SEM	4184,323	1420	2.947	.033	0.908	0.910	

Notes: RMSEA = root mean squared error of approximation; IFI: incremental fit index; CFI: comparative fit index.

Table A2. Results of the structural equation model

Total Sample

Path			Hypothesis	
Confidence	→	Science Related Populism	**H 1**	-.298 ***
Constraints	→	Science Related Populism	**H 2**	-.032 n.s.
Complacency	→	Science Related Populism	**H 3**	.588 ***
Calculation	→	Science Related Populism	**H 4**	-.009 n.s.
Collective Responsibility	→	Science Related Populism	**H 5**	-.072 n.s.
Science Related Populism	→	Ad Evaluation	**H 6**	-.213 ***

*** p < 0.01 ** p < 0.05 * p < 0.10 .

TBE

Path			Hypothesis	
Confidence	→	Science Related Populism	**H 1**	-.474 ***
Constraints	→	Science Related Populism	**H 2**	-.075 n.s.
Complacency	→	Science Related Populism	**H 3**	.719 ***
Calculation	→	Science Related Populism	**H 4**	.050 n.s.
Collective Responsibility	→	Science Related Populism	**H 5**	-.254 *
Science Related Populism	→	Ad Evaluation	**H 6**	-.240 ***

*** p < 0.01 ** p < 0.05 * p < 0.10 .

HPV

Path			Hypothesis	
Confidence	→	Science Related Populism	**H 1**	-.485 **
Constraints	→	Science Related Populism	**H 2**	-.124 n.s.
Complacency	→	Science Related Populism	**H 3**	.833 ***
Calculation	→	Science Related Populism	**H 4**	-.049 n.s.
Collective Responsibility	→	Science Related Populism	**H 5**	-.338 n.s.
Science Related Populism	→	Ad Evaluation	**H 6**	-.034 ***

*** p < 0.01 ** p < 0.05 * p < 0.10 .

Meningococcal Disease

Path			Hypothesis	
Confidence	→	Science Related Populism	**H 1**	-.082 n.s.
Constraints	→	Science Related Populism	**H 2**	-.004 n.s.
Complacency	→	Science Related Populism	**H 3**	.535 **
Calculation	→	Science Related Populism	**H 4**	-.154 n.s.
Collective Responsibility	→	Science Related Populism	**H 5**	-.240 n.s.
Science Related Populism	→	Ad Evaluation	**H 6**	-.397 ***

*** p < 0.01 ** p < 0.05 * p < 0.10 .

COVID-19

Path			Hypothesis	
Confidence	→	Science Related Populism	**H 1**	-.234 n.s.
Constraints	→	Science Related Populism	**H 2**	-.049 n.s.
Complacency	→	Science Related Populism	**H 3**	.380 ***
Calculation	→	Science Related Populism	**H 4**	.001 n.s.
Collective Responsibility	→	Science Related Populism	**H 5**	-.017 n.s.
Science Related Populism	→	Ad Evaluation	**H 6**	-.229 ***

*** p < 0.01 ** p < 0.05 * p < 0.10 .

Dealing with their own emotions: Portuguese journalists well-being and emotional labor after COVID-19

Rita Araújo
University of Minho

In the past decade the news industry sector has been struggling with difficulties posed by revenue decline, platform competition, and technological changes (Libert et al, 2021; Pavlik et al, 2021), along with challenges related to digital media, such as social media use and online harassment. The COVID-19 pandemic and the conflict in Ukraine piled on top of all challenges the field was facing, contributing to the disruption of journalistic processes and norms, along with significant changes in the employment conditions of journalists, such as loss of income, labor insecurity, and loss of job (Libert et al, 2021). Furthermore, journalists face several challenges related to their professional culture and identity. All of these challenges contribute to generating feelings of psychological distress, such as stress, anxiety, burnout, and emotional labor (Jukes et al, 2021; Libert et al, 2021; Osmann et al, 2021; Simunjak, 2021), which negatively affect journalists' well-being and mental health status (Simunjak & Menke, 2022; Thomson, 2021) and contribute to journalists' vulnerability.

While journalism has always been an emotionally demanding profession (Kotisova, 2019; Simunjak & Menke, 2022; Thomson, 2021; Wahl-Jorgensen, 2020), journalists' well-being and mental health is often neglected, both by journalists as individuals and by media institutions. Journalism's ideal of objectivity, closely linked to its watchdog function, is opposed to an emotional journalism that is often perceived as a threat to those normative ideals (Wahl-Jorgensen, 2020). Nonetheless, the aftermath of the COVID-19 pandemic shows that journalists report more stress and emotional labor (Simunjak, 2021; Osmann et al, 2021; Libert et al, 2021; Jukes et al, 2021; Hoak, 2021) due to changes in newsrooms' organization and in journalistic work. These reports by journalists seem to indicate that public health crises such as COVID-19 may increase journalists' contextual vulnerability, which can in turn lead to emotional distress and affect their mental health.

We conducted a questionnaire survey among Portuguese journalists (n=222) and 83% of inquired journalists recognized that during the COVID-19 pandemic their emotional labor was higher than usual in their professional practice. Close contact with other people's vulnerability was the top reason pointed out by journalists for this increased emotional labor, followed by the absence of boundaries between personal and professional lives, the feeling of being "always on", and the fear of infecting family members with the SARS-CoV-2 virus. As for the consequences of this increased emotional labor, more than half of those who acknowledge it (56%) identified the impact on their mental health as their first concern. This impact on mental health translates into feelings of anxiety, stress, depression and exhaustion. Other consequences include the impact on personal and family lives, followed by the impact on the relationship with colleagues, impact on work, and the quality of the news. These results highlight journalists' concerns with well-being and mental health, as well as an awareness of an increased emotional toll in the aftermath of the pandemic which was mainly due to vicarious suffering.

Starting from the results of the survey, we will conduct semi-structured interviews with Portuguese journalists in order to further explore their perceptions about emotional labor and emotional management both during the pandemic and in their everyday work; and about support systems (both individual and organizational) and coping strategies. Previous surveys to Portuguese journalists during the COVID-19 pandemic indicate an increasing deterioration of employment conditions, such as labor insecurity, loss of income and loss of jobs (Araújo et al., 2021; Camponez et al., 2020; Lopes et al, 2020; Miranda et al., 2021). This decline in journalism's conditions affects not only the newly arrived to the profession, but also experienced reporters and those with higher academic training. Journalists' everyday work can challenge their well-being and mental health, and we are interested in contacting with those experiences and coping strategies, as well as in identifying good practices within media organizations so that we can contribute to reducing journalists' vulnerability in the event of future public health crises.

Patient support & Doctor-Patient Relationship

Factors influencing psychotherapists' adoption of telepsychotherapy during and after a period of compulsory confrontation – a qualitative approach

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Veronika Karnowski
Chemnitz University of Technology

Objectives

The Covid-19-pandemic has had a significant impact on the mental health of the general population while at the same time in person consultations with psychotherapists became increasingly difficult. This amplified the need to provide alternative treatment options, especially for vulnerable groups, who are concerned about leaving their homes. One such alternative is telepsychotherapy, in which psychotherapy is delivered via video call. Despite strong evidence of therapeutic success for many disorders via this technology, usage in Germany remained insignificant up until the pandemic, during which it was utilized increasingly.

Despite this 'compulsory testing phase' that nearly all psychotherapists underwent during the pandemic, usage of telepsychotherapy declined alongside the pandemic restrictions. Adoption rates now vastly differ between individual therapists. Hence, we aim to investigate the factors hindering or supporting psychotherapists adoption of telepsychotherapy after a compulsory testing phase.

Theoretically, our research is grounded in adoption theories, most prominently the Technology Adoption Model (TAM) and Diffusion of Innovations (DOI) to identify barriers and enabling factors. As, according to DOI, a testing phase should enable adoption, we want to investigate in detail:

RQ1: Which attitudes towards telepsychotherapy did psychotherapists have before the compulsory testing phase (i.e., pandemic) and how did testing the technology change these attitudes?

To remain open to individual and situation-specific enabling and hindering factors to adoption, we also rely on the concept of affordances as a specific constellation of user, technology, and context. We therefore ask:

RQ2: In how far do psychotherapists interpret features of the technology differently, leading to varying perceived affordances?

Hereby, we aim to enable policymakers to foster the implementation of telehealth-related technologies, aid practitioners in implementing telehealth solutions and provide researchers with insights for further discussion.

Method

To answer our research question we conducted an explorative, semi-structured interview study with eleven German psychotherapists. Participants conduct behavioural therapy (8) and psychodynamic therapy (3). All interviewees used telepsychotherapy during the Covid-19-pandemic. Current usage ranges from none to 100%.

Interviews were conducted online in German from January 2023 onwards. They lasted on average half an hour, are recorded, transcribed and analysed using Kuckartz's qualitative content analysis. All interviews are coded by two researchers using the same coding rules. Codes are based on literature and extended through insights from the interviews. Results are compared and discussed.

Results

Regarding RQ1, few interviewees had experience with telepsychotherapy before the Covid-19-pandemic. Prior concerns preventing the implementation regarding effectiveness, technical issues and therapeutic relationship could largely be resolved by the compulsory testing phase (i.e., Covid-19-pandemic).

Regarding RQ2 we can distinguish two sets of psychotherapists. Firstly, those who still feel negatively about the technology and use it scarcely. They report having tried to perform their therapy sessions exactly as they did face-to-face, encountering issues regarding loss of information, e.g. body language, physical changes or hygiene, alongside difficulties employing proven methods and ensuring a controlled environment. This type of therapist perceives low patient satisfaction with the technology.

In contrast, those with a more positive outlook interpret the same technological features differently. They report new, helpful insights, e.g. by observing the patient’s home, their interaction with the environment and potentially disturbing factors. Further, telepsychotherapy allowed for new methods, interventions, and exercises. Patient satisfaction is considered high among this set of therapists.

While most therapists of both groups agree that face-to-face sessions are generally preferable when delivering therapy, group two points out benefits occasional online sessions can have on the therapy process, e.g. for additional input, helpful interventions, preventing missed sessions or finalizing a therapy. Telepsychotherapy affords customizability of therapy, which may improve therapeutic success. Further, advantages and suitability for specific patients were highlighted. Telepsychotherapy affords accessibility, especially for vulnerable patients such as adolescents and the sick, which may impact therapeutic success.

Discussion

While concerns towards telepsychotherapy were generally resolved through usage, attitude differs between the two sets of psychotherapists. While one group interprets the technology as a new medium to deliver the same service as before, the other highlights several distinct benefits and fields of application, especially advantages of hybrid treatments. The latter group perceives two affordances of telepsychotherapy – customizability and accessibility – explaining part of the variation in telehealth uptake among therapists. Further research is needed on the relationship between schools of thought and attitude towards telepsychotherapy along with therapeutic success using the technology.

Regulatory restrictions in Germany impede therapists and patronize them in choosing appropriate treatment methods for their patients. Therapists require greater latitude. To enable them, training and resources are necessary, which could be provided by health insurances.

Exploring the impact of online health communities and features of the doctor-patient relationship on empowerment in the doctor-patient relationship: Perspectives of cancer patients and health professionals

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For cancer patients and individuals interested in cancer-related issues, the use of online health information has become an important resource for self-management, especially when struggling with various physical and psychological symptoms (Lleras de Frutos et al., 2020). Online health communities (OHCs), particularly those dealing with cancer, are important platform that not only provide opportunities for peer-to-peer information sharing and emotional social support, but also allow users to access health professionals and their medical expertise (Atanasova et al., 2018).

Previous research has shown that OHCs are important resources for patients before and after a physician visit, usually to reassure or supplement inadequate information they have received from the physician (McMullan, 2006). OHCs foster patient empowerment (Atanasova, 2018; Johnston et al., 2013; Petrovčič and Petrič, 2014), and some studies have also shown that OHCs may also have empowering outcomes for health professionals, particularly those who participate in OHCs as moderators (Atanasova et al., 2017). In addition, OHCs may also have an impact on empowerment in the doctor-patient relationship, which refers to patients' ability to improve their control, self-efficacy, and competencies in encounters with health professionals (Petrič et al., 2017). The study by Petrič et al. (2017) is one of the few that examined the impact of OHCs on patient empowerment in relationship with physician. The study showed that the process of finding meaning in OHC is likely to lead to the development of dysfunctional skills and control when the physician is perceived as paternalistic. This implies that the features of the doctor-patient relationship are important to consider when investigating how the use of OHCs affects empowerment in the doctor-patient relationship. To date, however, studies on empowerment in doctor-patient relationship have been scarce. Most studies have examined the direct effects of OHCs on the doctor-patient relationship and communication (ElKefi & Asan, 2021; Lu & Zhang, 2021; Wang et al., 2023) and have not considered that the effects of OHC use might depend on the features of the doctor-patient relationship. In a relationship where decision making is shared between patients and doctors and where there is mutual trust and understanding, the patient and doctor may be more open to discussing online health information from OHCs. Such a relationship could eliminate some of the disadvantages of using OHCs, which could negatively impact patient empowerment and empowerment in the doctorpatient relationship. Moreover, in examining the impact of OHCs on the doctor-patient relationship and empowerment, studies have often focused primarily on the perspective of patients and OHC users without including the perspective of health professionals.

The main aim of this paper is to build on the limitations of previous research and explore how the use of OHCs facilitates or hinders empowerment in doctor-patient relationship, depending on characteristics of existing doctor-patient as perceived by cancer patients and health professionals. A qualitative research design was used for the study, in which in-depth, semi-structured interviews were conducted with users who are also cancer survivors (n=7) and with health professional moderators related to cancer issues (n=10) from the largest OHC in Slovenia, as well as with cancer survivors (n=8) and health care professionals specializing in oncology (n=9) who are not necessarily OHC users. Data analysis was performed using inductive thematic analysis.

According to the preliminary analysis, the study identifies barriers (questioned credibility of information, misinterpretation of information, information overload, dissemination of inappropriate (alternative) treatments) and facilitators (informational and emotional social support, access to expert knowledge and different professionals, insight into new and alternative approaches to the treatment of diseases) to the use of OHCs. The results show that how specific barriers and facilitators to OHC use are addressed in the doctor-patient relationship and the extent to which this leads to empowerment in the doctor-patient relationship depends on specific features of the doctor-patient relationship. According to respondents, a high-quality doctor-patient relationship includes open and collaborative communication, trust and honesty, shared decision making and active engagement by both patients and health professionals. When the relationship is of high quality, the use of OHC can serve as a tool to address certain systemic health care problems (lack of time during consultations, limited access to mental health services, treatment by multiple specialists), which can also lead to empowerment in doctor-patient relationship. When the doctor-patient relationship lacks trust, partnership, and active engagement of both patients and health professionals, barriers to OHC use are not adequately addressed and may lead to dysfunctional empowerment or even disempowerment in the doctor-patient relationship. The study has several practical and theoretical implications for health care professionals, decision makers, and policy makers.

REFERENCES

Atanasova, S. (2018), Socio-structural properties and psychological empowerment in health-related online support communities, Doctoral dissertation, Faculty of Social Sciences, University of Ljubljana.

Atanasova, S., Kamin, T., & Petrič, G. (2017). Exploring the benefits and challenges of health professionals' participation in online health communities: Emergence of (dis) empowerment processes and outcomes. International journal of medical informatics, 98, 13-21.

Atanasova, S., Kamin, T., & Petrič, G. (2018). The benefits and challenges of online professional-patient interaction: Comparing views between users and health professional moderators in an online health community. Computers in Human Behavior, 83, 106-118.

ElKefi, S., & Asan, O. (2021). How technology impacts communication between cancer patients and their health care providers: A systematic literature review. International journal of medical informatics, 149, 104430.

Lleras de Frutos, M., Casellas-Grau, A., Sumalla, E. C., de Gracia, M., Borràs, J. M., & Ochoa Arnedo, C. (2020). A systematic and comprehensive review of internet use in cancer patients: Psychological factors. PsychoOncology, 29(1), 6-16.

Lu, X., & Zhang, R. (2021). Impact of patient information behaviours in online health communities on patient compliance and the mediating role of patients' perceived empathy. Patient Education and Counseling, 104(1), 186-193.

McMullan, M. (2006). Patients using the Internet to obtain health information: how this affects the patient–health professional relationship. Patient education and counseling, 63(1-2), 24-28.

Petrič, G., Atanasova, S., & Kamin, T. (2017). Impact of social processes in online health communities on patient empowerment in relationship with the physician: emergence of functional and dysfunctional empowerment. Journal of medical Internet research, 19(3), e74.

Petrovčič, A., & Petrič, G. (2014). Differences in intrapersonal and interactional empowerment between lurkers and posters in health-related online support communities. Computers in Human Behavior, 34, 39-48

Wang, Z., Zhang, X., Han, D., Zhao, Y., Ma, L., & Hao, F. (2023). How the use of an online healthcare community affects the doctor-patient relationship: An empirical study in China. Frontiers in Public Health, 11.

The Impact of Credibility on the Intention to Recommend Physician Rating Websites: A Mixed Methods Approach

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Even in the age of digitalisation, personal recommendations have a considerable impact on our decision-making behaviour (Kim and Kim 2018). Especially in the medical field, it has been shown that recommendations by family and friends seem to significantly influence various health-related decisions (Reust and Mattingly 1996). In the context of health-specific medical online communication, Physician Rating Websites (PRWs) have gained popularity as a digital communication medium in recent years (Bidmon et al. 2020; Guetz and Bidmon 2023). Similar to other rating websites, these online portals allow patients to share their health-specific treatment experiences with a large online community (Bidmon, Terlutter, and Röttl 2014; Guetz and Bidmon 2022a) and could be especially useful for vulnerable groups in society, who would otherwise not have access to personal recommendations in the realm of physicians. However, recommendations are only useful if perceived as credible (Klawitter and Hargittai 2018; Ma and Atkin 2017).

For this reason, in our research endeavour, we examine if and how credibility impacts the intention to recommend PRWs (IR). A cross-sectional (Study 1) and an experimental (Study 2) study were conducted to investigate the influence of credibility on IR.

Our conceptual framework is based on findings from two theoretical domains: Source Credibility Theory (Hovland and Weiss 1951) and the Unified Theory of Acceptance And Use of Technology (UTAUT) (Venkatesh et al. 2003). Credibility describes a communicator's believability level as judged by the information perceiver (O'Keefe 2002). Moreover, the UTAUT attempts to provide a comprehensive explanation of which factors impact the use of new or adapted technologies (Williams, Rana, and Dwivedi 2015). Within both studies, we propose that the degree of credibility increases IR. In addition to the direct effect, we propose an indirect effect through performance expectancy and use intention. This indirect effect should describe the direction of effects even better and weaken the direct effect between credibility and IR. To investigate the proposed direct and indirect effects, six hypotheses were formulated and examined with the help of the two studies.

Both studies were conducted as online surveys using the crowdsourcing platform Clickworker.com. The corresponding questionnaire was created using published and validated scales. In order to compensate for potential weaknesses of online surveys, logic tasks and attention checks were included.

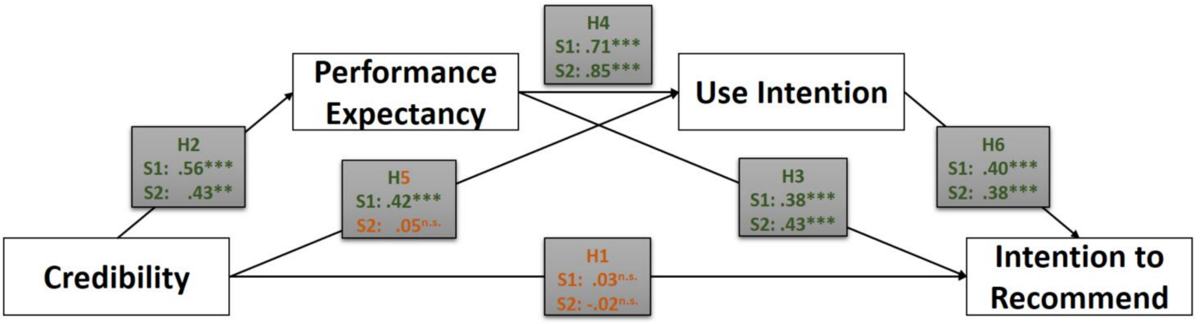
A total of 814 individuals participated in our surveys. The male-female ratio was almost balanced, with a slight surplus on the female side, and the age of study participants ranged from 15 to over 60 years. SPSS Statistics Version 28 was used to test the hypotheses. Regression-based mediation analyses were conducted by calculating model number 6 of the

PROCESS macro (Hayes 2017). The direct relationship between credibility and IR could be confirmed within Study 1. However, this relationship could not be established within Study 2. A direct positive impact of credibility on IR could be shown, but the relationship was only significant on the 10 % level, i.e., only by trend. As Figure 1 shows, however, the indirect effect of credibility on IR over performance expectancy and use intention could be demonstrated in both studies.

The majority of the hypotheses were confirmed by Study 1 and Study 2. However, it should be noted that both studies have limitations in the areas of survey type (online panel) and common method bias and Study 1 in using cross-sectional data to examine proposed influencing paths. Notwithstanding, following the procedure described above and conducting a confirmatory experimental study, we attempted to overcome these limitations. The proposed mediation model shows that credibility seems to impact IR. However, this influence occurs not directly but indirectly via the two mediator variables, performance expectancy, and use intention. The present study thus shows that review credibility influences performance expectancy and sets in motion a chain of effects that leads to the recommendation of those portals.

PRWs, like other social media platforms, provide accessible eWoM and could be especially useful for vulnerable target groups in society. Higher credibility of online ratings on PRWs, however, is crucial for patients when choosing a physician. Increased usage rates lead to more reviews, representing a range of opinions and enhancing PRW credibility. To attract users, PRWs should verify reviews and increase credibility. Physicians can benefit by asking patients to leave reviews, linking their websites to PRW rankings. Vulnerable groups in society could particularly benefit from this self-reinforcing mechanism of PRW usage.

Figure 1. Serial Mediation Model



S1= Study 1 / S2= Study 2

p<.05, **p<.01, ***p<.001, n.s.= not significant

Supporting Patients' Self-Determination Through Physicians' Provision of a Digital Health Information Service

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Introduction

Self-determination is essential for health-related behaviors (Ntoumanis et al., 2021; Ryan et al., 2008) and requires that patients own sufficient information (Zimmerman & Shaw, 2020). However, patients' most trusted source – physicians – often lack time to adequately educate their patients during the consultation (Yarnall et al., 2003), resulting in patients' unmet information needs and limited abilities to self-manage their health. The corresponding patient group, which is dissatisfied with the extent of information provided by their physician, can thus be considered particularly vulnerable.

Focusing on health communication efforts to address this group of patients, a physicianprovided digital health information service (DHIS) might provide a solution to this challenge (Hopstaken et al., 2021; WHO, 2018). It is a web-based platform for tailored information about symptoms, medical examinations, and treatment options that can be accessed irrespective of time and place. On such a platform, physicians select the information that their patients need in a particular situation and provide them with additional information to the explanations given during the consultation.

To explore whether a physician-provided DHIS improves patients' self-determination, our study is guided by the Self-Determination Theory (SDT) (Deci & Ryan, 2000; Ryan & Deci, 2000; Williams et al., 1998a). According to SDT, individuals have an innate need for autonomy, competence, and relatedness. The fulfillment of those needs contributes to the experience of self-motivation and is essential for optimal functioning and psychological well-being. In the health context, meeting these needs is associated with greater volitional engagement in healthcare and increased internalization of values and skills, which may lead to positive health outcomes and sustained behavior change (Ryan et al., 2008; Williams et al., 1998a; Ng et al., 2012). Against this background, the current study postulates that physicians' provision of a DHIS results in higher perceived autonomy (H1), competence (H2), and relatedness (H3).

Methods

An online survey with a stratified sample of 1,000 German residents was conducted via an Online Access Panel. In the current study, we focused on the subsample of n = 239 individuals who perceived the physician-provided extent of information as insufficient. These participants were aged between 18-74 years (M = 49.3, SD = 14.7), 59.0% were female, education levels were equally distributed, and 55.6% suffered from at least one chronic disease (see Table 1 for further details).

Established scales were used to measure the general levels of perceived autonomy, competence, and relatedness. Subsequently, we provided further information about a physician-provided DHIS, describing it as a web-based platform for tailored digital health information that can be accessed from home. The measures for the general levels were adapted to this context and participants were asked to assess their level of autonomy, competence, and relatedness based on the received description (see Table 2 for all items).

The study received ethical approval from the Central Ethics Committee of the first author's university and all participants provided informed consent before their participation. For data analysis, three univariate repeated measures ANOVAs were conducted to compare the perceived general and DHIS-supported levels of autonomy, competence, and relatedness (see Figure 1).

Results and Discussion

Supporting H1 and H2, the participants perceived an increase in autonomy ($\eta^2 = .265$, $p < .001$) and competence support ($\eta^2 = .025$, $p = .013$). This is in line with previous studies that identified the provision of choices and individualized support as autonomy-supportive mechanisms in healthcare (Zhang, 2016; Smit et al., 2019). The increase in perceived competence was rather small. This might be related to the selected fictitious scenario, which is more capable of depicting the ascribed added value than which potentials are exploited. In contrast, H3 had to be rejected as we found no increase in relatedness ($\eta^2 = .001$, $p = .649$) based on the DHIS. This can be attributed to ceiling effects, as physicians are considered the most trusted source of health information in Germany (Baumann et al., 2020), and the participants were asked to image a physician with whom they already possess a relationship. To conclude, by implementing DHIS, physicians could foster an autonomy- and competencesupportive healthcare climate and thus meet patients' needs. In the long term, this could positively impact self-determination, health-related behavior, and health status. However, our study has several limitations such as providing a fictitious scenario instead of measuring actual use. In this regard, we will supplement the described findings by presenting first results of an intervention study that is currently in the field. In this study, we examine the impact of physicians' provision of a DHIS on patients' autonomy, competence, and relatedness in cardiology medical practices.

REFERENCES

Baumann, E., Czerwinski, F., Rosset, M., Seelig, M. & Suhr, R. (2020). Wie informieren sich die Menschen in Deutschland zum Thema Gesundheit? Erkenntnisse aus der ersten Welle von HINTS Germany. [How do people in Germany seek health information? Insights from the first wave of HINTS Germany]. Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz, 63(9), 1151–60. https://doi.org/10.1007/s00103-020-03192-x

Deci, E. L. & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. Psychol Inq, 11(4), 227–68. https://doi.org/10.1207/S15327965PLI1104_01

Dugan, E., Trachtenberg, F. & Hall, M. A. (2005). Development of abbreviated measures to assess patient trust in a physician, a health insurer, and the medical profession. BMC Health Serv Res, 5, 64. https://doi.org/10.1186/1472-6963-5-64

Hopstaken, J. S., Verweij, L., van Laarhoven, C. J. H. M., Blijlevens, N. M. A., Stommel, M. W. J. & Hermens, R. P. M. G. (2021). Effect of Digital Care Platforms on Quality of Care for Oncological Patients and Barriers and Facilitators for Their Implementation: Systematic Review. J Med Internet Res, 23(9), e28869. https://doi.org/10.2196/28869

Li, Y. & Wang, X. (2018). Seeking Health Information on Social Media. J Organ End User Comput, 30(1), 1–22. https://doi.org/10.1037//0003-066x.55.1.68

Ng, J. Y. Y., Ntoumanis, N., Thøgersen-Ntoumani, C., Deci, E. L., Ryan, R. M., Duda, J. L. et al. (2012). Self-Determination Theory Applied to Health Contexts: A Meta-Analysis. Perspect Psychol Sci, 7(4), 325–40. https://doi.org/10.1177/1745691612447309

Ntoumanis, N., Ng, J. Y. Y., Prestwich, A., Quested, E., Hancox, J. E., Thøgersen-Ntoumani, C. et al. (2021). A meta-analysis of self-determination theory-informed intervention studies in the health domain: effects on motivation, health behavior, physical, and psychological health. Health Psychol Rev, 15(2), 214–44. https://doi.org/10.1080/17437199.2020.1718529

Petrocchi, S., Labrie, N. H., Schulz, P. J. (2020). Measurement invariance of the Short Wake Forest Physician Trust Scale and of the Health Empowerment Scale in German and French women. J Health Psychol, 25(4), 558–69. https://doi.org/10.1177/1359105317719582

Ryan, R. M., Patrick, H., Deci, E. L. & Williams, G. C. (2008). Facilitating health behaviour change and its maintenance: Interventions based on Self-Determination Theory. Eur Health Psychol, 10, 2–5.

Ryan, R. M. & Deci, E. L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. Am Psychol, 55(1), 68–78. https://doi.org/10.1037//0003-066X.55.1.68

Smit, E. S., Zeidler, C., Resnicow, K. & de Vries, H. (2019). Identifying the Most AutonomySupportive Message Frame in Digital Health Communication: A 2x2 Between-Subjects Experiment. J Med Internet Res, 21(10), e14074. https://doi.org/10.2196/14074

Williams, G. C., Deci, E. L. & Ryan, R. M. (1998a). Building healthcare partnerships by supporting autonomy: promoting maintained behavior change and positive health outcomes. In: A. L. Suchman, P. Hinton-Walker & R. Botelho (editors). Partnerships in Healthcare: Transforming Relational Process. University of Rochester Press (p. 67–87).

Williams, G. C., Freedman, Z. R. & Deci, E. L. (1998b). Supporting autonomy to motivate patients with diabetes for glucose control. Diabetes Care, 21(10), 1644–51. https://doi.org/10.2337/diacare.21.10.1644

Williams, G. C., Rodin, G. C., Ryan, R. M., Grolnick, W. S. & Deci, E. L. (1998c). Autonomous regulation and long-term medication adherence in adult outpatients. Health Psychol, 17(3), 269–76. https://doi.org/10.1037//0278-6133.17.3.269

World Health Organization (2018). Classification of Digital Health Interventions v1.0: A shared language to describe the uses of digital technology for health. https://apps.who.int/iris/bitstream/handle/10665/260480/WHO-RHR-18.06-eng.pdf.

Yarnall, K. S. H., Pollak, K. I., Østbye, T., Krause, K. M. & Michener, J. L. (2003). Primary care: is there enough time for prevention? Am J Public Health, 93(4), 635–41. https://doi.org/10.2105/ajph.93.4.635

Zhang, Y. (2016). Understanding the sustained use of online health communities from a selfdetermination perspective. J Assn Inf Sci Tec, 67(12), 2842–57. https://doi.org/10.1002/asi.23560

Zimmerman, M. S. & Shaw, G. (2000). Health information seeking behaviour: a concept analysis. Health Info Libr J, 37(3), 173-191. https://doi.org/10.1111/hir.12287

APPENDIX

Table 1. Participant Characteristics

	Subsample of participants dissatisfied with the extent of information provision (n = 239)		Total sample (n = 1,000)	
	M	*SD*	*M*	*SD*
Age	49.3	14.7	51.8	14.4
	n	*%*	*n*	*%*
Gender				
Male	98	41.0	500	50.0
Female	141	59.0	500	50.0
Divers	0	0.0	0	0.0
Education				
Low	85	35.6	333	33.3
Medium	73	30.6	333	33.3
High	81	33.8	334	33.4
Chronic disease				
Yes	133	55.6	500	50.0
No	106	44.4	500	50.0

Table 2. Measurement

Construct / Items		**Source**
Information Sufficiency*		
INS1. How would you assess the amount of information your physicians provide for you?		Created by the authors
General Level of Autonomy		
GLA1. I feel that my physicians have provided me choices and options (e.g., regarding my treatment).	α = .92, *M* = 4.85, *SD* = 1.51	Adapted from the Health Care Climate Questionnaire (Williams et al., 1998b; Williams et al., 1998c)
GLA2. My physicians encourage me to ask questions		
GLA3. It is important to my physicians to hear my opinion		
GLA4. It is important to my physicians to provide me with comprehensive information about different options.		
General Level of Competence		

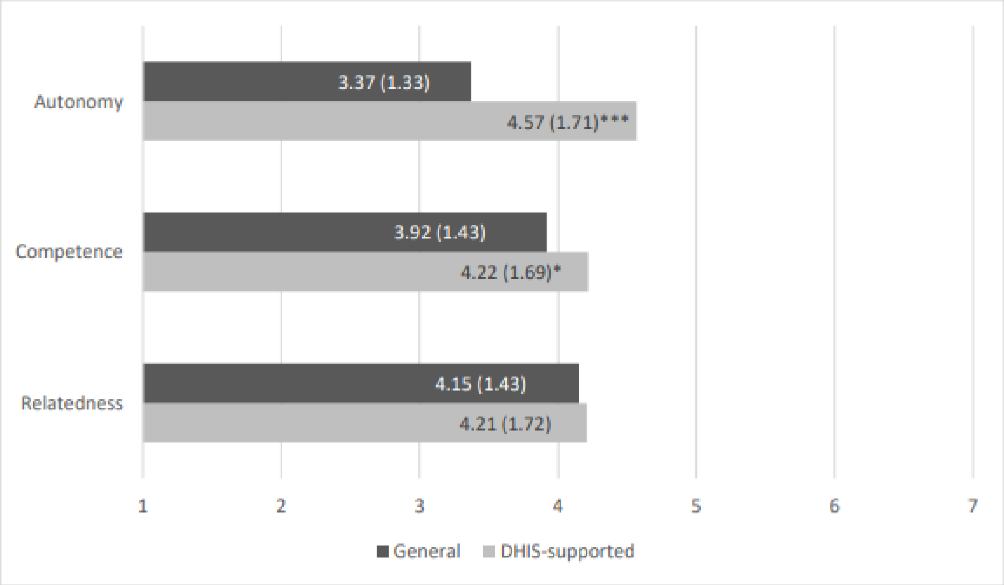
GLC1. I feel confident that I can manage my health with the help of my physicians.	α = .92, *M* = 5.11, *SD* = 1.34	Adapted from the Perceived Competence Scale (Williams et al., 1998b)
GLC2. Discussions with my physicians enable me to improve my health permanently		
GLC3. With the help of my physicians, I am able to take care of my own health.		
GLC4. With the help of my physicians, I can meet health challenges.		
General Level of Relatedness		
GLR1. My physicians are very careful and cautious.	α = .93, *M* = 5.40, *SD* = 1.38	Adapted from the Short Wake Forest Physician Trust Scale (Dugan et al., 2005; Petrocchi et al., 2020)
GLR2. My physicians generally inform me openly and honestly.		
GLR3. I trust my physicians to prepare me in the best possible way to make a decision (e.g., for a treatment option).		
GLR4. All in all, I completely trust my physicians.		
DHIS-Supported Level of Autonomy		
DLA1. With the help of a digital health information service provided by my physician, I can be more aware of choices and options (e.g., regarding my treatment).	α = .94, *M* = 4.64, *SD* = 1.67	Created by the authors, inspired by the Health Care Climate Questionnaire (Williams et al., 1998b; Williams et al., 1998c)
DLA2. Having a digital health information service provided by my physician makes it easier for me to discuss my questions with my physician.		
DLA3. By providing a digital health information service, I feel that it is important for my physician that I can form my own opinion.		
DLA4. By providing a digital health information service, I feel that it is important for my physician to provide me with comprehensive information about different options.		
DHIS-Supported Level of Competence		
DLC1. I feel confident that I can better manage my health with the help of a digital information service provided by my physician.	α = .96, *M* = 4.35, *SD* = 1.67	Created by the authors, inspired by the Perceived Competence Scale (Williams et al., 1998b)
DLC2. A digital information service provided by my physician enables me to improve my health permanently.		
DLC3. With the help of a digital information service provided by my physician, I am better able to take care of my own health.		
DLC4. With the help of a digital information service provided by my physician, I can better meet health challenges.		
DHIS-Supported Level of Relatedness		

DLR1. With a digital information service, I would feel that my physician is careful and cautious.	$\alpha = .95$, $M = 4.46$, $SD = 1.70$	Created by the authors, inspired by the Short Wake Forest Physician Trust Scale (Dugan et al., 2005; Petrocchi et al., 2020)
DLR2. With a digital information service, my physician educates me openly and honestly.		
DLR3. A digital information service strengthens my trust in my physician to prepare me in the best possible way to make a decision (e.g., for a treatment option).		
DLR4. All in all, such an additional service conveys to me that I can completely trust my physician.		

Note. All items were measured on 7-point Likert-type scales.

* To measure participants' level of information (in)sufficiency, we asked them to rate the amount of information provided by their physician from 1 = too little to 7 = too much. We merged the answers below the center as well as from the center of the scale (participants who indicated a value between 1 and 4) and the answers above the center of the scale (participants who indicated a value between 5 and 7) to build subgroups of those who are dissatisfied (n = 239) and satisfied (n = 761) with the provided amount of information.

Figure 1. Means of Perceived General and DHIS-Supported Levels of Autonomy, Competence, and Relatedness



Note. n = 239. The figure shows the results from the three one-way repeated measures ANOVAs. The y-axis represents the three dependent variables autonomy, competence, and relatedness. The x-axis represents the means (standard deviations), and the colors represent the two levels of perceived autonomy, competence, and relatedness (general level and DHIS-supported level). DHIS = digital health information service.

Difference in perceived autonomy: $F(1,238) = 85.70$, $p < .001$, $\eta^2 = .265$
Difference in perceived competence: $F(1,238) = 6.20$, $p = .013$, $\eta^2 = .025$
Difference in perceived relatedness: $F(1,238) = .21$, $p = .649$, $\eta^2 = .001$

***$p \leq .001$, **$p \leq .01$, *$p \leq .05$

Understanding Cancer Information Repertoires of Patients and Relatives

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Introduction

Cancer information promotes prevention measures, helps to reduce uncertainties, and empowers individuals to make self-determined decisions (Groen et al., 2015; Reyna et al., 2015). In the case of an own cancer disease or a diagnosis within a family, the individuals' cancer information-seeking behavior (CISB) – i.e., seeking, evaluating, and applying cancer information (Brashers et al., 2000) – is especially crucial for an active role in disease and uncertainty management (Wigfall & Friedman, 2016; Zhuang & Guan, 2017).

A crucial step in the CISB process is the selection of information sources. Thereby, individuals can choose from and combine a variety of traditional media (e.g., print, broadcasting media), online sources (e.g., websites, social media), or interpersonal sources (e.g., physicians, individual counseling services, friends) (Rains & Ruppel, 2016; Walsh et al., 2010), building their cancer information repertoire (CIR) (Bachl & Mangold, 2017).

In order to address the vulnerable group of cancer patients and relatives, a deeper understanding of their CIR is needed. Therefore, the current study aimed to identify different CIR types (RQ1) that will be further described (RQ2) by known facilitators and barriers of CISB such as competencies, motivations, and cancer risk-related factors. In addition, we consider socio-demographics and source-related demands.

Methods

We conducted a cross-sectional online survey via an Online-Access-Panel with 1,084 German individuals that are or have been diagnosed with cancer (n = 144) and/or have relatives (life partner or blood relatives) who are or have been affected by this disease (n = 990).

They were aged 18-87 years (M = 47.60, SD = 15.92), 50.5% were female, and 49.9% were highly educated. The study received ethical approval and all participants provided informed consent.

The measurement instrument is provided in the Appendix (see Table A1). A hierarchical cluster analysis (ward method) was performed to identify CIR types. The usage frequency of various information sources and intentions to use a live chat on familial cancer from a cancer information service that has not yet been established were integrated as cluster-defining variables. The analysis revealed three to seven clusters (elbow criterion). We explored its interpretability and decided on a 5-cluster structure (see Table 1). Univariate ANOVAs and chisquared tests were conducted to compare the types regarding socio-demographics, cancer risk-related factors, perceived eHealth literacy, information motivation, and source-related demands (see Table 2).

Results and Discussion

The first CIR is characterized by the lowest frequency of use/intentions across all sources and is called the non-seekers (n = 224). The communicative allrounders (n = 241) form the second CIR type as their acquisition of cancer information showed a wide variety of sources. The third type preferred to turn to family/friends or anonymous services such as print media, TV/radio, websites, and live chat – they are named the safety-focused seekers (n = 97). Individuals in the fourth cluster showed a tendency toward online sources and therefore are called the online affines (n = 247). Lastly, the expert-focused responsibility delegates (n = 275) form the fifth cluster, as they predominantly turn to their physician/medical facilities, suggesting that they delegate responsibility to experts.

Regarding RQ2, the findings revealed that the non-seekers are characterized by a higher proportion of men as well as fewer individuals at familial risk of cancer that showed, among other characteristics, lower information motivation and risk perceptions, and higher tolerance of uncertainties. The communicative allrounders are younger individuals with higher information motivation and risk perceptions. Nearly half of them have a familial risk of cancer. Additionally, they report more pronounced competencies in online navigation. The safetyfocused seekers are mainly female and have the highest risk perceptions and a lower tolerance of uncertainties. Furthermore, they are highly interested and attach great importance to information services being autonomy-supportive, individualized, anonymous, and synchronous. The online affines are younger individuals and have the lowest share of cancer patients. Although they are more likely to use online media, they rate their competence in online navigation slightly lower. The expert-focused responsibility delegates have the highest average age and share of cancer patients. In addition, they possess a lower risk perception.

The CIR types emphasize the need to consider various sources when addressing cancer patients and relatives. Information motivation and involvement through a diagnosis or a familial cancer risk contributed most strongly to explaining the CIR types. While highly involved and interested individuals appear to be reached through a wide range of sources, others have specific preferences such as online sources or medical experts, while some low-involved individuals are particularly difficult to reach. Limitations and implications will be discussed during the presentation.

REFERENCES

Bachl, M. & Mangold, F. Gesundheitsbezogene Informationsrepertoires: Ein nutzerorientierter Ansatz zur Analyse der Informationsnutzung im Gesundheitskontext. In C. Lampert & M. Grimm (Ed.), Gesundheitskommunikation als transdisziplinäres Forschungsfeld (p. 81-92). Nomos. https://doi.org/10.5771/9783845285290

Brashers, D. E., Neidig, J. L., Haas, S. M., Dobbs, L. K., Cardillo, L. W., Russell, J. A. (2000). Communication in the management of uncertainty: The case of persons living with HIV or AIDS. Commun Monogr, 76(1), 63-84. https://doi.org/10.1080/03637750009376495

Groen, W. G., Kuijpers, W., Oldenburg, H. S. A., Wouters, M. W. J. M., Aaronson, N. K. & van Harten, W. H. (2015). Empowerment of Cancer Survivors Through Information Technology: An Integrative Review. J Med Int Res, 17(11), e270. https://doi.org/10.2196/jmir.4818

Rains, S. A. & Ruppel, E. K. (2016). Channel complementarity theory and the health information-seeking process: Further investigating the implications of source characteristic complementarity. Comm Res, 43(2), 232-252. https://doi.org/10.1177/0093650213510939

Reyna, V. F., Nelson, W. L., Han, P. K. & Pignone, M. P. (2015). Decision Making and Cancer. Am Psychol, 70(2), 105-118. https://doi.org/10.1037/a0036834

Walsh, M C., Trentham-Dietz, A., Schroepfer, T. A., Reding, D. J., Campbell, B., Foote, M. L., Kaufman, S., Barrett, M., Remington, P. L. & Clearly, J. F. (2010). Cancer Information Sources Used by Patients to Inform and Influence Treatment Decisions. J Health Comm, 15(4), 445-463. https://doi.org/10.1080/10810731003753109

Wigfall, L. T. & Friedman, D. B. (2016). Cancer Information Seeking and Cancer-Related Health Outcomes: A Scoping Review of the Health Information National Trends Survey Literature. J Health Comm, 21(9), 989-1005. https://doi.org/10.1080/10810730.2016.1184358

Zhuang, J. & Guan, M. (2017). Modeling the Mediating and Moderating Roles of Risk Perceptions, Efficacy, Desired Uncertainty, and Worry in Information Seeking-Cancer Screening Relationship Using HINTS 2017 Data. Health Commun, 37(7), 897-908. https://doi.org/10.1080/10410236.2021.1876324

Table 1. Standardized Means of Cluster-Defining Variables

	1 Non-seekers	2 Communi-cative allrounders	3 Safety-focused seekers	4 Online affines	5 Expert-focused responsibility delegates	Total
n	224	241	97	247	275	1,084
%	20.7	22.2	8.9	22.8	25.4	100
Frequency of using cancer-related information sources						
Print (e.g., booklets, magazines)	-1.11	.74	.73	-.23	.20	.00
Tv/radio	-.95	.84	.76	-.33	.07	.00
Family/friends	-1.26	.68	.71	-.06	.23	.00
Physicians/medical facilities	-1.01	.71	.44	-.44	.44	.00
Individual counseling services (e.g., patient organizations, cancer information services)	-.68	1.39	-.31	-.52	-.09	.00
Social media	-.77	1.12	-.21	.20	-.47	.00
Online portals/websites	-1.19	.56	.96	.08	.07	.00
Usage intention						
Live chat on familial cancer	-.61	.55	.96	.22	-.51	.00

Note. z-standardized means of frequencies of information source usage and live chat usage intentions for the five clusters. The colors represent the strength of deviation from 0:
dark red = strong negative deviation (< -1.00);
light red = moderate negative deviation (-.20 to -1.00);
light green = moderate positive deviation (.20 to 1.00);
dark green = strong positive deviation (> 1.00).

Table 2. Means/Shares of Cluster-Characterizing Variables

			1 Non-seekers	2 Communi-cative allrounders	3 Safety-focused seekers	4 Online affines	5 Expert-focused responsibility delegates	Total
n	eta²	Cramers V	224	241	97	247	275	1,084
%			20.7	22.2	8.9	22.8	25.4	100
Socio-demographics								
Age***	.07		48.53	42.91	49.84	43.76	53.60	47.60
Gender***		.14						
Female (%)			42.0	44.4	62.9	54.3	55.1	50.5
Male (%)			58.9	55.6	37.1	45.7	44.9	49.5
Education		.05						
Low (%)			13.4	10.4	11.3	12.1	14.2	12.5
Medium (%)			39.7	35.3	34.0	41.3	36.0	37.6
high (%)			46.9	54.4	54.6	46.6	49.8	49.9
Cancer risk-related factors								
Cancer diagnosis (%)***		.14	10.7	15.8	14.4	6.5	18.9	13.3
Fam. cancer risk (%)***		.18	22.8	47.7	40.2	34.0	31.6	34.7
Risk perception (severity)***	.06		2.84	3.38	3.49	3.26	2.99	3.15
Uncertainty intolerance***	.06		2.75	3.20	3.16	2.98	2.84	2.96
Perceived eHealth literacy (DHLI)								
Searching information	.01		3.34	3.27	3.49	3.29	3.37	3.34
Evaluating reliability	.00		3.15	3.23	3.26	3.15	3.10	3.17
Determining relevance	.00		3.23	3.33	3.43	3.26	3.30	3.30
Navigation***	.08		2.23	2.89	2.47	2.34	2.51	2.51
Adding content	.00		3.55	3.55	3.71	3.52	3.61	3.57
Protecting privacy*	.01		3.21	2.86	2.85	3.03	2.97	2.99
Information motivation								
Information interest (cancer)***	.22		2.32	3.66	3.63	3.07	3.20	3.13
Information interest (fam. cancer risk)***	.11		2.97	3.74	4.02	3.45	3.58	3.58
Information avoidance (fam. cancer risk)***	.03		2.77	2.67	2.18	2.57	2.42	2.56
Source-related demands								
Autonomy-supportive***	.03		3.74	3.99	4.22	3.99	4.03	4.03
Individualized***	.02		3.80	4.02	4.33	4.02	4.03	4.01
Anonymous***	.02		3.19	3.69	3.64	3.59	3.41	3.49
Synchronous***	.02		4.02	4.11	4.49	4.28	4.21	4.19

Note. Means or shares of socio-demographics, cancer risk-related factors, perceived eHealth-literacy, information motivation, and source-related demands for the five clusters. The colors represent the strength of deviation from the total mean/share:
dark red = strong negative deviation (< -.30/-10%);
light red = moderate negative deviation (-.15 to -.30/-4 to -10%);
light green = moderate positive deviation (.15 to .30/4 to 10%);

dark green = strong positive deviation (> .30/10%).

All items of risk perception, uncertainty intolerance, eHealth literacy, information motivation, and source-related demands were measured on 5-point Likert-type scales, ranging from 1-5.

Results of ANOVAs: Age: $F(4,1079) = 20.64$, $p < .001$; perceived severity: $F(4,1079) = 17.77$, $p < .001$; uncertainty intolerance: $F(4,1079) = 17.72$, $p < .001$; searching information: $F(4,1064) = 1.27$, $p = .281$; evaluating reliability: $F(4,1063) = 1.03$, $p = .392$; determining relevance: $F(4,1064) = 1.19$, $p = .312$; navigation: $F(4,1055) = 22.23$, $p < .001$; adding content: $F(4,1024) = .86$ $p = .491$; protecting privacy: $F(4,912) = 2.53$, $p = .040$; information interest (cancer): $F(4,1079) = 76.43$, $p < .001$; information interest (fam. cancer risk): $F(4,1079) = 32.90$, $p < .001$; information avoidance (fam. cancer risk): $F(4,1079) = 9.40$, $p < .001$; source-related demands – autonomy-supportive: $F(4,1079) = 7.75$, $p < .001$; individualized: $F(4,1079) = 5.22$, $p < .001$; anonymous: $F(4,1079) = 6.47$, $p < .001$; synchronous: $F(4,1079) = 5.85$, $p < .001$.

Results of chi-square tests: Gender: $\chi^2(4) = 19.79$, $p < .001$; education: $\chi^2(8) = 6.16$, $p = .629$; cancer diagnosis: $\chi^2(4) = 20.17$, $p < .001$; fam. cancer risk: $\chi^2(4) = 34.59$, $p < .001$.

DHLI = Digital Health Literacy Instrument

fam. = familial

*** $p \leq .001$; ** $p \leq .01$; * $p \leq .05$.

APPENDIX

Table A1. Measurements

Construct/items	**α**	**Source**
Cancer diagnosis *CD1.* Have you currently or in the past received a cancer diagnosis?	-	Created by the authors
Familial cancer risk *FCR1.* Do you have a known familial risk of cancer?	-	Created by the authors
Risk perception (severity) *RP1.* If there is or would be a familial risk of cancer in your family, how threatening is this to you?	-	Adapted from Kahlor, 2010
Uncertainty intolerance *UI1.* I can't relax if I don't know what's going to happen tomorrow. *UI2.* Uncertainty causes me discomfort, anxiety or stress. *UI3.* Unforeseen events take a lot out of me. *UI4.* It frustrates me not to have all the information I need. *UI5.* You should always look ahead so that you avoid surprises. *UI6.* A small unforeseen event can spoil everything, despite the best planning. *UI7.* Uncertainty paralyzes me when it's time to act. *UI8.* Being uncertain means that I am not first-class. *UI9.* If I'm uncertain, I can't take the next step. *UI10.* When I'm uncertain, I don't function well. *UI11.* I always want to know what the future holds for me. *UI12.* I can't stand being surprised. *UI13.* The slightest doubt can stop me from acting. *UI14.* I should be able to organize everything in advance. *UI15.* Uncertainty means that I lack self-confidence. *UI16.* Uncertainty keeps me from sleeping well. *UI17.* Ambiguities in life burden me. *UI18.* I can't stand being undecided about my future.	.92	UI-18 (German version), Gerlach et al., 2008
Perceived eHealth literacy		Digital Health Literacy Instrument (DHLI), van der Vaart & Drossaert, 2017
Searching information When you search the Internet for information on health, how easy or difficult is it for you to… *SI1.* Make a choice from all the information you find? *SI2.* Use the proper words or search query to find the information you are looking for? *SI3.* Find the exact information you are looking for?	.81	
Evaluating reliability When you search the Internet for information on health, how easy or difficult is it for you to… *ER1.* Decide whether the information is reliable or not? *ER2.* Decide whether the information is written with commercial interests (eg, by people trying to sell a product)? *ER3.* Check different websites to see whether they provide the same information?	.76	
Determining relevance When you search the Internet for information on health, how easy or difficult is it for you to… *DR1.* Decide if the information you found is applicable to you? *DR2.* Apply the information you found in your daily life? *DR3.* Use the information you found to make decisions about your health (eg, on nutrition, medication or to decide whether to ask a doctor's opinion)?	.79	
Navigation When you search the Internet for health information, how often does it happen that…	.76	

N1. You lose track of where you are on a website or the Internet? *N2.* You do not know how to return to a previous page? *N3.* You click on something and get to see something different than you expected?		
Adding content When typing a message (eg, to your doctor, on a forum, or on social media such as Facebook or Twitter) how easy or difficult is it for you to… AC1. Clearly formulate your question or health-related worry? AC2. Express your opinion, thoughts, or feelings in writing? AC3. Write your message as such, for people to understand exactly what you mean?	.88	
*Protecting privacy** When you post a message on a public forum or social media, how often… *PP1.* Do you find it difficult to judge who can read along? *PP2.* Do you (intentionally or unintentionally) share your own private information (eg, name or address)? *PP3.* Do you (intentionally or unintentionally) share some else's private information?	.60*	
Information interest (cancer) *IC1.* What is your level of interest in information about cancer in general?	-	Created by the authors
Information interest (familial cancer risk) *IFC1.* I want to know everything about familial cancer risk, even though it worries me. *IFC2.* I basically want to know everything about familial cancer risk. *IFC3.* It is important to me to know everything about familial cancer risk.	.90	Adapted from Howell & Shepperd, 2016
Information avoidance (familial cancer risk) *AFC1.* I avoid learning anything about familial cancer risk. *AFC2.* When it comes to familial cancer risk, sometimes not knowing is better. *AFC3.* I can think of situations where I would rather not know everything about familial cancer risk.	.79	Adapted from Howell & Shepperd, 2016
Source-related demands How important are the following aspects to you when it comes to cancer information and counseling services? How important is it to you…		
Importance of autonomy-support *AS1.* that you are provided with choices and options (e.g., therapy options)? *AS2.* that you feel understood? *AS3.* that you feel encouraged to ask questions? *AS4.* that you have the opportunity to express your opinion?	.81	Adapted from the Health Care Climate Questionnaire, Williams et al., 1996
Importance of individualization *I1.* that there is enough room for your individual questions, wishes, and fears?	-	Created by the authors
Importance of anonymity *A1.* that you can ask questions anonymously?	-	Created by the authors
Importance of synchronicity *S1.* that you receive direct answers to your questions?	-	Created by the authors

Note. *due to insufficient internal consistency, only PP1 was included in the analysis.

Transparent Risk Communication for Vulnerable Groups

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Accessible health information is a key element of high quality and equitable health care (1, 2). They are the basis for making informed and shared decisions (1, 3). Unfortunately, some groups in society are disadvantaged by current communication strategies (15). The COVID-19 pandemic, in particular, demonstrated that public health messaging in Germany disadvantaged certain social groups (e.g., migrants) and led to lower vaccination rates - even though willingness to vaccinate against Covid-19 was higher among unvaccinated migrants in Germany than among non-migrants - due to inaccessibility (4, 5). In addition to the lack of transparent communication tailored to the specific needs of different and diverse target groups, the conditions in which they live and work are often not sufficiently taken into account (6). Further, there are individual factors (e.g. health literacy, education, language, culture) that make it (even more) difficult for people to access health-related information to take charge of their own health (7, 8), and that have an impact on equitable health care. Thus, interventions, e.g. public health messaging, that are effective for the general population may be of less benefit to groups that are already disadvantaged (in terms of health), leading to intervention generated inequalities that widen the gap between more and less disadvantaged groups (6, 9, 10).

To meet these challenges, various efforts focus on inclusive communication strategies that actively involve different and diverse audiences, taking into account their specific characteristics, information needs and preferences. There is a particular focus on addressing the needs of vulnerable groups in society, including those with lower levels of education, specific age groups (such as the elderly) and those with language barriers, as they are also more likely to have poorer health outcomes (11). These groups often face significant difficulties in accessing, understanding, evaluating and using health information (12), leading to inequalities in the use and quality of health services (11).

This panel will provide insights into real-world efforts, current research, methodologies, findings and implications, and will highlight the potential of targeted communication strategies to address existing health inequalities and empower people from diverse backgrounds to make informed health decisions.

The power of social media based COVID-19 vaccine outreach among migrant communities

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Health access such as vaccination are lower among migrants compared to the general population (5). During the COVID-19 pandemic urgent vaccination calls have been made to improve vaccine outreach to various vulnerable groups. However, many migrant communities were not effectively reached with common communication approaches in Germany (4, 5). Reasons could be that national health advertisements address generally German messengers and German speaking communities. Therefore, we assessed a targeted facebook® campaign disseminating COVID-19 vaccine information among migrant communities (5).

We focused on Arabic, Turkish and Russian speaking migrants in Germany (N = 888,994). In randomized online experiments we investigated the impact of the social media advertisement at the level of language and depicted messenger (government authority, religious leader, doctor or family). We considered online reach, click-through rates, conversion rates and cost-effectiveness of the advertisement. Interestingly, Arabic and Russian speakers were approx. two- times more likely (OR = 2.4, 95% CI: 1.9; 2.9 and OR 1.8, 95% CI: 1.3; 2.4) to click on advertisements translated to their native language compared to German-language advertisements. Moreover, our results covered that government representatives can be more successful in engaging migrants online compared to other messengers. These results may contradict common claims of lower trust in government institutions among migrants.

Thus, our advertisement study unraveled the potential of community-tailored vaccination campaigns on social media for reaching migrant communities. Hence, public health communication needs to expand the traditional media health campaigns to prevent drop outs and health segregation.

Enhancing informed decision-making: Evidence-based health risk communication for vulnerable audiences

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Informed decisions should be based on information that presents benefits and harms of medical interventions and their options in a comprehensive and understandable way. Unfortunately, individuals are often unable to make informed decisions because the information available does not meet the criteria for evidence-based and transparent risk communication (13, 14).

Our research aims to improve the effectiveness of health communication initiatives and promote equitable access to health information. In current projects, we therefore investigated whether factors that lead to inequalities in informed and shared decision making have been taken into account in studies of the effectiveness of health information. Further, we incorporated feedback from vulnerable audiences in the development process of evidence-based vaccination fact boxes. Fact boxes are comprehensive and user-friendly tools designed to help people understand complex risk information and support informed and shared decision-making (15). Evidence-based fact boxes about COVID-19 and influenza vaccination were developed and pilot-tested with Arabic, German, Turkish and Russian-speaking participants from diverse social backgrounds to identify barriers to understanding and identify ideas for improving the fact boxes.

In summary, our work aims to promote informed decision-making by addressing the limitations of current approaches to health communication. By developing evidence-based fact boxes designed specifically for disadvantaged groups, we strive to promote information equity and improve the overall quality of healthcare.

Optimization of Guideline Processes with Regard to Gender and Diversity: Concept Development and Piloting

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Medical guidelines can contribute to evidence-based healthcare. To date, however, guidelines have given little consideration to people's needs in terms of gender equality and other diversity related aspects. In addition, current guidelines usually do not reliably provide all of the information needed to develop evidence-based patient decision-aids.

The aim of the project is to develop and pilot-test a concept for developing gender-specific and diversity-sensitive medical guidelines that will also allow the development of evidence-based decision-making tools for different target-audiences in the healthcare system.

The project comprises four steps:
1. Development of the concept to extend the guideline processes.
2. Pilot testing of the concept with a guideline-developing group.
3. Adaptation and pilot testing of an e-learning training program for guideline developers with an emphasis on the objectives as displayed in the concept.
4. Development and pilot testing of appropriate gender and diversity oriented patient decision-aids.

The first step included literature searches, interviews with different members of guideline groups and participant observations to explore the processes and inform the development of the concept and the development of a corresponding toolbox.

Preliminary results include the concept and additional material that will support the guideline development groups in order to implement the concept: a toolbox that provides methods e.g. generic search strategies to conduct literature searches, a guide for a literature review to support the identification of relevant decision-making situations and a checklist to guide the reflection of the single steps of the processes.

REFERENCES

1. GPGI WG. Good practice guidelines for health information. Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen. 2016;110:e1-e8.
2. Rising KL, Hollander JE, Schaffer JT, Kline JA, Torres CA, Diercks DB, et al. Effectiveness of a decision aid in potentially vulnerable patients: a secondary analysis of the chest pain choice multicenter randomized trial. Medical Decision Making. 2018;38(1):69-78.
3. Stacey D, Légaré F, Lewis K, Barry MJ, Bennett CL, Eden KB, et al. Decision aids for people facing health treatment or screening decisions. Cochrane database of systematic reviews. 2017(4).
4. Wulkotte E, Schmid-Küpke N, Neufeind J, Wichmann O. COVID-19-Impfquotenmonitoring in Deutschland als Einwanderungsgesellschaft (COVIMO-Fokuserhebung): Robert-Koch-Institut; 2022.
5. Tjaden J, Haarmann E, Savaskan N. Experimental evidence on improving COVID-19 vaccine outreach among migrant communities on social media. Scientific Reports. 2022;12(1):16256.
6. O'Neill J, Tabish H, Welch V, Petticrew M, Pottie K, Clarke M, et al. Applying an equity lens to interventions: using PROGRESS ensures consideration of socially stratifying factors to illuminate inequities in health. Journal of clinical epidemiology. 2014;67(1):56-64.
7. Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. Health promotion international. 2000;15(3):259-67.
8. Durand M-A, Carpenter L, Dolan H, Bravo P, Mann M, Bunn F, et al. Do interventions designed to support shared decision-making reduce health inequalities? A systematic review and meta-analysis. PloS one. 2014;9(4):e94670.

9. Lorenc T, Petticrew M, Welch V, Tugwell P. What types of interventions generate inequalities? Evidence from systematic reviews. Journal of epidemiology and community health. 2013;67(2):190-3.
10. Schubbe D, Scalia P, Yen RW, Saunders CH, Cohen S, Elwyn G, et al. Using pictures to convey health information: A systematic review and meta-analysis of the effects on patient and consumer health behaviors and outcomes. Patient education and counseling. 2020;103(10):1935-60.
11. Berkman ND, Sheridan SL, Donahue KE, Halpern DJ, Crotty K. Low health literacy and health outcomes: an updated systematic review. Annals of internal medicine. 2011;155(2):97-107.
12. Schaeffer D, Berens E-M, Vogt D. Health literacy in the German population: results of a representative survey. Deutsches Ärzteblatt International. 2017;114(4):53.
13. Gigerenzer G, Gray JM. Better doctors, better patients, better decisions: Envisioning health care 2020: Mit Press; 2011.
14. Mühlhauser I, Albrecht M, Steckelberg A. Evidence-based health information and risk competence. GMS German Medical Science. 2015;13.
15. McDowell M, Rebitschek FG, Gigerenzer G, Wegwarth O. A Simple Tool for Communicating the Benefits and Harms of Health Interventions: A Guide for Creating a Fact Box. MDM Policy & Practice. 2016;1(1):2381468316665365.

Preparing for the next pandemic: communication in the post-antibiotic era

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Rationale
Antimicrobial resistance (AMR) - whereby microorganisms are resistant to antimicrobial agents to which they were previously susceptible - is one of the most urgent health problems we face: current projections suggest that by 2050 up to 10 million people could die annually due to drugresistant infections. Preventive actions are urgently needed to curb these projections, especially with regard to antibiotic resistance (ABR). Preventive measures should most importantly aim to increase awareness of the upcoming ABR pandemic among the general public, increase responsible antibiotic prescription behaviour by doctors, and increase prudent use of antibiotics by patients. However, there continues to be a low level of awareness of the ABR threat in the general public. This is highly problematic, also in light of the experiences with the Covid-19 pandemic. Experts had been warning about respiratory infectious disease pandemics for over 20 years, yet when the pandemic started in late 2019 the majority of the population was largely unaware of this and failed to take preventive action. Moreover, research so far has indicated that patients not only tend to request antibiotics inappropriately but also that doctors tend to honour these requests, particularly when there are no or unclear guidelines for antibiotic treatment.

In this panel, we will present results from ongoing efforts in the field of health communication on ABR in various European countries. Specifically, we will present results from two ongoing systematic reviews conducted in the Netherlands and Belgium. The first presentation deals with summarizing perceptions towards ABR in healthcare professionals, with a specific focus on causes, consequences, and solutions of ABR, whilst the second presentation summarizes the effectiveness of patient education studies for responsible antibiotic use using randomized controlled trials. The third presentation will describe results from qualitative focus groups with Swiss-Italian doctors who have experience in patient-doctor interactions for medical conditions for which antibiotics are not indicated but preferred and/or requested by patients. The last presentation will describe the lessons learned from the SAFE programme (Superbug Awareness For Education), an educational program that was designed and implemented across Italy, Portugal, Spain, and Morocco. Together, these presentations will inform the audience about current insights on raising AMR awareness in various European countries and effective communication-based strategies in patients and/or doctors to prevent AMR through prudent antibiotic use.

Perceptions of healthcare professionals about antibiotic resistance: causes, consequences, and solutions

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Background: Antibiotic resistance (ABR) is one of the greatest threats to global health today. Though warnings about the risk of ABR are as old as antibiotics themselves, healthcare professionals often still do not perceive ABR as an urgent problem. Risk communication could be applied to emphasize the urgency of ABR. Risk communication is most effective when tailored to the existing perceptions of end-users. This systematic review aimed to understand healthcare professionals' perceptions of the threat of ABR and to inform the content of such risk communication interventions.

Methods: A librarian systematically searched Embase, Medline, CINAHL, and PsycInfo. Quantitative studies in high-income countries were included in the review if they investigated the perceptions of hospital healthcare professionals about ABR. Risk of bias was assessed using an adapted version of the Newcastle-Ottawa scale.

Results: The search yielded 13551 papers (8909 after removing duplicates) of which 42 papers were included in the review. Included studies were performed between 1999 and 2018 and covered results from 16 countries. Most studies were performed in Europe (n=33), followed by North America (n=20) and Australasia (n=4). Out of 42 studies, 38 do not mention a theoretical background for the topics addressed.

Current stage of work: Data analysis and interpretation.

Discussion: Further analysis will provide insight into the perceptions of healthcare professionals about causes of, consequences of, and solutions for ABR over the years and insight into studies performed on this topic. This systematic review will further yield recommendations for risk communication. **PROSPERO registration:** CRD42022359249.

Effects of patient-targeted educational materials on prudent antibiotic use. A systematic review and meta-analysis of randomized controlled trials

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Background. Antibiotic resistance (ABR) is a growing health problem worldwide. Excessive and inappropriate antibiotic use by patients in healthcare has been shown to be a major contributor to the problem. Understanding how patient-targeted educational interventions to promote appropriate antibiotic use can aid in the prevention of ABR is important.
Methods. A systematic review was conducted. The databases Ovid Medline, EMBASE, PsycInfo, Cinahl, and Cochrane were searched from inception till December 2022. Search terms were developed with an information specialist. Developed criteria for title/abstract screening are pretested on random subsets and final title and abstract screening will be completed by one author. Criteria for full paper screening are developed and full text screening will be done. Outcomes had to measure change in antibiotic-related prescribing/consumption or antibiotic related behaviors, and/or knowledge, attitudes, beliefs, or satisfaction. Data extraction and quality assessment will be done by one author and a random sample will be assessed by a second reviewer. When applicable, meta-analysis using random effect models will be conducted. The review is registered with PROSPERO.
Expected findings. Effective intervention components targeting patients to improve antibiotic use in a healthcare context.
Practical application. This systematic review will provide insight into effective communication or education interventions targeted at patients. This information will aid to select effective components that can be used in future interventions to improve antibiotic use in the healthcare context.

The empowered patient in the context of antimicrobial resistance

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Background: The empowered patient has become a central topic in the doctor-patient interaction. At the same time, a growing concern is directed at the steady increase in antibiotic drug resistance forms. One of the biggest influences on this trend is physicians' excessive and unjustified antibiotic prescriptions. By their own admission, the influence of patients' expectations leads them to inappropriate antibiotic prescribing even when their professional judgment would advise them differently. Where exactly do the boundaries lie between an empowered and autonomous patient on the one hand and a patient who follows medical advice on the other hand?

Method: We will present data from a study based on several focus groups conducted with general practitioners regarding the prescription of antibiotics. Specifically, we will focus on the experiences of general practitioners with patients who request an antibiotic even when it is not indicated. We aim to explore the strategies employed by doctors in such cases. How do they handle these expectations? How do general practitioners try to accommodate an empowered patient in such situations?
Expected findings: We expect to gain a clearer understanding of the prescribing practices when it comes to patients' requests, and to gain insight into the nature of the pressure that doctors perceive from their patients.
Practical application: This study will help defining the limitations of the conceptualization of the empowered patient in order to help doctor evaluate the real needs of their patient whenever they advance a specific request for antibiotics.

Lessons learnt in educational and Learning-Service interventions among pre-university and university students across the Mediterranean region

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Background. Education is a basic pillar to build an AMR-resilient society. The SAFE programme was implemented across the Mediterranean region (Italy, Portugal, Spain and Morocco) for awareness of the AMR problematic, focusing on youth as proactive agents to amplify research and social awareness on AMR. SAFE has been carried out since 2020, and targeted youth to promote critical thinking and evidence-based knowledge to train them as proactive dissemination agents for empowered patients and consumers.
Methods. Workshops on AMR, outreach skills and knowledge transfer were implemented, targeting academy, research professionals, and its students. The Learning-Service approach was implemented in lab sessions after the workshops, Online course and dozens of digital and offline resources were developed targeting the general public and high school teachers, assessing how to tackle this topic in the classroom. Outreach campaigns and knowledge quizzes were distributed during scientific events (World Microbe Forum, European Researcher's Night, World Antibiotic Awareness Week, Youth Network e-Congress SAFE), involving the participants, as to assess the impact of our efforts.
Expected findings. Effective intervention components targeting the youth to improve antibiotic use and comprehension of the topic, while supporting the research for new drug therapies.
Practical application. These activities provided insight into effective communication and education interventions targeted at youngsters (pre-university and university students), and aid in selecting effective strategies and resources for future interventions to prevent AMR. So far, we have already involved agents such as the teaching community and vulnerable collectives (youngsters from school failure, marginalized neighborhoods, North African countries).

Mental Health

#mentalhealth: A Content Analysis about Mental Health on Social Media

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Introduction

Stipulated by the COVID-19 pandemic, an increasing amount of people share their personal experiences with mental health on social media, through advocating mental health issues, sharing resources, and creating online communities. This phenomenon has drawn significant attention from researchers (e.g., Elmquist & McLaughlin, 2018; Heiss & Rudolph, 2022; Lee et al., 2020; Pavelko & Myrick, 2020). The current content analytical study aims to provide novel insights into the landscape of mental health content on two popular social media platforms. We investigated the provided health information on Instagram and TikTok from various stakeholders, namely influencers, health experts, and organizations (Chen & Wang, 2021; Jia et al., 2023; Reavley et al., 2022).

For this purpose, we draw upon the common sense model of illness self-regulation (CSM; Leventhal et al., 2003) and framing theory (Goffman, 1974). The CSM describes five factors on how patients perceive (and communicate) their health and illnesses: identity, cause, timeline, consequences, and perceived controllability. Identity includes mentioning symptoms. Causes refer emotional, biological, psychological, or environmental causes leading to the illness. Timeline refers to how the illness appears; chronic (more than a year), cyclic (attacks), or acute (short period). The factor consequences gives insight in whether the consequences occur on the long or short term. Lastly, perceived controllability gives information on whether the patient feels in control of their illness. We aimed to examine to what extend these components will be present in content about mental health on social media. Additionally, we investigated the presence or absence of nine media frames to provide a comprehensive overview of the portrayals (and its potential consequences) of mental health content online.

Method

The sample for the data analysis was collected on Instagram and TikTok, through the search of mental health hashtags. Based on the most popular post, built a list of 60 profiles, consisting of influencers and organizations. From those profiles we coded 10 posts each, which results in 600 posts in total. The codebook was created based on previous literature and adapted to the mental health content in an iterative process. The first and third author performed the reliability tests, the third author coded the material. Table 1 gives an overview of the coded variables and Krippendorff's alpha.

Results

Most of the profiles were celebrities or influencers (41.6%), followed by health professionals (21.7%), and organizations (18.3%). Mental health was mentioned in 46.7% (n = 280) of our sampled posts. However, a substantial part included mental health in the hashtags (e.g., #mentalhealth) only and provided no further information on the topic in the caption, image, or video. Only 25.2% (n = 151) posts included mental health in the image/video or the caption. Within these posts, following topics were mentioned most often: prevention (33.8%), anxiety (13.9%), PTSD/trauma (10.6%), and other (including suicide, therapy, harm; 35.8%). Most posts were positive in sentiment (69.5%), followed by neutral/unclear (23.8%) and negative (6.6%) sentiment.
With regards to the CSM, symptoms (identity; 28.5%) and causes (11.3%) were most frequently discussed. For the media frames, mental health improvement (21.7%) and awareness (14.0%) were the most common themes in images or videos discussing mental health.

Conclusion

This content analytical study sheds light into how Instagram and TikTok users apply mental health-related hashtags along with their posts. Our study findings revealed that, although mental-health hashtags are being widely used, only a few posts in our sample were actually discussing the topic of mental health. This finding underscores the strategic use of mental health related hashtags to attract views rather than fostering open dialogue on important topics, including mental health (Errs et al., 2018; Page, 2012). However, it is promising that healthcare professionals and organizations share relevant hashtags with visual content or captions to raise awareness and increase knowledge about mental health. While the prevalent concerns of trivialization of mental health online persists, further research focusing solely on mental health posts are needed to gain deeper understanding of such content online. With more extensive knowledge about the nature of mental health posts, it may be possible to utilize social media for creating greater public understanding around vulnerable groups and sensitive issues with the aim of improving society's (perception of) mental illness.

REFERENCES

Chen, J., & Wang, Y. (2021). Social media use for health purposes: Systematic review. Journal of Medical Internet Research, 23(5), e17917–e17917. https://doi.org/10.2196/17917

Elmquist, D. L., & McLaughlin, C. L. (2018). Social media use among adolescents coping with mental health. Contemporary School Psychology, 22(4), 503–511. https://doi.org/10.1007/s40688-017-0167-5

Erz, A., Marder, B., & Osadchaya, E. (2018). Hashtags: Motivational drivers, their use, and differences between influencers and followers. Computers in Human Behavior, 89, 48–60. https://doi.org/10.1016/j.chb.2018.07.030

Goffman, E. (1974). Frame analysis: An essay on the organization of experience. NY: Harper & Row.

Heiss, R., & Rudolph, L. (2022). Patients as health influencers: Motivations and consequences of following cancer patients on Instagram. Behaviour & Information Technology, 1–10. https://doi.org/10.1080/0144929X.2022.2045358

Jia, M., Ju, R., & Zhu, J. (2023). Understanding mental health organizations' Instagram through visuals: A content analysis. Health Communication, 1–11. https://doi.org/10.1080/10410236.2023.2185350

Lee, N., Buchanan, K., & Yu, M. (2020). Each post matters: A content analysis of #mentalhealth images on Instagram. Journal of Visual Communication in Medicine, 43(3), 128–138. https://doi.org/10.1080/17453054.2020.1781535

Leventhal, H., Brissette, I., & Leventhal, E. (2003). The commpn-sense model of self-regulation of health and illness. In H. Leventhal & L. Cameron (Eds.), The Self Regulation of Health and Illness Behavior (pp. 42–65). New York.

Lindgren, S., & Johansson, A. (2021). Getting better? Hegemonic, negotiated and oppositional uses of Instagram for mental health support. Journal of Communication Inquiry, 47(3), 268-290. https://doi.org/10.1177/01968599211042581

Page, R. (2012). The linguistics of self-branding and micro-celebrity in Twitter: The role of hashtags. Discourse & Communication, 6(2), 181–201. https://doi.org/10.1177/1750481312437441

Pavelko, R. L., & Myrick, J. G. (2020). Measuring trivialization of mental illness: Developing a scale of perceptions that mental illness symptoms are beneficial. Health Communication, 35(5), 576–584. https://doi.org/10.1080/10410236.2019.1573296

Reavley, N., Fernando, L. M. N., & Jorm, A. (2022). Websites and the validity of mental health care information. In D. J. Stein, N. A. Fineberg, & S. R. Chamberlain (Eds.), Mental Health in a Digital World (pp. 191–206). Elsevier. https://doi.org/10.1016/B978-0-12-822201-0.00009-5

Table 1

Variable	**Definition**	**Krippendorff's Alpha**
Mental health present in the overall post	Indicate based on the content of the influencer/organization if the posted content includes mental health. This can be identified by looking at profile details, biography or pictures and can include posts about maintaining mental health, preventing illness and the hashtags) 1=Yes 2=No	1
Occupation	Indicate the occupation or the main focus of the influencer. When they aren't celebrities, medical professionals, or a business owner they can be included in the category of instafamous influencer or the main focus of the organization. 1= Celebrity or Insta/ TikTok famous (This person is seen as a famous person, this include instafamous or TikTok famous people) 2= Health professional influencer (e.g., Psychologist, doctor, or a person who is currently a student in medicine or psychology focused on providing health related advice) 3= Self-claimed mental health professional influencer (This person posts about mental health and illness but doesn't	1

	have a degree in medicine, psychology, … Important: other health related accounts aren't included (e.g., someone who uses essential oils for health practice)) 4= Mental health focused organization (This organization focusses on mental health related content) 5= No mental health focused organization (This is an organization with different goals than talking about mental health e.g., Nike posts something about depression). 99= Other / unclear (Could include small businesses	
Verification	Indicate if influencer/organization is verified shown with a blue checkmark next to name in profile. 1=Yes 2=No	1
Main topic of mental health	indicate the main topic of mental illness used in the post. 1= Depression 2= PTSD / trauma 3= Anxiety 4= Eating disorders 5= Focus on prevention or mental health 6=Not specifically mentioned (the post clearly focusses on a mental illness by e.g., talking about recovering, but the exact mental illness isn't mentioned) 7= Other (could include suicide or self-harm) 99= No mental illness or something about mental health mentioned	.78
Cause	Indicate whether the cause of the illness is discussed and which one. 1= Emotional cause (e.g., Stress) 2= Biological cause (e.g., Inheritable) 3= Psychological cause (e.g., personality) 4= Environmental cause 5= No cause mentioned 99= No mental illness or mental health mentioned	.70
Consequences	Indicate whether consequences of the illness are mentioned and which consequences. 1= Short term consequences (Maximum a month) 3= Long term consequences (Longer than a month) 3= No consequence mentioned 99= No mental illness or mental health mentioned	.84
Timeline	Indicate the timeline of the illness which is mentioned. 1= Chronic (An illness that last for more than a year and needs ongoing attention) 2= Cyclic (The patient experiences attacks of the disease occasionally) 3= Acute (An illness that lasts for a short period of time) 4= No timeline mentioned 99= No mental illness or mental health mentioned	.84
Identity	Indicate the timeline of the illness which is mentioned. 1= Chronic (An illness that last for more than a year and needs ongoing attention) 2= Cyclic (The patient experiences attacks of the disease occasionally) 3= Acute (An illness that lasts for a short period of time) 4= No timeline mentioned 99= No mental illness or mental health mentioned	.84
Controllability	Indicate whether the influencer talks about the controllability of the illness.	.84

	1= The influencers states to be in control over the illness or that it is possible to be in control 2= The influencer states that they don't have control over the illness or that it isn't possible to be in control 3= Nothing regarding the controllability is mentioned 99= No mental illness or mental health mentioned	
Curability	Indicate whether the influencer talks about the curability of the illness. 1= The influencers states that the illness can be cured 2= The influencers states that the illness can't be cured 3= Nothing regarding curability is mentioned 99= No mental illness or mental health is mentioned	.84
Overall sentiment	Indicate the overall sentiment of the post (look at the image/ video and the caption 1= Overall positive sentiment (Could include positive experiences, motivation quotes, inspirational quotes, positive mindsets, being grateful; a person can also talk about how they weren't doing well in the past in a positive manner) 2=-overall negative sentiment (including: stories and experiences of how a person isn't doing well, glamorization, stigmatization, and trivialization of mental health) 3=overall neutral sentiment or no clear sentiment identifiable.	1
Main frame image/ video and caption	Indicate which frames are being used, multiple frames can be used in one post. 1= Help-seeking frame (This frame focusses on seeking help or encouraging people to seek help) 2= Not your responsibility (This frame focusses on the patient not being the one responsible for developing their illness e.g., 1 out 10 people might be depressed at some point in their life and this because of no fault of their own). 3= Awareness (This frame focusses on the awareness of mental health) 4= Stigma (This frame focusses on the stigmatization of mental illnesses, this means that negative attributes are allocated to people with mental illnesses e.g. They can be presented as dangerous, violent, or mad. This could also include people trying to fight those stigmas) 5= Trivialization or romanticizing mental health problems (This frame focusses on how mental illnesses aren't a real illness and how we all suffer from mental illnesses on the one hand and even seeing mental illnesses as something good or something that makes you special on the other hand (e.g. This including statements like get over it, just don't be depressed, I am a little sad so I am depressed, mental illnesses are cool and part of your identity)) 6= Accessibility help and funding (This frame focusses on the availability of help and whether it is expensive. This could include motivating others to help people who are struggling with mental illness). 7= Promoting risky health behavior (This frame focusses on promoting risky behaviors like not taking medication, self-harm). 8= Information of symptoms (This frame focusses on symptoms of a mental illness, e.g., '5 things that could be a panic attack')	Image/ video: 0.84 Caption: 1

	9= Mental health improvement (This frame focusses on the improvement of mental health and/ or the prevention of mental illness, e.g., giving tips) 10= No clear frame / multiple 99= No mental health mentioned	
Own experience image/ video	Indicate whether the influencer shares their own experience, or the organization shares personal experiences with mental health or a mental illness in the image or the video) 1= Yes, they share their own experiences 2= No they don't share their own experiences 3= Organization which shares personal experiences (could be more than 1 person's experiences) 4= Organization which doesn't share personal experiences 99= No mental health or mental illness included	.85
Own experience	Indicate whether the influencer shares their own experiences, or the organization shares personal experiences with mental health or a mental illness in the caption) 1= Yes, they share their own experiences 2= No they don't share their own experiences 3= Organization which shares experiences of people 4= Organization which doesn't share personal experiences 99= No mental health or illness mentioned	1
Trigger warning	Include whether a trigger warning is included in the caption of the post) 1= Yes 2= No	1
#mentalhealth	Include whether a trigger warning is included in the caption of the post) 1= Yes 2= No	.89
#mentalillness	Include whether a trigger warning is included in the caption of the post) 1= Yes 2= No	.93
#mentalhealthawareness	Include whether a trigger warning is included in the caption of the post) 1= Yes 2= No	.94
#mentalhealthmatters	Include whether a trigger warning is included in the caption of the post) 1= Yes 2= No	.87

Decolonizing Global Mental Health in Europe: A Mental Health 4 All Study

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According to OECD data (2018), more than 84 million people face issues with mental health in Europe. Additionally, migrants and refugees face psychosocial problems more frequently than non-migrants (Lindert et al., 2008; Rousseau & Frounfelker, 2019). This paper seeks to illuminate and undo barriers to access faced by migrants and refugees seeking mental healthcare. The paper is a project undertaken by a consortium of research institutions as part of the EU-Commission funded project "Mental Health 4 All." The twin pandemics of Covid-19 and global racism in the aftermath have highlighted an urgent need to understand how mental health is affected in various global contexts (Currie & Higa, 2021; Godlee, 2020).

Researchers have called for context-specific approaches to mental health (Collins, 2020). The concept of global mental health has been proposed to acknowledge varying solutions to complex mental health problems (Patel, 2012). Proponents of global mental health acknowledge cultural dimensions as a key component of holistic ways of living (Kohrt & Mendenhall, 2016). However, critics of global approaches to mental health rightfully point out the ontologization and biologization of culture, objectifying and conceptualizing cultures from the so-called Global South as intellectually inferior (David Wenceslau & Ortega, 2022).

Additionally, much of the work on decolonizing mental health centers on contexts outside of the Global North, despite the fact that migrants/refugees arrive in high numbers from former colonies, with the desire for a "better life"(Arghavan, 2019). The current literature on mental health in migrants/refugees does little to acknowledge the complexities of geopolitical power dynamics and the effects these dynamics have on individual and collective mental health (Hickling, 2020).

The current paper is undergirded by decoloniality as a theoretical framework. The analysis centers notions of multivocality in theorizing new ways to decolonize mental health approaches in Europe. This framework aligns with calls to center culture as a means to adopt innovative theoretical and practical methods addressing (mental) healthcare (Dutta, 2008) . It further employs a fluid, evolving notion of culture as a site of struggle, bringing power dynamics to the heart of the analysis (Hall, 1997).

The data consist of fifteen interviews with migrants to the Netherlands with low-language proficiency in Dutch who have sought access to mental healthcare. The interviews were conducted over the span of three months in late 2022, recorded, transcribed, and analyzed using Atlas.ti. Interpretative phenomenological analysis was employed to identify themes and categories. Special attention was paid to balanced integration, openness, concreteness, resonance, and actualization to ensure analytical rigor.

Expectations of professionalism was a consistent theme noted in the interviews. Rather than being passive recipients of mental healthcare treatment, respondents indicated they had specific notions of how they expected to be treated. Cultural notions of respect, discretion, and relationality came to the fore during discussions of professionalism.

The theme of **Language as a boundary/language as a wall** characterized several of the interviews. While the Dutch language presented an insurmountable problem for the majority of respondents, English worked as a semi-permeable boundary. This finding nuances common-sense notions of language as a binary option; it is not as though participants either speak or don't speak a language, but rather *how* they speak their languages and *what* they consider their language that makes a difference.

In the European Union, where international policies are often responsible for the traumatization of those fleeing war, an analysis of the barriers faced by those with resultant psychosocial problems is sorely needed. The present paper proposes communication-oriented strategies to advocating access to mental healthcare, as well as higher quality interaction with mental healthcare professionals. This focus recenters the person receiving healthcare as an active agent on their own path, instead of relying on deficit-centered notions of patients in need of a western-style intervention. The work presented here contributes to the growing and necessary discussion of migrant/refugee mental healthcare in Europe.

REFERENCES

Arghavan, M. (2019). The migrant scholar of color as refugee in the western academy. In Who Can Speak and Who is Heard/Hurt?: Facing Problems of Race, Racism, and Ethnic Diversity in the Humanities in Germany (pp. 177–194). https://doi.org/10.14361/9783839441039-009

Collins, P. Y. (2020). What is global mental health? World Psychiatry, 19(3), 265–266. https://doi.org/10.1002/wps.20728

Currie, C. L., & Higa, E. K. (2021). The Impact of Racial and Non-racial Discrimination on Health Behavior Change Among Visible Minority Adults During the COVID-19 Pandemic. Journal of Racial and Ethnic Health Disparities. https://doi.org/10.1007/S40615-021-01189-Z

David Wenceslau, L., & Ortega, F. (2022). The 'Cultures' of Global Mental Health. Theory, Culture & Society, 39(3), 99–119. https://doi.org/10.1177/02632764211039282

Dutta, M. J. (2008). Communicating health: A culture-centered approach. Polity. Godlee, F. (2020). Racism: The other pandemic. BMJ, 369, m2303. https://doi.org/10.1136/bmj.m2303

Hall, S. (1997). Old and New Identities , Old and New Ethnicities. Culture, Globalization, and the World System: Contemporary Conditions for the Representation of Identity, 41–68. https://doi.org/10.2307/2076274

Hickling, F. W. (2020). Owning our madness: Contributions of Jamaican psychiatry to decolonizing Global Mental Health. Transcultural Psychiatry, 57(1), 19–31.

Kohrt, B. A., & Mendenhall, E. (Eds.). (2016). Global Mental Health: Anthropological Perspectives. Routledge. https://doi.org/10.4324/9781315428055

Lindert, J., Schouler-Ocak, M., Heinz, A., & Priebe, S. (2008). Mental health, health care utilisation of migrants in Europe. European Psychiatry, 23(S1), s114–s120. https://doi.org/10.1016/S0924-9338(08)70057-9

Patel, V. (2012). Global mental health: From science to action. Harvard Review of Psychiatry, 20(1), 6–12. https://doi.org/10.3109/10673229.2012.649108

Rousseau, C., & Frounfelker, R. L. (2019). Mental health needs and services for migrants: An overview for primary care providers. Journal of Travel Medicine, 26(2), tay150. https://doi.org/10.1093/jtm/tay150

Stigmatizing and Destigmatizing Communication about Mental Illness in Youtube Comments: A Quantitative Content Analysis

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People affected by mental illnesses are particularly exposed to public stigmatization (e.g., Schomerus et al., 2012). Statements and comments on social media are of great influence in this regard, since they are likely to have an effect on the public perception of and stigmatizing attitudes toward this social group (e.g., Athanasopoulou et al., 2015; Budenz et al., 2020). Social media present a great opportunity for the empowerment and destigmatization of affected individuals through self-selected representation and disclosure (Author et al., 2021). Possibilities for pseudonymity and anonymity in social media play an important role to feel safe to talk about own experiences with mental illness and stigmatization without the need to publicly reveal one's own identity (e.g., Rains, 2014). Following the online disinhibition effect (Suler, 2004), it can be presumed that being anonymous in online contexts has a disinhibiting effect on commenters who articulate their stigmatization toward persons with mental illness more frequently and clearly online than offline. On the basis of comments and videos concerning the topics ADHD, schizophrenia, and depression on Youtube as one of the largest social media platforms, the present study aims to examine (1.) how frequent stigma-related comments are, (2.) which types of stigmatizing communication can be identified, and (3.) which role specific content-related characteristics of the video commented and characteristics of the commenters (e.g., sex) play in this regard.

Method

Procedure

First, all videos hosted on Youtube from 2005 to 2021 were searched with the German search terms „ADHS" (ADHD), „Aufmerksamkeitsdefizit-Hyperaktivitätsstörung" (attention deficit hyperactivity disorder), „Schizophrenie" (schizophrenia), and „Depression" (depression) using the Youtube data API. Second, all videos without German language, all videos without comments or with deactivated comments, all videos without content related to mental illness, as well as all video duplicates were excluded from further analyses. Finally, the comments from all remaining videos were downloaded and subjected to a comprehensive quantitative content analysis (cf. Krippendorff, 2018) using a self-developed codebook.

Sample

Table 1 shows the total number of videos and comments for ADHD, schizophrenia, and depression that were identified as eligible and included for further analyses. The analyses for the current presentation are based on videos and comments which were posted between 2017 and 2021 (see also Table 1).

Instrument

The self-developed codebook consisted of a comprehensive category system with ten main categories and additional subcategories for video coding (e.g., title, year of publication, content description, number and gender of persons depicted) as well as ten main categories and additional subcategories for the coding of comments (content, personal experience with mental illness, public stigmatization, experience with stigmatization, self-stigmatization, contact insecurity, anti-stigma, demand for communication, defense of persons with ADHD/schizophrenia/depression, other stigmatizing comments).
An extensive coder training and a subsequent pretest of n = 820 (ADHD), n = 800 (schizophrenia), and n = 2,359 (depression) comments showed that the three independent coders reached a sufficient to good interrater reliability for all main categories (ADHD: .68-.80; schizophrenia: .66-.86; depression: .68-.90) of the codebook using Krippendorff's Alpha (Hayes & Krippendorff, 2007).

Results

Figure 1 shows the proportion of stigma-related comments in relation to all analyzed comments. Although the total number of identified comments is more as twice as much for depression than for ADHD or schizophrenia, the number of stigma-related comments is proportionally equal for all three mental illnesses. Most of the stigma-related comments consisted of statements of public stigmatization, followed by demands for anti-stigma (Table 2), whereas comments concerning depression had the highest proportion of stigmatizing statements but also anti-stigma demands. The results also suggest that in the case of ADHD men are more than twice as frequently subject to public stigmatization compared to woman. Concerning videos of schizophrenia, the sex of the commenters made no difference regarding the frequency of stigmatizing statements. Regarding the topic of depression, male commenters made more stigmatizing statements than female commenters.

Discussion

Social media are important for attitude formation and communicating opinions about and experiences with mental illnesses. Likewise, demands for support and empowerment of affected individuals are articulated through social media posts. It is of utmost importance to better understand which specific reactions are evoked by the topic and the representation of mental illness and to which extent stigmatizing as well as destigmatizing tendencies are identifiable in such reactions. The present content analysis shed light on those questions in great detail and in this respect allows statements to be made in particular about the type and content of the videos, the type of comments, the role of sex as well as previous experiences with mental illness. Implications for health communication and anti-stigma communication will be discussed.

REFERENCES

Athanasopoulou, C., Suni, S., Hätönen, H., Apostolakis, I., Lionis, C. & Välimäki, M. (2015). Attitudes towards schizophrenia on YouTube: A content analysis of Finnish and Greek videos. Informatics for Health & Social Care, 1–18. https://doi.org/10.3109/17538157.2015.1008485

Budenz, A., Klassen, A., Purtle, J., Yom Tov, E., Yudell, M. & Massey, P. (2020). Mental illness and bipolar disorder on Twitter: Implications for stigma and social support. Journal of Mental Health, 29(2), 191–199. https://doi.org/10.1080/09638237.2019.1677878

Hayes, A. F. & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. Communication Methods and Measures, 1(1), 77–89. https://doi.org/10.1080/19312450709336664

Krippendorff, K. (2018). Content analysis: An introduction to its methodology (4th edition). Sage.

Rains, S. A. (2014). The implications of stigma and anonymity for self-disclosure in health blogs. Health Communication, 29(1), 23–31. https://doi.org/10.1080/10410236.2012.714861

Schomerus, G., Schwahn, C., Holzinger, A., Corrigan, P. W., Grabe, H. J., Carta, M. G. et al. (2012). Evolution of public attitudes about mental illness: A systematic review and meta-analysis. Acta Psychiatrica Scandinavica, 125(6), 440–452. https://doi.org/10.1111/j.1600-0447.2012.01826.x

Suler, J. (2004). The online disinhibition effect. Cyberpsychology & Behavior, 7(3), 321–326. https://doi.org/10.1089/1094931041291295

Figure 1. Proportion of stigma-related comments in relation to all analyzed comments concerning ADHD, schizophrenia, and depression.

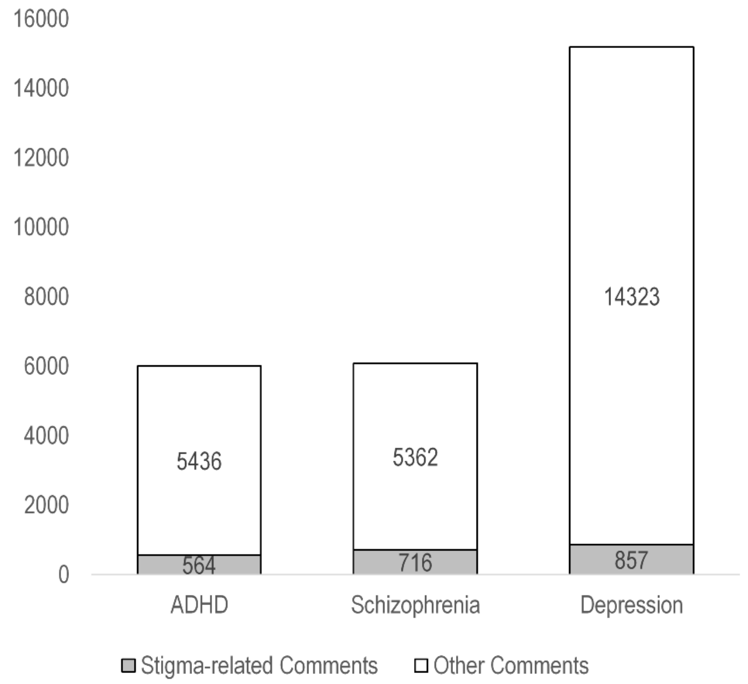

Table 1. Number of Included Videos and Comments in Total (2005-2021) and from 2017 to 2021 for ADHD, Schizophrenia, and Depression

	ADHD	Schizophrenia	Depression
N Videos (Total)	822	522	206
N Comments (Total)	75,783	82,909	64,536
n Videos (2017 to 2021)	339	300	108
n Comments (2017 to 2021)	6,000	6,078	15,130

Table 2. Distribution and Frequency of Stigma-related Comments

	Public Stigmatization	Personal Experience with Stigmatization	Self-Stigmatization	Anti-Stigma Comment
		ADHD		
Total	274	126	23	210
Frequency (stigma-related comments)	48.58%	22.34%	4.08%	37.23%
Frequency (all comments)	4.57%	2.10%	0.38%	3.50%
		Schizophrenia		
Total	503	45	4	196
Frequency (stigma-related comments)	70.25%	6.29%	0.59%	27.37%
Frequency (all comments)	8.28%	0.74%	0.07%	3.23%
		Depression		
Total	807	657	86	500
Frequency (stigma-related comments)	94.17%	76.66%	10.04%	58.34%
Frequency (all comments)	5.33%	4.34%	0.57%	3.30%

The role of mental well-being in health communication about COVID-19: An interview study among students with varying levels of depression

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Introduction

Health messages are not routinely checked for their potential impact on mental well-being. Nevertheless, research suggest that exposure to specific types of messages may have a negative impact on mental well-being of the recipients (Dolinšek et al., 2023). During the COVID-19 pandemic, a global decline in mental well-being was observed (O'Connor et al., 2021; Paredes et al., 2021). This can be partially attributed to the extent of exposure to pandemic information, as well as to specific types of messages, such as those using negative emotional appeals (Trnka & Lorencova, 2020). Individuals with symptoms of depression might be particularly vulnerable to these negative effects, due to their tendency to selectively process information, focusing on the negative and minimizing the importance of positive information (Clark et al., 1999; Siegel et al., 2017). Indeed, a recent scoping review suggests that those with higher levels of depressive symptoms process specific health messages differently than those with minimal levels. For instance, they might focus on different elements of the messages and develop higher reactance toward them (Dolinšek et al., 2023).
As a result of the impact of message exposure on mental well-being, effectiveness of health messages may be reduced as recipients engage in information avoidance, defensive processing, and even maladaptive responses to regulate their emotions, as was observed during the COVID-19 pandemic (Ytre-Arne & Moe, 2021).

Social networking sites (SNSs) played a crucial role in information dissemination during the COVID-19 pandemic, providing new communication opportunities for official sources, such as governments and health organizations (Tsao et al., 2021). SNSs also provided users with coping opportunities (Yang et al., 2020). For instance, passive SNS use - such as browsing content - increased loneliness and decreased life satisfaction, while active use - like reacting to posts and sharing positive information about COVID-19 - decreased levels of loneliness (Pennington, 2021) and was associated with lower levels of depression (Yang et al., 2020). Accordingly, we predict that specific SNS use could be leveraged to buffer negative effects of exposure to specific professional health messages on users' mental well-being.

So far, effects of health messaging on mental well-being and the role of pre-existing depressive symptoms in message processing have not been the focus in health communication in general. Most existing studies focus on patient populations and messages about their specific mental health issue, but not on persuasive messages about other general health issues, such as those promoting preventative behaviours during pandemics. Furthermore, mental well-being is a complex multi-dimensional concept (consisting of hedonic and eudaimonic well-being), which is mostly neglected as studies focus on single specific indicators (e.g., feeling sad). Lastly, studies relating SNS use and mental well-being are mostly correlational and predominantly focus on time spent using SNSs, rather than on particular actions, such as liking or sharing specific content.

Therefore, the aim of this interview study is to explore the relationship between exposure to specific health messages and mental well-being outcomes (RQ1), likelihood to comply with the message health recommendation (RQ2) and SNS use in response to specific messages (RQ3) for those with varying levels of depressive symptomatology. It will contribute to the field of health communication by providing further insights into most effective and least harmful communication techniques for those with varying depressive symptomatology, in order to prevent further harming an already vulnerable population.

Methods

We use a qualitative approach through semi-structured interviews with undergraduate students with high and low levels of depressive symptomatology (n = 15 per group). The 1.5-hour long interviews will be formed by two parts. First, to explore to what extent participants are aware of covid-19 messaging effects, participants will share their impressions about health messaging during the Covid-19 pandemic in terms of its' a) impact on their mental well-being, b) message effectiveness, and c) the role of social networking interactions about such messages in message processing. In the second part, participants will be shown 12 existing professional messages promoting social distancing during the COVID-19 pandemic. Each message will exhibit a specific message characteristic (e.g., hope appeal). Participants' impressions of these messages will be discussed in relation to the researched concepts again. This will allow for a more systematic observation. We are particularly interested in the similarities and differences in impressions of and perceived effectiveness among those with varying levels of depressive symptoms.

Current stage

We are currently running a pre-test of the messages to be shown to the participants. Interviews will be performed in September. We are confident that some preliminary findings and participant quotes can be presented during the conference.

REFERENCES

Akhther, N., & Sopory, P. (2022). Seeking and sharing mental health information on social media during COVID-19: Role of depression and anxiety, peer Support, and health benefits. Journal of Technology in Behavioral Science, 7(2), 211–226. https://doi.org/10.1007/s41347-021-00239-x

Bendau, A., Petzold, M. B., Pyrkosch, L., Mascarell Maricic, L., Betzler, F., Rogoll, J., Große, J., Ströhle, A., & Plag, J. (2021). Associations between COVID-19 related media consumption and symptoms of anxiety, depression and COVID-19 related fear in the general population in Germany. European Archives of Psychiatry and Clinical Neuroscience, 271(2), 283–291. https://doi.org/10.1007/s00406-020-01171-6

Clark, D. A., Beck, A. T., & Alford, B. A. (1999). Scientific foundations of cognitive theory and therapy of depression (pp. ix, 494). John Wiley & Sons Inc.

Dolinšek, Š., Meppelink, C. S., Giani, S., van Weert, J. C. M., van den Putte, B., & Scholz, C. (2023). The role of mental well-being in the effects of persuasive health messages: A scoping review. Unpublished manuscript.

Freimuth, V. S., Hammond, S. L., Edgar, T., & Monahan, J. L. (1990). Teaching those at risk: Content-analytic study of AIDS PSAs. Communication Research, 17(6), 775-791.

Miller, S. M., & Shoda, Y. (1996). Applying Cognitive-Social Theory to health-protective behaviour: Breast self-examination in cancer screening. Psychological Bulletin, 119(1), 70-94.

Muthusamy, N., Levine, T. R., & Weber, R. (2009). Scaring the already scared: Some problems with HIV/Aids fear appeals in Namibia. Journal of Communication, 59(2), 317-344.

O'Connor, R. C., Wetherall, K., Cleare, S., McClelland, H., Melson, A. J., Niedzwiedz, C. L., O'Carroll, R. E., O'Connor, D. B., Platt, S., Scowcroft, E., Watson, B., Zortea, T., Ferguson, E., & Robb, K. A. (2021). Mental health and well-being during the COVID-19 pandemic: Longitudinal analyses of adults in the UK COVID-19 Mental Health & Wellbeing study. The British Journal of Psychiatry, 218(6), 326–333. https://doi.org/10.1192/bjp.2020.212

Paredes, M. R., Apaolaza, V., Fernandez-Robin, C., Hartmann, P., & Yañez-Martinez, D. (2021). The impact of the COVID-19 pandemic on subjective mental well-being: The interplay of perceived threat, future anxiety and resilience. Personality and Individual Differences, 170, 1–6. https://doi.org/10.1016/j.paid.2020.110455

Pennington, N. (2021). Communication outside of the home through social media during COVID-19. Computers in Human Behavior Reports, 4, 1–9. https://doi.org/10.1016/j.chbr.2021.100118

Siegel, J. T., Lienemann, B. A., & Rosenberg, B. D. (2017). Resistance, reactance, and misinterpretation: Highlighting the challenge of persuading people with depression to seek help. Social and Personality Psychology Compass, 11(6), e12322. https://doi.org/10.1111/spc3.12322

Stolow, J. A., Moses, L. M., Lederer, A. M., & Carter, R. (2020). How fear appeal approaches in Covid-19 heatlh communication may be harming the global community. Health Education & Behaviour, 47(4), 531-535.

Trnka, R., & Lorencova, R. (2020). Fear, anger, and media-induced trauma during the outbreak of COVID-19 in the Czech Republic. Psychological Trauma: Theory, Research, Practice, and Policy, 12(5), 546–549. https://doi.org/10.1037/tra0000675

Tsao, S.-F., Chen, H., Tisseverasinghe, T., Yang, Y., Li, L., & Butt, Z. A. (2021). What social media told us in the time of COVID-19: A scoping review. The Lancet Digital Health, 3(3), 175–194. https://doi.org/10.1016/S2589-7500(20)30315-0

Witte, K., & Morrison, K. (2000). Examining the influence of trait anxiety/repression-sensitization on individuals' reactions to fear appeals. Western Journal of Communication, 64(1), 1-27.

Yang, Y., Liu, K., Li, S., & Shu, M. (2020). Social media activities, emotion regulation strategies, and their interactions on people's mental health in COVID-19 pandemic. International Journal of Environmental Research and Public Health, 17(23), Article 23. https://doi.org/10.3390/ijerph17238931

Ytre-Arne, B., & Moe, H. (2021). Doomscrolling, monitoring and avoiding: News use in COVID-19 pandemic lockdown. Journalism Studies, 22(13), 1739–1755. https://doi.org/10.1080/1461670X.2021.1952475

Methods and Instruments in Health Communication

The Readability Study: A protocol for a randomised trial exploring the effect of grade reading level on knowledge, perceived reading ease and acceptability

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Background
The importance of health information that is accessible to everyone is widely recognised, with many international policies and documents recommending the use of health literacy-sensitive strategies to reduce the complexity of written health information. Readability assessment is the most common approach to evaluate and revise the health literacy demands of health information written in English. Grade reading level recommendations vary across organisations. In the United States, the Agency for Healthcare Research and Quality (AHRQ) recommend grade 5-6, while in Australia, an 8th grade reading level is often recommended. However, the designation of these thresholds is not transparent and there is limited evidence to suggest that these levels are optimal in terms of comprehension.

Objectives
The objectives of the Readability Study are two-fold: (i) to assess whether grade reading level of written health information influences knowledge, perceived reading ease, acceptability and trust, and (ii) to explore whether health information written at a lower grade reading level may potentially reduce disparities in outcomes for interventions where health literacy may be a mediator.

Methods
This study is a four-arm parallel online randomised controlled trial. A community sample of adults living in Australia will be recruited by Dynata, a social research company specialising in panel sampling. Quota sampling will be used to recruit 50% of participants with less than tertiary education. Health literacy will be assessed using the self-reported single item literacy screener as well as a performance-based measure. Participant recruitment will begin in the first week of July 2023.

Participants will be randomised to view health information about two musculoskeletal conditions (sciatica and knee osteoarthritis) written at one of four grade reading levels; grade 8, 10, 12 or 14. The intervention texts were adapted from UpToDate; a reputable source of written health information and patient education materials. The grade reading level was assessed using the Simple Measure of Gobbledygook (SMOG) Index. The SMOG Index is best suited to healthcare applications as it is more robust and less likely to underestimate the readability compared to other formulas. It uses the number of polysyllabic words and sentences to calculate a readability score. The original grade 14 text was revised down to each lower grade reading level by reducing the sentence length, replacing polysyllabic words with shorter words and converting text into bullet points where feasible. The texts were reviewed by topic experts and consumers.

The primary outcome is knowledge, to be assessed using four validated items and three purpose-built items for each topic Knowledge scores across the two topics will be summed and analysed as a continuous variable. The secondary outcomes are perceived reading ease, acceptability and trust.

Analysis will use an Intention to Treat approach to compare outcomes across the randomised groups. We will undertake unadjusted analyses, and analyses adjusted for important covariates. Trial registration: ACTRN12623000224628p

Results

Data collection is due to begin in the first week of July 2023, with all data to be collected and analysed by the end of July 2023. We will present results of multiple linear regressions and logistic regressions to test for differences in knowledge, perceived reading ease, acceptability and trust between the four grade reading levels. We will also present results of an exploratory linear regression looking at the impact of health literacy and education level on all outcomes across the four conditions.

Conclusion

Results from this study will contribute to an important gap in the evidence base regarding the effect of grade reading level on consumer knowledge. This will have implications for health literacy guidelines and policies. Our findings will also inform a Delphi consensus study to develop a checklist for conducting readability analyses.

Amplifying the Risk of COVID-19? A Multi-Method-Approach

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LMU Munich

Given the rapid changes and unknown risks that often occur during public health crises, including the COVID-19 pandemic (Link, 2021; Tang & Zou, 2021), crisis communication faces the challenge to raise awareness without creating panic (Seeger et al., 2010). Here, the mass media are of importance.

Previous research in this context often draws on the Social Amplification of Risk Framework (SARF) (Kasperson et al., 1988). SARF theorizes how and why risks or risk events are amplified or attenuated (Rossmann et al., 2018). Specifically, the framework assumes amplification (attenuation) processes at two stages: (1) the transfer of information about the risk, e.g., communication of risks by news coverage, and (2) the response mechanisms of society, i.e., audiences' interpretation and perception (Kasperson et al., 1988). Regarding the media's impact on audiences' risk perception during the COVID-19 pandemic, research provides conflicting results (Cipolletta et al., 2022). For instance, studies in China (Zhao & Wu, 2021; Zhou, 2022) and Greece (Gardikiotis et al., 2021) observed amplification effects, while in the US, attenuation processes were found for conservative media (Chung & Jones-Jang, 2022), thus confirming media- and culture-related differences in risk amplification.

However, prior studies in the SARF context mostly analyze either the communication about risks or audiences‘ responses to risk communication, lacking an integrative perspective. To address this issue, we not only asked to what extent public and private TV news—as most important information source during the pandemic (Dreisiebner et al., 2022)—exhibit characteristics that are considered to enhance risk perceptions (RQ1), but were also interested in the association between media use and changes in risk perception in Germany during the COVID-19 pandemic (RQ2). Therefore, we followed a multi-method approach.

Study 1: Quantitative Content Analysis

First, we examined the COVID-19-related reporting of leading German TV news, including the Tagesschau (public TV newscast) and RTL Aktuell (private TV newscast) (01.03.-21.04.2020, N = 321, sampling process in Figure 1). Measures (Table 1) included characteristics of news coverage potentially amplifying risks, i.e., volume of reporting, degree of debates, emotionalization, and specific frames (Rossmann et al., 2018; Shih et al., 2008).
Our data show a high volume of COVID-19-related reporting. Compared to the Tagesschau, RTL Aktuell addressed the issue even more often ($t(275.45) = -12.92$, $p < .001$). While the degree of debates was low in both newscasts, the reporting of RTL Aktuell was more emotionalizing (i.e., risk enhancing) than the reporting of the Tagesschau ($\chi^2(2) = 18.449$, $p < .001$). As for the frames, the consequences frame (amplifying) was most common throughout the sample (and even more emphasized in RTL Aktuell, $\chi^2(2) = 8.156$, $p = .017$). However, the (risk attenuating) action frame was also very prominent, while other frames were not.

Thus, despite providing both risk amplifying and attenuating information, TV news, especially RTL Aktuell, exhibited more characteristics considered to amplify risk perceptions (RQ1).

Study 2: Panel Survey

To answer RQ2, we conducted a two-wave panel survey with a quota sample recruited by an online panel provider. Field time was 23.-31.03.2020 for the first (t1; N = 1,378) and 15.-21.04.2020 for the second wave (t2; N = 1,061). In both surveys, we measured perceived susceptibility (1 = not probable, 5 = very probable) and severity of COVID-19 (1 = not severe at all, 5 = very severe) (Hubner & Hovick, 2020). At time two, respondents indicated how often they had encountered COVID-19-related information on public and private TV channels in between the waves. Based on these variables, we built four groups: users of both media (n = 513), only public TV users (n = 310), only private TV users (n = 105), and non-users (n = 133) and computed mixed ANOVAS for both indicators of risk perception (control variables: age, previous experience with COVID-19, Dryhurst et al., 2020).

For both aspects of risk perception, there was a significant main effect of TV news use (Table 2 and 3). Respondents who did neither use public nor private TV news showed the lowest risk perception. However, there was no significant interaction effect with time. Nonetheless, the estimated marginal means point out that private TV news users showed the highest perceived severity, which remained unchanged, while severity decreased in all other groups (Figure 3). This is in line with RTL Aktuell emphasizing consequences of COVID-19.

Discussion

Combining content analysis and survey data, our results indicate that TV news reporting on COVID-19 may have amplified users' risk perceptions. However, more research is needed to examine the effects of different types of media and changes in risk perceptions over time.

REFERENCES

Chung, M., & Jones-Jang, S. M. (2022). Red media, blue media, trump briefings, and COVID-19: Examining how information sources predict risk preventive behaviors via threat and efficacy. Health Communication, 37(14), 1707–1714. https://doi.org/10.1080/10410236.2021.1914386

Cipolletta, S., Andreghetti, G., & Mioni, G. (2022). Risk perception towards COVID-19: A systematic review and qualitative synthesis. International Journal of Environmental Research and Public Health, 19(8), 4649. https://doi.org/10.3390/ijerph19084649

Dreisiebner, S., März, S., & Mandl, T. (2022). Information behavior during the COVID-19 crisis in German-speaking countries. Journal of Documentation, 78(7), 160–175. https://doi.org/10.1108/JD-12-2020-0217

Dryhurst, S., Schneider, C. R., Kerr, J., Freeman, A. L. J., Recchia, G., van der Bles, A. M., Spiegelhalter, D., & van der Linden, S. (2020). Risk perceptions of COVID-19 around the world. Journal of Risk Research, 23(7-8), 994–1006. https://doi.org/10.1080/13669877.2020.1758193

Gardikiotis, A., Malinaki, E., Charisiadis-Tsitlakidis, C., Protonotariou, A., Archontis, S., Lampropoulou, A., Maraki, I., Papatheodorou, K., & Zafeiriou, G. (2021). Emotional and cognitive responses to COVID-19 information overload under lockdown predict media attention and risk perceptions of COVID-19. Journal of Health Communication, 26(6), 434–442. https://doi.org/10.1080/10810730.2021.1949649

Hubner, A. Y., & Hovick, S. R. (2020). Understanding risk information seeking and processing during an infectious disease outbreak: The case of Zika virus. Risk Analysis, 40(6), 1212–1225. https://doi.org/10.1111/risa.13456

Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., Kasperson, J. X., & Ratick, S. (1988). The social amplification of risk: A conceptual framework. Risk Analysis, 8(2), 177–187. https://doi.org/10.1111/j.1539-6924.1988.tb01168.x

Link, E. (2021). Information avoidance during health crises: Predictors of avoiding information about the COVID-19 pandemic among German news consumers. Information Processing & Management, 58(6), 102714. https://doi.org/10.1016/j.ipm.2021.102714

Rössler, P. (2017). Inhaltsanalyse (3rd ed.). UVK.

Rossmann, C., Meyer, L., & Schulz, P. J. (2018). The mediated amplification of a crisis: Communicating the A/H1N1 pandemic in press releases and press coverage in Europe. Risk Analysis, 38(2), 357–375. https://doi.org/10.1111/risa.12841

Seeger, M. W., Reynolds, B., & Sellnow, T. L. (2010). Crisis and emergency risk communication in health contexts: Applying the CDC model to pandemic influenza. In R. L. Heath & D. O'Hair (Eds.), Handbook of risk and crisis communication (pp. 493–506). Routledge.

Shih, T.-J., Wijaya, R., & Brossard, D. (2008). Media coverage of public health epidemics: Linking framing and issue attention cycle toward an integrated theory of print news coverage of epidemics. Mass Communication and Society, 11(2), 141–160. https://doi.org/10.1080/15205430701668121

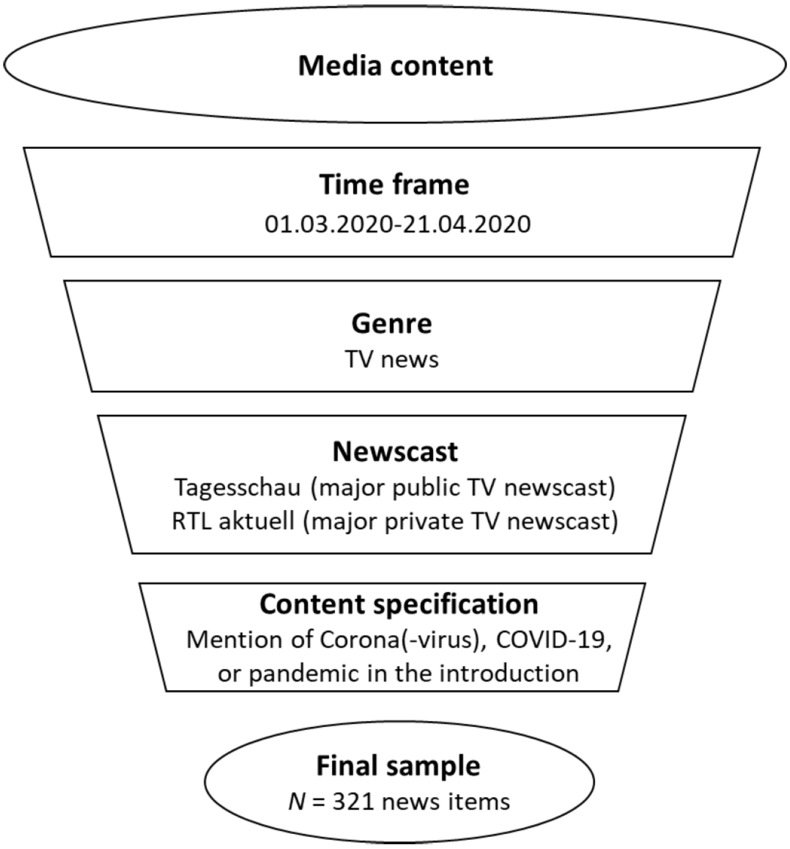
Tang, L., & Zou, W. (2021). Health information consumption under COVID-19 lockdown: An interview study of residents of Hubei Province, China. Health Communication, 36(1), 74–80. https://doi.org/10.1080/10410236.2020.1847447

Zhao, S., & Wu, X. (2021). From information exposure to protective behaviors: Investigating the underlying mechanism in COVID-19 outbreak using social amplification theory and extended parallel process model. Frontiers in Psychology, 12, 631116. https://doi.org/10.3389/fpsyg.2021.631116

Zhou, S. (2022). Impact of pandemic proximity and media use on risk perception during COVID-19 in China. Geomatics, Natural Hazards and Risk, 13(1), 591–609. https://doi.org/10.1080/19475705.2021.2003875

APPENDIX

Figure 1. Sampling procedure content analysis



Note. Figure based on Rössler (2017, p. 54).

Table 1. Variables and reliability

Variable	Krippendorff's Alpha
Frames	0.96
Risk-amplifying	
• Consequences … dissemination of SARS-CoV-2 or its individual, social, political, or economic consequences	0.86
• Consequences in detail … specification of consequences addressed in news item	0.88
• Uncertainty … characterized by uncertainties in any aspect(s) of the pandemic, including the cause, the cure, the possible spread or similar	1.0
Risk-attenuating	
• Action … all measures taken against the dissemination of SARS-CoV-2, including e.g., medical measures or political strategies	0.81
• Reassurance … emphasizes the idea that the public should not worry about the pandemic or its impact	1.0
• New evidence … refers to new evidence helping to understand SARS-CoV-2, reduce its spread or quell the infection	0.85
Volume … overall volume of COVID-19 related reporting	0.96

Degree of debates … difference in opinions, outright arguments/disagreements/debates, antagonism between opposing opinions or stances	0.96
Emotionalization … use of emotional instead of abstract, sober language	0.87

Note. Variables based on Shih et al. (2008) and Rossmann et al. (2018). News items were coded by two student coders, reliability measures were derived from coding 8 randomly selected newscasts (n = 50 news items).

Figure 2. Effect of time and TV news use on susceptibility (age as covariate)

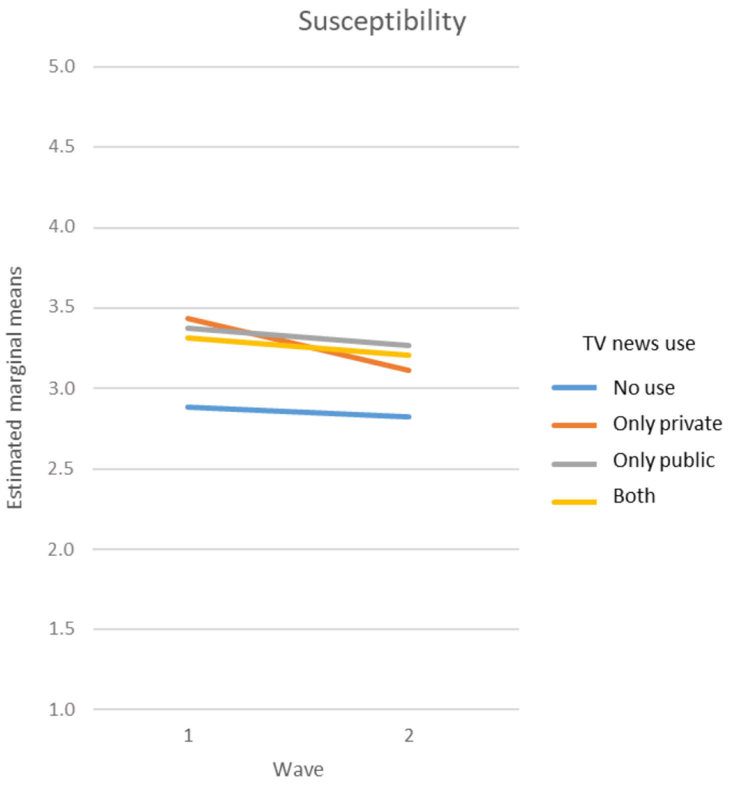


Figure 3. Effect of time and TV news use on severity (age as covariate)

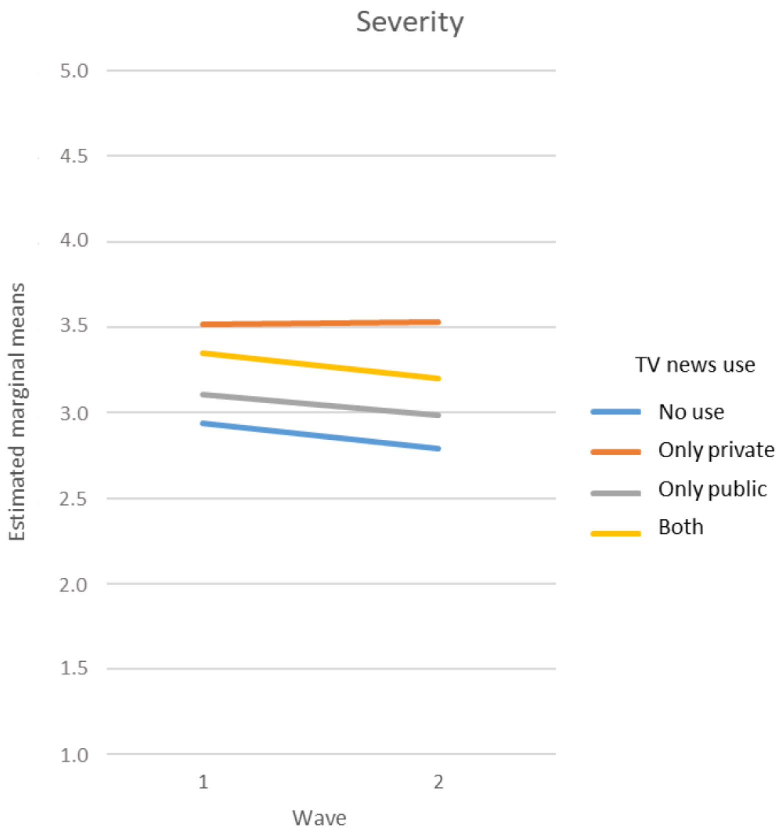


Table 2. Results of the mixed ANOVA for susceptibility

	F	*df*	*p*	η^2p
Within subject				
Time	14.597	1	<.001	.014
Time*TV news use	2.279	3	.078	.006
Error(Time)		1055		
Between subject				
Constant term	1367.982	1	<.001	.565
TV news use	8.602	3	<.001	.024
Error		1055		
Control				
Prior experience	46.781	1	<.001	.042
Age	26.387	1	<.001	.024

Table 3. Results of the mixed ANOVA for severity

	F	*df*	*p*	$\eta^2 p$
Within subject				
Time	4.854	1	.028	.005
Time*TV news use	1.047	3	.371	.003
Error(Time)		1055		
Between subject				
Constant term	199.359	1	<.001	.159
TV news use	11.611	3	<.001	.032
Error		1055		
Control				
Prior experience	0.000	1	.993	.000
Age	245.623	1	<.001	.189

Breaking Barriers – Segmenting Target Groups for Health and Climate Change Communication in Germany

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Climate change is the biggest threat for human health (Costello et al., 2009; Romanello et al., 2021), as it initiates and exacerbates a series of detrimental health consequences. Present and future effects of climate change include, but are not limited to, increasing heat strokes, spread of disease vectors and a rise in allergens and respiratory problems (Romanello et al., 2021). Climate change disproportionately affects the elderly and individuals with chronic conditions (Balbus & Malina, 2009) making them important target groups for communication about the health consequences of climate change.

In order to mitigate climate change and reduce negative health effects, large-scale measures need to be implemented, requiring input from governments and society (Costello et al., 2009). Stern and colleagues (2000) proposed a triad of environmentally significant behaviors. Besides individual behavior change, public support of political measures is needed (IPCC, 2022). Finally, political participation is crucial to initiate systemic and legislative changes (Ockwell et al., 2009). In the present research, we summarize these three aspects under the concept of readiness to act (RTA) against climate change.

To increase efficacy and sustainability of such transformative processes, they need to be complemented with science and risk communication (Jenny & Betsch, 2022). For tackling health crises, the associated risks should be well understood (Dryhurst et al., 2020; Noar & Zimmerman, 2005). To effectively communicate climate change, scientists have suggested segmentation of the audience and targeting specific groups (Berger et al., 2019; Gifford, 2011). Thus, this research defines highly vulnerable individuals as well as people with low RTA as target groups and aims at understanding their segmenting demographic characteristics and how they can be reached.

We conducted an online survey in Germany at four time points between August 2022 and January 2023. The total sample (N = 3.845) is quota-representative for age crossed with gender and federal state. Besides socio-demographic factors, we assessed the health risk perception of climate change consequences (e.g., extreme weather events). Moreover, we captured the RTA based on three indicators: individual behavior (e.g., meat consumption), acceptance of policies (e.g., speed limit on freeways) and political participation (e.g., taking part in demonstrations). Finally, we assessed the frequency of information about climate change and the use of and trust in certain media types (e.g., Social Media, newspapers).

The analysis of different health risk perceptions showed that some risks, such as low food-quality, were perceived as lower than others, e.g., extreme weather events. Multiple linear regressions were performed to identify sociodemographic factors that affect risk perceptions and the RTA. For risk perceptions, some sociodemographic factors, i.e., female gender, living in a bigger municipality, and having a chronic condition were related to higher risk perceptions. For RTA, the results showed that older age, female gender, high education, and living in a bigger municipality were positively related with RTA. In general, the effect sizes were rather small ($\beta < .11$ to $\beta < .29$). Less than half of the participants (39-44%) indicated that they inform themselves (very) frequently while a third (30-34%) rarely or never obtained information about climate change. When examining the use of and trust in different media types for individuals with low RTA and high vulnerability, the study found no clear patterns. In general, people with low RTA informed themselves less often across all media types. Other than that, people with low RTA barely differed from those with medium or high RTA regarding their information behavior. This was also true for people with a chronic condition, even though they perceived greater health risks.

This study revealed that health risks due to climate change are perceived quite differently – less obvious consequences (e.g., psychological consequences) are considered less risky than rather obvious consequences (such as heat waves or extreme weather). While further results suggest that certain socio-demographics are related to differences in RTA, additional psychological variables need to be considered (such as risk perception, social norms, or selfefficacy; Betsch et al., in prep) to better understand differences in RTA. It proved challenging to find a practical segmentation method for targeting specific groups via certain media types. An important conclusion regarding media use is that people with low RTA search less information regarding the topic, while the causal direction is unclear. Yet, more indirect ways of reaching this group (e.g., indirectly via entertainment education formats etc.; e.g., Lubjuhn & Pratt, 2009) may be needed. While using segmentation according to demographics might have a positive impact when done on a large scale (e.g., by targeting people in smaller municipalities), it should not be the only horse we back to promote climate action and protect human health. Especially vulnerable groups need to be better understood to enable health communicators to reach this important target group.

REFERENCES

Balbus, J. M., & Malina, C. (2009). Identifying vulnerable subpopulations for climate change health effects in the United States. Journal of occupational and environmental medicine, 51(1), 33–37.

Berger, N., Lindemann, A.-K., & Böl, G.-F. (2019). Wahrnehmung des Klimawandels durch die Bevölkerung und Konsequenzen für die Risikokommunikation. Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz, 62(5), 612–619. https://doi.org/10.1007/s00103-019-02930-0

Betsch C., Geiger M., Lehrer L. et al. (in prep) Modeling the readiness to act against climate change.

Costello, A., Abbas, M., Allen, A., Ball, S., Bell, S., Bellamy, R., Friel, S., Groce, N., Johnson, A., Kett, M., Lee, M., Levy, C., Maslin, M., McCoy, D., McGuire, B., Montgomery, H., Napier, D., Pagel, C., Patel, J., … Patterson, C. (2009). Managing the health effects of climate change. The Lancet, 373(9676), 1693–1733. https://doi.org/10.1016/S0140-6736(09)60935-1

Dryhurst, S., Schneider, C. R., Kerr, J., Freeman, A. L. J., Recchia, G., van der Bles, A. M., Spiegelhalter, D., & van der Linden, S. (2020). Risk perceptions of COVID-19 around the world. Journal of Risk Research, 23(7–8), 994–1006. APA PsycInfo. https://doi.org/10.1080/13669877.2020.1758193

Gifford, R. (2011). The dragons of inaction: Psychological barriers that limit climate change mitigation and adaptation. American Psychologist, 66(4), 290–302. https://doi.org/10.1037/a0023566

IPCC, W. (2022). Climate change 2007: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK.

Jenny, M. A., & Betsch, C. (2022). How large-scale behavioural data can support climate action and systemlevel change.

Lubjuhn, S., & Pratt, N. (2009). Media communication strategies for climate-friendly lifestyles – Addressing middle and lower class consumers for social-cultural change via Entertainment-Education. IOP Conference Series: Earth and Environmental Science, 8, 012009. https://doi.org/10.1088/1755-1315/8/1/012009

Noar, S. M., & Zimmerman, R. S. (2005). Health Behavior Theory and cumulative knowledge regarding health behaviors: Are we moving in the right direction? Health Education Research, 20(3), 275–290. https://doi.org/10.1093/her/cyg113

Ockwell, D., Whitmarsh, L., & O'Neill, S. (2009). Reorienting climate change communication for effective mitigation: Forcing people to be green or fostering grass-roots engagement? Science Communication, 30(3), 305–327.

Romanello, M., McGushin, A., Di Napoli, C., Drummond, P., Hughes, N., Jamart, L., Kennard, H., Lampard, P., Solano Rodriguez, B., Arnell, N., Ayeb-Karlsson, S., Belesova, K., Cai, W., Campbell-Lendrum, D., Capstick, S., Chambers, J., Chu, L., Ciampi, L., Dalin, C., … Hamilton, I. (2021). The 2021 report of the Lancet Countdown on health and climate change: Code red for a healthy future. The Lancet, 398(10311), 1619–1662. https://doi.org/10.1016/S0140-6736(21)01787-6

Stern, P. C. (2000). New environmental theories: Toward a coherent theory of environmentally significant behavior. Journal of social issues, 56(3), 407–424.

The potential of the method Group Concept Mapping to improve research about environmental health literacy among socially disadvantaged groups – Research in Progress

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Background:
The unequal distribution of environmental risks and resources reinforces already existing health risks, such as poverty or lack of education, of socially low status groups (i.e., socially disadvantaged groups)1. This is due to the varying degree of vulnerability and adaptive capacity to environmental risk exposure between different social status groups2. To explain this difference, there are different assumptions. Either environmental health information is 1) not accessible and 2) comprehensible for specific vulnerable groups (i.e., socially disadvantaged groups) or people lack 3) the knowledge (and skills) to understand environmental health risks or 4) to develop appropriate solutions to make informed decisions to reduce health risks, improve quality of life and protect the environment (all of this being aspects of environmental health literacy, EHL3).

From the literature in the field of health communication it can be deduced that socially disadvantaged groups belong to the vulnerable groups that are seldom studied4. However, existing research often neglects understanding environment-related health risks from the perspective of socially disadvantaged persons. Additionally, it lacks discussion with these groups about the accessibility and comprehensibility of environmental health information. In order to gain more insights about these vulnerable groups, a participatory research method is useful, allowing for consideration of life circumstances and the range and diversity of different voices and experiences. The method Group Concept Mapping (GCM)5 allows a high degree of participation, which is not designed to build consensus, but to address the individual life situation of the participants. The method engages voice and participation, especially of those not typically engaged. It also develops and facilitates understanding and helps to discover new meaning through increased clarity of the issues.

Thus, the aim of the study is to test GCM as a participatory research method in the field of (environmental) health communication, to analyze the four different aspects of EHL among socially disadvantaged groups.

Methods:
Sample: People from deprived neighbourhoods that have a high proportion of structural and social problems (e.g., low social status based on poverty/low income or low educational status) are recruited as experts, via local contact points (e.g., via the neighborhood management or social institutions), which are committed to socially disadvantaged groups. The experts can recruit additional people to reach more participants for the GCM.

Process: GCM uses a participant-centered approach, which consists of the following parts: Planning, developing ideas, preparing content, organization, conducting analysis, interpreting and using the results. The experts are involved throughout the entire process of GCM by taking over individual parts or carrying them out together with the researchers.
First EHL is collected from the experts in order to assess their knowledge and skills in solving environment-related health risks. For this purpose, a questionnaire will be used that is currently being tested on students in the fields of public health and medicine. The questionnaire could be used to identify initial indications of EHL of people from socially disadvantaged groups.
After that, each expert is asked to brainstorm about their own knowledge and beliefs about the accessibility, understandability and comprehensibility of environmental health information.

Analysis: In a mixed-method design GCM combines qualitative with quantitative methods. For analysis the qualitative contributions from the brainstorming are related to each other, sorted and rated. Then, map analysis is done by creating blocks of group knowledge, opinions, beliefs and values using quantitative hierarchical cluster analysis or multidimensional scaling. Experts and researchers jointly interpret the resulting map and discuss meaning and value.

In a final step researchers and experts decide together how best to use the results. One possibility would be to plan a larger event to stimulate the implementation of environmental health information needs. Specific implementation options and recommendations for action could be discussed together with professionals from the field of (environmental) health communication and to develop specific environmental health information suitable for the life circumstances of people from socially disadvantaged groups.

Expected results: We expect to gain insights how GCM can be deployed as a participatory method to improve EHL among vulnerable groups (e.g., to identify multipliers and other sources of information (e.g., media) or barriers, which provide or hinder access to environmental health information).

Discussion: As this is research in progress, we would like to discuss 1) how GCM can be implemented in the context of (environmental) health sciences, 2) which potentials and limits the method has to analyze vulnerable populations in terms of 3) accessibility and involvement in the participatory process and 4) what possibilities this method offers in terms of strengthening EHL.

REFERENCES

1 Lehmkuhl, D. (2019). Das Thema Klimawandel und seine Bedeutung im Gesundheitssektor: Entwicklung, Akteure, Meilensteine. Bundesgesundheitsblatt, 62, 546–555.

2 Bolte, G., Bunge, C., Hornberg, C. & Köckler, H. (2018). Umweltgerechtigkeit als Ansatz zur Verringerung sozialer Ungleichheiten bei Umwelt und Gesundheit. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz [Environmental justice as an approach to tackle environmental health inequalities], 61(6), 674–683. https://doi.org/10.1007/s00103-018-2739-6

3 Finn, S. & O'Fallon, L. (2017). The Emergence of Environmental Health Literacy-From Its Roots to Its Future Potential. In: Environmental Health Perspectives 125 (4), S. 495–501. DOI: 10.1289/ehp.1409337

4 Reifegerste, D. (2021). Gesundheitskommunikation in der Prävention und Gesundheitsförderung für schwer erreichbare Zielgruppen. In: Tiemann, M., Mohokum, M. (eds) Prävention und Gesundheitsförderung. Springer Reference Pflege – Therapie – Gesundheit . Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-62426-5_16

5 Kane, M. A. & Rosas, S. R. (2017). Conversations About Group Concept Mapping: Applications, Examples, and Enhancements(1st ed.). SAGE Publications, Inc.

The truth lies in between. Dyadic Interviews for research with vulnerable persons

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Methodological approaches in health communication for/with vulnerable groups

Dyadic interviews are a common form of qualitative methods to research vulnerable populationsin the health context. These vulnerable groups include, for example, older adults, people with disabilities, people with cognitive impairments, and stigmatized people (Kwek, 2017). Due to their vulnerability (i.e., limited resources or higher risks of poor physical, psychological, or social health) (Schiavo, 2013), they are often dependent on supportive personsto cope with their illness. Hence, the respective research often includes another person accompanying and supporting the vulnerable person. This can either be a private companion, e.g., a family member, or a professional companion like a nurse. Thus, dyadic interviews are often the only opportunity to conduct research with these vulnerable persons.

In addition, interviews with the dyad of caregiver and cared-for are increasingly used in health research to explore the dyadic coping with illnesses, because social relationships are known to have an important influence on health and coping (Bodenmann, 2019). With dyadic interviews it is not only possible to get in contact with the patient and learn about his/her health status, but also to analyse his/her relationships and communication with informal caregivers and health professionals.

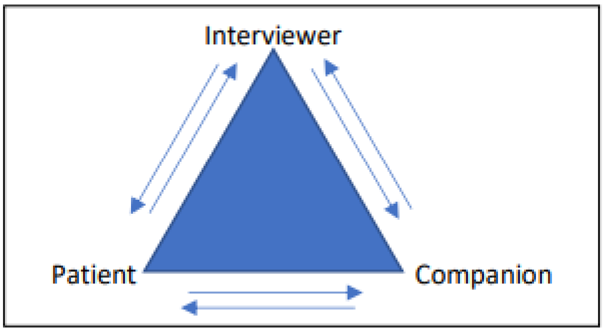
Consequently, dyadic interviews offer many opportunities for research with vulnerable persons. However, many researchers still avoid conducting dyadic interviews, because they fear the methodological challenges of collection and analysis (Morgan, 2016). Our contribution examines the opportunities and methodological challenges of dyadic interviews based on a study about the relationship and communication dynamics of elder (> 65 years) couples, in which one partner cares for the other. It is a cared-for and caregiver in couple dyad, which was used as an example to reflect on the opportunities and challenges in (1) data collection and (2) analysis of dyadic interviews.

With regard to (1) data collection, after an open invitation (Flick, 2018), the interviews (n=7) increasingly changed from interviewing the individual partners to a conversation among the three persons (interviewer, caregiver, cared-for). Impulses did not just come from the interviewer, but the partners also asked each other questions and set impulses for narration. The participants increasingly determined the course of the conversation and set topics independently in most cases, while the interviewer followed them.
At the same time, as is known from research on communication during accompanied doctor visits (Wolff & Roter, 2011), the presence of a family member can be a hurdle for the patient to express certain topics such as problems with the caregiver (e.g., aggressive behaviour) or 2 Interviewer Patient Companion shameful topics. It is also possible, that one

partner is not capable or willing to participate in the interview. In these cases, interviews (or parts of them) with only one partner can be a solution. In our example study, three interviews were conducted only with the caregivers, because they did not want their partners to know about the real extent of their burden.

Regarding (2) analysis of dyadic interviews, the units of analysis are not single individuals, but individuals in relation to each other. The focus of the analysis is on the way of interaction between the two interviewees and among the interviewer and the respective interviewees (see figure 1).

Figure 1. Communication in the triad



Examining collective orientations and habitus in the couple´s interactions, the documentary method (Bohnsack et al., 2018) was used in our study. This method was developed to analyse transcripts of group discussions and can also be used for dyadic interviews (i.e., conversations among three people) (Przyborski, 2004). For example, conflicts were implicitly communicated in some segments of the interview. Here, the imbalance of the relationship between caregiver and cared-for partner became particularly evident. The hitherto joint, seamlessly connected partner narrative came to a standstill, and/or interviewees ceased the cooperative reporting with “we” or speaking to one another. In other situations, conflict was indicated more explicitly by the interviewees expressing themselves uncooperatively or sometimes competitively and contradictorily to one another. It can be seen that established roles are interrupted by adapting to and coping with illnesses and functional limitations, and the couple relationship dwindled (Author, 2023). Thus, in the analysis, the way of talking to each other can give a lot of insights about the relationship between the partners.

In sum, there are many opportunities for dyadic interviews despite the methodological challenges – which are solvable. Dyadic interviews serve as a method to get information on hardto-reach persons, as vulnerable people often are. In our presentation, we will give specific examples of the interviews and discuss the transfer to other interview dyads, such as patienthealth professional or patient-adult child dyads with migration background.

REFERENCES

Bodenmann, G., Falconier, M. K., & Randall, A. K. (2019). Editorial: Dyadic Coping. Frontiers in Psychology, 10, 1498. https://doi.org/10.3389/fpsyg.2019.01498

Bohnsack, R., Hoffmann, N. F., & Nentwig-Gesemann, I. (Eds.). (2018). Typenbildung und Dokumentarische Methode: Forschungspraxis und methodologische Grundlagen. Verlag Barbara Budrich

Flick, U. (2018). An introduction to qualitative research (6th ed.). SAGE.

Kwek, A. (2017). The indispensability of labelled groups to vulnerability in bioethics. Bioethics, 31(9), 674–682. https://doi.org/10.1111/bioe.12379

Morgan, D. L. (2016). Essentials of Dyadic Interviewing. Routledge. https://doi.org/10.4324/9781315429373

Przyborski, A. (2021). Gesprächsanalyse und dokumentarische Methode: Qualitative Auswertung von Gesprächen, Gruppendiskussionen und anderen Diskursen (2nd ed.). VS Verlag für Sozialwissenschaften

Schiavo, R. (2013). Health communication: From theory to practice. Vol. 217. John Wiley & Sons

Wolff, J. L. & Roter, D. L. (2011). Family presence in routine medical visits: a meta-analytical review. Social Science and Medicine, 72(6), 823–831. https://doi.org/10.1016/j.socscimed.2011.01.015

Health Apps & Digital Tools

The significance of health apps featuring gamification content in the context of self-management for chronic diseases

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Diabetes mellitus is the collective term for a variety of disorders of human metabolism characterized by persistently elevated blood glucose levels, i.e., chronic hyperglycemia. (Harreiter & Roden, 2019; Kabisch et al., 2014). In addition to acute dangers of hypoglycemia, such as disturbances of consciousness, chronic hyperglycemia can also lead to numerous serious physical and psychological consequences (Kalscheuer, 2017; Madonna et al., 2017). In Europe, approximately 50-60 million people are diagnosed with diabetes. A distinction can be made between type 1 diabetes and type 2 diabetes, where type 1 diabetes cannot be prevented, while the main causes of type 2 diabetes are obesity and lack of exercise, in addition to genetic predisposition. In addition to social and economic preventive measures to avoid type 2 diabetes, measures must also be taken to ensure the best possible therapy and, ultimately, the best possible state of health for those suffering from the disease. Relevant in this regard is continuous recording of personal diabetes data and, if necessary, responsible use of medications or insulin injections (Lambrinou et al., 2019). Good self-management is the essential key strategy here. Recently, the possibilities of app-based management of the disease have come to the fore and studies confirm their effectiveness (Ryan et al., 2017). While the overall usage of these apps is already researched, detailed analysis about specific elements is missing. One interesting aspect in this context are gamification elements (Bendel, 2023; Miller et al., 2016). It is assumed that gamification could be particularly motivating regarding patient compliance. Compliance describes the extent to which patients consistently act in accordance with medical recommendations and based on their own sufficient knowledge as required by the management of their disease (Gorenoi et al. 2007). Whether and to what extent gamification content can make helpful contributions to patient compliance in diabetes is still unknown. Therefore, the present study aims to address the following research question:

RQ: To what extent can self-management apps of diabetes patients, especially with gamification content help diabetes patients regarding their daily self-management and their compliance with the diabetes disease?

We conducted 12 qualitative interviews with diabetes type 1 or diabetes type 2 patients. The patients (6 male, 6 female) were between 26 and 60 years old. For analyzing the interviews, we used the thematic analysis (Braun, & Clarke, 2006).
According to the participants, using apps is a key component of self-management. Miriam (49 years) explains that she uses them to track her blood sugar levels and analyze them

over time: “Without this app, I would feel somewhat like in a vacuum, and, um, I think the emotional impact of the condition would become more significant for me. So, in a way, it has almost become like a hobby for me, as strange as it may sound.” Gregor (57 years) confirms that all the sub steps in self-management become less complicated. Milan (38 years) shares the same opinion because analog records can easily get lost, and phone is always at hand anyway.

The interviewees report that they prefer apps being free of charge as well as easy to use. This is an important criterion for quality for them. However, apps with gamification content were not consciously selected but rather stumbled upon by chance. Especially in the early phase of disease management, i.e., shortly after diagnosis, there was talk of apps in general and gamification because the engagement with one's own illness was still new and exciting. Aspects such as point systems were perceived as motivating and entertaining and were tested out of curiosity, as stated by Carolin (36 years). A value is seen in the fact that the seriousness of the condition can be somewhat mitigated through the design of gamification elements, resulting in less development of fears. But while the app itself has positive effects on one's own health behavior, confirmed by all participants, this does not necessarily apply to the gamification elements as expected regarding patient compliance. These elements can also add additional stress and pressure on already bad days, as Anni explains (26 years). Milan (38 years) also elaborates that intense usage of these elements can take up too much time.

The present study demonstrates in line with Ryan et al., (2017) that participants believe that digital tools such as apps are indispensable in their daily disease management. Regarding gamification elements, a mixed picture emerges. While some perceive them as motivating, the playful nature with challenges can also be perceived as disruptive and pressure-inducing. These results are discussed referring to theoretical approaches of patients’ compliance with chronic diseases.

REFERENCES

Bendel, O. (2023). Gamification. Gabler Wirtschaftslexikon. Last accessed on 15/05/2023 from https://wirtschaftslexikon.gabler.de/definition/gamification-53874/version-180769

Gorenoi, V., Schönermark, M. & Hagen, A. (2007). Maßnahmen zur Verbesserung der Compliance bzw. Adherence in der Arzneimitteltherapie mit Hinblick auf den Therapieerfolg. [Measures to improve compliance or adherence in drug therapy with regard to therapeutic success.] Köln: DAHTA.

Harreiter, J., & Roden, M. (2019). Diabetes mellitus – Definition, Klassifikation, Diagnose, Screening und Prävention (Update 2019). [Definition, classification, diagnosis, screening, and prevention.] Wiener klinische Wochenschrift, [Vienna Clinical Weekly.] 131(S1), 6–15.

Kabisch, S., Kulzer, B., Pfeiffer, A. F. H., Pfohl, M., Schifferdecker, E., Schulze, M. B., & Weitgasser, R. (2014). Allgemeine Grundlagen des Diabetes mellitus. [General Basics of Diabetes Mellitus.] In H. Schatz & A. F. H. Pfeiffer (Eds.), Diabetologie kompakt [Compact

Diabetology.] (pp. 1–31). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-41358-2_1

Kalscheuer, H., Serfling, G., Schmid, S., & Lehnert, H. (2017). Diabetologische Notfälle: Hypoglykämie, ketoazidotisches und hyperglykämisches Koma. [Diabetological Emergencies: Hypoglycemia, Diabetic Ketoacidosis, and Hyperglycemic Coma.] Der Internist, [The Internist], 58(10), 1020–1028.

Lambrinou, E., Hansen, T. B., & Beulens, J. W. (2019). Lifestyle factors, self management and patient empowerment in diabetes care. European Journal of Preventive Cardiology, 26(2_suppl), 55–63.

Madonna, R., Balistreri, C. R., Geng, Y.-J., & De Caterina, R. (2017). Diabetic microangiopathy: Pathogenetic insights and novel therapeutic approaches. Vascular Pharmacology, 90, 1–7.

Miller, A. S., Cafazzo, J. A., & Seto, E. (2016). A game plan: Gamification design principles in mHealth applications for chronic disease management. Health Informatics Journal, 22(2), 184–193. https://doi.org/10.1177/1460458214537511

Ryan, E. A. et al. (2017). Improved A1C Levels in Type 1 Diabetes with Smartphone App Use. Canadian Journal of Diabetes, 41(1), 33–40.

How do I make a good choice? Introducing a European health app quality label to empower vulnerable users

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Health apps have shown to be beneficial to users' health outcomes or disease management (Lee et al., 2018). However, the number of health apps available in app stores is overwhelming (Carroll et al., 2017), making it difficult to choose. Users struggle with the question which app is safe to use, provides adequate health benefits, and handles data carefully. Such concerns can sometimes even prevent them from using health apps (Torous et al., 2018). To support people make informed choices about health apps, a European health app quality label has been developed and extensively tested in a large European research consortium (including Italy, Lithuania, Croatia, Germany and The Netherlands).

The quality label ranges from A (very good) to E (not good) (see Figure 1), and reflects the results of an independent test (International Organization for Standardization, 2021). The assessment covers four different areas, i.e., easy to use, healthy and safe (e.g., whether the app is safe to use and actually contributes to the intended health goals), secure data (e.g., whether the data collected by the app is handled carefully), and robust build (e.g., whether the app is regularly maintained). While the research consortium is in contact with the European Commission and national governments to implement this label and to ensure that it is adopted by app stores, the aim of our study is to co-create and test optimal communication strategies to introduce the label to vulnerable health app users.

The communication strategies are developed by means of co-creation to ensure that European citizens can adequately use the label. During this process, we pay specific attention to vulnerable groups, such as people with lower levels of health literacy. Low health literacy is associated with poor health outcomes (Taggart et al., 2012), and this group might therefore benefit most from health apps to monitor and improve their health. At the same time, people with lower health literacy levels report less health app use compared to groups with higher levels of health literacy (Mackert et al., 2016). This also stresses the importance of this target group for the communication, for example by increasing trust or reducing potential barriers to health app use. Since the quality label aims to facilitate informed health app choice it is not only important that people understand how they can use the label to discern good apps from bad apps, but also choose an app that particularly scores high on aspects that are important to the specific user (e.g., safe data). Supporting this decision making process thus ultimately contributes to the empowerment of this group.

Guided by the Double Diamond approach (Design Council, 2019) we investigate what aspects of the quality label are clear to future users and which elements require additional explanation (and in which form). We also investigate where in the health app decision making process the health app quality label would be useful and how people would like to be presented with it. At least nine co-creation sessions are held, either online or offline, and each session has three to six participants. Inclusion criteria are being at least 16 years old and smartphone user. Active health app use was not chosen as an inclusion criterion as we are also interested in the barriers people might experience. We aimed for a diverse group of participants, including patients, as they may use health apps for disease management, and people with lower levels of heath literacy.

The first phase (six sessions), in which ideas and experiences are collected is almost completed. The transcripts and visual material collected during the sessions (boards with sticky notes) will be analyzed using the interpretative content analysis approach. Based on the analysis of this qualitative data, communication prototypes will be developed and presented to the participants during the second phase of the co-creation (at least three sessions, including one with health care providers to make sure that the communication fits national health care settings) in September 2023. The purpose of the second phase is to check with the participants whether all their input has been correctly translated into the communication materials. During the ECHC conference, we will share the results of the co-creation process and how they have been translated into communication. This communication will be used to introduce the label to the European public. Furthermore, the supporting communication will enable everyone in Europe, and especially those citizens who are vulnerable due to lower levels of health literacy, to make informed choices about health apps. This will ultimately empower this group and benefit their health and European public health in general.

REFERENCES

Carroll, J. K., Moorhead, A., Bond, R., LeBlanc, W. G., Petrella, R. J., & Fiscella, K. (2017). Who uses mobile phone health apps and does use matter? A secondary data analytics approach. Journal of Medical Internet Research, 19(4), e125.

Design Council (2019). Framework for innovation. Derived on April 30, 2023 from https://www.designcouncil.org.uk/our-work/skills-learning/tools-frameworks/framework-for-innovation-design-councils-evolved-double-diamond/

International Organization for Standardization (2021). Health app and wellness app assessment framework and label (CEN ISO/TS 82304-2). Available at: https://www.iso.org/standard/78182.html

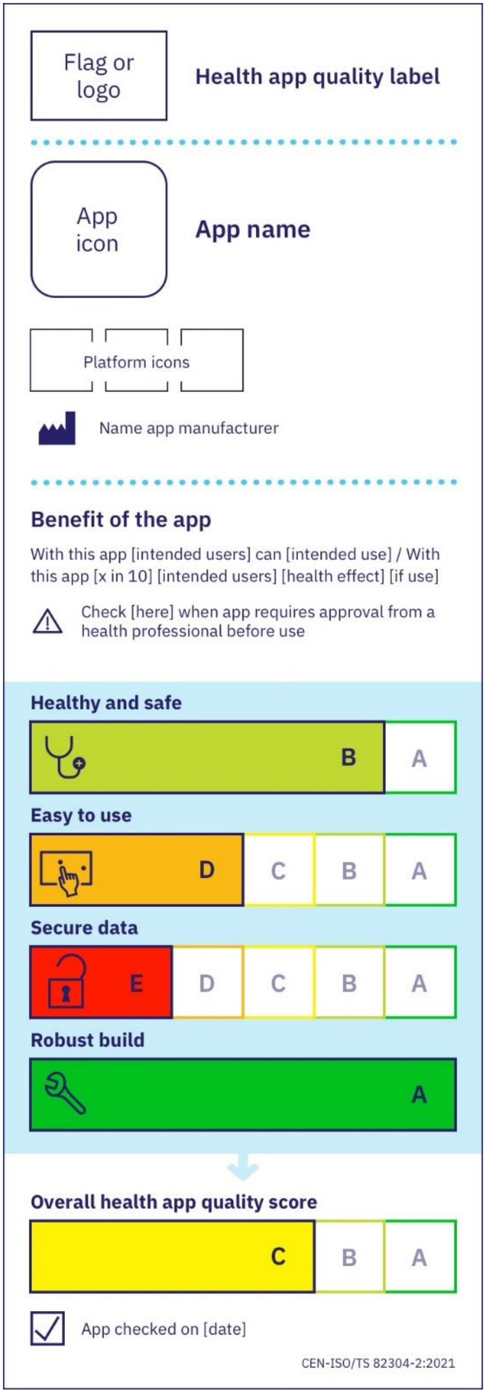
Lee, J. A., Choi, M., Lee, S. A., & Jiang, N. (2018). Effective behavioral intervention strategies using mobile health applications for chronic disease management: a systematic review. BMC medical informatics and decision making, 18(1), 1-18.

Mackert, M., Mabry-Flynn, A., Champlin, S., Donovan, E. E., & Pounders, K. (2016). Health literacy and health information technology adoption: the potential for a new digital divide. Journal of Medical Internet Research, 18(10), e264.

Taggart, J., Williams, A., Dennis, S., Newall, A., Shortus, T., Zwar, N., ... & Harris, M. F. (2012). A systematic review of interventions in primary care to improve health literacy for chronic disease behavioral risk factors. BMC Family Practice, 13, 1-12.

Torous, J., Nicholas, J., Larsen, M. E., Firth, J., & Christensen, H. (2018). Clinical review of user engagement with mental health smartphone apps: evidence, theory and improvements. BMJ Mental Health, 21(3), 116-119.

Figure 1. Health app quality label



Patient-Facing Mobile Chronic Disease Interventions with Healthcare Provider Co-Use: A Systematic Review of Tool Characteristics and Effectiveness

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Unlike acute illnesses, the treatment of chronic diseases is not primarily carried out in the medical practice or the hospital (Schaeffer & Moers, 2008). Instead, the prolonged nature and individual manifestation of chronic diseases place patients at the forefront of responsibility. Therefore, patient-led chronic disease self-management is indispensable (Clark et al., 1991) and embraces three tasks: Patients need to learn about their condition (knowledge management), adhere to medical treatments and a balanced lifestyle (condition management), and cope with negative feelings associated with the disease in a functional way (emotional management). However, maintaining self-management efforts is a conceivably challenging endeavor, as evidenced by alarmingly low adherence (Llorca et al., 2021) and reduced quality of life (Wong et al., 2019). Hence, to encourage long-term self-management, active self-management support from patients' healthcare providers (i.e., physicians, nurses, health educators) is imperative (Patel et al., 2018). Yet structural constraints and limited personnel resources within the healthcare system hinder the provision of attentive self-management support (Daruwalla et al., 2019).

To tackle this shortfall, healthcare providers are increasingly recommending the use of mobile health technologies (mHealth) to patients – leveraging the proliferation and ubiquity of mobile media. Beyond mere recommendation, healthcare providers can act as co-users by engaging in mobile communication with patients or accessing patients' self-tracked data through synchronized web or mobile platforms. Integrating mHealth into patient care allows healthcare providers to adjust treatment plans, offer timely feedback, or conduct remote consultations (Varshney, 2014). Extant research has explored the role of healthcare providers in the adoption and everyday life integration of mHealth (for a review, see Leigh et al., 2019), suggesting that mHealth co-use may encourage patients' self-management efforts. However, given the enormous variety of mHealth tools and ways of co-use it remains unclear which self-management tasks and tool characteristics – that is mobile devices, platforms, featured media attributes, and integrated behavior change techniques (BCTs) within interventions (Michie et al., 2013) – have the greatest potential to enhance effectiveness of co-used mHealth. Thus we ask:

RQ1: What tool characteristics in patient-facing mHealth interventions with healthcare provider co-use are predominantly examined?

RQ2: How do healthcare provider co-use and mHealth tool characteristics relate to effectiveness regarding patients' health-related self-management outcomes?

Method

To this end, we conducted a systematic review of the literature. Based on a previously conducted parent systematic review of 101 studies on the use and effects mHealth for chronic disease self-management (Authors, 2023; PROSPERO: omitted for peer review; OSF: https://osf.io/sg7tw/?view_only=4e90c83695ae44adb099b5f923efbb27), we selected a subsample of studies in which healthcare providers acted as co-users of patient-facing mHealth (n = 48 with k = 39 eligible for effectivity assessments) and updated the extracted data accordingly. The eligibility criteria (Table 1) and screening process (Figure 1) are detailed below. See Tables 2–4 for bibliographical and methodological information of the study corpus and its quality assessment according to the mHealth reporting checklist (Agarwal et al., 2016).

Results

A thorough tool characterization of mHealth interventions with healthcare provider co-use is provided in Figure 2 (RQ1). Co-use primarily served the purpose of supporting condition management (46/48; 95.8%). Less often, co-use played a role in knowledge (29/48; 60.4%) or emotional management (16/48; 33.3%). Most interventions ran on smart systems (39/48; 81.3%) delivered through apps (34/48; 70.8%). Furthermore, the majority of co-use systems included self-tracking features, in which healthcare providers monitored and reviewed patients' self-collected data to provide swift feedback (39/48; 81.3%). In contrast, actual healthcare provider-patient communication via chat platforms or voice and video calls was less frequently featured (31/48; 64.6%). This is striking, given the fact that effectivity assessments (RQ2; see Stehr et al., 2021 for coding scheme) revealed that communication features were the most effective overall (13/26; 50.0%), while self-tracking features scored relatively lower across cognitive, behavioral, emotional, and clinical measures, as well as quality of life (overall: 13/30; 43.3%; for an overview of all effectivity ratings, see Tables 5–9). Upon comparison of mHealth interventions with and without healthcare provider co-use (from the remaining studies in Authors, 2023), results even indicate a higher share of overall effective interventions in studies without healthcare provider co-use (25/43, 58.1%) than in those with this support (17/39, 43.6%).

Conclusions

In conclusion, enhancing self-management support through mHealth couse likely hinges on the establishment of effective communication channels that foster personal engagement between patients and healthcare providers. Moving beyond the limitations of brief feedback solely reliant on self-reported data, the crucial emphasis should lie in facilitating personal interactions to ensure tailored support and comprehensive care. Further results and limitations of the study will be discussed in the presentation.

REFERENCES

Agarwal, S., LeFevre, A. E., Lee, J., L'Engle, K., Mehl, G., Sinha, C., & Labrique, A. (2016). Guidelines for reporting of health interventions using mobile phones: mobile health (mHealth) evidence reporting and assessment (mERA) checklist. BMJ, i1174. https://doi.org/10.1136/bmj.i1174

Authors. (2023). Blinded for peer review. Clark, N. M., Becker, M. H., Janz, N. K., Lorig, K., Rakowski, W., & Anderson, L. (1991). Self-Management of Chronic Disease by Older

Adults: A Review and Questions for Research. Journal of Aging and Health, 3(1), 3–27. https://doi.org/10.1177/089826439100300101

Daruwalla Z, Thakkar V, Aggarwal M, Kiasatdolatabadi A, Guergachi A, Keshavjee K. Patient Empowerment: The Role of Technology. In F. Lau (Eds.) Improving Usability, Safety and Patient Outcomes with Health Information Technology, (pp. 70-74). ISO Press.

Leigh, S. J. & Ashall-Payne, L. (2019). The role of health-care providers in mHealth adoption. The Lancet Digital Health, 1(2), e58–e59. https://doi.org/10.1016/s2589- 7500(19)30025-1

Llorca, C. V. y, Cortés Castell, E., Ribera Casado, J. M., de Lucas Ramos, P., Casteig Ayestarán, J. L., Casteig Blanco, A., Gil Guillén, V. F., & Rizo Baeza, M. (2021). Factors Associated with Non-Adherence to Drugs in Patients with Chronic Diseases Who Go to Pharmacies in Spain. International Journal of Environmental Research and Public Health, 18(8), 4308. https://doi.org/10.3390/ijerph18084308

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., ... Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: Building an international consensus for the reporting of behavior change interventions. Annals of Behavioral Medicine, 46(1), 81–95. https://doi.org/10.1007/s12160-013-9486-6

Patel, N. J., Datye, K. A., & Jaser, S. S. (2018). Importance of patient-provider communication to adherence in adolescents with type 1 diabetes. Healthcare (Basel), 6(2). https://doi.org/10.3390/healthcare6020030

Schaeffer, D., & Moers, M (2008). Überlebensstrategien – ein Phasenmodell zum Charakter des Bewältigungshandelns chronisch Erkrankter [Survival strategies – a phase model on the character of coping actions of chronically ill patients]. Pflege & Gesellschaft, 13(1), 6–30.

Stehr, P., Reifegerste, D., Rossmann, C., Caspar, K., Schulze, A., & Lindemann, A.-K. (2022). Effective communication with caregivers to prevent unintentional injuries in children under seven years. A systematic review. Patient Education and Counseling, 105(8), 2721–2730. https://doi.org/10.1016/j.pec.2022.04.015

Rossmann, C., & Krömer, N. (2016). mHealth in der medizinischen Versorgung, Prävention und Gesundheitsförderung [mHealth in medical care, prevention and health promotion]. In F. Fischer & A. Krämer (Hrsg.), eHealth in Deutschland [eHealth in Germany] (S. 441–456). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-66249504-9_24

Varshney, U. (2014). Mobile health: Four emerging themes of research. Decision Support Systems, 66, 20–35. https://doi.org/10.1016/j.dss.2014.06.001

Wong, S. K. W., Smith, H. E., Chua, J. J. S., Griva, K., Cartwright, E. J., Soong, A. J., Dalan, R., & Tudor Car, L. (2019). Effectiveness of self-management interventions in young adults with type 1 and 2 diabetes: a systematic review and meta-analysis. Diabetic Medicine, 37(2), 229–241. https://doi.org/10.1111/dme.14190

Table 1. Inclusion and Exclusion Criteria

Category	Inclusion criteria	Exclusion criteria
Population	Patients of all age groups with diagnosed type 1 diabetes, type 2 diabetes, asthma, or COPD as main users of mHealth	People with no or other chronic diseases (this includes reversible stages such as prediabetes); Healthcare professionals or informal caregivers as main/only users of mHealth
Intervention	Chronic disease self-management interventions using mobile media	Chronic disease self-management interventions without mobile media
Comparator	Not applicable. Observational studies may not have a comparator; Control or comparison groups may receive no, traditional, offline, or non-mobile digital interventions	
Outcome	Tool characteristics of mHealth (envisaged self-management tasks, device, platform, media attributes, and BCTs) Theory base, behavioral determinants Adoption, post-adoption, and continued use of mHealth Health-related effects of mHealth use	Cost-effectiveness of mHealth
Study Design	Quantitative interventional and observational studies	Qualitative studies, content analyses design studies without empirical testing, evidence syntheses, theoretical treatises, research-in-progress, editorials, think-pieces

Figure 1. PRISMA Flowchart of Systematic Review Search Process

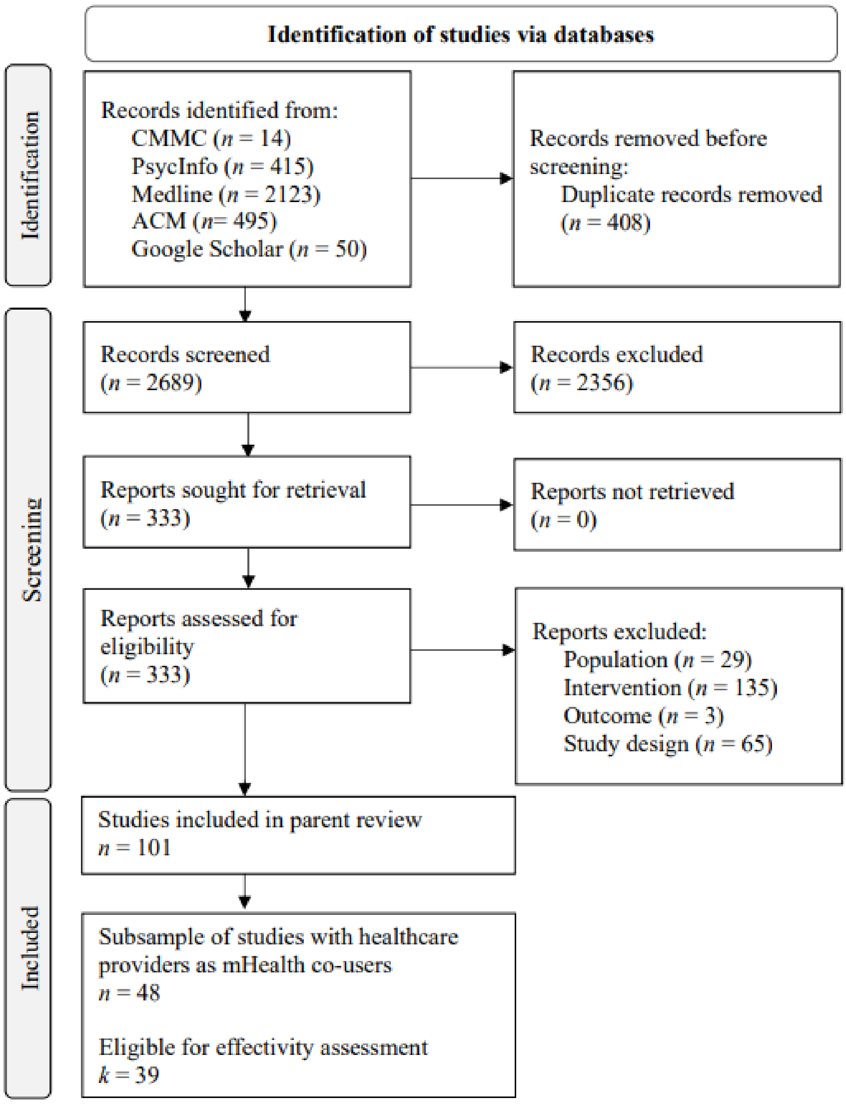


Table 2. Bibliographic Information

	Occurrence rate	
	n	%
Database		
PsycINFO	4	8.3
Medline	44	91.7
Publication years		
2011-2019	28	58.3
2020-2022	20	41.7
Country of affiliation of the first author		
Australia	1	2.1
Canada	2	4.2
China	7	14.6
Denmark	1	2.1
France	1	2.1
Germany	1	2.1
Ghana	1	2.1
India	1	2.1
Iran	2	4.2
Netherlands	3	2.1
Norway	1	6.3
Romania	1	2.1
Saudi Arabia	4	8.3
Singapore	1	2.1
South Korea	4	8.3
Spain	1	2.1
Taiwan	1	2.1
Turkey	1	2.1
United Arab Emirates	1	2.1
United Kingdom	3	6.3
United States of America	10	20.8
Discipline according to the affiliation of the first author		
Health sciences	6	12.5
Psychology	1	2.1
Medicine	34	70.9
Computational science	7	14.6

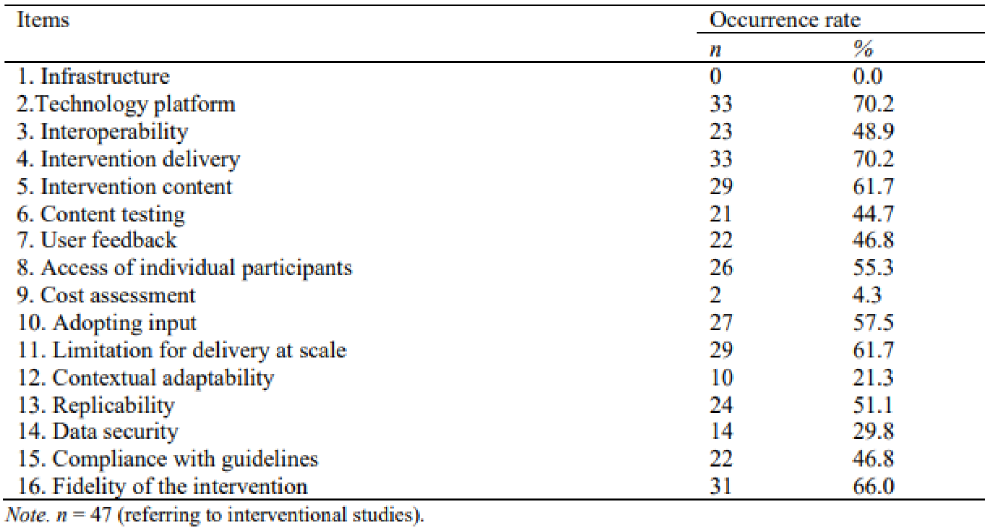
Note. $n = 48$.

Table 3. Methodological Information

	Occurrence rate	
	n	%
Study design		
Randomized controlled trial	25	52.1
Single-arm trial	18	37.5
Non-randomized controlled trial	3	6.3
Cross-sectional study	2	4.2
Sample: Type of chronic disease		
Diabetes type 1	8	16.7
Diabetes type 2	20	41.7
Diabetes type 1 and 2	7	14.6
Diabetes not specified	1	2.1
Asthma	4	8.3
Chronic obstructive pulmonary disease	8	16.7
Sample: Age group		
Adolescents	8	16.7
Adults	30	62.5
Older adults	9	18.8
n/a	1	2.1
Country of recruitment		
Australia	1	2.1
Canada	2	4.2
China	7	14.6
Denmark	1	2.1
France	1	2.1
Germany	1	2.1
Ghana	1	2.1
India	1	2.1
Iran	2	4.2
Mexico	1	2.1
Netherlands	3	6.3
Norway	1	2.1
Romania	1	2.1
Saudi Arabia	3	6.3
Singapore	1	2.1
South Korea	3	6.3
Taiwan	1	2.1
Turkey	1	2.1
United Arab Emirates	1	2.1
United Kingdom	3	6.3
United States of America	9	18.8
International	2	4.2
n/a	1	2.1

Note. n = 48.

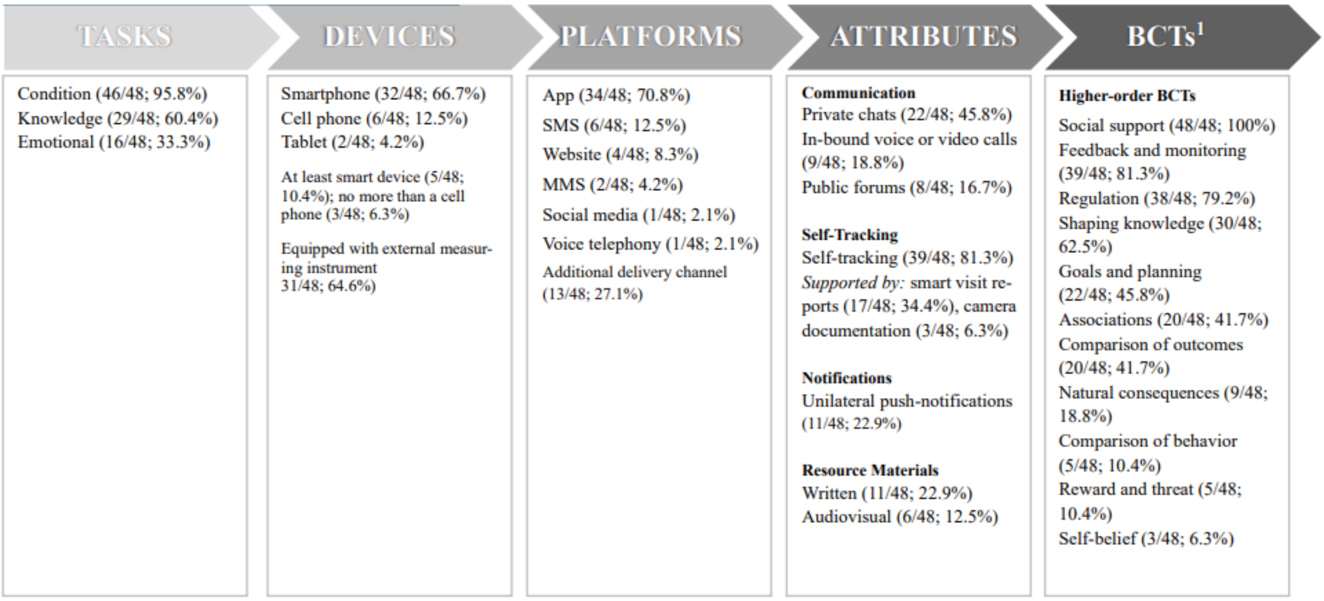
Table 4. Mobile Health Reporting and Assessment Checklist (mERA) Results



Items	Occurrence rate	
	n	%
1. Infrastructure	0	0.0
2.Technology platform	33	70.2
3. Interoperability	23	48.9
4. Intervention delivery	33	70.2
5. Intervention content	29	61.7
6. Content testing	21	44.7
7. User feedback	22	46.8
8. Access of individual participants	26	55.3
9. Cost assessment	2	4.3
10. Adopting input	27	57.5
11. Limitation for delivery at scale	29	61.7
12. Contextual adaptability	10	21.3
13. Replicability	24	51.1
14. Data security	14	29.8
15. Compliance with guidelines	22	46.8
16. Fidelity of the intervention	31	66.0

Note. $n = 47$ (referring to interventional studies).

Figure 2. Systematization of Tool Characteristics of mHealth Interventions with Healthcare Provider Co-Use



TASKS

Condition (46/48; 95.8%)
Knowledge (29/48; 60.4%)
Emotional (16/48; 33.3%)

DEVICES

Smartphone (32/48; 66.7%)
Cell phone (6/48; 12.5%)
Tablet (2/48; 4.2%)

At least smart device (5/48; 10.4%); no more than a cell phone (3/48; 6.3%)

Equipped with external measuring instrument 31/48; 64.6%)

PLATFORMS

App (34/48; 70.8%)
SMS (6/48; 12.5%)
Website (4/48; 8.3%)
MMS (2/48; 4.2%)
Social media (1/48; 2.1%)
Voice telephony (1/48; 2.1%)
Additional delivery channel (13/48; 27.1%)

ATTRIBUTES

Communication
Private chats (22/48; 45.8%)
In-bound voice or video calls (9/48; 18.8%)
Public forums (8/48; 16.7%)

Self-Tracking
Self-tracking (39/48; 81.3%)
Supported by: smart visit reports (17/48; 34.4%), camera documentation (3/48; 6.3%)

Notifications
Unilateral push-notifications (11/48; 22.9%)

Resource Materials
Written (11/48; 22.9%)
Audiovisual (6/48; 12.5%)

BCTs[1]

Higher-order BCTs
Social support (48/48; 100%)
Feedback and monitoring (39/48; 81.3%)
Regulation (38/48; 79.2%)
Shaping knowledge (30/48; 62.5%)
Goals and planning (22/48; 45.8%)
Associations (20/48; 41.7%)
Comparison of outcomes (20/48; 41.7%)
Natural consequences (9/48; 18.8%)
Comparison of behavior (5/48; 10.4%)
Reward and threat (5/48; 10.4%)
Self-belief (3/48; 6.3%)

[1] BCTs are based on the well-established BCT Taxonomy (BCTTv1) by Michie et al. (2013), which provides a nomenclature of 93 lower-order BCTs, organized into 16 higher-order BCTs. For example, the higher-order BCT "social support" comprises "unspecified social support", "practical social support", and "emotional social support" in lower-order. In this review, 11 higher-order BCTs were present within the 48 mHealth interventions examined.

Table 5. Health-Related Effectivity Assessment: Envisaged Self-Management Tasks

Self-management task	Number of studies with a significant effect on resp. outcomes out of total number of studies that examined this type of outcome										Overall effective studies[1] out of total	
	Cognitive		Behavioral		Emotional		Quality of life		Clinical			
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Knowledge	9/15	60.0	11/18	61.1	2/8	25.0	1/6	16.7	14/21	66.7	11/25	44.0
Condition	10/19	52.6	18/29	62.1	3/11	27.3	4/12	25.0	19/29	65.5	16/37	43.2
Emotional	4/7	57.1	6/9	66.7	1/6	16.7	1/4	25.0	9/11	81.8	7/14	50.0

Note. Because some studies included more than one self-management task and/or examined more than one outcome, the cases presented here are not independent samples.

[1] Displayed is the number of those studies finding an influence on the respective types of outcomes.

Table 6. Health-Related Effectivity Assessment: Mobile Devices

Device	Number of studies with a significant effect on resp. outcomes out of total number of studies that examined this type of outcome										Overall effective studies[1] out of total	
	Cognitive		Behavioral		Emotional		Quality of life		Clinical			
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Smart device	10/19	52.6	17/27	63.0	3/8	37.5	4/11	36.7	15/25	60.0	15/33	45.5
Cell phone	1/1	100.0	2/3	66.7	0/3	0.0	0/1	0.0	5/6	83.3	2/6	33.3

Note. Because some studies examined more than one outcome, the cases presented here are not independent samples.

[1] Displayed is the number of those studies finding an influence on the respective types of outcomes.

Table 7. Health-Related Effectivity Assessment: Platforms

Platforms	Number of studies with a significant effect on resp. outcomes out of total number of studies that examined this type of outcome										Overall effective studies[1] out of total	
	Cognitive		Behavioral		Emotional		Quality of life		Clinical			
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
App	9/16	56.3	14/23	60.9	3/7	42.9	3/9	33.3	13/21	61.9	13/28	46.4
SMS	--	--	1/2	50.0	0/3	0.0	0/1	0.0	4/5	80.0	1/5	20.0
Website	0/2	0.0	1/2	50.0	0/1	0.0	1/2	50.0	0/1	0.0	1/2	50.0
MMS	1/1	100	1/1	100	--	--	--	--	1/2	50.0	1/2	50.0
Social Media	--	--	1/1	100	--	--	--	--	1/1	100	1/1	100
Voice telephony	1/1	100	1/1	100	--	--	--	--	1/1	100	1/1	100

Note. Because some studies included more than one platform and/or examined more than one outcome, the cases presented here are not independent samples.

[1] Displayed is the number of those studies finding an influence on the respective types of outcomes.

Table 8. Health-Related Effectivity Assessment: Media Attributes

Media attribute	Number of studies with a significant effect on resp. outcomes out of total number of studies that examined this type of outcome										Overall effective studies[1] out of total	
	Cognitive		Behavioral		Emotional		Quality of life		Clinical			
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Communication	8/14	57.1	14/19	73.7	3/9	33.3	3/9	33.3	17/23	73.9	13/26	50.0
Private chats	5/9	55.7	11/13	84.6	1/6	16.7	1/6	16.7	13/16	81.3	9/18	50.0
Voice/Video calls	4/6	66.7	5/7	71.4	2/3	66.7	2/4	50.0	4/8	50.0	4/9	44.4
Public forum	1/4	25.0	4/5	80.0	2/4	50.0	1/2	50.0	3/6	50.0	3/7	42.82
Self-tracking	9/17	52.9	14/24	58.3	2/8	25.0	3/11	27.3	15/23	65.2	13/30	43.3
Smart visit report	1/3	33.3	5/9	55.6	2/4	50.0	3/7	42.9	6/9	66.7	5/12	41.7
Camera	1/2	50.0	1/2	50.0	--	--	--	--	0/1	0.0	1/2	50.0
Notification	2/3	66.7	1/5	20.0	2/3	66.7	1/2	50.0	2/6	33.3	2/8	25.0
Resources	4/7	57.1	4/8	50.0	2/5	40.0	1/4	25.0	4/9	44.4	4/12	33.3
Written	3/6	50.0	3/6	50.0	2/5	40.0	1/3	33.3	3/7	42.9	3/9	33.3
Video	2/2	100.0	1/3	33.3	2/2	100.0	1/2	50.0	2/4	50.0	2/6	33.3

Note. Because some studies included more than one media attribute and/or examined more than one outcome, the cases presented here are not independent samples.

[1] Displayed is the number of those studies finding an influence on the respective types of outcomes.

Table 9. Health-Related Effectivity Assessment: BCTs

BCT	Number of studies with a significant effect on resp. outcomes out of total number of studies that examined this type of outcome										Overall effective studies[1] out of total	
	Cognitive		Behavioral		Emotional		Quality of life		Clinical			
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Goals and planning	7/10	70.0	9/13	69.2	2/6	33.3	2/5	40.0	12/16	75.0	11/19	57.9
Feedback and monitoring	9/17	52.9	14/24	58.3	2/8	25.0	3/11	27.3	15/23	65.2	13/30	43.3
Social support	11/20	55.0	19/30	63.3	3/11	27.3	4/12	25.0	20/31	64.5	17/39	43.6
Shaping knowledge	8/14	57.1	10/17	58.8	3/9	2/7	28.6	33.3	13/21	61.9	10/25	40.0
Natural consequences	2/5	40.0	3/6	50.0	2/4	2/3	66.7	0.0	2/6	33.3	3/8	37.5
Comp. of behavior	2/3	66.7	1/4	25.0	1/2	2/3	66.7	0.0	2/5	40.0	2/5	40.0
Associations	5/9	55.6	6/12	50.0	2/6	33.3	2/5	40.0	9/14	64.3	7/17	41.2
Comp. of outcomes	7/10	70.0	10/12	83.3	0/6	0.0	2/5	40.0	12/15	80.0	9/17	52.9
Reward and threat	1/3	33.3	2/4	50.0	0/1	0.0	0/3	0.0	0/3	0.0	1/4	25.0
Regulation	10/16	62.5	13/23	56.5	2/9	22.2	2/9	22.2	18/26	69.2	13/31	41.9
Self-belief	0/1	0.0	1/2	50.0	0/1	0.0	0/1	0.0	1/2	50.0	1/2	50.0

Note. Because some studies included more than one BCT and/or examined more than one outcome, the cases presented here are not independent samples.

[1] Displayed is the number of those studies finding an influence on the respective types of outcomes.

Using Instagram to reduce individual vulnerability: The influence of Attitudes, Previous Experiences, and Usage Experience on individuals' perceived online social support

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According to Naslund et al. (2020), establishing and maintaining social connections is essential for individuals, given that social support – both from family members but also peer groups, who are often found on the internet – is assists individuals in dealing with health issues. Social media has increased the visibility of health issues significantly (Wongkoblap et al., 2017). While previous studies have increasingly reported the negative health effects associated with passive consumption (Ahadzadeh et al., 2017), social media can also be utilized for health-enhancing purposes (Meier & Schäfer, 2018). Lou and Hancock (2020) even claimed that the 'perceived connectedness' in a social network, and the 'social support' received from other followers, were able to elicit positive responses in individuals, ultimately improving their well-being.

Empirical study

Conceptual model: A study by Forsman & Nordmyr (2017) found that social media use, particularly after the COVID-19 pandemic, is characterized by increased interpersonal interactions and online social support. This suggests that individuals' attitudes towards social media in general and social media content in particular are more positive (Ellison et al., 2014), leading them to spend more time on Instagram.

H1: The more positive users' attitudes towards Instagram, the higher their Instagram usage.

When spending more time on social media, users are also more likely to interact with other users (Steinfield et al., 2008). Several studies attest that if online experiences and interactions have been pleasant, social network usage intensifies (Ellison et al., 2014; Steinfield et al., 2008).

H2: The more positive users' previous experiences, the higher their Instagram usage.

The social support received from other users then helps them to feel less lonely (Heo et al., 2015). It classifies as a form of bridging social capital (Ellison et al., 2007), which might assist individuals in remedying their health problems.

H3: The more positive users' previous experiences, the more online social support they receive on Instagram.

Individuals have been found to use social media for a variety of reasons, such as information or entertainment (Forsman & Nordmyr, 2017). With the pandemic having disrupted traditional media consumption and media use, individuals have been found to increasingly turn to social media for advice and support regarding their mental health problems (Naslund et al., 2020). This aspect is crucial, given that social support has been found to be a reliable predictor of health outcomes, also serving as a buffer for (mental) health issues (Reid et al., 2016).

H4: The higher users' Instagram usage, the more online social support they receive on Instagram.

Method: A quantitative online survey utilizing a structured questionnaire was employed, which was based on established psychological and health scales. Sociodemographic questions concluded the questionnaire.

Study Population: Over a 4-week period, 532 subjects were recruited. In terms of age, respondents were between 18 and 32 years old (M= 23.7 years), which corresponds with the age of the average Instagram user (Statista, 2022). Female/male participation was unevenly distributed (f=70 %; m= 30%). Answers to all questions were reported on a 7-point Likert scale ranging from (1) 'I do not agree at all' to (7) 'I fully agree'.

Results: All hypotheses were tested simultaneously as part of a structural equation model using IBM SPSS AMOS Version 28. Model estimation was performed by use of maximum likelihood estimation (MLE). The model shows acceptable global fit measures (see Table 1).

Out of the four hypotheses, only hypothesis 4 is not supported. So while individuals positive attitudes towards Instagram was found to influence the time they spent on Instagram (H1), also their previous experiences – if positive – had an impact on the time they spent on Instagram (H2). Previous experiences on Instagram, however, did not induce them to experience positive online support from other Instagram users (H3). The time spent on Instagram was, nonetheless, linked to higher perceived online support from other Instagram users (H4; see Table 2).

Discussion of Results

The present study examined whether selected antecedents (e.g., attitudes towards and previous experiences with Instagram) influence respondents' Instagram usage, which was in turn expected to influence the online support individuals receive from other Instagram users. With our data, we were able to confirm the majority of proposed hypotheses; only previous experiences with Instagram were not found to predict individuals' perceived online support. One reason could be that individuals perceive online social relations as temporary (bridging social capital; Ellison et al., 2007), and move on to other influencers as their interests change. Therefore, their previous experiences are not suited to predict the online social support they receive.

REFERENCES

Ahadzadeh, A.S., Sharif, S.P. & Ong, F.S. (2017). Self-schema and self-discrepancy mediate the influence of Instagram usage on body image satisfaction among youth. Computers in Human Behavior 68, 8–16. https://doi.org/10.1016/j.chb.2016.11.011

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. Journal of Computer-Mediated Communication 12, 1143–1168.

Ellison, N.B., Vitak, J., Gray, R., & Lampe, C. (2014). Cultivating social resources on social network sites: facebook relationship maintenance behaviors and their role in social capital processes. Journal of Computer-Mediated Communication; 19(4): 855–870.

Forsman, A. K., & Nordmyr, J. (2017). Psychosocial Links Between Internet Use and Mental Health in Later Life: A Systematic Review of Quantitative and Qualitative Evidence. Journal of Applied Gerontology, 36(12), 1471–1518. https://doi.org/10.1177/0733464815595509

Meier, A. & Schäfer, S. (2018). Positive Side of Social Comparison on Social Network Sites: How Envy Can Drive Inspiration on Instagram. Cyberpsychology, Behavior, and Social Networking 21(7), 411-417. https://doi.org/10.1089/cyber.2017.0708

Naslund, J.A., Bondre, A., Torous, J. & Aschbrenner, K.A. (2020). Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice. Journal of Technology in Behavioral Science 5, 245–257. https://doi.org/10.1007/s41347- 020-00134-x

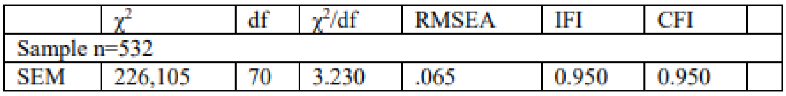
Reid, G. M., Holt, M. K., Bowman, C. E., Espelage, D. L., & Green, J. G. (2016). Perceived social support and mental health among first-year college students with histories of bullying victimization. Journal of Child and Family Studies, 25(11), 3331–3341. https://doi.org/10.1007/s10826-016-0477-7

Steinfield, C., Ellison, N.B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: a longitudinal analysis. Journal of Applied Developmental Psychology; 29(6): 434–445.

Wongkoblap, A., Vadillo, M.A., & Curcin, V. (2017). Researching Mental Health Disorders in the Era of Social Media: Systematic Review. Journal of Medical Internet Research 19(6):e228. doi: 10.2196/jmir.7215

APPENDIX

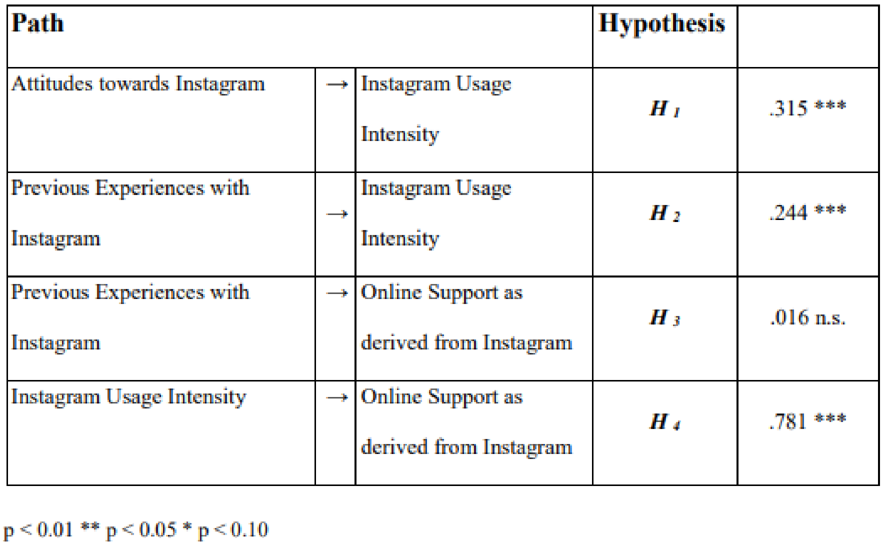
Table A1. Measures of global fit for the measurement model



	χ^2	df	χ^2/df	RMSEA	IFI	CFI	
Sample n=532							
SEM	226,105	70	3.230	.065	0.950	0.950	

Notes: RMSEA = root mean squared error of approximation; IFI: incremental fit index; CFI: comparative fit index.

Table A2. Results of the structural equation model



Path			**Hypothesis**	
Attitudes towards Instagram	→	Instagram Usage Intensity	H_1	.315 ***
Previous Experiences with Instagram	→	Instagram Usage Intensity	H_2	.244 ***
Previous Experiences with Instagram	→	Online Support as derived from Instagram	H_3	.016 n.s.
Instagram Usage Intensity	→	Online Support as derived from Instagram	H_4	.781 ***

*** $p < 0.01$ ** $p < 0.05$ * $p < 0.10$

Mobile Media in Critical Injury Situations of Children Under Seven Years

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Critical injury situations pose a particular challenge for parents and other caregivers because they occur rarely but require quick and competent intervention to prevent severe consequences (Bierhoff, 2010). In those situations, two vulnerable groups are involved: 1) children at risk of being harmed and 2) caregivers in an emotional state of emergency. While the first have low knowledge or ability to act, the second group might be inhibited by self-reproach, a lack of perceived self-efficacy, and panic (Hahn, 2015; Wei et al., 2013). In contrast, knowledge of possible actions and prior experience or at least cognitive and emotional anticipation of the situation may strengthen the readiness to act (Tietze et al., 2000; Wei et al., 2013; Ziller et al., 2000). However, we lack a comprehensive model of caregivers' behavior in critical injury situations. Transferring Bierhoff's (2010) model of behavior in emergency situations to child accidents, we ask: Which factors facilitate or impede caregivers' coping with critical injury situations? (RQ1) One way to cope with critical situations may be the use of mobile media such as smartphone apps (e.g., Born et al., 2020; Iskander et al., 2016). Results of a qualitative study indicate that apps may enable caregivers to quickly and easily access information (Neill et al., 2015). However, there is insufficient research on the extent to which such apps can be useful in critical situations. Therefore, we also address the following question: What are the potentials and limitations of using mobile media in critical injury situations? (RQ2)

Methods

To gain a comprehensive perspective, we combine results of online focus groups with a usability study. In study 1, we conducted online focus groups with parents (n=25), medical and pedagogical staff (n=17) (Table 1) as caregivers of children under seven years. Analyzing the transcripts, an inductive coding frame for 1) factors facilitating or impeding caregivers' coping with critical injury situations and 2) potentials and limits of mobile health was built in an iterative process. To examine how mobile health may support caregivers' coping with critical injury situations, coderelations between (1) and (2) were analyzed (Kuckartz & Rädiker, 2019).

In study 2, the app "Vergiftungsunfälle bei Kindern" (Poisoning accidents in children) was evaluated by parents and other informal caregivers (n = 42, Table 2). They tested the app by going through different scenarios. For the data collection, we applied a mixed methods approach: How caregivers would use the app in critical injury situations was assessed by self-reports (thinking aloud and focused interviews), observation data, click protocols and the System Usability Scale (SUS; Bangor et al., 2008). The data underwent qualitative content analysis with a focus on two main categories: ease of use and perceived usefulness.

Results

Based on the results of the focus groups, factors that facilitate or impede coping with critical situations (RQ1) are: (un)secured information situation, interpersonal support, caregivers' ability to act, and situational circumstances (Table 3). Accordingly, mobile media can contribute to coping with critical situations (RQ2) if they enable fast access to unambiguous information independent of time and place. Special functions such as step-by-step instructions with visualizations and acoustic signals can support caregivers' ability to act. However, in critical situations with potentially serious consequences, interpersonal contact with trained specialists remains crucial for those interviewed.

While many caregivers in the focus groups were rather critical of using an app (previously unknown to them) in critical situations, the participants in the usability study (study 2) had the opportunity to test a specific app for poisoning accidents to identify potentials and limitations (RQ2). Arguments in favor of the app included access to the poison control center, direct access to wellprepared, reliable information, and the fact that the app offers reassurance in an emergency. The arguments against using the app related to the perceived lack of information needs and the time aspect: navigating through the app would not be an option in an emergency.

Conclusion

Results of our project have underlined the importance of combining different perspectives: 1) perceptions of different potential user groups and 2) actual use experiences. To support caregivers' coping with critical situations, apps should be designed according to the facilitating factors identified in study 1 and confirmed in study 2. Apps should, for example, enable access to unambiguous information and provide assistance in getting interpersonal support. In Germany, the evaluated app provides direct contact with poisoning control centers. Future studies should further explore how mobile media can support vulnerable populations, e.g., people living in rural areas without direct access to the healthcare system (Chib et al., 2009).

REFERENCES

Bangor, A., Kortum, P. T., & Miller, J. T. (2008). An Empirical Evaluation of the System Usability Scale. International Journal of Human–Computer Interaction, 24(6), 574–594. https://doi.org/10.1080/10447310802205776

Bierhoff, H.-W. (2010). Psychologie prosozialen Verhaltens [Psychology of prosocial behavior]. Kohlhammer.

Born, J., Ohlmeier, C., Kis, J., Sick, R., Oberfeld, J., & Juhra, C. (2020). Great Help for Small People - The Development of a Children's Emergency App. Studies in Health Technology and Informatics, 270, 1297–1298. https://doi.org/10.3233/SHTI200410

Chib, A., Lwin, M. O., & Jung, Y. (2009). Adoption of Mobile Phones to Enhance Healthcare: A Technology Acceptance Study of Maternal Care Workers in Indonesia. Media Asia, 36(4), 216–222. https://doi.org/10.1080/23776277.2009.12224400

Hahn, A. (2015). Vergiftungen bei Kindern und Jugendlichen [Poisonings in children and adolescents]. In G. F. Hoffmann, M. J. Lentze, J. Spranger, & F. Zepp (Eds.), Springer Reference Medizin. Pädiatrie: Grundlagen und Praxis (pp. 1–10). Springer. https://doi.org/10.1007/978-3-642- 54671-6_135-2

Iskander, M., Lou, J., Wells, M., & Scarbecz, M. (2016). A poster and a mobile healthcare application as information tools for dental trauma management. Dental Traumatology : Official Publication of International Association for Dental Traumatology, 32(6), 457–463. https://doi.org/10.1111/edt.12278

Kuckartz, U., & Rädiker, S. (2019). Analyzing Qualitative Data with MAXQDA. Springer International Publishing. https://doi.org/10.1007/978-3-030-15671-8

Neill, S. J., Jones, C. H., Lakhanpaul, M., Roland, D. T., & Thompson, M. J. (2015). Parent's information seeking in acute childhood illness: What helps and what hinders decision making? Health Expectations, 18(6), 3044–3056. https://doi.org/10.1111/hex.12289

Tietze, K. W., Brockstedt, M., & Oberdisse, U. (2000). Prävention bei Vergiftungsunfällen im Kleinkindalter: Akzeptanz neuer Notfallmaßnahmen durch Ärzte, Laien-Ersthelfer und die betroffenen Kinder [Prevention of poisonings in infancy]. Blaue Reihe Des Berliner Zentrums Public Health(4). http://www.kinderumweltgesundheit.de/index2/pdf/themen/Vergiftungen/2000_04.pdf

Wei, Y.-L., Chen, L.-L., Li, T.-C., Ma, W.-F., Peng, N.-H., & Huang, L.-C. (2013). Self-efficacy of first aid for home accidents among parents with 0- to 4-year-old children at a metropolitan community health center in Taiwan. Accident; Analysis and Prevention, 52, 182–187. https://doi.org/10.1016/j.aap.2012.12.002

Ziller, S., Brockstedt, M., Hölling, H., & Tietze, K. W. (2000). Verbesserung der Versorgung bei Vergiftungsunfällen im Kleinkindalter [Improving care for poisonings in young children]. Bundesgesundheitsblatt, 43(12), 960–968. https://doi.org/10.1007/s001030050390

Table 1. Overview of Focus Group Sample

Target group	No. of participants	Sampling criteria
Fathers	*n* = 10	Gender: male Age of children: 1 month – 4 years Previous app experience: n = 4 low, n = 6 high
Mothers	*n* = 5	Gender: female Age of children: 11 month – 13 years Previous app experience: n = 2 low, n = 2 high, n = 1 not specified
Parents of younger children	*n* = 7	Gender: n = 3 male, n = 4 female Age of children: 1 month – 1 year Previous app experience: n = 3 low, n = 3 high, n = 1 not specified
Parents of older children	*n* = 3	Gender: n = 1 male, n = 2 female Age of children: 4 years – 6 years Previous app experience: n = 2 low, n = 1 high
Medical staff	*n* = 8	Gender: n = 2 male, n = 6 female Experience: n = 5 long, n = 3 short Predisposition app use: n = 4 (rather) positive, n = 1 ambivalent, n = 3 rather skeptical
Pedagogical staff	*n* = 9	Gender: n = 2 male, n = 7 female Experience: n = 6 long, n = 3 short Predisposition app use: n = 5 positive, n = 2 ambivalent, n = 2 (rather) skeptical

Table 2. Sample of the Usability Study

Characteristics		Female (*n* = 22)	Male (*n* = 20)
Permanent caregivers (parents, older siblings etc.)			
Attitude towards mHealth	positive	6	5
	negative	5	5
Temporary caregivers (babysitters, family members not in the same household etc.)			
Attitude towards mHealth	positive	7	4
	negative	4	6

Table 3. Factors Facilitating/Impeding Caregivers' Coping with Critical Injury Situations

Inductive main categories	Inductive subcategories
(Un)secure information situation	Availability of knowledge/information
	Ambiguity of situation/information
Interpersonal support	--
Caregivers' (in)ability to act	High involvement/responsibility
	Emotional/physical reactions
	Complete incapacitation
Situational circumstances	Reactions/symptoms of the child
	Time pressure
	Secluded place

Clinical AI Applications in the Context of Cancer: Explaining Openness to Information and Consent to Use through Risk Perceptions and Efficacy Beliefs

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Background

Artificial intelligence (AI) can provide great support in optimizing diagnostic and therapeutic decisions in oncology. Overall, people tend to accept the use of AI in medicine (Antes et al., 2021; Yang et al., 2019), although concerns about associated risks have also been identified (Esmaeilzadeh et al., 2021; Laï et al., 2020). As individuals' risk-related concerns may result from a lack of knowledge, adequate information provision should be considered as a potential pathway to increase trust and reduce concerns about AI.

Based on the Extended Parallel Process Model (EPPM; Witte, 1992, 1994), the Risk Perception Attitude Framework (RPA; Rimal & Real, 2003) helps to explain health information seeking motivation and behavior by the interplay of individuals' risk and self-efficacy perceptions, and provides a theory-based tool for audience segmentation and targeting of health and risk communication campaigns (Rimal, 2001; Rimal & Real, 2003). The RPA framework classifies individuals into four attitudinal groups: People with a responsive attitude (high risk perception (RP), strong efficacy beliefs (EB)) are highly motivated to engage with health-related information and behaviors. Those with an avoidance attitude (high RP, weak EB) tend not to take selfprotective measures due to their weak EB. Individuals with a proactive attitude (low RP, strong EB) seek information for future health maintenance, while those with an indifferent attitude (low RP, weak EB) display the lowest motivation to actively address the topic.

Previous RPA research (e.g., Rains et al., 2019; Rimal & Juon, 2010; Turner et al., 2006) examined the perceived risk of being affected by a particular disease as a motivating factor for engaging in self-protective behaviors. However, the perception of using certain technology in oncological care as being potentially risky has not yet been considered. As this study aims to understand openness to information about clinical AI applications in oncology, perceived risk associated with AI-assisted diagnosis and treatment recommendations, along with efficacy beliefs concerning AI-related information behavior, are utilized to categorize individuals into attitudinal groups. The first research question (RQ1) seeks to characterize these four groups by examining sociodemographic and socioeconomic variables, vulnerability-related variables (perceived risk of developing cancer, being directly or indirectly affected by cancer), and information-related variables (perceived knowledge insufficiency regarding AI use in medicine).

RQ2 explores differences between the four attitudinal groups regarding their intention to seek information about and consent to use AI-assisted diagnosis and treatment recommendations in the context of cancer.

Methods

The research questions were answered using an online survey of the German population, stratified by age, gender, and education (n=3,274; see Table 1 for sample characteristics). The study was conducted in September 2022 via an online access panel. Established measures were adapted for the study (see Table 2 for item wording and scale type).

The sample was divided into four groups using a median split for perceived risk (Mdn=3,0) and efficacy beliefs (Mdn=3,0) (Lee & You, 2020; Rimal & Real, 2003), classifiying the respective groups as high (Mdn≥3.0) and low (Mdn=<3.0). A chi- squared test was performed to assess the statistical significance of the group classification (χ 2 (1, 3274)=17.4, p≤.001, V=.07; see Table 3).

MANOVA F-tests and chi-squared tests were performed to examine differences between the groups regarding sociodemographic, socioeconomic, vulnerability-, and information-related characteristics (RQ1). MANOVA F-tests with Games Howell posthoc tests were used to assess differences between the four groups regarding intended information seeking and consent to use AI-assisted diagnosis and treatment recommendations (RQ2). All analyses were conducted using R.

Results

Regarding RQ1, small but significant differences were observed between the four attitudinal groups regarding gender, age, education, income, perceived cancer susceptibility, and perceived knowledge insufficiency. No significant differences were found for perceived cancer severity and being affected by cancer (see Table 4 for detailed results).

Regarding RQ2, significant differences were found among all four attitudinal groups regarding both outcome variables (F(3, 3269)=143.93, p≤.001, η^2=.12; see Table 5 for detailed results). The responsive group showed the highest intentions to both seek information about and consent to use AI-assisted diagnosis and treatment recommendations, followed by the proactive group.

Discussion

Consistent with prior RPA research, the results indicate that the responsive group exhibits the highest intention to seek information and consent to use AI-assisted diagnosis and treatment recommendations, and thus is most likely to be receptive to this type of technological advancement. However, we also found differences from the RPA assumptions, which will be discussed in the presentation, along with implications and limitations. Our results offer empirical insights for targeting strategies aiming at an increased acceptance of using AI in oncological care.

REFERENCES

Antes, A. L., Burrous, S., Sisk, B. A., Schuelke, M. J., Keune, J. D., & DuBois, J. M. (2021). Exploring perceptions of healthcare technologies enabled by artificial intelligence: An online, scenario-based survey. BMC Medical Informatics and Decision Making, 21(1), 221. https://doi.org/10.1186/s12911-021-01586-8

Esmaeilzadeh, P., Mirzaei, T., & Dharanikota, S. (2021). Patients' Perceptions Toward Human-Artificial Intelligence Interaction in Health Care: Experimental Study. Journal of Medical Internet Research, 23(11), e25856. https://doi.org/10.2196/25856

Games, P. A., & Howell, J. F. (1976). Pairwise Multiple Comparison Procedures with Unequal N’s and/or Variances: A Monte Carlo Study. Journal of Educational Statistics, 1(2), 113–125. https://doi.org/10.3102/10769986001002113

Kahlor, L. A. (2010). Prism: A planned risk information seeking model. Health Communication, 25(4), 345–356. https://doi.org/10.1080/10410231003775172

Kahlor, L. A., Yang, J., Li, X., Wang, W., Olson, H. C., & Atkinson, L. (2020). Environmental Risk (and Benefit) Information Seeking Intentions: The Case of Carbon Capture and Storage in Southeast Texas. Environmental Communication, 14(4), 555–572. https://doi.org/10.1080/17524032.2019.1699136

Koshy, A. N., Ko, J., Sajeev, J. K., Rajakariar, K., Roberts, L., Cooke, J., & Teh, A. W. (2019). Evaluating patient attitudes and barriers towards smart technology for cardiac monitoring: results from a prospective multicentre study. BMJ Innovations, 5(2-3), 101–107. https://doi.org/10.1136/bmjinnov-2018-000336

Laï, M.-C., Brian, M., & Mamzer, M.-F. (2020). Perceptions of artificial intelligence in healthcare: Findings from a qualitative survey study among actors in France. Journal of Translational Medicine, 18(1), 14. https://doi.org/10.1186/s12967- 019-02204-y

Lee, M., & You, M. (2020). Safety Behaviors to Reduce Risk of Using Chemical Household Products: An Application of the Risk Perception Attitude Framework. International Journal of Environmental Research and Public Health, 17(5). https://doi.org/10.3390/ijerph17051528

Li, J.-Y., Wen, J., Kim, J., & McKeever, R. (2020). Applying the Theory of Motivated Information Management to the Context of Conflicting Online Health Information: Implications for Childhood Vaccination Communication with Parents. International Journal of Strategic Communication, 14(5), 330–347. https://doi.org/10.1080/1553118X.2020.1817030

Rains, S. A., Hingle, M. D., Surdeanu, M., Bell, D., & Kobourov, S. (2019). A Test of The Risk Perception Attitude Framework as a Message Tailoring Strategy to Promote Diabetes Screening. Health Communication, 34(6), 672–679. https://doi.org/10.1080/10410236.2018.1431024

Rimal, R. N. (2001). Perceived Risk and Self-Efficacy as Motivators: Understanding Individuals' Long-Term Use of Health Information. Journal of Communication, 51(4), 633–654. https://doi.org/10.1111/j.1460-2466.2001.tb02900.x

Rimal, R. N., & Juon, H.-S. (2010). Use of the Risk Perception Attitude Framework for Promoting Breast Cancer Prevention. Journal of Applied Social Psychology, 40(2), 287–310. https://doi.org/10.1111/j.1559-1816.2009.00574.x

Rimal, R. N., & Real, K. (2003). Perceived Risk and Efficacy Beliefs as Motivators of Change. Human Communication Research, 29(3), 370–399. https://doi.org/10.1111/j.1468-2958.2003.tb00844.x

Turner, M. M., Rimal, R. N., Morrison, D., & Kim, H. (2006). The Role of Anxiety in Seeking and Retaining Risk Information: Testing the Risk Perception Attitude Framework in Two

Studies. Human Communication Research, 32(2), 130–156. https://doi.org/10.1111/j.1468-2958.2006.00006.x

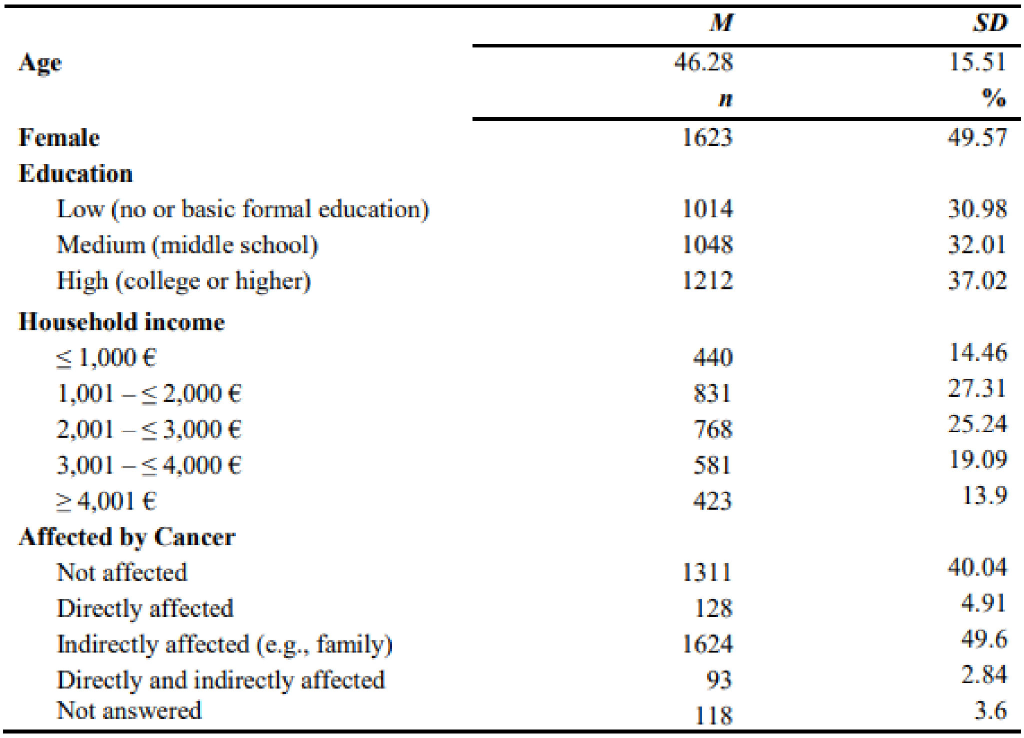
Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. Communication Monographs, 59(4), 329–349. https://doi.org/10.1080/03637759209376276

Witte, K. (1994). Fear control and danger control: A test of the extended parallel process model (EPPM). Communication Monographs, 61(2), 113–134. https://doi.org/10.1080/03637759409376328

Yang, K., Zeng, Z., Peng, H., & Jiang, Y. (2019). Attitudes Of Chinese Cancer Patients Toward The Clinical Use Of Artificial Intelligence. Patient Preference and Adherence, 13, 1867–1875. https://doi.org/10.2147/PPA.S225952

APPENDIX

Table 1. Sample characteristics (n = 3,274)



	M	*SD*
Age	46.28	15.51
	n	%
Female	1623	49.57
Education		
Low (no or basic formal education)	1014	30.98
Medium (middle school)	1048	32.01
High (college or higher)	1212	37.02
Household income		
≤ 1,000 €	440	14.46
1,001 – ≤ 2,000 €	831	27.31
2,001 – ≤ 3,000 €	768	25.24
3,001 – ≤ 4,000 €	581	19.09
≥ 4,001 €	423	13.9
Affected by Cancer		
Not affected	1311	40.04
Directly affected	128	4.91
Indirectly affected (e.g., family)	1624	49.6
Directly and indirectly affected	93	2.84
Not answered	118	3.6

Table 2. Overview of the measures (all measures were translated into German using a team translation approach)

Construct	**Examples of item wording**	**Source**	**Mean index Cronbach's α**	***M* (*SD*)**
Risk perception (RP) AI in medicine	RP1: "Please rate the overall level of risk posed by AI-assisted diagnosis and treatment recommendations."[1] RP2: "How serious are the risks posed by AI-assisted diagnosis and treatment recommendations?"[2]	Adopted from Kahlor et al. (2020)	.79	3.08 (0.87)
Efficacy perception	Perceived behavioral control: e.g., "I know how to proceed in order to obtain information about AI-assisted diagnosis and treatment recommendations."[3] (4 items) Target efficacy: e.g., "There are sources that give me reliable information on AI-assisted diagnosis and treatment recommendations."[3] (3 items)	Perceived behavioral control: adopted from Kahlor (2010); target efficacy: adopted from Li et al. (2020)	.91	2.80 (0.88)
Information seeking intention	e. g., "I plan to actively seek more information about the use of AI in the context of cancer in the future."[3] (3 items)	Adopted from Kahlor (2010)	.88	2.87 (1.09)
Consent to use AI-assisted diagnosis and treatment recommend-dations	e. g., "In the event of a future cancer diagnosis, I would be interested in AI-assisted diagnosis and treatment recommendations."[3] (2 items)	Adopted from Koshy et al. (2019)	.87	3.14 (1.10)
Risk perception cancer	Susceptibility: "How likely do you think it is to get cancer?"[1]	Adopted from Kahlor (2010)		2.87 (0.88)
	Severity: "If you were to get cancer, how threatening would that be for you?"[4]	Adopted from Kahlor (2010)		3.75 (1.01)
Perceived knowledge insufficiency AI in medicine	Current knowledge: "How well would you say you are currently informed about artificial intelligence in the medical field?"[5] Desired knowledge: "How much knowledge do you think would be sufficient to adequately assess AI in the medical field and decide whether you wanted to use it if needed?"[5]	Adopted from Kahlor (2010)		36.16 (35.32)
	Knowledge insufficiency: Difference between current and desired knowledge was calculated.			

Notes.

[1] five-point Likert-type scale from 1 "not at all likely" to 5 "extremely likely"

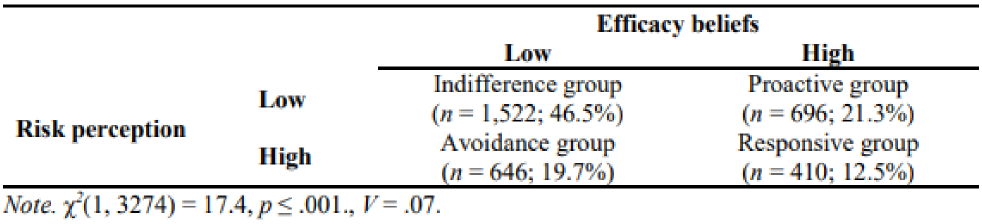
[2] five-point Likert-type scale from 1 "not at all serious" to 5 "extremely serious"

[3] five-point Likert-type scale from 1 "does not apply at all" to 5 "does fully apply"

[4] five-point Likert-type scale from 1 "not at all threatening" to 5 "extremely threatening"

[5] Slider ranging from 0 "no knowledge at all" to 100 "perfect knowledge"

Table 3. Attitudinal groups based on risk perception and efficacy beliefs



		Efficacy beliefs	
		Low	**High**
Risk perception	**Low**	Indifference group (*n* = 1,522; 46.5%)	Proactive group (*n* = 696; 21.3%)
	High	Avoidance group (*n* = 646; 19.7%)	Responsive group (*n* = 410; 12.5%)

Note. $\chi^2(1, 3274) = 17.4$, $p \leq .001.$, $V = .07$.

Table 4. Mean differences between attitudinal groups

	Indifference group (low RP, weak EB)	**Avoidance group** (high RP, weak EB)	**Proactive group** (low RP, strong EB)	**Responsive group** (high RP, strong EB)
Gender^1:				
Male	46.0%	50.0%	54.5%	51.7%
Female	54.0%	50.0%	45.5%	48.3%
Age^2 (*M* [*SD*])	48.34^a (14.95)	46.11^b (16.07)	46.36^b (15.57)	38.79^c (14.28)
Education^3				
Low	32.9%	33.3%	26.4%	31.0%
Medium	31.8%	30.3%	37.0%	31.0%
High	35.3%	36.4%	36.5%	38.0%
Income^4				
≤ 1000 €	15.3%	16.5%	11.0%	14.3%
1001 – ≤ 2000 €	26.4%	30.8%	25.7%	27.8%
2001 – ≤ 3000 €	26.2%	23.7%	24.1%	26.0%
3001 – ≤ 4000 €	18.7%	19.0%	20.6%	18.1%
≥ 4001 €	13.4%	9.9%	18.6%	13.8%
Affected by cancer^5				
Directly affected	3.5%	4.0%	4.0%	4.9%
Indirectly affected (e.g., family)	49.7%	47.4%	50.4%	51.2%
directly & indirectly affected	3.0%	2.3%	3.5%	1.7%
Not affected	38.7%	41.2%	38.6%	37.6%
Not answered	4.9%	5.1%	3.3%	4.6%
Risk perception cancer: Susceptibility^6 (*M* [*SD*])	2.85 (.82)^a	2.84 (.90)^{ab}	2.84 (.87)^{abc}	3.05 (1.01)^d
Risk perception cancer: Severity^7 (*M* [*SD*])	3.73 (1.00)	3.82 (1.01)	3.75 (1.02)	3.69 (1.00)
Perceived knowledge insufficiency^8 (*M* [*SD*])	44.63 (37.94)^a	39.41 (34.17)^b	31.06 (31.38)^c	19.39 (34.93)^d

Note. In case of proportions, Cramer's *V* was used, in case of means a MANOVA (Pillai's trace; $F(3, 3042) = 20.29, p \leq .001, \eta^2 = .03$) was used to assess mean differences between groups. Due to lack of variance homogeneity in the Box M test, Games Howell post hoc tests were interpreted (Games & Howell, 1976). Groups with different code letters differ significantly ($.000 < p < .05$).

$^1\chi^2(3, 3270) = 10.2, p = .02., V = .05$

$^2F(3, 3042) = 35.79, p \leq .001, \eta^2 = .03$

$^3\chi^2(6, 3274) = 17.69, p = .007, V = .05$

$^4\chi^2(12, 3043) = 32.12, p = .001, V = .06$

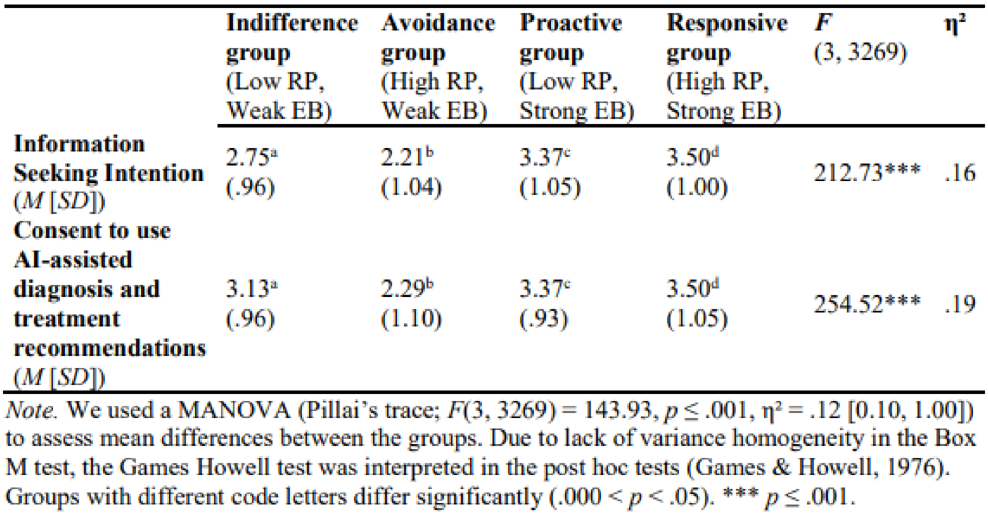
$^5\chi^2(9, 3123) = 7.42, p = .59$

$^6F(3,3042) = 5.85, p \leq .001, \eta^2 = .01$

$^7F(3, 3042) = 1.52, p = .21$

$^8F(3,3042) = 44.79, p \leq .001, \eta^2 = .04$

Table 5. Mean differences between attitudinal groups regarding intention to seek information about and consent to use AI-assisted diagnosis and treatment recommendations



	Indifference group (Low RP, Weak EB)	**Avoidance group** (High RP, Weak EB)	**Proactive group** (Low RP, Strong EB)	**Responsive group** (High RP, Strong EB)	***F*** (3, 3269)	**η^2**
Information Seeking Intention (*M* [*SD*])	2.75^{a} (.96)	2.21^{b} (1.04)	3.37^{c} (1.05)	3.50^{d} (1.00)	212.73***	.16
Consent to use AI-assisted diagnosis and treatment recommendations (*M* [*SD*])	3.13^{a} (.96)	2.29^{b} (1.10)	3.37^{c} (.93)	3.50^{d} (1.05)	254.52***	.19

Note. We used a MANOVA (Pillai's trace; $F(3, 3269) = 143.93$, $p \leq .001$, $\eta^2 = .12$ [0.10, 1.00]) to assess mean differences between the groups. Due to lack of variance homogeneity in the Box M test, the Games Howell test was interpreted in the post hoc tests (Games & Howell, 1976). Groups with different code letters differ significantly ($.000 < p < .05$). *** $p \leq .001$.

Depression, anxiety and suicide prevention

“Mobil without fear”: Using ICTs to Empower People with Anxiety Disorders in Public Transportation

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Public mobility enables participation in social life, which, however, can pose an almost insurmountable problem for people with psychological illnesses. In the course of infrastructure development, mobility offerings, solutions, and ICTs (apps, route planners, assistance systems, etc.), little attention is paid to psychological barriers in public transportation. Furthermore, the benefits of digital services for this vulnerable group are often overestimated. Studies on mental illness and passenger anxiety (Risser et al., 2015), including the use of digital planning tools (Angelini et al., 2016), indicate that individuals with anxiety disorders generally find mobility situations overwhelming. Given the insufficient study and theoretical depth on everyday anxiety and diagnosed anxiety disorders in public transport within the social sciences (Dehne, 2015, pp. 13-14), it is not surprising that this gap exists. The "Mobil without fear" project aims to address this gap by developing recommendations for information provision, communication support, and enhanced mobility services for individuals with anxiety disorders. These recommendations will be integrated into existing infrastructure or considered for future planning.

Qualitative Method-Setting

Based on a sensitive, qualitative methodological setting, the empirical study conducted in this project involved participants with anxiety disorders in a careful and responsible manner.

For this purpose, an interdisciplinary team of experts, including traffic planners, mobility psychologists, and individuals affected by mental illnesses, collaborated to create a research design that specifically addressed their needs. Together, we developed an approach and interview guide specifically targeting this particular group. Furthermore, the project underwent review by the Ethics Committee of the University of Vienna to ensure ethical considerations were met. Interviewers received training, and participants were given the freedom to choose their preferred interview mode (in person, by phone, online), enabling us to successfully conduct interviews with this vulnerable target group (Götzenbrucker et al., 2022).

In total, 12 qualitative semi-structured interviews (Kruse 2015) and 3 accompanied positive mobility walks (Kusenbach 2003) were conducted. The participants were selected based on the principle of maximum variation, encompassing different types of fears, diverse motives for usage, varied residential areas, different travel times, and various public transport lines in the city of Vienna. The findings were analyzed using qualitative content analysis (Kuckartz, 2008). Subsequently, the results were shared and discussed in (online) expert workshops and expert interviews (Pfadenhauer, 2009). These activities served as important discussion material for inter-departmental working groups at "Wiener Linien." The purpose of these discussions was to evaluate and implement measures that would enhance mental accessibility within the current mobility offerings, as well as to provide guidance for future developments in this area.

Results

For people with anxiety disorders, it is crucial that all stages of a public transportation journey are as predictable as possible and adhere to a user-centered design approach that emphasizes usability (Carlsson, 2004). Information is Key, and especially planning trips ahead (pre-trip) precisely helps to mitigate anxiety. On the trip itself, having sufficient personal space is a key requirement for those affected, solved by stopgap solutions in an environment not adapted to their needs. For instance, public restrooms are used as save spaces and seats are occupied by self-created barriers. ITCs that provide affected retreats (for example distraction) and information about peak hours greatly enhance mobility for this group. Additionally, the availability of communicative and technologically mediated human support, particularly during emergencies or challenging situations, would be beneficial. However, individuals with anxiety disorders report a lack of general awareness among security personnel and other passengers regarding their condition.

A follow-up study is currently in the planning stage to delve deeper into these subjects, with a particular emphasis on the youth demographic (aged 14-24) and their role in environmental conservation.

Presentation

The presentation focuses on the methodological approach that facilitated the inclusion of individuals with mental illnesses. It also addresses the significance of both ICT and non-ICT solutions in public transportation. The presentation concludes by emphasizing the importance of public awareness for anxiety disorders and how it can facilitate the use of public transportation for people with anxiety disorders.

REFERENCES

Angelini, A. et al. (2016). PHOBILITY-Handbuch: Verkehrsteilnahme von Menschen mit psychischen Erkrankungen - insbesondere Phobien, Angst- und Zwangsstörungen. TUVerlag.

Carlsson, G. (2004). Travelling by urban public transport: Exploration of usability problems in a travel chain perspective. Scandinavian Journal of Occupational Therapy 11, 78-89. doi.10.1080/11038120410020548

Dehne, M. (2015). Soziologie der Angst. Springer Fachmedien Wiesbaden. doi.org/10.1007/978-3-658-15523-0

Götzenbrucker, G. et al. (2022) Qualitative Interviewforschung mit vulnerablen Gruppen. methodologische Reflexionen zum Einsatz von Präsenz-, Telefon- und Videotelefonie-Interviews in einem Forschungsprojekt zu Angst und Mobilität [45 Absätze]. Forum

Qualitative Sozialforschung / Forum: Qualitative Social Research,23(3), Art. 5, https://doi.org/10.17169/fqs-23.3.3934

Kruse, J. (2015). Qualitative Interviewforschung. Ein integrativer Ansatz. (2. Überarb. u. erg. Auflage. Weinheim, Beltz Juventa.

Kusenbach, M. (2003). Street phenomenology. The go-along as ethnographic research tool. In: Ethnography Vol 4(3), 455–485.

Kuckartz, U. (2018). Qualitative Inhaltsanalyse. Methoden, Praxis, Computerunterstützung. 4. Auflage. Weinheim, Beltz Juventa, 100.

Pfadenhauer, M. (2009). Das Experteniterview. In Buber, Renate und Holzmüller, Hartmut (Hg.) Qualitative Marktforschung, 449-461, DOI:10.1007/978-3-8349-9441-7_28

Risser, R., Lexell, E. M., Bell, D., Iwarsson, S., & Ståhl, A. (2015). Use of local public transport among people with cognitive impairments – A literature review. ITransportation Research Traffic Psychology and Behaviour, 29, 83–97. doi.org/10.1016/j.trf.2015.01.002

Representations and discussions of #postnataldepression on Instagram: Between self-help and (false) ideals of motherhood?

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In Europe, approximately 8 percent of healthy mothers without previous depression history develop postpartum depression (Shorey et al., 2018). Additionally, albeit less common, fathers can also be affected by the illness (Eddy et al., 2019). Although postpartum depression is a relevant topic, it is also highly stigmatized, which is why open communication about the topic is often scarce. In this context, social media have been celebrated as spaces of de-tabooization, communicative exchange, and social support; yet at the same time, social media and especially Instagram have been associated with worsened mental health and lower self-esteem among mothers (Jaworska, 2018; Moujaes & Verrier, 2020). While the findings on the effects and potential benefits of social media communication about postpartum depression are heterogeneous, how postpartum depression is portrayed and discussed on social media has received even less attention.

The goal of this contribution thus is to add to the scarce empirical evidence on depictions of postpartum depression on social media, and more specifically Instagram. In doing so, we will conduct a qualitative content analysis of the social media contents posted under the Instagram hashtag #postnataldepression, as well as the user discussions of the contents. While contents posted under the more general Instagram hashtag #postpartum – relating to all kind of experiences in the postpartum period – have already been analyzed (MacPherson et al., 2022), to date there is no study that specifically investigated the depictions of postpartum depression on the platform. Moreover, it has not been examined how users discuss the depression-related contents on Instagram.

Regarding the way postpartum depression is negotiated on social media, an early study by Kantrowitz-Gordon (2013) already shows that women affected by postpartum depression expressed shame, a feeling of disconnected motherhood, and self-judgement for allegedly failing to comply with the ideal of a ‘good mother’ in an online forum. In a more recent study by Smith-Frigerio (2020), it was furthermore shown that peer support plays an important role in the social media communication on postpartum depression, with personal stories and words of encouragement being shared online. Apart from these studies, little is known about the representations and discussions of postpartum depression on social media, and particularly on Instagram. We thus ask:

RQ1: How is postpartum depression depicted and discussed under the hashtag #postnataldepression on Instagram?

Postpartum depression is an illness closely linked to ideas of (female) gender and motherhood (Held & Rutherford, 2012). Yet, little is known about the construction and representations of gender norms, roles and expectations in the contents on Instagram. In the second research question, we hence ask:

RQ2: How is gender represented in the posts and comments under the hashtag #postnataldepression on Instagram?

To answer the research questions, we will analyze a selection of posts and related comments published under the hashtag #postnataldepression (June 2023: 147,904 posts). Postnatal depression, although medically incorrect, appears to be the established term on Instagram, as the number of associated posts suggests. We will select the contents posted under the hashtag in a two-step procedure using a research account with no previous activities: First, the 50 top memes listed first under the hashtag will be included in the analysis; second, up to ten comments under the original posts that have the most Likes are selected (see Figures 1 to 3 for illustration). Posts and comments will be analyzed combinedly, and both visual and textual elements are examined. Doing so, a combination of linguistic analysis, and qualitative content analysis based on deductive and inductive coding will be conducted (see Table 1). The deductive codes of the analysis will comprise a) contentrelated aspects including medical information (e.g., on prevalence rates, treatment options), self-help and external support strategies (e.g., yoga, mindfulness, family support), stigma addressing, gender role depictions and stereotypes (e.g., caring mother, absent father); and b) form-related aspects such as style, coloring, and visualization (e.g. depiction of mother-babyrelationship, use of quotes, illustrations). In line with Linguistic Discourse Analysis (Spitzmüller & Warnke 2011), we will focus on the construction and constitution of the concept depression through verbal and visual means (Iakushevich 2021). Additionally, the different use of the terms postnatal and postpartum will be examined from a linguistic perspective.

In the presentation, we will discuss the implications of the (potentially gendered) social media representations of postpartum depression on coping processes, illness perceptions, and (de-)stigmatization of affected individuals. Along these lines, we will reflect on the potential role of social media logics and aesthetics, and healthism attitudes as well as on the consequences for health-related perceptions and behavior.

REFERENCES

Eddy, B., Poll, V., Whiting, J., & Clevesy, M. (2019). Forgotten fathers: Postpartum depression in men. Journal of Family Issues, 40(8), 1001–1017. https://doi.org/10.1177/0192513X19833111

Held, L., & Rutherford, A. (2012). Can't a mother sing the blues? Postpartum depression and the construction of motherhood in late 20th-century America. History of Psychology, 15(2), 107–123. https://doi.org/10.1037/a0026219

Iakushevich, M. (2021). „Immer mehr Menschen fallen in Depression“: Mediale Konstruktionen einer Volkskrankheit [“More and more people fall into depression“: Media constructions of a widespread disease.]. In M. Iakushevich, M., Y. Ilg, & T. Schnedermann (Eds.). Linguistik und Medizin. Sprachwissenschaftliche Zugänge und interdisziplinäre Perspektiven (pp. 399–418). Berlin/ Boston: De Gruyter.

Jaworska, S. (2018). 'Bad' mums tell the 'untellable': Narrative practices and agency in online stories about postnatal depression on Mumsnet. Discourse, Context & Media, 25, 25–33. https://doi.org/10.1016/j.dcm.2017.11.002

Kantrowitz-Gordon (2013). Internet confessions of postpartum depression. Issues in Mental Health Nursing, 34(12), 874–882. https://doi.org/10.3109/01612840.2013.806618

MacPherson, A. R., Reid, M., & Dautovich, N. (2022). Examining the postpartum period through social media: A content and thematic analysis of #postpartum Instagram posts. Psychology of Popular Media. Advance online publication. https://doi.org/10.1037/ppm0000422

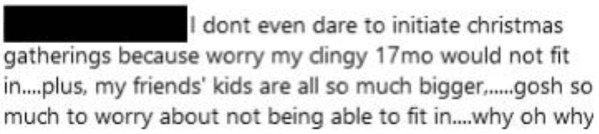
Moujaes, M. & Verrier, D. (2020). Instagram use, InstaMums, and anxiety in mothers of young children. Journal of Media Psychology, 33(2), 72–81. https://doi.org/10.1027/1864-1105/a000

Shorey, S., Chee, C. Y. I., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. Journal of Psychiatric Research, 104, 235–248. https://doi.org/10.1016/j.jpsychires.2018.08.001

Smith-Frigerio, S. (2020). "You are not alone": Linking peer support to information and resources for mental health concerns in advocacy groups' social media messaging. Health Communication, 36(14), 1980–1989. https://doi.org/10.1080/10410236.2020.1808415

Spitzmüller, J. & Warnke, I. (2011). Diskurslinguistik. Eine Einführung in Theorien und Methoden der transtextuellen Sprachanalyse [Discourse Linguistics. An introduction to theories and methods of transtextual language analysis]. Berlin/ Boston: De Gruyter.

Figure 1. Post and comment under #postnataldepression (December 12, 2023)

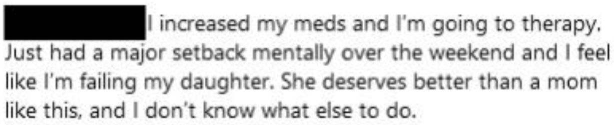


[redacted] I dont even dare to initiate christmas gatherings because worry my clingy 17mo would not fit in....plus, my friends' kids are all so much bigger,.....gosh so much to worry about not being able to fit in....why oh why

Figure 2. Post and comment under #postnataldepression (June 12, 2023)

TO THE MAMA STRUGGLING WITH DEPRESSION OR ANXIETY – I WANT YOU TO KNOW IT'S OKAY. IT'S OKAY NOT TO BE OKAY. YOU'RE NOT FAILING YOUR FAMILY. IT'S OKAY TO CRY. IT'S OKAY TO GO TO THERAPY. IT'S OKAY TO NEED A PRESCRIPTION. I KNOW YOU FEEL BROKEN AND LOST, BUT WITH HELP, YOU WILL MAKE IT THROUGH THIS. YOU DON'T HAVE TO HIDE THIS; FEEL YOUR FEELINGS AND KNOW THAT YOU DON'T HAVE TO DO THIS ALONE.

@MYBESTMOMFRIEND



[redacted] I increased my meds and I'm going to therapy. Just had a major setback mentally over the weekend and I feel like I'm failing my daughter. She deserves better than a mom like this, and I don't know what else to do.

Figure 3. Post and comment under #postnataldepression (May 1, 2023)

[redacted] I am deep in the trenches! But hopefully that means I'm on my way out 🤷‍♀️ Hang in there mommas! We don't always have to thrive sometimes just surviving is okay.

[redacted] Take time for yourself. New moms often neglect their own health and well-being while caring for their babies. Make sure you take time out each day to do something that makes you feel good.

[redacted] In the meantime we can try to take 5-mins to get back to ourselves - breathe, relax, and feel loved.

Life-saving measures? Evaluation of digital health communication for males with suicide risk and their gatekeepers

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The suicide rates among men surpass those among women worldwide. For instance, in Germany, approximately 75% of all deaths by suicide occur in men (Schelhase, 2022). Even though recent reviews have highlighted advances in our understanding of risk factors and countermeasures for suicidal behavior in men and women (Hamilton & Klimes-Dougan, 2015; Krysinska et al., 2016), the substantially increased risk for males is still a sad reality. Hence, preventive measures are needed that are specifically developed for men and consider the particularities of vulnerable (suicidal) men and their suicide-related communication (Struszczyk et al., 2019). One of the important measures in suicide prevention are communication interventions, and specifically digital communication interventions. While countermeasures such as therapy or risk education have been extensively studied as life-saving measures, (digital) communication interventions, however, have received less attention. Digital media such as Websites nowadays play an important role as information sources on suicide methods, but can also be used to easily reach individuals for suicide prevention purposes (Till & Niederkrotenthaler, 2014). A recent systematic review (Authors, in review) shows that digital interventions indeed appear to be effective means of male suicide prevention.

Besides digital communication, so-called 'gatekeepers' (people who are in contact with individuals at risk of suicide; e. g., family members/ friends) play a central role in prevention, and can be considered an access bridge to this vulnerable group. Following reviews, gatekeepers can be effective in suicide prevention (Zalsman et al., 2016). However, training programs are needed to sensitize gatekeepers and convey competencies in dealing with men at risk (Gould et al., 2013). Here, digital training programs have been shown to successfully support gatekeepers' development of competencies (Ghoncheh et al., 2016).

To date, however, evaluated digital communication interventions for men and gatekeepers are lacking. In an interdisciplinary project on suicide prevention for men, psychologists and communication experts thus developed a) a male-specific website to inform men at risk about suicide prevention, and b) an e-learning program to educate potential gatekeepers about the appropriate life-saving measures. Based on existing research, the communication measures included testimonials, expert statements, visual presentations and educational/instructive materials, which all have proven effective in health contexts. We aim to analyze whether the website and the e-learning program are perceived as (1) understandable; (2) appealing; and (3) useful by the two different audiences. Additionally, we want to explore (4) if scenario-based interview techniques are (ethically and methodologically) adequate to explore such a delicate topic.

To reach these four research goals, a two-step qualitative study with both men and gatekeepers will be conducted. Individual online interviews with a total of 24 men in three age groups (18 to 30, 30 to 50, over 50 years; 8 per age group) will be performed. Moreover, four online focus groups with gatekeepers will be implemented with 8 people each (32 in total). The focus group sample will be equally distributed regarding gender and age (individuals from younger (under 40) and older (over 40) age groups). All participants are asked to intensively study the intervention materials and briefly evaluate them (step 1), before the interviews and focus groups take place (step 2). In the first step, the pre-task, the participants can engage with the content in the natural setting of their homes, and are encouraged to reflect on it. In an evaluation of the pretask, initial findings on the attractiveness, intuitiveness, and comprehensibility of the contents can be gained by using simple and pragmatic evaluation tasks (e.g. in the form of likes and dislikes, or following a grading principle with open text fields). The delicate topic of suicide demands specific methodological approaches. Therefore, the scenario technique is used to keep the interviewees' psychological stress as low as possible and enable them to evaluate the digital interventions on the basis of a standardized crisis situation: A fictitious scenario of a man in a psychological crisis will be presented, which serves as the basis for the interviews. In addition (and also to minimize emotional stress), we will first ask the men indirectly about the assumed perceptions of others, before they are asked to present their own view. This so-called circular questioning is a technique often used in therapy to investigate sensitive topics.

Both studies will be finished by November 2023. In the presentation, we discuss the need for gender-specific (digital) prevention programs as well as the implications of health communication targeted at vulnerable groups. Whatever the specific results will be, we are convinced that health communication can contribute important insights for gender-specific lifesaving measures in the context of suicide prevention.

REFERENCES

Ghoncheh, R., Gould, M. S., Twisk, J. W. R., Kerkhof, A. J. F. M., & Koot, H. M. (2016). Efficacy of adolescent suicide prevention e-learning modules for gatekeepers: A randomized controlled trial. JMIR Mental Health, 3(1), e8. https://doi.org/10.2196/mental.4614

Gould, M. S., Cross, W., Pisani, A. R., Munfakh, J. L., Kleinman, M. (2013). Impact of applied suicide intervention skills training on the National Suicide Prevention Lifeline. Suicide & Life-threatening Behavior, 43, 676–691. https://doi.org/10.1111/sltb.12049

Hamilton, E., & Klimes-Dougan, B. (2015). Gender differences in suicide prevention responses: Implications for adolescents based on an illustrative review of the literature. International Journal of Environmental Research and Public Health, 12(3), 2359–2372. https://doi.org/10.3390/ijerph120302359

Krysinska, K., Batterham, P. J., & Christensen, H. (2017). Differences in the effectiveness of psychosocial interventions for suicidal ideation and behaviour in women and men: A systematic review of Randomised Controlled Trials. Archives of Suicide Research, 21(1), 12–32. https://doi.org/10.1080/13811118.2016.1162246

Schelhase, T. (2022). Suizide in Deutschland: Ergebnisse der amtlichen Todesursachenstatistik [Suicides in Germany: Results of the official cause of death statistics]. Bundesgesundheitsblatt – Gesundheitsforschung – Gesundheitsschutz, 65, 3–10. https://doi.org/10.1007/s00103-021-03470-2

Struszczyk, S., Galdas, P. M., & Tiffin, P. A. (2019). Men and suicide prevention: A scoping review. Journal of Mental Health, 28(1), 80–88. https://doi.org/10.1080/09638237.2017.1370638

Till, B. & Niederkrothenthaler, T. (2014). Surfing for suicide methods and help: Content analysis of websites retrieved with search engines in Austria and the United States. The Journal of Clinical Psychiatry, 75, 886–892. https://doi.org/10.4088/JCP.13m08861

Zalsman, G., Hawton, K., Wasserman, D., van Heeringen, K., Arensman, E., Sarchiapone, M., Carli, V., Höschl, C., Barzilay, R., Balazs, J., Purebl, G., Kahn, J. P., Sáiz, P. A., Lipsicas, C. B., Bobes, J., Cozman, D., Hegerl, U., & Zohar, J. (2016). Suicide prevention strategies revisited: 10-year systematic review. The Lancet Psychiatry, 3, 646–659. https://doi.org/10.1016/S2215-0366(16)30030-X

“Do not Push Them Away”—YouTube Interviews as a Tool for Suicide Prevention?

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With more than 700.000 suicides worldwide per year, suicide is a “major public health problem” (WHO, 2021). Yet, it is still a taboo and stigmatized–also in media (WHO, 2021). However, media depictions were shown to impact suicide and suicide prevention. For example, while a movie ending with a suicide (Night Mother, 1986) had negative effects on its audience, a movie ending with survival and coping (Elizabthtown, 2005) had positive effects. Thus, „media portrayal of successful coping (…) is an important suicide-protective factor” (Till et al., 2015, p. 77). However, next to lengthy audiovisual media, content on the (social) web needs closer research. By entering “suicide” in the YouTube search bar the amount of videos indicates this necessity.

This study observed the effect of the youtube-interview “Wie ist das 6x SELBSTMORD ZU VERSUCHEN?” (“How is it to attempt suicide 6x?”) by creator Leeroy—who is popular for a german speaking audience (2.41 Mio. subcribers; January 2023). In the interview Kevin tells Leeroy about his struggles with suicidality. While doing so, he gives detailed descriptions of suicide attempts. Yet, the interview also contains fact checks, ways on how to seek help and how to help others. Also, the video ends with Kevin wishing the viewers all the best, giving supportive impulses to not give up and information to those who know borderliners. As Kevin represents a vulnerable group (male, e. g., Wolfersdorf & Etzersdorfer, 2011; borderline, e. g., Etzersdorfer et al., 2002) the video might be relevant for suicide prevention in particular.

Before starting the main survey, several exclusion criteria were applied (e. g., no mental illness; no previous suicide [attempts] in circle of acquaintances). The study included a 2 (Pre-Video, Post-Video) x 2 (Male, Female) mixed design with several dependent variables (Life Satisfaction; Diener et al., 1985; Gratitude, McCullough et al., 2001; “Intention to Provide Adequate Help to Suicidal Individuals”, Arendt et al., 2018, pp. 49-50; General Help Seeking, Wilson et al., 2005; emotional states, Renaud & Unz, 2016). Participants had to complete a pre-questionnaire containing scales to said variables. Then the video of 21:16 minutes length followed. After watching it, participants had to complete a post-questionnaire containing the same and further variables (relevance of YouTube videos, following Health, 1996). Overall, N = 138 (male: n = 30; female: n = 107; diverse: n = 1) participated (age: $M = 21.40$, $SD = 1.96$). Further, $n = 93$ (67.4%) indicated to have foreknowledge regarding suicide and suicide prevention (e. g., from documentaries, lectures etc.) and $n = 12$ (8.7%) stated to know the video.

Results showed several significant main effects of the video. Satisfaction with life increased, $F(1, 135) = 34.25$, $p < .001$, $\eta p^2 = .202$. Same applied for help-seeking, both for personal or emotional problems, $F(1, 135) = 5.77$, $p = .018$, $\eta p^2 = .041$, as well as for suicidal thoughts, $F(1, 135) = 22.42$, $p < .001$, $\eta p^2 = .142$. Due to low reliability for the intention to provide adequate help scale, items were looked at separately revealing that only one item reached no significant difference („I quickly say goodbye and leave“). All further items showed a significant increase after the video (e. g., „I ask him whether he thinks about suicide“, $F(1, 135) = 32.00$, $p < .001$, $\eta p^2 = .192$). Further, for „I encourage him to seek help at a telephone counseling service or with a psychologist“ not only a significant pre-post effect was shown, $F(1, 135) = 13.22$, $p < .001$, $\eta p^2 = .089$, but also a main effect of sex, $F(1, 135) = 10.67$, $p = .001$, $\eta p^2 = .073$. Also changes in emotions were evident. While positive emotions declined (e. g., enjoyment, $F(1,135) = 220.09$, $p < .001$, $\eta p^2 = .620$), negative emotions arose (e. g., anger, $F(1,135) = 7.76$, $p = .006$, $\eta p^2 = .054$). More results will be presented at the conference.

Altogether, the interview—despite rosen negative emotions—seems to indicate a protective effect (e. g., higher helping intentions). Further, participants’ own help-seeking behavior increased indicating that the video raised awareness in case they themselves encounter problems. However, it should be noted that due to several exclusion criteria this study did not include vulnerable participants. Thus, whether the video helps in protecting vulnerable individuals needs further observation. At a societal level, however, such videos might improve their situation with a rosen awareness and strengthened social support. Thus, not only more research on YouTube videos is needed but in particular vulnerable groups should be addressed in future studies as well.

The double burden of vulnerability: Comparing responsibility attributions towards depressed individuals in Germany and the US

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Depression is a major public health issue with severe individual and societal consequences (Steffen et al., 2020). How society perceives the vulnerable group of depressed people matters to understand how a society deals with mental illness and those affected by it. This includes attributions of responsibility for causes and solutions of depression – arguably linked to behavior toward and stigmatization of depressed individuals (Zhang & Wen, 2021). If depressed individuals already strained by their illness are made responsible, this may double their burden. Responsibility attributions are commonly differentiated in individual responsibility attribution (abbrev. IRA) and societal responsibility – or in the broader sense used here, social context responsibility attribution (combining societal and social network responsibility) (SRA). For some illnesses, including depression, a genetic responsibility attribution (GRA) is also conceivable. All responsibility attributions can be shaped by media representations and frames (Semetko & Valkenburg, 2020). Individual media framing has been linked to lower, societal framing to higher policy support (e.g., Temmann et al., 2022). However, there is less knowledge about how SES, psychological characteristics, and media use shape responsibility attributions. It matters, also for responsibility attributions, which media are used as a source of health information as contents differ in their framing (Chang et al., 2016). In particular, comparative studies are lacking that look into country-specific differences in responsibility attributions and their predictors. For example, Germany and the U.S. differ not only in cultural individualism, but also in how their health system is financed, which can impact how people believe that their health depends on themselves rather than others (as in the "healthism" concept by Crawford, 1980). We thus ask:

RQ1: How do responsibility attributions for depression differ between Germany and the US in terms of (a) SRA, (b) IRA, and (c) GRA?

RQ2: How do Germany and the US differ with regard to the predictors of (a) SRA, (b) IRA, and (c) GRA?

A cross-sectional online survey with 2,168 participants was conducted in Germany (N = 1,094) and the US (N = 1,074). Recruitment was carried out by an online access panel; both subsamples were representative of age, gender, and education (Table 1). All variables were measured on a 7-point scale (Table 2) using mostly validated scales. SRA, IRA, GRA were assessed by three factors that emerged from a pool of 29 items. Use of media health information sources (only assessed for those who actively search for info; n = 1,710) was rated for each source and clustered into traditional mass media, social media, online information sources, and alternative media. Trust in media was captured as the average trust in all health information sources. Six items measured healthism (Alfrey et al., 2019). Additionally, participants indicated sociodemographic characteristics, health interest, prior experience with and knowledge on depression. We used t-tests for independent samples and OLS regression models in both country samples to answer our research questions. The three responsibility attributions were used as DVs in our model, IVs were sociodemographics (block 1), health-related perceptions and knowledge (block 2), health info-seeking (block 3), and healthism (block 4).

RQ1: Findings showed that SRA were significantly higher in Germany than in the US. In contrast, the US subsample rated IRA and GRA significantly higher than the German subsample (see Table 3).

RQ2: Tables 4, 5, 6 provide an overview of the results. Surprisingly, higher healthism was positively associated with all three attributions in both country subsamples.

SRA: In the German subsample, female gender, lower education, knowledge on depression, and trust in health info sources were positively associated with SRA. A more frequent alternative media use for health-info seeking was associated with lower SRA. Among US participants, younger age, knowledge and trust were positively related to SRA.

IRA: In the German subsample, female gender, younger age, and the use of alternative media were positively associated with IRA. In the US sample, while lower education, knowledge, trust, and alternative media use were positively related, higher social media use was linked to lower IRA.

GRA: Among German participants, depression knowledge, mass media use, and alternative media use were positively related to GRA, and social media use was negatively associated with it. For the US sample, knowledge, trust, and social media use all positively predicted GRA.

We conclude that specific media use patterns can shape responsibility attributions and solution preferences for depression. These patterns differ across countries hinting at the relevance of including country-level health predictors. Differences in the media and public healthcare system must be explored further. We will discuss the theoretical and empirical implications thereof in our presentation.

REFERENCES

Alfrey, L., O'Connor, J., Phillipson, S., Penney, D., Jeanes, R., Phillipson, S. (2019). Attitudes of pre-service physical education teachers to healthism: Development and validation of the Attitude Towards Healthism Scale (ATHS). European Physical Education Review, 25(2), 424–437. https://doi.org/10.1177/1356336X17742665

Chang, J. J. C., Kim, S.-H., Shim, J. C. & Ma, D. H. (2016). Who is responsible for climate change? Attribution of responsibility, news media, and South Korean's perceived risk of climate change. Mass Communication and Society, 19(5), 566–584. https://doi.org./10.1080/15205436.2016.1180395

Crawford, R. (1980). Healthism and the medicalization of everyday life. International Journal of Health Services, 10(3), 365–388. https://doi.org/10.2190/3H2H-3XJN-3KAYG9NY

Powroznik, K. M. (2016). Healthism and weight-based discrimination: The unintended consequences of health promotion in the workplace. Work and Occupations, 44(2), 139–170). Https://doi.org/10.1177/0730888416682576

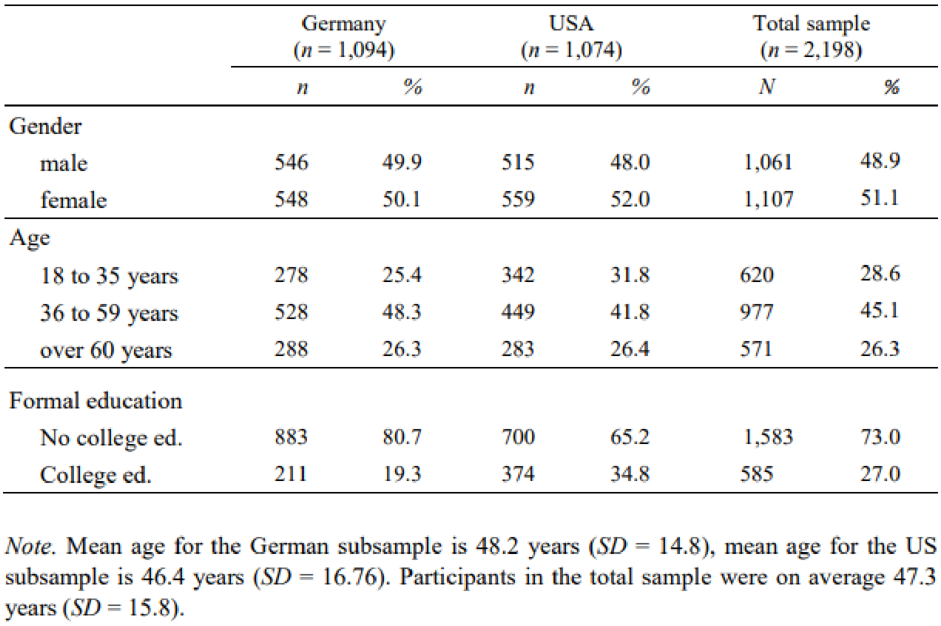
Semetko, H. A., & Valkenburg, P. M. V. (2000). Framing European politics: A content analysis of press and television news. Journal of Communication, 50(2), 93– 109. https://doi.org/10.1111/j.1460-2466.2000.tb02843.x

Steffen, A., Thom, J., Jacobi, F., Holstiege, J., & Bätzing, J. (2020). Trends in prevalence of depression in Germany between 2009 and 2017 based on nationwide ambulatory claims data. Journal of Affective Disorder, 27(1), 239–247. https://doi.org/10.1016/j.jad.2020.03.082

Temmann, L. J., Wiedicke, A., Schaller, S., Scherr, S., & Reifegerste, D. (2022). A systematic review of responsibility frames and their effects in the health context. Journal of Health Communication, 26(12), 828–838. https://doi.org/10.1080/10810730.2021.2020381

Zhang, N., & Wen, T. J. (2021). Exploring the public perception of depression: Interplay between the attribution of cause and narrative persuasion. Health Communication, 36(8), 992–1000. https://doi.org/10.1080/10410236.2020.1731775

Table 1. Sample characteristics



	Germany (*n* = 1,094)		USA (*n* = 1,074)		Total sample (*n* = 2,198)	
	n	*%*	*n*	*%*	*N*	*%*
Gender						
male	546	49.9	515	48.0	1,061	48.9
female	548	50.1	559	52.0	1,107	51.1
Age						
18 to 35 years	278	25.4	342	31.8	620	28.6
36 to 59 years	528	48.3	449	41.8	977	45.1
over 60 years	288	26.3	283	26.4	571	26.3
Formal education						
No college ed.	883	80.7	700	65.2	1,583	73.0
College ed.	211	19.3	374	34.8	585	27.0

Note. Mean age for the German subsample is 48.2 years (*SD* = 14.8), mean age for the US subsample is 46.4 years (*SD* = 16.76). Participants in the total sample were on average 47.3 years (*SD* = 15.8).

Table 2. Overview of all scales

		Social context responsibility attributions			Individual responsibility attributions			Genetic responsibility attributions			Healthism				Health info-seeking (mass media)			Health info-seeking (online info)			Health info-seeking (social media)			Health info-seeking (alternative media)			Trust in health-info sources		
	n	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*	*α*	*n*	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*	*α*	*M*	*SD*	*α*
GER	1,094	4.51	1.09	.94	3.72	1.18	.80	3.44	1.27	.68	4.20	1.32	.84	879	4.37	1.27	.83	3.39	1.39	.85	3.62	1.51	.89	2.70	1.50	.86	1.94	1.38	.95
USA	1,074	4.42	1.13	.94	4.15	1.22	.81	3.58	1.40	.72	4.16	1.40	.86	831	4.70	1.33	.86	3.65	1.44	.89	3.78	1.54	.92	3.30	1.71	.92	2.49	1.79	.96
Total	2,168	4.47	1.11	.94	3.93	1.21	.81	3.51	1.34	.70	4.18	1.36	.85	1,710	4.53	1.31	.84	3.52	1.42	.87	3.70	1.53	.90	2.99	1.63	.90	2.21	1.61	.96

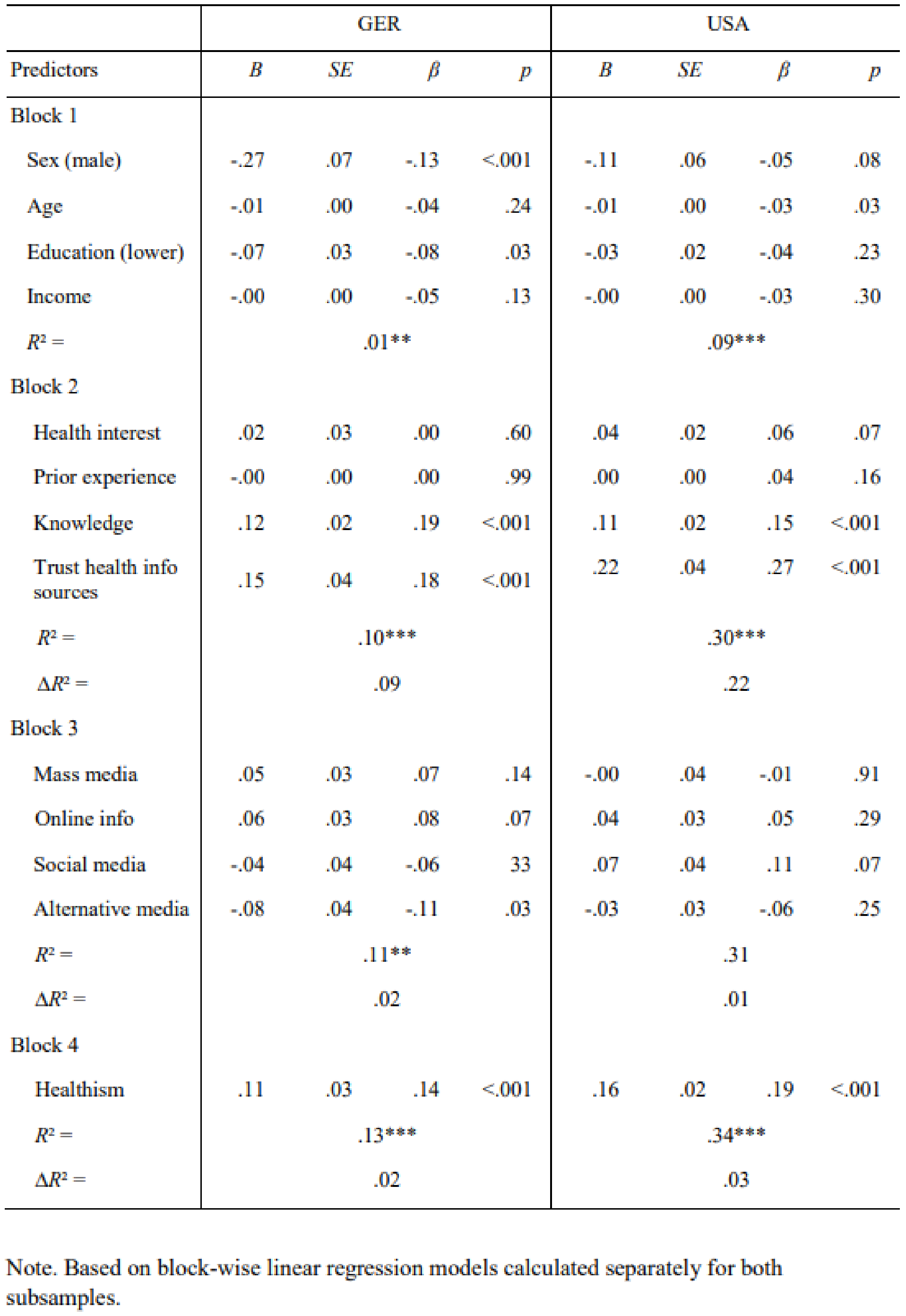
Note. All items were measured on a scale from 1 (= *strongly disagree*) to 7 (= *strongly agree*).

Table 3. Country differences in responsibility attributions

	Germany (n = 1,094)		US (n = 1,074)					
Responsibility attributions	*M*	*SD*	*M*	*SD*	*df*	*t*	*p*	Cohen's *d*
SRA	4.51	1.09	4.42	1.13	2166	2.08	.038	1.11
IRA	3.72	1.18	4.15	1.22	2166	8.26	<.001	1.20
GRA	3.44	1.27	3.58	1.40	2166	2.37	<.018	1.33

Note. Reported are results from t-tests for independent samples.

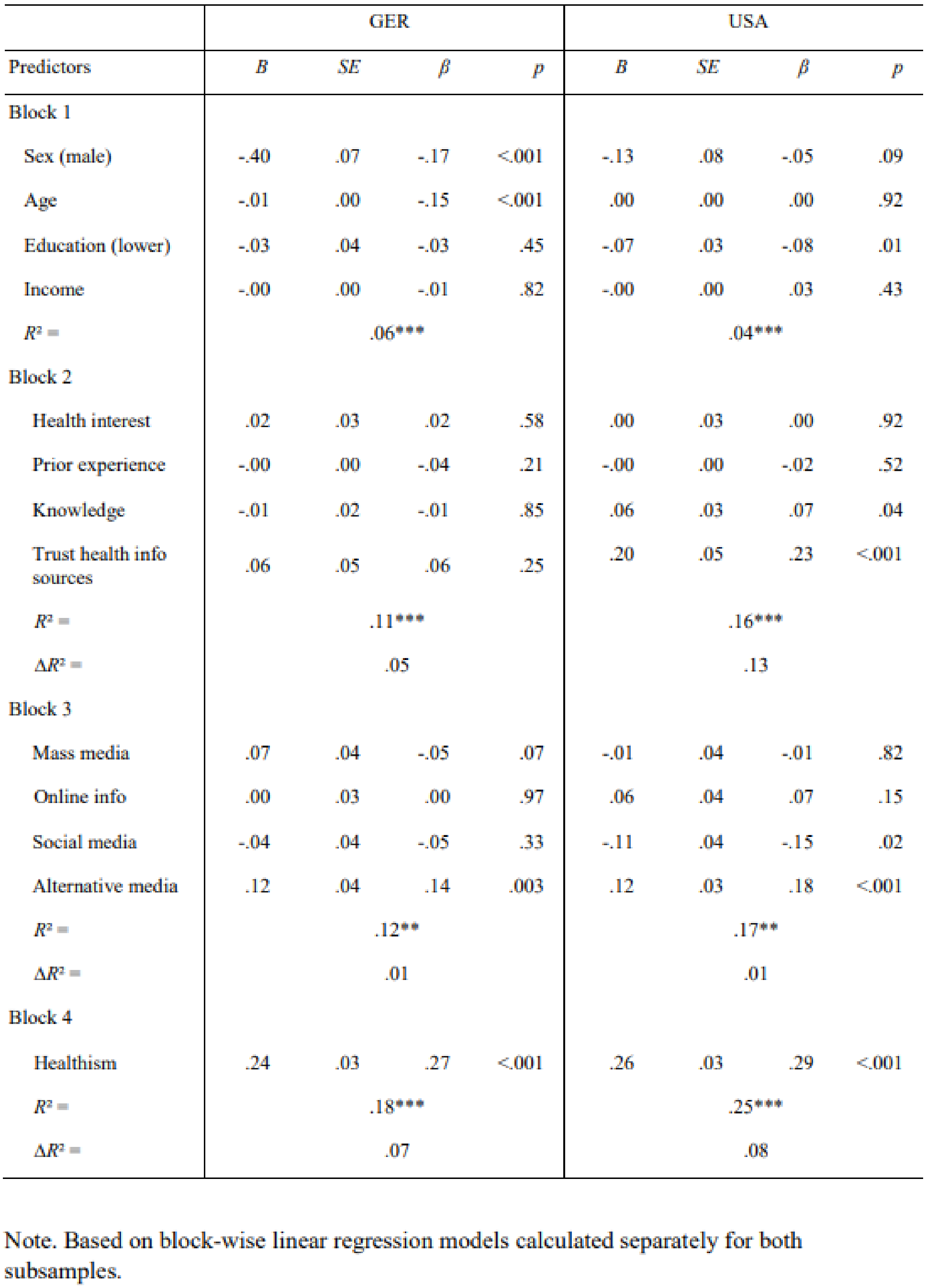
Table 4. Predictors of social context responsibility attributions (SRA)



	GER				USA			
Predictors	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*
Block 1								
Sex (male)	-.27	.07	-.13	<.001	-.11	.06	-.05	.08
Age	-.01	.00	-.04	.24	-.01	.00	-.03	.03
Education (lower)	-.07	.03	-.08	.03	-.03	.02	-.04	.23
Income	-.00	.00	-.05	.13	-.00	.00	-.03	.30
R^2 =	.01**				.09***			
Block 2								
Health interest	.02	.03	.00	.60	.04	.02	.06	.07
Prior experience	-.00	.00	.00	.99	.00	.00	.04	.16
Knowledge	.12	.02	.19	<.001	.11	.02	.15	<.001
Trust health info sources	.15	.04	.18	<.001	.22	.04	.27	<.001
R^2 =	.10***				.30***			
ΔR^2 =	.09				.22			
Block 3								
Mass media	.05	.03	.07	.14	-.00	.04	-.01	.91
Online info	.06	.03	.08	.07	.04	.03	.05	.29
Social media	-.04	.04	-.06	33	.07	.04	.11	.07
Alternative media	-.08	.04	-.11	.03	-.03	.03	-.06	.25
R^2 =	.11**				.31			
ΔR^2 =	.02				.01			
Block 4								
Healthism	.11	.03	.14	<.001	.16	.02	.19	<.001
R^2 =	.13***				.34***			
ΔR^2 =	.02				.03			

Note. Based on block-wise linear regression models calculated separately for both subsamples.

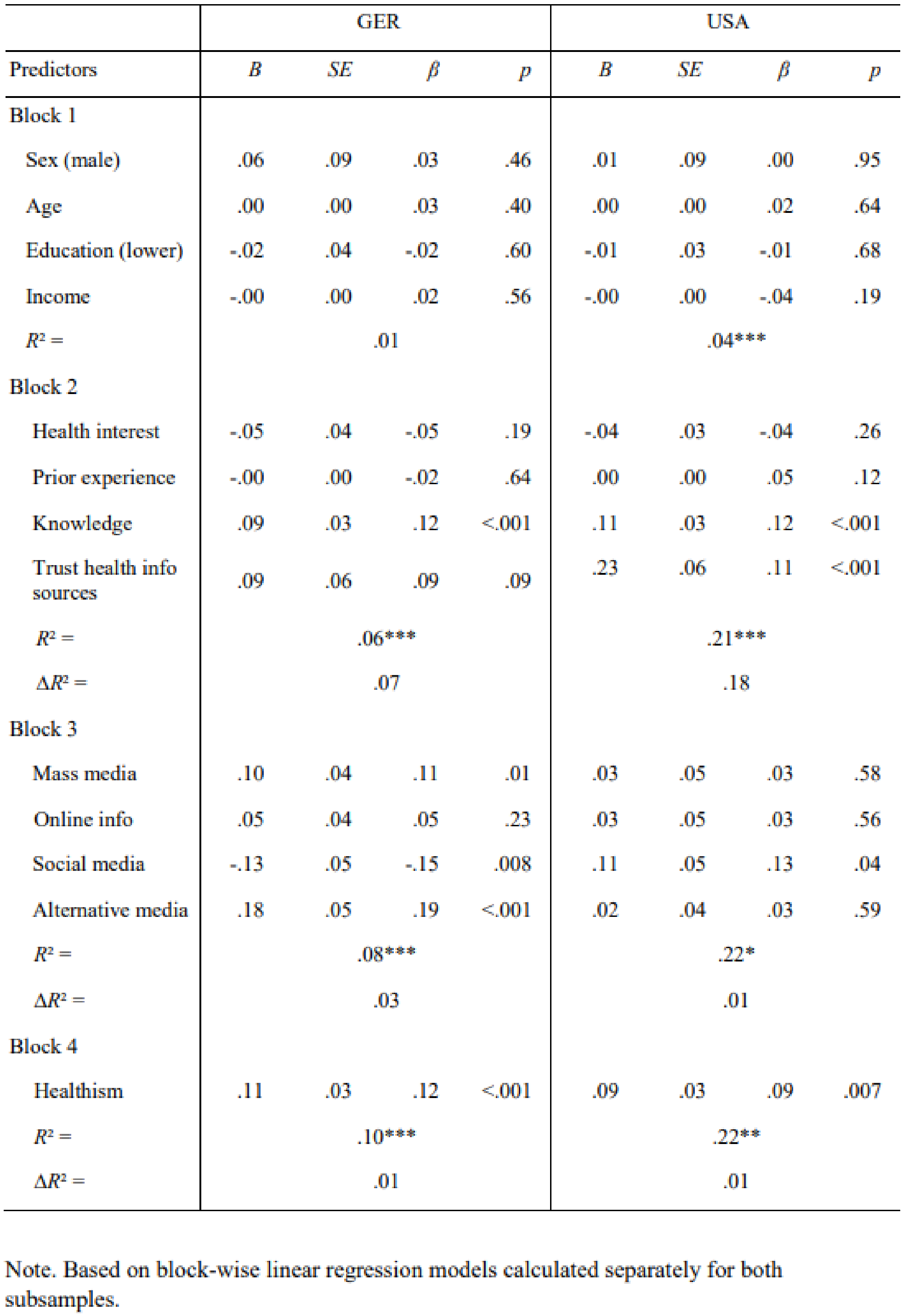
Table 5. Predictors of individual behavior responsibility attributions (IRA)



	GER				USA			
Predictors	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*
Block 1								
Sex (male)	-.40	.07	-.17	<.001	-.13	.08	-.05	.09
Age	-.01	.00	-.15	<.001	.00	.00	.00	.92
Education (lower)	-.03	.04	-.03	.45	-.07	.03	-.08	.01
Income	-.00	.00	-.01	.82	-.00	.00	.03	.43
R^2 =		.06***				.04***		
Block 2								
Health interest	.02	.03	.02	.58	.00	.03	.00	.92
Prior experience	-.00	.00	-.04	.21	-.00	.00	-.02	.52
Knowledge	-.01	.02	-.01	.85	.06	.03	.07	.04
Trust health info sources	.06	.05	.06	.25	.20	.05	.23	<.001
R^2 =		.11***				.16***		
ΔR^2 =		.05				.13		
Block 3								
Mass media	.07	.04	-.05	.07	-.01	.04	-.01	.82
Online info	.00	.03	.00	.97	.06	.04	.07	.15
Social media	-.04	.04	-.05	.33	-.11	.04	-.15	.02
Alternative media	.12	.04	.14	.003	.12	.03	.18	<.001
R^2 =		.12**				.17**		
ΔR^2 =		.01				.01		
Block 4								
Healthism	.24	.03	.27	<.001	.26	.03	.29	<.001
R^2 =		.18***				.25***		
ΔR^2 =		.07				.08		

Note. Based on block-wise linear regression models calculated separately for both subsamples.

Table 6. Predictors of genetic responsibility attributions (GRA)



	GER				USA			
Predictors	*B*	*SE*	*β*	*p*	*B*	*SE*	*β*	*p*
Block 1								
Sex (male)	.06	.09	.03	.46	.01	.09	.00	.95
Age	.00	.00	.03	.40	.00	.00	.02	.64
Education (lower)	-.02	.04	-.02	.60	-.01	.03	-.01	.68
Income	-.00	.00	.02	.56	-.00	.00	-.04	.19
R^2 =	.01				.04***			
Block 2								
Health interest	-.05	.04	-.05	.19	-.04	.03	-.04	.26
Prior experience	-.00	.00	-.02	.64	.00	.00	.05	.12
Knowledge	.09	.03	.12	<.001	.11	.03	.12	<.001
Trust health info sources	.09	.06	.09	.09	.23	.06	.11	<.001
R^2 =	.06***				.21***			
ΔR^2 =	.07				.18			
Block 3								
Mass media	.10	.04	.11	.01	.03	.05	.03	.58
Online info	.05	.04	.05	.23	.03	.05	.03	.56
Social media	-.13	.05	-.15	.008	.11	.05	.13	.04
Alternative media	.18	.05	.19	<.001	.02	.04	.03	.59
R^2 =	.08***				.22*			
ΔR^2 =	.03				.01			
Block 4								
Healthism	.11	.03	.12	<.001	.09	.03	.09	.007
R^2 =	.10***				.22**			
ΔR^2 =	.01				.01			

Note. Based on block-wise linear regression models calculated separately for both subsamples.

Who Experiences Mental Harm during Crisis? Advices for Media Communication with Vulnerable Groups

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Previous research has shown that times of crisis often affect individuals' mental health. For instance, during the coronavirus pandemic, people showed an increase in depressive symptoms (Ding et al., 2020). In this context, several detrimental (stressors) and protective (assets) crisis responses influencing individuals' mental health have been identified. In particular, stressors include high related concerns (Olagoke et al., 2020) and bad future perspectives (Wu et al., 2021), while feelings of hope (Strayhorn, 2023) and trust in institutional crisis management (Généreux et al., 2022) are considered as assets.

Besides ones' direct experiences, their media exposure affects people's crisis responses and thus their mental health. Accordingly, a vast amount of research provides evidence that a higher media use positively predicts several poor mental health outcomes (Chu et al., 2022). Therefore, strategies for communicating crisis events adequately – i.e., in a truth-oriented, transparent, and balanced manner which does not cause additional harm or even improve mental health during crisis (Su et al., 2021) – are warranted. In order to develop such an efficient communication strategy, the following two major aspects should be considered: Firstly, not only the mere quantity of media exposure influences mental health during crisis, but rather how specific contents are experienced or evaluated (van der Velden et al., 2018). Secondly, vulnerability to harmful (media) experiences can strongly differ between individuals (Houston et al., 2018), with some being more vulnerable than others. So far, however, these considerations have mostly been neglected in health communication research.

Thus, the present study seeks to develop a more sophisticated understanding of those groups who are particularly vulnerable for mental health issues during the coronavirus pandemic. Using latent profile analysis, we analyze subgroups within the German population based on seven psychological indicators (Table 1). Guided by previous research, these include mental health status (depressive symptoms, perceived COVID-19 distress) as well as potential stressors (health respectively political concerns, future perspectives) and assets (hope, trust in institutional crisis management). Furthermore, we investigate how the subgroups differ in various evaluations concerning COVID-19 media coverage (Table 2). This may help to reflect how vulnerable individuals experience the contents compared to less affected people, and therefore may provide insights into how messages about crisis can be communicated more sensitively.

The analysis is based on data of an online survey of German citizens (N = 1162, female = 49%, Mage = 53) which was conducted in December 2021 when the fourth infection wave in Germany occurred.

Using different fit indices (Nylund-Gibson et al., 2019; Table 3), the analysis revealed four groups which differ considerably in the seven psychological indicators (Table 4): Concerned Vulnerables, Moderate Affected, Healthy Sceptics, and Healthy Optimists.

With regards to the present research aim, particularly the Concerned Vulnerables (n = 50) are of special interest. Compared to the less affected groups, they show the significantly highest depressive symptoms (M = 18.30) and further perceive high COVID-19 distress (M = 4.33). While their concerns about the health risk of the virus are only moderate (M = 3.01), their political concerns regarding the restrictions to personal freedom (M = 4.16) are considerably higher than in almost all the other groups. At the same time, they have little hope (M = 2.86) and feel a lack of control and fear about the future (M = 4.49). Particularly the latter, i.e., their bad future perspectives, represent a significant difference to the other groups. In this line, the Concerned Vulnerables further hardly trust that officials and institutions manage the pandemic successfully (M = 1.96).

Results of a MANOVA and subsequent Bonferroni post-hoc tests (Table 4, 5) show that, relative to rather cognitive evaluations (e.g., media trust), especially negative emotional experiences concerning COVID-19 media coverage go hand in hand with the multifaced harmful crisis experiences of the Concerned Vulnerables. Compared to the not affected groups, they experience immense levels of stress due to related news (M = 3.70) and are significantly more fatigued (M = 3.73) and afraid (M = 2.91) by the received contents.

So, in order to mitigate negative (media) experiences during crisis and to improve positive feelings, such as hope or trust, our results call for a more balanced approach of reporting which is known as solution-oriented journalism. Journalists should pay less attention to negative news and more to positive things and successes during crisis. These could include successes of institutional crisis management, (environmental) benefits of lockdowns, or positive people-centered stories showing how well individuals are handling pandemic related challenges. This may vulnerable groups also give a sense of possible future paths.

REFERENCES

Chu, T. H., Yeo, T. E. D., & Su, Y. (2022). Effects of Exposure to COVID-19 News and Information: A Meta-Analysis of Media Use and Uncertainty-Related Responses During the Pandemic. Journalism & Mass Communication Quarterly, 99(1), 89–112. https://doi.org/10.1177/10776990211068857

Ding, Y., Xu, J., Huang, S., Li, P., Lu, C., & Xie, S. (2020). Risk Perception and Depression in Public Health Crises: Evidence from the COVID-19 Crisis in China. International Journal of Environmental Research and Public Health, 17(16). https://doi.org/10.3390/ijerph17165728

Eshghi, A., Haughton, D., Legrand, P., Skaletsky, M., & Woolford, S. (2011). Identifying groups: A comparison of methodologies. Journal of Data Science, 9(2), 271–291. https://doi.org/10.6339/JDS.201104_09(2).0009

Généreux, M., Roy, M., David, M. D., … , & Champagne-Poirier, O. (2022). Psychological Response to the COVID-19 Pandemic in Canada: Main Stressors and Assets. Global Health Promotion, 29(1), 23–32. https://doi.org/10.1177/17579759211023671

Houston, J. B., Spialek, M. L., & First, J. (2018). Disaster Media Effects: A Systematic Review and Synthesis Based on the Differential Susceptibility to Media Effects Model. Journal of Communication, 68(4), 734–757. https://doi.org/10.1093/joc/jqy023

Kroenke, K., Strine, T. W., Spitzer, R. L., Williams, J. B. W., Berry, J. T., & Mokdad, A. H. (2009). The PHQ-8 as a Measure of Current Depression in the General Population. Journal of Affective Disorders, 114, 163–173. https://doi.org/10.1016/j.jad.2008.06.026

Nylund-Gibson, K., Grimm, R. P., & Masyn, K. E. (2019). Prediction from latent classes: A demonstration of different approaches to include distal outcomes in mixture models. Structural Equation Modeling. A Multidisciplinary Journal, 26(6), 967–985. https://doi.org/10.1080/10705511.2019.1590146

Olagoke, A. A., Olagoke, O. O., & Hughes, A. M. (2020). Exposure to Coronavirus News on Mainstream media: The Role of Risk perceptions and Depression. British Journal of Health Psychology, 25(4), 865–874. https://doi.org/10.1111/bjhp.12427

Strayhorn, T. L. (2023). Hope and Mental Health: An Investigation of Loneliness, Depression, Stress and Hope in University Students amid COVID-19. Journal of Psychology & Behavior Research, 5(1), 13-26. https://doi.org/10.22158/jpbr.v5n1p13

Su, Z., McDonnell, D., Wen, J., … , & Xian, Y.-T. (2021). Mental health consequences of COVID-19 media coverage: the need for effective crisis communication practices. Globalization and Health, 17, 4. https://doi.org/10.1186/s12992-020-00654-4

Van der Velden, P., Van der Meulen, M., Lenferink, L., & Yzermans, J. C. (2018). Media experiences and associations with mental health among the bereaved of the MH17-disaster: A latent profile analysis. Scandinavian Journal of Psychology. https://doi.org/10.1111/sjop.12426

Wu, L., Li, X., & Lyu, H. (2021). The Relationship Between the Duration of Attention to Pandemic News and Depression During the Outbreak of Coronavirus Disease 2019: The Roles of Risk Perception and Future Time Perspective. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.564284

Table 1. Measurements of the psychological indicators

Depressive symptoms Over the last two weeks, how often have you been bothered by any of the following problems?	Cronbach's Alpha = .93 *M* = 5.52 *SD* = 5.94
Little interest or pleasure in doing things	
Feeling down, depressed, or hopeless	
Trouble falling or staying asleep, or sleeping too much	
Feeling tired or having little energy	
Poor appetite or overeating	
Feeling bad about yourself-or that you are a failure or have let yourself or your family down	
Trouble concentrating on things	
Thoughts that life is not worth living	
COVID-19 distress	*M* = 2.32 *SD* = 1.17
How often do you feel that you are mentally distressed by COVID-19?	
Health concerns Please indicate how much the following statements/emotions apply to you?	Cronbach's Alpha = .91 *M* = 3.44 *SD* = 1.01
COVID-19 is a health threat for me personally.	
COVID-19 is a health threat for people close to me.	
COVID-19 is a serious health threat for the German population.	
Fear of getting infected.	
Worry for people close to me.	
I am afraid that many people in Germany will become infected.	
Political concerns Please indicate how much the following statements/emotions apply to you?	Cronbach's Alpha = .87 *M* = 2.78 *SD* = 1.14
Due to the measures taken to combat COVID-19 at my place of residence, my fundamental rights are severely restricted.	
The measures against the spread of COVID-19 severely restrict the fundamental rights in Germany.	
Anger that I am not allowed to do a lot of things that I usually do.	
I'm angry that people in Germany are not allowed to do a lot of things that they usually do.	

Hope Please indicate how much the following statements/emotions apply to you?	*r* = .57 *M* = 3.21 *SD* = 1.10
Hope that Corona will soon no longer be a problem for me. I have hope that Corona will soon no longer be a problem in Germany.	
Future perspectives Please indicate how much the following statements/emotions apply to you?	*r* = .58 *M* = 2.70 *SD* = 1.18
Due to Corona, I have less control over my future. Fear of the future.	
Trust in institutional crisis management How much do you trust the institutions and groups of people to contribute to a successful crisis management of the coronavirus pandemic?	Cronbach's Alpha = .92 *M* = 3.30 *SD* = 1.00
Federal government Local government Municipal administration Robert-Koch-Institute (RKI) Scientists Medical staff	

Table 2. Measurements of media evaluations

COVID-19 media coverage…	
Issue fatigue due to media coverage …annoys me. … can't hear and see anymore	*r* = .78 *M* = 2.65 *SD* = 1.01
Fear due to media coverage …makes me feel uncertain …makes me afraid	*r* = .59 *M* = 2.20 *SD* = 0.83
Stress due to media coverage …stresses me	*M* = 2.42 *SD* = 1.02
Perceived information overload …is too much …is too complex	*r* = .43 *M* = 2.34 *SD* = 0.78
Perceived bias …depicts the situation worse than actually is …does not provide all important information	*r* = .49 *M* = 2.34 *SD* = 0.85
Perceived orientation due to media coverage …provide useful classifications …sets the right focus	*r* = .62 *M* = 2.62 *SD* = 0.94
Media trust …is trustworthy … is accurate	*r* = .79 *M* = 2.76 *SD* = 0.80

Table 3. Fit indices of the latent profile analysis[1]

Profiles	AIC	BIC	Entropy	BLRT *p*
2	22131.85	22238.81	0.84	.01
3	21801.55	21947.40	0.83	.01
4	21436.13	21620.88	0.87	.01
5	21258.30	21481.93	0.83	.01

Note. Based on previous research (Nylund-Gibson et al., 2019) AIC, BIC, and BLRT were used to assess the model fit and to select an adequate cluster solution. A lower AIC and BIC as well as a significant p-value of BLRT (< .05) suggest a better model fit, when an additional profile is added. Entropy can range between 0 and 1, whereby higher values indicate a higher classification accuracy. Overall, the four-profile solution was therefore selected.

[1] Latent profile analysis is a person-centered statistical method in order to identify homogenous classes within a heterogenous sample. Unlike traditional hierarchical cluster analysis, group membership is determined based on different estimators, such as maximus likelihood estimation, and not by random cut-off points (Eshghi et al., 2011).

Table 4. Results of the latent profile analysis

	Concerned Vulnerables (n = 50)	Moderate Affected (n = 240)	Healthy Sceptics (n = 121)	Healthy Optimists (n = 544)	*F*	*eta*^{2}
Depressive symptoms	18.30^{a}	10.30^{b}	4.59^{c}	2.35^{d}	1270.70***	.57
Perceived distress due to COVID-19	4.33^{a}	3.35^{b}	2.47^{c}	1.66^{d}	1165.80***	.55
Health concerns	3.01^{a}	4.13^{b}	2.35^{c}	3.50^{d}	10.73**	.01
Political concerns	4.38^{a}	2.95^{b}	4.16^{a}	2.20^{c}	283.42***	.23
Bad future perspectives	4.49^{a}	3.59^{b}	3.24^{c}	2.02^{d}	827.59***	.46
Feelings of hope	2.86^{a}	3.05^{a}	2.80^{a}	3.42^{b}	31.42***	.03
Trust in institutional crisis management	1.96^{a}	3.53^{b}	1.98^{a}	3.73^{c}	112.16***	.11

Note. n = 955. Overall multivariate variance analysis: Wilk's Lamda = .25, *F*(7, 947) = 404.61***, eta^2 = .75. Same letters indicate no differences between the profiles at the .05 level, based on Bonferroni post-hoc test. ****p* <.001, ***p* <.01
Depressive Symptoms: Sum index from 0 to 24. 0 to 4 = no depressive symptoms, from 5 to 9 = clinically unremarkable status, from 10 to 14 = mild depressive symptoms, from 15 to 19 = moderate depressive symptoms, from 20 to 24 = severe depressive symptoms (Kroenke et al., 2009).
All other indicators: Scales from 1 to 5.

Table 5. Media evaluations and sociodemographic characteristics of the profiles

	Concerned Vulnerables (n = 50)	Moderate Affected (n = 240)	Healthy Sceptics (n = 121)	Healthy Optimists (n = 544)	*F*	*eta²*
Media evaluations						
Media trust	1.77a	2.95b	1.74a	3.00b	57.06***	.06
Orientation due to media coverage	1.72a	2.77b	1.74a	2.84b	61.56***	.06
Perceived bias	3.28a	2.31b	3.29a	2.12c	72.45***	.07
Fear due to media coverage	2.91a	2.70a	1.99b	1.90c	232.98***	.20
Stress due to media coverage	3.70a	2.82b	2.99b	1.96c	299.15***	.24
Perceived overload	2.83a	2.34b	2.69a	1.16c	35.64***	.03
Fatigue due to media coverage	3.73a	2.65b	3.62a	2.27c	107.16***	.10
Sociodemographics						
Age	46.60a	49.80a	49.80a	56.10b	54.12***	.05
Sex (female)	62%	53%	42%	40%		
Education (high)	26%	32%	38%	26%		
Economic situation (worse)	64%	36%	40%	18%		

Note. n = 995. Same letters indicate no differences between the profiles at the .05 level, based on Bonferroni post-hoc test. ****p* <.001, ***p* < .01, **p* < .05

Media experiences and evaluations: Scales from 1 to 4.

Nutrition Communication with Socio-economically Disadvantaged Young Families: A Qualitative Look at Informational Needs and Barriers

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Pregnancy and the first two years of a child's life are critical development periods in which malnutrition is linked to a variety of immediate and long-term health consequences (e.g., Herman et al., 2014; Saveedra & Dattilo, 2022). Nutritional habits of families with a low socioeconomic status often diverge substantially from dietary recommendations, for a variety of reasons (e.g., Lampert & Krause, 2014). Despite a growing research interest in evidence-based nutrition communication (e.g., Godemann & Bartelmeß, 2021; Mörixbauer et al., 2019), it is still unclear how communicative interventions should be designed in order to effectively motivate members of this particularly vulnerable and diverse target group to rethink their eating habits. A recent systematic review of the literature (Author et al., 2023) suggests that communication approaches and materials used in dietary interventions are often poorly documented and usually not based on health communication theories. Communicative interventions also faced significant barriers and produced, to some extent, defensive reactions. Overall, the review suggests that nutrition-related informational needs and preferences of families with a low socioeconomic status are largely unknown, similarly to the range of defensive responses towards certain types of information. This exploratory study therefore attempted to answer the following two research questions:

RQ1: What informational needs and preferences do socio-economically disadvantaged young families have regarding information related to child nutrition?

RQ2: Which defensive reactions and forms of resistances towards child nutrition information should be anticipated for which kind of communicative approach?

Method

Interview data from n = 12 guided individual interviews and nine focus group interviews with n = 42 young or becoming parents of families in precarious socioeconomic situations as well as guided individual interviews with n = 17 professional educators (e.g., physicians, midwives) working with vulnerable families were re-analyzed. The original interview data were collected and transcribed by an external service provider. A qualitative content analysis was conducted (Kuckartz & Rädiker, 2022; Schreier, 2012) with combined deductive and inductive category formation. The initially deductive categories were based on the aims and research questions of the study as well as relevant health communication constructs (e.g., self-efficacy, defensive reactions). Further categories were inductively derived from the interviews. The category system was adapted regarding the different participant groups (e.g., vulnerable mothers or stakeholders). All coded segments (i.e., text passages) for the individual categories were subsequently reviewed (category-based analysis). An overview of all case summaries was created and examined for similarities and differences with regard to nutrition communication-related needs (case-based analysis).

Results

Young families as well as educators indicated a variety of defensive reactions towards nutrition-related information. Persuasive attempts initially often produced irritation or disinterest. Dietary recommendations were criticized for a variety of reasons, statements about actual dietary behavior were inconsistent, and nutrition-related knowledge was only partly compatible with evidence-based recommendations. The professional educators were aware of these barriers and indicated a variety of strategies to minimize these unwanted reactions. These included respectful and positive approaches, an explicit avoidance of criticism, and a variety of individually developed strategies to minimize defensive reactions. However, even stakeholders were only partially aware of generally accepted sources of evidence-based nutrition information and evidence-based communication strategies.

Discussion

Overall, the findings highlight the complexity and real-world challenges of delivering evidence-based nutrition information in an evidence-based form, as well as a lack of several further competencies that contribute to the current situation. The presentation summarizes the findings regarding several barriers and promising strategies, and highlights theoretical as well as empirical research gaps. Implications for an improved evidence-based communication approaches for vulnerable individuals, particularly groups with a low socioeconomic status, as well as methodological implications and limitations will be discussed.

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REFERENCES

Cusick, S. E. & Georgieff, M. K. (2016). The role of nutrition in brain development: The golden opportunity of the “first 1000 days”. The Journal of Pediatrics, 175, 16– 21. https://doi.org/10.1016%2Fj.jpeds.2016.05.013

Godemann, J. & Bartelmeß, T. (Eds.). (2021). Ernährungskommunikation: Interdisziplinäre Perspektiven – Theorien – Methoden [Nutrition communication: Interdisciplinary perspectives – theories – methods]. Wiesbaden: Springer VS.

Herman, D. R., Taylor Baer, M., Adams E et al. (2014). Life course perspective: Evidence for the role of nutrition. Maternal and Child Health Journal, 18, 450– 461. https://doi.org/10.1007/s10995-013-1280-3

Kuckartz, U. & Rädiker, S. (2022). Qualitative Inhaltsanalyse. Methoden, Praxis, Computerunterstützung [Qualitative content analysis. Methods, practice, computer support] (5th. ed.). Weinheim: Beltz Juventa.

Lampert, T. & Krause, L. (2014). Statusspezifische Unterschiede im Auftreten von Übergewicht und Adipositas beim Übergang vom Kindes- in das Jugendalter: Ergebnisse des Kinder- und Jugendgesundheitssurveys (KiGGS) [Status-specific differences in the occurrence of overweight and obesity in the transitional period from childhood to adolescence – results from the cross-sectional German KIGGS study]. Gesundheitswesen, 76, 377–384.

Mörixbauer, A., Gruber, M., & Derndorfer, E. (2019). Handbuch Ernährungskommunikation [Nutrition communication handbook]. Berlin: Springer Spektrum.

Saavedra, J. M. & Dattilo, A. M. (2022). Nutrition in the first 1000days of life: Society's greatest opportunity. In J. M. Saavedra & A. M. Dattilo (Eds.), Early Nutrition and Long-Term Health (2 nd ed., pp. 3–25): Woodhead Publishing.

Schreier, M. (2012). Qualitative Content Analysis in Practice. London: SAGE Publications.

Schwarzer, R. (2008). Modeling health behavior change: How to predict and modify the adoption and maintenance of health behaviors. Applied Psychology, 57, 1–29. https://doi.org/10.1111/j.1464-0597.2007.00325.x

Fighting the Stigma of Eating Disorders on Instagram: An Experimental Study on the Impact of Different Etiological Explanations, Affectedness, and Gender (Congruence) on Stigma

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The stigma of eating disorders is both widespread (e.g., BETA, 2022; Roehrig & McLean, 2010) and detrimental (Brelet et al., 2021) in its effect on those affected. For them, the stigmatization of their disease means being vulnerable to, not least, stigmatizing attitudes involving responsibility and controllability over their disease (BETA, 2022). However, there is a lack of research dedicated to eating disorder stigma and attitudes the public holds toward the disorder (Bannatyne & Abel, 2015).

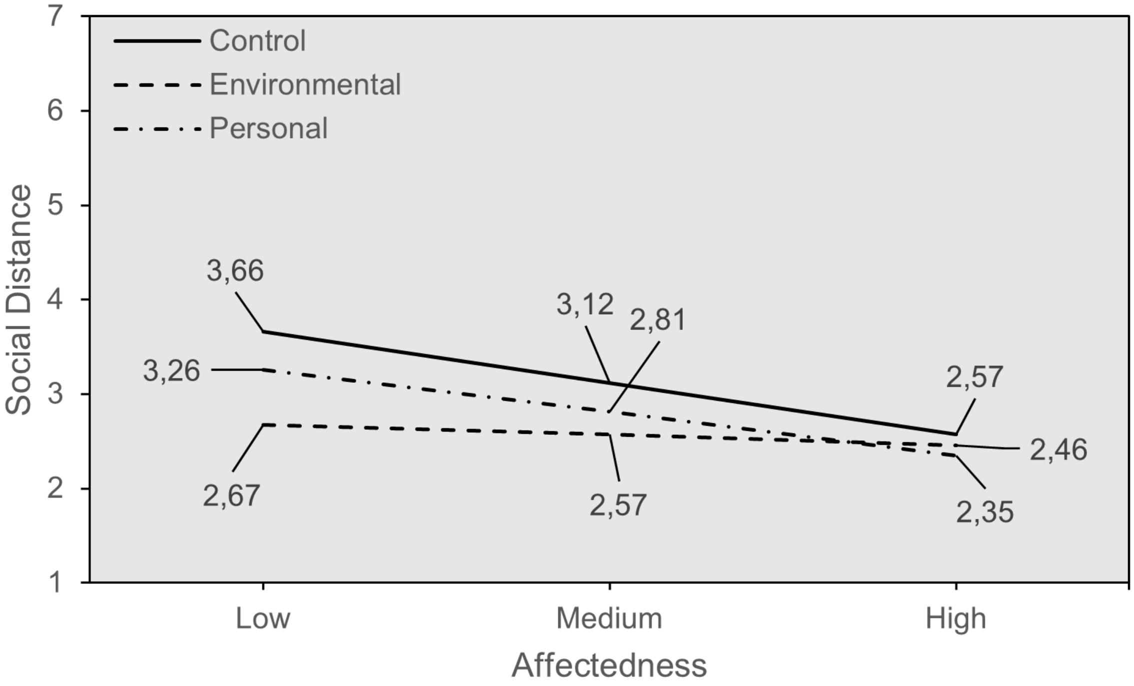
The stigma of eating disorders often manifests itself through social distance and negative attitudes, but is also shaped by the perception that those affected are responsible for their illness (Brelet et al., 2021). In line with attribution theory (Weiner et al., 1988), (not) attributing responsibility for and control over the disease to a person affected should influence how other people react to them. Therefore, one strategy to reduce eating disorder stigma relies on the explanation of the disease's causes (etiology) to decrease blame (Doley et al., 2017). Given that an interplay of genetic, psychological and environmental factors is viewed as leading to the onset of eating disorders (Mental Health UK, n.d.), the question arises as to the emphasis on which factor is most effective in reducing related stigma. The present study also tests the disposition-content congruency hypothesis (Valkenburg & Peter, 2013) as an explanation for a moderating role of both gender and own affectedness by eating disorders in the investigated media effects.

Method

A sample of 256 participants (37.5% women, 62.5% men, Mage = 32.6 years) was recruited via Amazon Mechanical Turk (n = 240) and University Mailing Lists (n = 16). In a 2 x 2 +1 online experiment (four experimental groups, one control group) we exposed individuals to fictional Instagram posts by people suffering from anorexia nervosa narrating their personal experience with onset factors of the disease. The first experimental factor was the etiology of their disease (personal or environmental), the second was the gender (male or female) of the portrayed person, and the dependent variable was the desired social distance (Link et al., 1987) to people with anorexia as a stigma measurement. We also investigated the role of the participants' gender and affectedness by eating disorders as potential moderators of this relationship.
As the main data collection has just ended, this abstract refers only to the first results using the main data set.

Results
First results show that eating disorder stigma could be successfully reduced through exposure to Instagram content emphasizing an environmental eating disorder etiology. Highlighting a personal etiology, on the other hand, did not lead to a decrease in stigma compared to the control condition. Furthermore, personal affectedness acts as a moderator in the effect of the environmental etiology condition on stigma: For low and medium levels of affectedness, the post about environmental factors significantly reduced stigma, while for high levels of affectedness, it did not (see Figure 1).

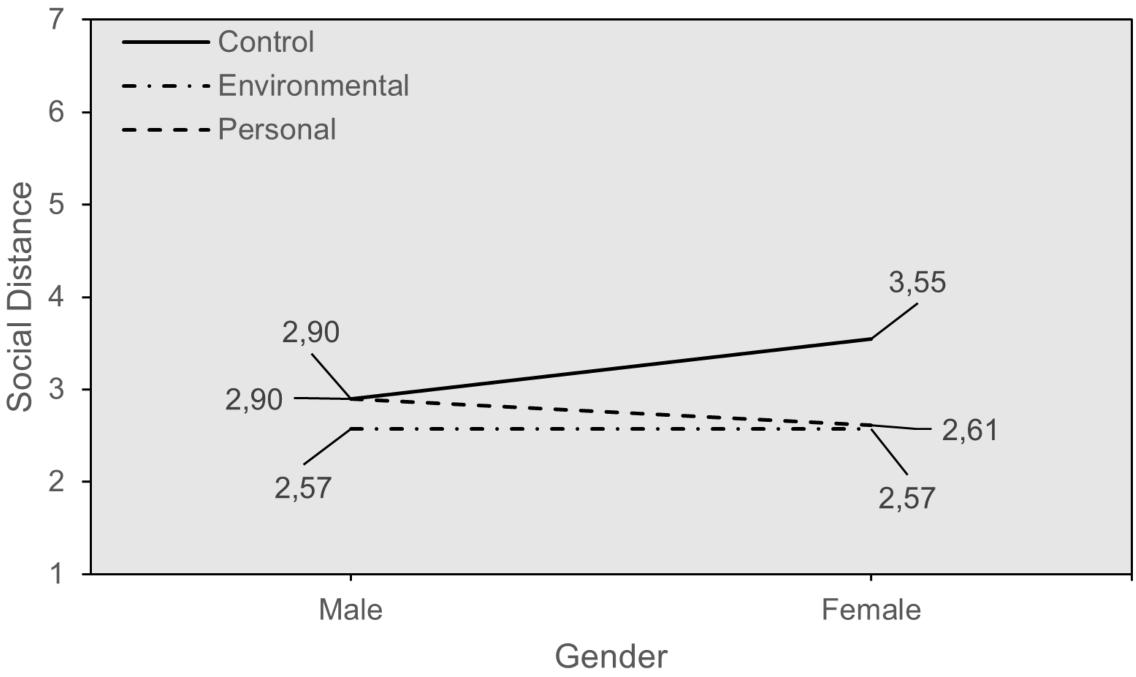
Figure 1. Moderation analysis for the influence of affectedness in the relationship between different eating disorder etiology descriptions and social distance



Note. Shown are the group means.
Model statistics for the dependent variable social distance: R2 = 0.15, F(5, 246) = 8.63, p < .001.

Additionally, an interaction was found between the participants' gender and the personal factor compared to the control condition for stigma. Although no such interaction was shown for the environmental factor, for women, conditional effects demonstrate that both etiology conditions significantly reduced stigma. For men, neither of the two did (see Figure 2).

Figure 2. Moderation analysis for the influence of gender in the relationship between different eating disorder etiology descriptions and social distance



Note. Shown are the group means.
Model statistics for the dependent variable social distance: R2 = 0.06, F(5, 249) = 2.98, p = .012.

As these are just the first results, not all hypotheses about disposition-content congruence have been explored yet.

Discussion

The present study supports prior research suggesting that explaining etiology (versus no explanation; Bannatyne & Stapleton, 2015; versus ambiguous explanation; Wingfield et al., 2011) can reduce eating disorder stigma. However, this effect was only significant for the environmental etiology description. Why stigma levels in the personal factor/male condition were (albeit not significantly) notably less reduced than in all other etiology conditions, provides an avenue for further research. This study also provides evidence that affectedness plays a moderating role in the effect of an environmental etiology explanation on stigma. Highly affected participants exposed to the environmental explanation could have had strong attitudes from real-life experiences, which outweighed the Instagram post's information. Moreover, the finding that favorable effects on stigma only occurred for female and not male participants underlines the value of examining this effect more closely in a next step. In doing so, it should be further considered whether there is (in)congruence of the gender of the participants and the persons portrayed. Finally, this finding indicates a need for gender-sensitive anti-stigma interventions when it comes to eating disorders.

REFERENCES

Bannatyne, A. J., & Abel, L. M. (2015). Can we fight stigma with science? The effect of aetiological framing on attitudes towards anorexia nervosa and the impact on volitional stigma. Australian Journal of Psychology, 67(1), 38–46. https://doi.org/10.1111/ajpy.12062

Bannatyne, A., & Stapleton, P. (2015). Educating medical students about anorexia nervosa: A potential method for reducing the volitional stigma associated with the disorder. Eating Disorders, 23(2), 115–133. https://doi.org/10.1080/10640266.2014.976102

BETA. (2022). National survey of mental health-related stigma and discrimination. ACT: Department of the Prime Minister and Cabinet.

Brelet, L., Flaudias, V., Désert, M., Guillaume, S., Llorca, P. M., & Boirie, Y. (2021). Stigmatization toward people with anorexia nervosa, bulimia nervosa, and binge eating disorder: A scoping review. Nutrients, 13(8), 2834. https://doi.org/10.3390/nu13082834

Doley, J. R., Hart, L. M., Stukas, A. A., Petrovic, K., Bouguettaya, A., & Paxton, S. J. (2017). Interventions to reduce the stigma of eating disorders: A systematic review and meta-analysis. International Journal of Eating Disorders, 50(3), 210–230. https://doi.org/10.1002/eat.22691

Link, B. G., Cullen, F. T., Frank, J., & Wozniak, J. F. (1987). The social rejection of former mental patients: Understanding why labels matter. American Journal of Sociology, 92(6), 1461–1500. https://doi.org/10.1086/228672

Mental Health UK (n.d.). Causes of eating disorders. Retrieved on June 25, 2023, from https://mentalhealth-uk.org/help-and-information/conditions/eating-disorders/causes/

Roehrig, J. P., & McLean, C. P. (2010). A comparison of stigma toward eating disorders versus depression. International Journal of Eating Disorders, 43(7), 671–674. https://doi.org/10.1002/eat.20760

Valkenburg, P. M., & Peter, J. (2013). The Differential Susceptibility to Media Effects Model. Journal of Communication, 63(2), 221–243. https://doi.org/10.1111/jcom.12024

Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. Journal of Personality and Social Psychology, 55(5), 738–748. https://doi.org/10.1037/0022-3514.55.5.738

Wingfield, N., Kelly, N., Serdar, K., Shivy, V. A., & Mazzeo, S. E. (2011). College students' perceptions of individuals with anorexia and bulimia nervosa. International Journal of Eating Disorders, 44(4), 369–375. https://doi.org/10.1002/eat.20824

(Don't) Look at My Imperfections: A Correlational Explorative Study of the Beach Body Experiences of Women With Visual Disfigurements

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The cultural construction of the ideal beach body as a slim, toned, tanned and otherwise flawless human figure in swimwear (Jordan, 2007), has been found to reinforce negative body image in many women during the warm seasons (Kleim, 2023), a psychological condition linked to low self-esteem, depression, eating disorders and other physical and mental health problems (e.g., Grabe et al., 2008).

Swimwear exposes publicly bodily details that are otherwise hidden, including visual disfigurements such as scars, burns and birth marks, which are heavily underrepresented in public media discourse. The question then arises of how individuals with visual disfigurements experience embodiment in beach body-related situations. These might include both experiences of bodily exposure in natural beach environments and on social networking sites (SNS), where beach body photographs are habitually shared. Examining the beach body experiences of such women will shine a light on an often invisible and stigmatised group.

Survey research was conducted with women from Australia and the UK (N = 659). The sample included 177 females who reported having one or more visual disfigurements (scars, burns, birth marks), which would become visible in swimwear.

Considering that sub-sample, we hypothesised that

(1) being exposed to normative beach bodies on SNS would be associated with negative body image, i.e., low appearance evaluation and high self-objectification and thin-ideal internalisation;
(2) the sharing of beach body selfies on SNS would also be associated with negative body image, i.e., high appearance evaluation and low self-objectification and thin-ideal internalisation;
(3) being exposed to non-normative bodies at the beach would be associated with positive body image, i.e., high appearance evaluation and low self-objectification and thin-ideal internalisation;
(4) individuals who felt least satisfied about their beach bodies would be most affected by exposure to other women's beach bodies both online and at the beach.

The sub-sample's age ranged from 18 to 70 years (M = 31.63; SD = 12.88). Self-reported mean BMI was 25.75 (SD = 6.22). Most participants identified as Caucasian (95.5%) and heterosexual (82.5%), and 37.3% were mothers and/or pregnant during the study. Almost 40% of participants reported they had suffered from an eating disorder or disordered eating behaviour.

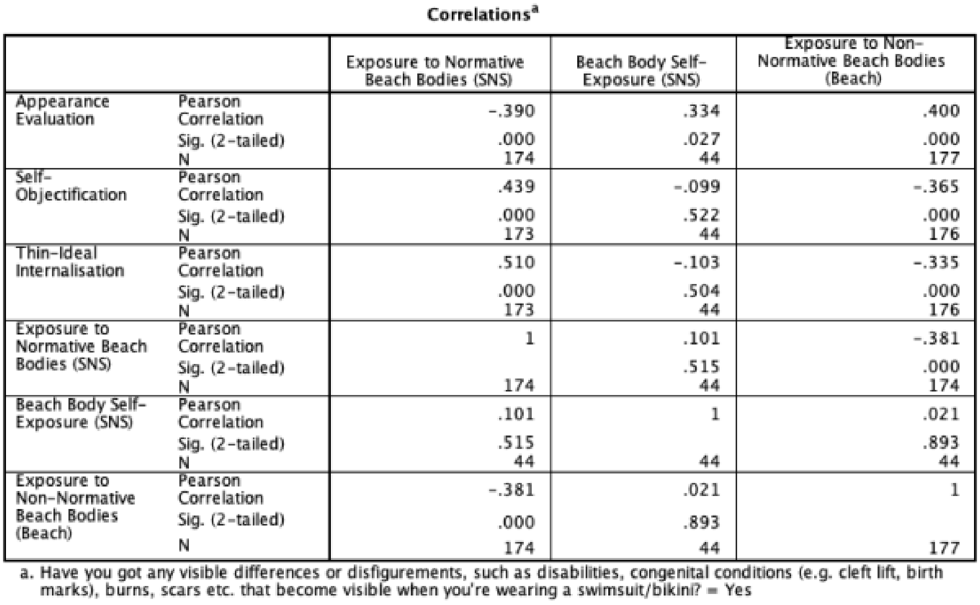
Hypotheses 1 and 3 were supported. Being exposed to normative beach body photographs on SNS was associated with low appearance evaluation (r (174) = -.390, p < .001), high self-objectification (r (173) = .439, p < .001) and high thin-ideal internalisation (r (173) = .510, p < .001) (H1), whereas viewing naturally flawed bodies at the beach correlated with high appearance evaluation (r (177) = .400, p < .001), low self-objectification (r (176) = -.365, p < .001) and low thin-ideal internalisation (r (176) = -.335, p < .001) (H3).

Hypthesis 2 was partially supported. While selfie-sharing was associated with high appearance evaluation (r (44) = .334, p < .05), no significant correlations were found in terms of self-objectification (p (44) = .522) and thin-ideal internalisation (p (44) = .504) (H2).

Hypothesis 4 was not supported. Although viewing normative beach body photographs on SNS was significantly associated with high self-objectification and thin-idealisation in all women independent of their beach body satisfaction, the highest effect sizes revealed in women who held a positive relationship with their beach body (thin-ideal internalisation: r (23) = .730, p < .01; self-objectification: r (23) = .433, p < .05). This subgroup also showed the strongest negative association between exposure to naturally flawed bodies at the beach and self-objectification (r (23) = -.538, p <.01) or thin-ideal internalisation (r (23) = -.419, p < .01), whereas no signification correlations were observed amongst women with low beach body satisfaction (H4).

Our results serve for a critical re-discussion of normative appearance-related media discourse, which oftentimes comes at the expense of vulnerable individuals and might affect their mental health, even if they try and uphold a positive self-image.

We argue for a re-definition of the term beach body that includes a normalisation of visibly impaired bodies in swimwear, which are legitimated to be exposed at the beach like any other body. Changing narratives might help vulnerable individuals to feel more comfortable about their allegedly imperfect bodies at the beach and to fully enjoy the benefits of engaging with this natural environment, which, on the other hand, might benefit their mental and physical health (McKerron & Mourato, 2013; Nichols, 2018; O'Brien, 2006; Tucker & Gilland, 2007).



Correlations[a]

		Exposure to Normative Beach Bodies (SNS)	Beach Body Self-Exposure (SNS)	Exposure to Non-Normative Beach Bodies (Beach)
Appearance Evaluation	Pearson Correlation	-.390	.334	.400
	Sig. (2-tailed)	.000	.027	.000
	N	174	44	177
Self-Objectification	Pearson Correlation	.439	-.099	-.365
	Sig. (2-tailed)	.000	.522	.000
	N	173	44	176
Thin-Ideal Internalisation	Pearson Correlation	.510	-.103	-.335
	Sig. (2-tailed)	.000	.504	.000
	N	173	44	176
Exposure to Normative Beach Bodies (SNS)	Pearson Correlation	1	.101	-.381
	Sig. (2-tailed)		.515	.000
	N	174	44	174
Beach Body Self-Exposure (SNS)	Pearson Correlation	.101	1	.021
	Sig. (2-tailed)	.515		.893
	N	44	44	44
Exposure to Non-Normative Beach Bodies (Beach)	Pearson Correlation	-.381	.021	1
	Sig. (2-tailed)	.000	.893	
	N	174	44	177

a. Have you got any visible differences or disfigurements, such as disabilities, congenital conditions (e.g. cleft lift, birth marks), burns, scars etc. that become visible when you're wearing a swimsuit/bikini? = Yes

More than a Body. An Experimental Investigation of the Effects of Body Neutrality and Body Positivity on Women's Body Image

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Body positivity is a social media movement that seeks to (1) challenge socially prevailing idealised body ideals as well as (2) promote self-love and body appreciation by portraying diverse body shapes which are otherwise underrepresented in the media (Cohen et al., 2021). Recently, however, the movement is receiving increasing criticism, as body positive content still focuses on women's appearance (Cohen et al., 2019, 2021; Cox Thomson, 2021). Social media activists are therefore calling to replace body positivity in favour of body neutrality, a concept which is less appearance focused (Weingus, 2018). Still, there is a lack of empirical research regarding the new phenomenon and its effects on women's body image.

According to the Tripartite Influence Model (Thompson et al., 1999), social comparison (Festinger, 1954) plays a major role when it comes to media's impact on body image. Notably, an important dimension of comparison is appearance – especially for women (Davison & McCabe, 2006; Wheeler & Miyake, 1992). Specifically, body ideals conveyed via the media can lead to upward comparisons, which often result in a poorer body image among female recipients (Frederick et al., 2017). Importantly, the tendency to seek this comparison (trait appearance comparison, or TAC) can vary from person to person (Myers & Crowther, 2009). Another framework for understanding the relationship between media content and body image is the objectification theory (Fredrickson & Roberts, 1997) which states that the female body is constructed as an object in society. The accumulation of objectifying experiences socialises women to look at and evaluate their body based on appearance, i.e., self-objectification (Cohen et al., 2019).

Idealised representations of bodies are very present on social media (Boepple & Thompson, 2016). Various studies show that these representations lead to lower body appreciation and body satisfaction as well as increased self-objectification among women (e.g., Brown & Tiggemann, 2016; Casale et al., 2021). In contrast, body positivity posts have been shown to increase body appreciation and body satisfaction. However, regarding the impact of body positivity content on users' self-objectification, there is no improvement compared to idealised content (Cohen et al., 2019; Nelson et al., 2022). Against this backdrop, the present study examines (1) how body neutrality posts compared to body positivity posts affect body appreciation and body satisfaction of the female recipients and (2) if body neutrality posts lead to less self-objectification among recipients than positivity posts. Furthermore, it was assumed that social media literacy and TAC influence the effect of body neutrality and body positivity content on body image due to their importance in prior research (e.g., McLean et al., 2016; Tamplin et al., 2018). To answer our research question and test the assumptions, a one-factor online experiment with two experimental groups was conducted. The subjects were randomly assigned to one of the two groups. The participants (N = 144, information on the sample can be found in Table 1) were presented either the stimuli of the body neutrality or the body positivity condition (same image, caption varied). Subsequently, body appreciation, body satisfaction, and self-objectification were measured. Please see Table 2 for a list of the items measured.

The results of the MANCOVA (Table 3) show that there are no significant differences between body neutrality and body positivity in terms of body appreciation ($F(1,139) = .02$, $p = .90$, $\eta^2 p = .00$), body satisfaction ($F(1,139) = .24$, $p = .63$, $\eta^2 p = .00$), and self-objectification ($F(1,139) = .01$, $p = .92$, $\eta^2 p = .00$). Moreover, there is no significant impact of the moderating variable social media literacy on body image. However, moderation analysis (Table 4) revealed that TAC is a significant predictor for all three dependent variables. There is a negative correlation between TAC and body appreciation ($b = -.50$, $t = -7.11$, $p < .001$, 95% CI = [-.22, .33]) and body satisfaction ($b = -.42$, $t = -5.90$, $p < .001$, 95% CI = [-.55, -.28]) and a positive correlation between TAC and self-objectification ($b = .62$, $t = 13.82$, $p < .001$, 95% CI = [.53, .71]).

Overall, our study provides important initial findings regarding the impact of body neutrality social media content on women's body image: Compared to body positivity posts, body neutrality posts do not have an exceptionally more positive effect on body image. Nevertheless, the study shows once more how relevant TAC is in the reception of social media content. More longitudinal research is needed to understand long-term effects of following body-related content on social media.

REFERENCES

Boepple, L., & Thompson, J. K. (2016). A content analytic comparison of fitspiration and thinspiration websites: FITSPO THINSPO COMPARISON. International Journal of Eating Disorders, 49(1), 98–101. https://doi.org/10.1002/eat.22403

Brown, Z., & Tiggemann, M. (2016). Attractive celebrity and peer images on Instagram: Effect on women's mood and body image. Body Image, 19, 37–43. https://doi.org/10.1016/j.bodyim.2016.08.007

Casale, S., Gemelli, G., Calosi, C., Giangrasso, B., & Fioravanti, G. (2021). Multiple exposure to appearance-focused real accounts on Instagram: Effects on body image among both genders. Current Psychology, 40(6), 2877–2886. https://doi.org/10.1007/s12144- 019-00229-6

Cohen, R., Fardouly, J., Newton-John, T., & Slater, A. (2019). #BoPo on Instagram: An experimental investigation of the effects of viewing body positive content on young women's mood and body image. New Media & Society, 21(7), 1546–1564. https://doi.org/10.1177/1461444819826530

Cohen, R., Newton-John, T., & Slater, A. (2021). The case for body positivity on social media: Perspectives on current advances and future directions. Journal of Health Psychology, 26(13), 2365–2373. https://doi.org/10.1177/1359105320912450

Davison, T. E., & McCabe, M. P. (2006). Adolescent Body Image and Psychosocial Functioning. The Journal of Social Psychology, 146(1), 15–30. https://doi.org/10.3200/SOCP.146.1.15-30

Frederick, D. A., Daniels, E. A., Bates, M. E., & Tylka, T. L. (2017). Exposure to thin-ideal media affect most, but not all, women: Results from the Perceived Effects of Media Exposure Scale and open-ended responses. Body Image, 23, 188–205. https://doi.org/10.1016/j.bodyim.2017.10.006

Lindner, D., & Tantleff-Dunn, S. (2017). The Development and Psychometric Evaluation of the Self-Objectification Beliefs and Behaviors Scale. Psychology of Women Quarterly, 41(2), 254–272. https://doi.org/10.1177/0361684317692109

McLean, S. A., Paxton, S. J., & Wertheim, E. H. (2016). The role of media literacy in body dissatisfaction and disordered eating: A systematic review. Body Image, 19, 9–23. https://doi.org/10.1016/j.bodyim.2016.08.002

Myers, T. A., & Crowther, J. H. (2009). Social comparison as a predictor of body dissatisfaction: A meta-analytic review. Journal of Abnormal Psychology, 118(4), 683–698. https://doi.org/10.1037/a0016763

Nelson, S. L., Harriger, J. A., Miller-Perrin, C., & Rouse, S. V. (2022). The effects of bodypositive Instagram posts on body image in adult women. Body Image, 42, 338–346. https://doi.org/10.1016/j.bodyim.2022.07.013

Szalai, T. D., Czeglédi, E., Vargha, A., & Grezsa, F. (2017). Parental Attachment and Body Satisfaction in Adolescents. Journal of Child and Family Studies, 26(4), 1007–1017. https://doi.org/10.1007/s10826-016-0626-z

Tamplin, N. C., McLean, S. A., & Paxton, S. J. (2018). Social media literacy protects against the negative impact of exposure to appearance ideal social media images in young adult women but not men. Body Image, 26, 29–37. https://doi.org/10.1016/j.bodyim.2018.05.003

Tandoc, E. C., Yee, A. Z. H., Ong, J., Xu, D., & Han, Z. (2021). Developing a Perceived Social Media Literacy Scale: Evidence from Singapore. International Journal of Communication, 15, 2484–2505.

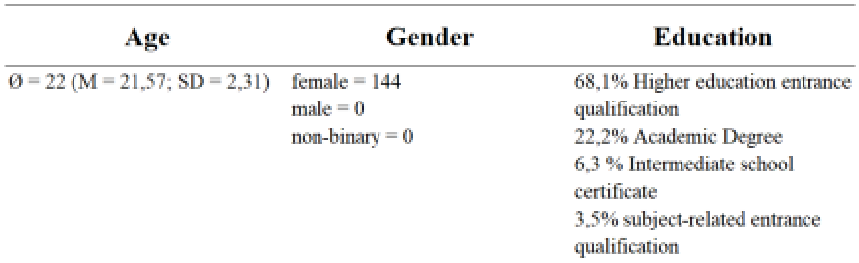
Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). Exacting beauty: Theory, assessment, and treatment of body image disturbance. American Psychological Association. https://doi.org/10.1037/10312-000

Tylka, T. L., & Wood-Barcalow, N. L. (2015). The Body Appreciation Scale-2: Item refinement and psychometric evaluation. Body Image, 12, 53–67. https://doi.org/10.1016/j.bodyim.2014.09.006

Weingus, L. (2018). Body Neutrality Is A Body Image Movement That Doesn't Focus On Your Appearance. HuffPost News. https://www.huffpost.com/entry/what-is-body-neutrality_n_5b61d8f9e4b0de86f49d31b4

Wheeler, L., & Miyake, K. (1992). Social comparison in everyday life. Journal of Personality and Social Psychology, 62(5), 760–773. https://doi.org/10.1037/0022-3514.62.5.760

Table 1. Description of participants



Age	Gender	Education
Ø = 22 (M = 21,57; SD = 2,31)	female = 144 male = 0 non-binary = 0	68,1% Higher education entrance qualification 22,2% Academic Degree 6,3 % Intermediate school certificate 3,5% subject-related entrance qualification

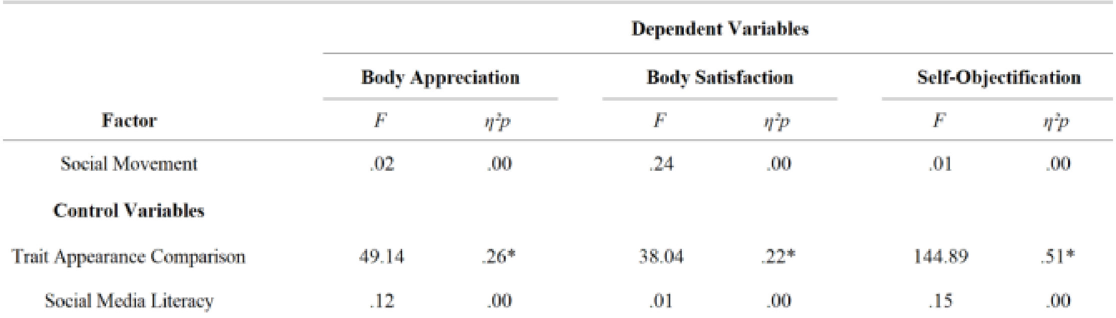
Note. *N* = 144.

Table 2. List of items

Body Appreciation	Body Satisfaction	Self-Objectification	Social Media Literacy	Trait Appearance Comparison
I respect my body.	I'm satisfied with my general appearance.	Looking attractive to others is more important to me than being happy with who I am inside.	I know how to create an account on social media.	At parties or other social events, I compare my physical appearance to the physical appearance of others.
I feel good about my body.	I'm satisfied with my body weight.	I try to imagine what my body looks like to others (i.e., like I am looking at myself from the outside.)	I know how to delete my account on social media.	The best way for a person to know if they are overweight or underweight is to compare their figure to the figure of others.
I feel that my body has at least some good qualities.	I'm satisfied with my body shape.	How I look is more important to me than how I think or feel.	I know how to deactivate my account on social media.	At parties or other social events, I compare how I am dressed to how other people are dressed.
I take a positive attitude towards my body.	I'm satisfied with my muscles.	I choose specific clothing or accessories based on how they make my body appear to others.	I know how to post content, such as photos, on my social media account.	*Comparing your "looks" to the "looks" of others is a bad way to determine if you are attractive or unattractive.
I am attentive to my body's needs.	I'm satisfied with my level of femininity.	My physical appearance is more important than my personality.	I know how to remove unwanted content on my social media account.	In social situations, I sometimes compare my figure to the figures of other people.
I feel love for my body.		My body is what gives me value to other people.	I am aware of my organization's social media policy.	
I appreciate the different and unique characteristics of my body.		When I look in the mirror, I notice areas of my appearance that I think others will view critically.	I know the copyright laws governing social media platforms.	
My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.		I consider how my body will look to others in the clothing I am wearing.	I know how to appropriately handle conflicts in social media.	
I am comfortable in my body.		I have thoughts about how my body looks to others even when I am alone.	Information that I post on social media is permanent.	
I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).		I often think about how my body must look to others.	I know how to verify whether ehat is shared on social media is correct.	
		My physical appearance says more about who I am than my intellect.	The advertisements I see on social media are specifically targeted to my preference.	
		How sexually attractive others find me says something about who I am as a person.	I know how to use different sources of information to verify information I see on social media.	
		My physical appearance is more important than my physical abilities.	I can tell whether an information on social media is true or false.	
		I try to anticipate others' reactions to my physical appearance.	Social media sites such as Facebook control what I see on social media.	

Note. Items measured were based on studies by Lindner & Tantleff-Dunn (2017); Szalai et al. (2017); Tandoc et al. (2021), Thompson et al. (1999), and Tylka & Wood-Barcalow (2015).

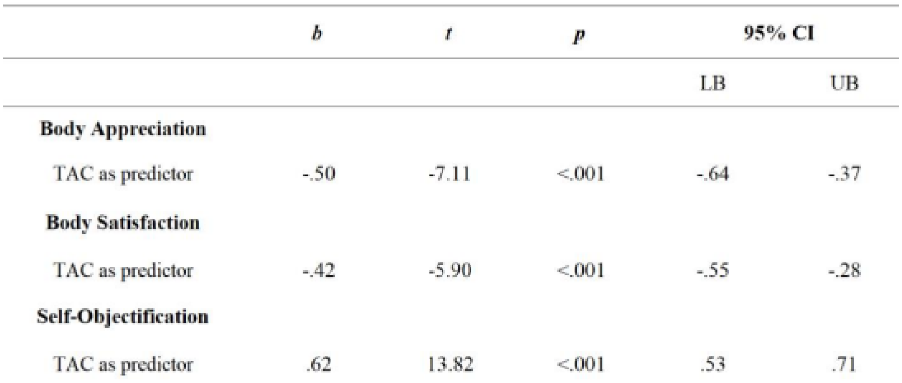
Table 3. Effects of social movement and control variables on the dependent variables body appreciation, body satisfaction, and self-objectification



	Dependent Variables					
	Body Appreciation		**Body Satisfaction**		**Self-Objectification**	
Factor	*F*	η^2p	*F*	η^2p	*F*	η^2p
Social Movement	.02	.00	.24	.00	.01	.00
Control Variables						
Trait Appearance Comparison	49.14	.26*	38.04	.22*	144.89	.51*
Social Media Literacy	.12	.00	.01	.00	.15	.00

Note. $N = 144$; $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 4. Trait appearance comparison as a predictor of the dependent variable



	b	*t*	*p*	95% CI	
				LB	UB
Body Appreciation					
TAC as predictor	-.50	-7.11	<.001	-.64	-.37
Body Satisfaction					
TAC as predictor	-.42	-5.90	<.001	-.55	-.28
Self-Objectification					
TAC as predictor	.62	13.82	<.001	.53	.71

Note. $N = 144$; LB describes the lower bound of the confidence interval, UB describes the upper bound.

Dietary Supplement Presentation on Instagram and TikTok: A Content Analysis of Influencer Posts Targeted at Austrian Adolescents

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Introduction

Social media has revolutionized the way young people access health information (Fergie et al., 2016; Hitlin & Olmstead, 2018; O'Keeffe et al., 2011). Social media influencers (SMIs) play a significant role in disseminating health-related messages, but the abundance of unverified information they share poses challenges. SMIs are users who have amassed a substantial following through regular postings, giving them the potential to influence others (Lou & Yuan, 2019; Pilgrim & Bohnet-Joschko, 2019). Despite the impact of SMIs on adolescent health, limited research has explored this phenomenon.

Young social media users are frequently exposed to content promoting unhealthy foods (Qutteina et al., 2021; Sokolova & Perez, 2021). This raises concerns because research repeatedly demonstrates that food marketing impacts eating behaviors and contributes to the ongoing childhood and adolescent obesity crisis (Folkvord et al., 2016; Harris et al., 2009). Influencers often showcase and market dietary supplements, such as protein powders and vitamins, promising, for instance, to enhance one`s appearance (Pilgrim & Bohnet-Joschko, 2019). Dietary supplements are oral products containing "dietary ingredients" intended to supplement one's diet (Binns et al., 2018). However, the marketing of supplements, especially targeted at adolescents as a vulnerable group, raises several concerns. Improper consumption can lead to serious adverse health effects, including toxic reactions, fatigue, or diarrhea (Morris & Crane, 2013). Additionally, concerns revolve around psychological dependence, economic consequences (adolescents spending money on potentially unnecessary products), substitution of healthy diets with supplements, and consumption of them without professional guidance (Binns et al., 2018).

Researchers across various disciplines have employed different theoretical frameworks to understand the relationship between influencers and adolescents. The Social Cognitive Theory (Bandura, 1969, 2002) and Social Comparison Theory (Festinger, 1954) are particularly valuable in explaining how adolescents learn and adopt behavior from influencers and compare themselves to them. For instance, the intake and endorsement of dietary supplements by influencers can motivate adolescents to emulate these behaviors and purchase the advertised products to achieve desired outcomes (e.g., a muscular body). Our study will dive deeper into the form of presentation of dietary supplements, building on previous theoretical approaches of influencer- and food marketing (Harris et al., 2009; Pilgrim & Bohnet-Joschko, 2019; Roberts & Pettigrew, 2007; Zou et al., 2021). Although content analyses on influencer posts and nutrition exist (Alruwaily et al., 2020; Castelló-Martínez & Tur-Viñes, 2020; Pilgrim & Bohnet-Joschko, 2019), research on dietary supplements in the context of influencers and adolescents is limited (Denniss et al., 2023; Wagner et al., 2020). Therefore, our qualitative content analysis aims to answer the research question: *Which dietary supplements are marketed, and how are they presented in social media influencer posts targeting Austrian adolescents?*

Methodology

Our content analysis is based on a citizen science study conducted in Austria, where adolescents actively participated in exploring and documenting health-related posts by influencers. Citizen science is an innovative participatory approach that unleashes the full potential of young people's personal expertise (Friemel, 2015, 2020). Our citizen science study motivated students for independent exploration, peer discussions, and documentation, resulting in over 2,000 social media posts collected from 19 school classes across 16 schools. Using exploratory analysis techniques (Mayring, 2015), we focus on influencer posts of dietary supplements on TikTok, Instagram, and YouTube. Purposeful sampling techniques ensure a diverse range of posts, considering variations in follower counts and influencer characteristics (e.g., age, gender, body type).

Our research aims to provide a comprehensive understanding of how dietary supplements are presented in influencer posts, taking into account the contextual factors at play. The design and analysis will be informed by prior literature and theoretical frameworks on influencer- and food marketing (Bleakley et al., 2022; Pilgrim & Bohnet-Joschko, 2019; Roberts & Pettigrew, 2007; Smith et al., 2023) to address the prevailing research gaps and answer our stated research question. Our analysis will include factors such as format (e.g., text, video, picture), engagement metrics (e.g., likes, comments), influencer characteristics (e.g., gender, body type), ad disclosure methods (e.g., hashtags), brands, food categories, health warnings, and calls to action. The study findings will offer valuable insights into the extent of dietary supplement marketing by influencers, informing health communicators and potential regulations on food marketing targeted at adolescents.

Work in Progress

This submission is a work-in-progress, presenting the concept for a content analysis. The results of the analysis will be available at the conference.

How Older Adults' Self-Assessed Critical Food/Media Literacy and Actual Knowledge Drift Apart When Evaluating Misleading Food Ads

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Following a healthy diet is important for people at all ages. However, especially for older adults a focus on eating nutrient-dense foods becomes vital. A healthy diet can be beneficial to protect against, for example, chronic diseases, which are more likely to be developed with progressing age (Office of Disease Prevention and Health Promotion, 2021). Mass media can be an important source of information for older adults (>65 years) to convey nutrition-related information and mass media are also among relevant situational factors which have been highlighted to influence older adults' healthy food choices (Caso & Vecchio, 2022). However, not only media, but also industries, are common sources contributing to the spread of health (mis)information nowadays (Nan et al., 2021). Reports from older adults suggest (Rueter et al., 2020) that they often accuse the food industry of deceiving them to make them buy food which is unhealthy. In fact, difficulties to comprehend health claims have been mentioned to drive older adults' unhealthy food choices (Caso & Veccio, 2022). Additionally, older adults indicated to feel powerless in the face of the food industry's marketing strategies (Rueter et al., 2020), making them a vulnerable group. Being armed with critical thinking skills regarding food ads (Ha et al., 2020) can help individuals resist making unhealthy food choices. However, there is a risk that media and food literacy could be seriously compromised. Kruger and Dunning (1999) discovered that those people who display the lowest knowledge are often those who overestimate their knowledge most. In contrast, people showing highest knowledge often underestimate their knowledge, which points to a mismatch between actual knowledge and self-assessments – a phenomenon known as the Dunning-Kruger Effect (DKE).

The aim of the present study is to detect the presence of the DKE (Kruger & Dunning, 1999) and raise awareness of it among older adults which may prevent this vulnerable group from correctly evaluating misleading food ads. Nan et al. (2021) call for further research which investigates the impact of health misinformation and identifies vulnerable individuals (e.g., older adults) who might be more affected by health misinformation's impact. In line with the assumptions of the DKE, we hypothesize that older adults with least food and media knowledge (actual knowledge) would overestimate their food and media literacy (selfassessments). Older adults with highest food and media knowledge would underestimate their food and media literacy.

We report results from a larger study project (online survey conducted with support of the Gallup International Association https://www.gallup.at/de/home/) that focused on detecting the DKE among a representative sample of the Austrian population. For the present conference, we focus on the findings generated among older adults (≥65 years) (N=213). In the online survey, we measured participants' self-assessments via critical food literacy (Krause et al., 2018) and media literacy (Pinkleton & Austin, 2016). Actual knowledge was measured via a quiz that tested participants' actual food and media knowledge (Table 1). For this purpose, participants were exposed to a misleading food ad which served as a basis for testing people's actual food and media knowledge.

In analysing the data to detect the DKE, we followed an approach similar to that used by previous researchers (e.g., McMahon et al., 2020; Sullivan et al., 2019). Based on participants' performance in the quiz (measuring food and media knowledge), they were grouped into quartiles. In the present study, we conducted a quartiles analysis with SPSS 28, which resulted in 4 knowledge groups ranging from lowest to highest knowledge. Paired sample t-tests were performed to check for the difference in mean scores between actual food and media knowledge and self-assessments (critical food and media literacy). Actual knowledge and selfassessments were measured using different scales. Hence, Z scores were calculated to interpret the results.

Our results confirm the presence of the DKE among older adults: Participants in the "lowest-knowledge" group showed significantly higher self-assessment scores (critical food and media literacy) (Mz-score =-.07, SD=.88) than actual knowledge (food and media knowledge) (Mz-score=-1.26, SD=.34) (t(29)=-7.48, p<.001, d=-1.36). In contrast, the "highest-knowledge" group showed significantly lower self-assessment scores (Mz-score=.06, SD=1.10) than actual knowledge (Mz-score=1.11, SD=.44) (t(80)=7.86, p<.001, d=.87) (Figure 1). The results lead to important implications for health communication efforts to protect older adults from misleading ads which will be discussed in the conference presentation. Relationships between the DKE and further variables (e.g., advertising evaluation variables, opinion leadership, social media use) will also be discussed.

REFERENCES

Caso, G., & Vecchio, R. (2022). Factors influencing independent older adults (un)healthy food choices: A systematic review and research agenda. Food Research International, 158, Article 111476. https://doi.org/10.1016/j.foodres.2022.111476

Ha, O.-R., Killian, H. J., Davis, A. M., Lim, S.-L., Bruce, J.-M., Sotos, J. J., Nelson, S. C., & Bruce, A. S. (2020). Promoting Resilience to Food Commercials Decreases Susceptibility to Unhealthy Food Decision-Making. Frontiers in Psychology, 11, Article 599663. https://doi.org/10.3389/fpsyg.2020.599663

Krause, C. G., Beer-Borst, S., Sommerhalder, K., Hayoz, S., & Abel, T. (2018). A short food literacy questionnaire (SFLQ) for adults: Findings from a Swiss validation study. Appetite, 120, 275-280. https://doi.org/10.1016/j.appet.2017.08.039

Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it. How difficulties in recognizing one's own incompetence lead to inflated self-assessments. Journal of Personality and Social Psychology, 77(6), 1121–1134.

McMahon, C., Stoll, B., & Linthicum, M. (2020). Perceived versus actual autism knowledge in the general population. Research in Autism Spectrum Disorders, 71, Article 101499. https://doi.org/10.1016/j.rasd.2019.101499

Nan, X., Wang, Y., & Thier, K. (2021). Health Misinformation. In T. L. Thompson & N. Grant Harrington (Eds.), The Routledge Handbook of Health Communication (3rd Ed.) (pp. 318-332). Routledge.

Office of Disease Prevention and Health Promotion. (2021, July, 20). Nutrition as We Age: Healthy Eating with the Dietary Guidelines. https://health.gov/news/202107/nutrition-we-agehealthy-eating-dietaryguidelines#:~:text=Special%20Considerations%20for%20Older%20Adults&text=Eating%20more%20fruits%2C% 20vegetables%2C%20whole,food%20group%20and%20nutrient%20recommendations

Parmenter, K., & Wardle, J. (1999). Development of a general nutrition knowledge questionnaire for adults. European Journal of Clinical Nutrition, 53, 298-308. https://doi.org/10.1038/sj.ejcn.1600726

Pinkleton, B. E, & Austin, E. W. (2016). Media Literacy. In D. K. Kim & J. W. Dearing (Eds.), Health Communication Research Measures (pp. 65-76). Peter Lang.

Rueter, J., Brandstetter, S., Curbach, J., Lindacher, V., Warrelmann, B., & Loss, J. (2020). How Older Citizens in Germany Perceive and Handle Their Food Environment—A Qualitative Exploratory Study. International Journal of Environmental Research and Public Health, 17, Article 4940. doi:10.3390/ijerph17196940

Sullivan, P. J., Ragogna, M., & Dithurbide, L. (2019). An investigation into the Dunning– Kruger effect in sport coaching. International Journal of Sport and Exercise Psychology, 17(6), 591-599. https://doi.org/10.1080/1612197X.2018.1444079

APPENDIX

Figure 1. Differences between actual knowledge (food & media knowledge) and selfassessments (critical food & media literacy) per quartile

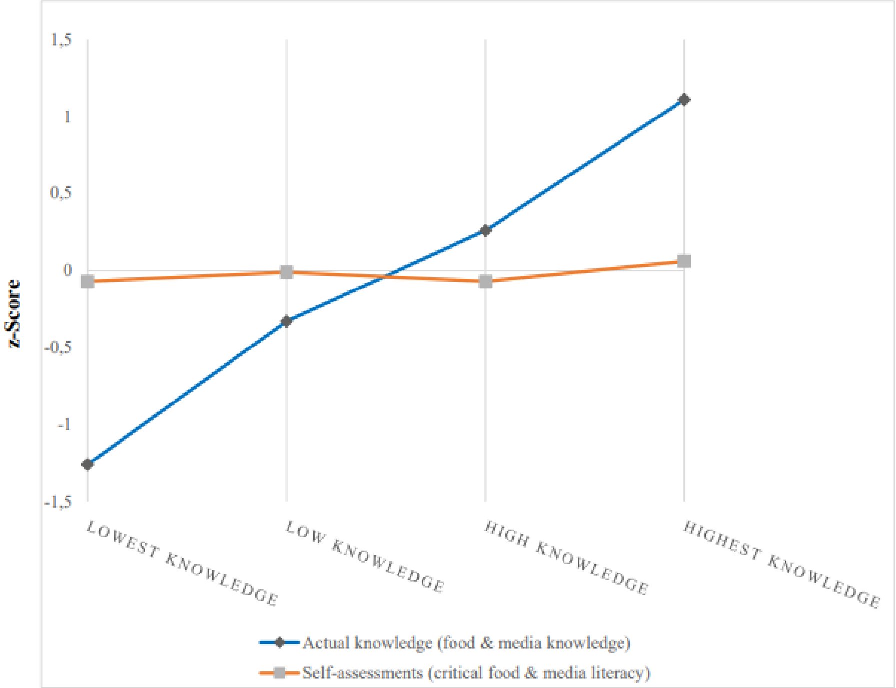

Table 1. Applied measures: means, standard deviations, cronbach alpha

Variables	Items	*M*	*SD*	α
Food literacy (self-assessment) (based on Krause et al., 2018)	***Critical food literacy***			***.89***
	How easy is it for you to judge if media information on nutritional issues can be trusted?[a]	4.12	1.39	
	Commercials often relate foods with health. How easy is it for you to judge if the presented associations are appropriate or not?[a]	4.01	1.55	
	How easy is it for you to evaluate if a specific food is relevant for a healthy diet?[a]	4.58	1.39	
	How easy is it for you to evaluate the longer-term impact of your dietary habits on your health?[a]	4.82	1.39	
Media literacy (self-assessment) (Pinkleton & Austin, 2016)	***Perceived critical thinking skills: message content***			***.70***
	It is important to think twice about what messages say.[b]	5.32	1.40	
	I look for more information before I believe something I see in messages. [b]	5.28	1.26	
	I think about things I see before I accept them as believable. [b]	5.58	1.12	
	Perceived critical thinking skills: message source			***.93***
	I think about how someone created a message. [b]	4.53	1.54	
	I think about what the creator of a message wants me to think. [b]	4.71	1.58	
	I think about why someone created a message I see. [b]	4.60	1.59	
Food knowledge (actual knowledge) (based on actual product information of an existing cereal bar as criticized by Foodwatch)[1]	***What's your guess? 100 grams of this product consist of: (Choose the right answer)***			-
	9 % / *19 %* / 29 % of fiber			
	5 % / *15 %* / 25 % of protein			
	3 % / *13 %* / 23 % of fat			
	0,27 % / 0,37 % / 0,47 % of salt			
	4 % / 14 % / *24 %* of sugar			
	20 % / 30 % / *40 %* of carbohydrates			
Food knowledge (actual knowledge) (based on Parmenter & Wardle, 1999)	***Do you think this product is either high or low in the following ingredients? (Chose the right answer)***			-
	-fiber (*high*/low)			
	-protein (*high*/low)			
	-fat (*high*/low)			
	-salt (high/*low*)			
	-sugar (*high*/low)			
	-carbohydrates (*high*/low)			
Media knowledge (actual knowledge) (based on critique by Foodwatch's food experts[1] and a team of 4 experts from the media and health communication field)	***In this ad you can see different graphical elements and texts. Some of these elements in this ad aim at conveying healthiness. Please click on all those elements from the list below, where you think that they try to convey healthiness.***			-
	-*Chocolate combined with cereals as a high-quality snack*			
	-*The shape of the female silhouette*			
	-The novelty of the product on the market			
	-UTZ certified cacao			
	-*The enjoyment of chocolate with a high cocoa content*			
	-*The light color of the ad*			
	-*Protein/fewer carbohydrates*			
	-*The name of the producer (Korni)*			
	-*The prominent illustration of cereals high in fiber*			

Notes. [a]seven-point Likert scale from "very hard" to "very easy", [b]seven-point Likert scale from "strongly disagree" to "strongly agree".
[1]https://www.foodwatch.org/en/foodwatch-international/

Message Strategies: Nudging & Framing

Looking at the Traffic Light? Testing the Effectiveness of Digital Nudges in Online Menus for Choosing Healthier Meal Alternatives Using an Online Experiment

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One of the greatest global health challenges of the 21st century is high-risk eating habits, which, among other things, lead to overweight and obesity, which in turn are risk factors for numerous secondary diseases such as cardiovascular disease or type 2 diabetes mellitus (Willett et al., 2019). High-risk diets are also a problem in Germany (Schienkiewitz et al., 2022).

In everyday work and study life, canteens are a common opportunity to eat the daily (hot) meal (Corvo et al., 2020; Raulio et al., 2010). Meal choices are often made spontaneously and under time pressure. The food offered in these facilities varies widely in terms of healthfulness. In addition to healthy options such as salads, there are usually less healthy alternatives such as burgers or hotdish. However, information about the healthiness of meals is often missing from the menu. Instead of banning certain unhealthy meals from the menu, subtle cues (nudges) could help steer choices toward the scientifically proven healthier meal.

The nudging approach, based on dual-process theories, is concerned with influencing behavior and decisions in a well-intentioned way (Thaler & Sunstein, 2009). Accordingly, decisions can pass through two systems that influence decision-making behavior and are used depending on the available cognitive capacity. System 1 is automated and fast, while System 2 is more reflective and time-consuming (Kahneman, 2012; Thaler & Sunstein, 2009). Nudges are intended to activate System 1 and to help people make desirable decisions more easily and quickly, without having to invest a lot of time and effort in an extensive search for information (Jung & Mellers, 2016). By changing situational conditions, nudges aim to draw more attention to an issue. Nudges have already been used in the context of various issues, such as organ donation, healthy eating, or physical activity (Beraldo & Karpus, 2021; Bucher et al., 2016; Cesareo et al., 2022; Forberger et al., 2019). Previous studies have shown that nudges can have a positive effect on people's health behaviors (e.g., Broers et al., 2017).

Nudges can be implemented in both physical and digital spaces (Weinmann et al., 2016). Nowadays, menus are not only displayed in the canteens, but also online. However, the effectiveness of digital nudges in the context of healthy eating is under-researched. Therefore, our study examines the effectiveness of different digital nudges (nutrition traffic light, nutrition table) in online menus for choosing healthier meal alternatives in university canteens.

Since previous research has shown positive effects of nudges on healthy eating, we hypothesize:

H1: Participants who are shown a nudge (nutrition traffic light, nutrition table, or a combination of both nudges) are more likely to choose healthier meals than participants in the control group.

As personal attitudes (towards healthy eating) are an important factor influencing decision making behavior (Conner et al., 2002), this influence is controlled for and leads to the following hypothesis:

H2: Attitudes toward healthy eating moderate the association between nudges and the choice of a healthier meal alternative, i.e., participants with neutral (compared to participants with very positive or very negative) attitudes toward healthy eating are more likely to choose healthier meals when presented with a nudge (compared to the control group).

Methods

To address the research question and hypotheses, we are currently conducting a pre-registered online experiment among (so far 167) students in Germany. Participants have been recruited from various German universities.

Four nudge conditions were implemented: A nutrition traffic light (1), a nutrition table (2), a combination of nutrition traffic light and nutrition table (3) and a control condition (4) with no nudge (see Figure 1 for an overview). The (purely visual) nutrition traffic light is intended to act as an evaluative, easy-to-process nudge (System 1). The nutrition table contains more (written) information and may require more cognitive resources to process (closer to System 2 processing), which may result in less powerful effects compared to the traffic light. Participants are randomly assigned to the four conditions. A power analysis yielded a sample size of n = 486 for the small effect sizes generally expected with nudging ($f^2 = .03$, power = .80).

In addition to meal choices (dependent variable), we asked about attitudes toward healthy eating, dietary habits, and sociodemographics. Menus were adapted for vegan or vegetarian, and omnivore diets. In addition, recognition of the nudges is tested using eye-tracking.

To date, 167 students have participated in the online experiment. With the current sample size, meaningful results are not yet expected. Recruitment is ongoing.

Results and limitations will be presented at the European Conference on Health Communication.

REFERENCES

Beraldo, S., & Karpus, J. (2021). Nudging to donate organs: Do what you like or like what we do? Medicine, Health Care and Philosophy, 24(3), 329–340. https://doi.org/10.1007/s11019-021-10007-6

Broers, V. J. V., De Breucker, C., Van den Broucke, S., & Luminet, O. (2017). A systematic review and meta-analysis of the effectiveness of nudging to increase fruit and vegetable choice. European Journal of Public Health, 27(5), 912–920. https://doi.org/10.1093/eurpub/ckx085

Bucher, T., Collins, C., Rollo, M. E., McCaffrey, T. A., De Vlieger, N., Van Der Bend, D., Truby, H., & Perez-Cueto, F. J. A. (2016). Nudging consumers towards healthier choices: A systematic review of positional influences on food choice. British Journal of Nutrition, 115(12), 2252–2263. https://doi.org/10.1017/S0007114516001653

Cesareo, M., Sorgente, A., Labra, M., Palestini, P., Sarcinelli, B., Rossetti, M., Lanz, M., & Moderato, P. (2022). The effectiveness of nudging interventions to promote healthy eating choices: A systematic review and an intervention among Italian university students. Appetite, 168, 105662. https://doi.org/10.1016/j.appet.2021.105662

Conner, M., Norman, P., & Bell, R. (2002). The theory of planned behavior and healthy eating. Health Psychology, 21(2), 194–201. https://doi.org/10.1037/0278-6133.21.2.194

Corvo, P., Fontefrancesco, M. F., & Matacena, R. (2020). Eating at Work: The Role of the Lunch-Break and Canteens for Wellbeing at Work in Europe. Social Indicators Research, 150(3), 1043–1076. https://doi.org/10.1007/s11205-020-02353-4

Forberger, S., Reisch, L., Kampfmann, T., & Zeeb, H. (2019). Nudging to move: A scoping review of the use of choice architecture interventions to promote physical activity in the general population. International Journal of Behavioral Nutrition and Physical Activity, 16(1), 77. https://doi.org/10.1186/s12966-019-0844-z

Jung, J. Y., & Mellers, B. A. (2016). American attitudes toward nudges. Judgment and Decision Making, 11(1), 62–74. https://doi.org/10.1017/S1930297500007592

Kahneman, D. (2012). Thinking, fast and slow. Penguin Books.

Raulio, S., Roos, E., & Prättälä, R. (2010). School and workplace meals promote healthy food habits. Public Health Nutrition, 13(6A), 987–992. https://doi.org/10.1017/S1368980010001199

Schienkiewitz, A., Kuhnert, R., Blume, M., & Mensink, G. B. M. (2022). Übergewicht und Adipositas bei Erwachsenen in Deutschland—Ergebnisse der Studie GEDA 2019/2020-EHIS [Overweight and Obesity in Adults in Germany-Results from the GEDA 2019/2020-EHIS Study.]. https://doi.org/10.25646/10292

Thaler, R. H., & Sunstein, C. R. (2009). Nudge: Improving decisions about health, wealth and happiness. Penguin Books.

Weinmann, M., Schneider, C., & Brocke, J. V. (2016). Digital Nudging. Business & Information Systems Engineering, 58(6), 433–436. https://doi.org/10.1007/s12599-016-0453-1

Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., De Vries, W., Majele Sibanda, L., … Murray, C. J. L. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. The Lancet, 393(10170), 447–492. https://doi.org/10.1016/S0140-6736(18)31788-4

APPENDIX

Figure 1. Overview of the Nudging-Conditions

Hausgemachtes Schnitzel vom Schweinerücken nach Wiener Art an Bratensauce mit Bratkartoffeln

€ 2,95 | 5,90 | 6,50

Hausgemachtes Schnitzel vom Schweinerücken nach Wiener Art an Bratensauce mit Bratkartoffeln

Nährwertangaben in g	Pro Portion
Energie (kJ/kcal)	3700/884
Fett	41,1
davon gesättigte Fettsäuren	10
Kohlenhydrate	83
davon Zucker	6,1
Protein	39,3

€ 2,95 | 5,90 | 6,50

Hausgemachtes Schnitzel vom Schweinerücken nach Wiener Art an Bratensauce mit Bratkartoffeln

Nährwertangaben in g	Pro Portion
Energie (kJ/kcal)	3700/884
Fett	41,1
davon gesättigte Fettsäuren	10
Kohlenhydrate	83
davon Zucker	6,1
Protein	39,3

€ 2,95 | 5,90 | 6,50

Note. Nutrition traffic light on the left (Condition 1), nutrition table in the middle (Condition 2), nutrition traffic light and nutrition table on the right (Condition 3). Condition 4 has no nudge.

Facilitators and barriers of electronic health record adoption from a nudging perspective: An exploratory study comparing Austria and France

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Electronic health records (EHR) have become an integral part of the health system in many developed countries. They serve as a centralized, comprehensive repository for all patient data, including, e.g., demographics, progress notes, past medical history, medications, vital signs, and immunizations (Griesser and Bidmon 2023), even though implementations and settings vary across countries. Many European countries, including Austria and France, face comparably low usage rates of EHR systems by patients (Bonomi 2016). A wide literature base has investigated facilitators and barriers to EHR adoption (McGinn et al. 2011, Griesser and Bidmon 2023). However, most of these studies have looked at the problem through the general lens of the patients' or physicians' perception while neglecting the setting of EHR implementation, i.e., adopted an opt-out or opt-in policy. In Europe, Austria is an example of a country applying an opt-out policy, meaning patients get enrolled in the EHR system following a default nudge. On the other hand, France is an example of implementing an opt-in policy, where patients are not enrolled in the EHR system by default and have to take action to opt into the system.

Nudges, in general, exploit individuals' proneness to biases by applying specific heuristics, and therefore adjusting the decision environment might drive people towards selecting a specific choice option. The default rule may be one of the most important nudges (Sunstein 2014). Literature taking a nudging perspective on EHR adoption is scarce so far. The study by Steinhauser and Raptis (2023) is among the first, investigating the choice architecture for and adoption of EHRs in four European countries. Thus, we extend their findings and base our research endeavour on three different theoretical frameworks, i.e., the Technology Acceptance Model (TAM) (Davis 1985; Davis 1989) and its further developments (Venkatesh et al. 2003), nudging theory (Thaler and Sunstein 2009) and the privacy calculus model (Pang et al. 2020; Cherif, Bezaz, and Mzoughi 2021) by exploring the following research question:

What are the similarities and differences regarding facilitators and barriers of EHR usage in countries with an opt-out vs. an opt-in setting?

We applied a qualitative exploratory approach using a coordinated semi-structured interview guideline in both countries to shed light on these similarities and differences. In Austria, we conducted four homogenously composed group discussions with n=30 patients separated by age (up to 45 years vs. 46 years +) and concerning EHR usage experience (users vs. nonusers). In contrast, in France, we led 19 single-patient interviews. The data were collected from October 2020 to January 2021. To analyse the data, we agreed upon a common code book in the first step, and coders then worked independently by applying MAXQDA. We categorized the codes associated with barriers and facilitators into distinct types and cross-referenced the data according to the regime type. Influencing factors were categorized into twelve subcategories. Patients have similar experiences concerning all facilitating categories in both opt-out and opt-in settings. Increased usefulness of EHR and efficacy of the patient-physician encounter, increased awareness, and the importance of social influence can be classified as the most important facilitators of EHR usage. On the other hand, we highlighted some differences between the two systems regarding hurdles impeding EHR usage, namely, a lack of communication and transparency or information security in relation to EHR.

In conclusion, supporting patients to improve their digital ability may help diminish the perception of EHR-induced barriers and improve their health and commitment in the long run. From a practical point of view, to the best of our knowledge, our research endeavour is among the first to provide practical guidelines for health policymakers and healthcare providers to cope with opt-in versus opt-out settings while implementing EHR.

Future research could address our main limitation of small sample sizes by applying a quantitative research setting to validate our findings. If the debate is to be moved forward, a better understanding, especially of the needs of the elderly, should be developed. These often face increased personal health concerns and suffer from multimorbidity, which enhances the usefulness of EHR by allowing physicians of different medical fields to exchange information. Overcoming challenges in the realm of EHR faced by the elderly, like limited digital literacy, unfamiliarity with technology, and potential physical or cognitive limitations, is an important issue for future research. This would also help other vulnerable groups in society to use this valuable health information technology in the long run.

REFERENCES

Bonomi, Sabrina. 2016. “The Electronic Health Record: A Comparison of Some European Countries.” In Information and Communication Technologies in Organizations and Society: Past, Present and Future Issues, edited by Francesca Ricciardi and Antoine Harfouche, 33–50. Cham: Springer International Publishing.

Cherif, Emna, Nora Bezaz, and Manel Mzoughi. 2021. “Do Personal Health Concerns and Trust in Healthcare Providers Mitigate Privacy Concerns? Effects on Patients’ Intention to Share Personal Health Data on Electronic Health Records.” Social Science and Medicine 283 (June). Elsevier Ltd. doi:10.1016/j.socscimed.2021.114146.

Davis, Fred D. 1989. “Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology.” MIS Quarterly 13 (3): 319–40.

Davis, Fred D. 1985. A Technology Acceptance Model for Empirically Testing New End-User Information Systems: Theory and Results. Cambridge (MA): MIT Sloan School of Management: Unpublished doctoral dissertation. http://dspace.mit.edu/handle/1721.1/15192

Griesser, Anna, and Sonja Bidmon. 2023. “A Process Related View on the Usage of Electronic Health Records from the Patients’ Perspective: A Systematic Review.” Journal of Medical Systems 47 (1). Springer US. doi:10.1007/s10916-022-01886-0.

McGinn, Carrie A., Sonya Grenier, Julie Duplantie, Nicola Shaw, Claude Sicotte, Luc Mathieu, Yvan Leduc, France Légaré, and Marie Pierre Gagnon. 2011. “Comparison of User Groups’ Perspectives of Barriers and Facilitators to Implementing Electronic Health Records: A Systematic Review.” BMC Medicine 9. doi:10.1186/1741-7015-9-46.

Pang, Patrick Cheong Iao, Dana McKay, Shanton Chang, Qingyu Chen, Xiuzhen Zhang, and Lishan Cui. 2020. “Privacy Concerns of the Australian My Health Record: Implications for Other Large-Scale Opt-out Personal Health Records.” Information Processing and Management 57 (6). Elsevier. doi:10.1016/j.ipm.2020.102364.

Steinhauser, Stefanie, and Georgios Raptis. 2023. “Design Propositions for Nudging in Healthcare: Adoption of National Electronic Health Record Systems.” Digital Health 9: 1–12. doi:10.1177/20552076231181208.

Sunstein, Cass R. 2014. “Nudging: A Very Short Guide.” Journal of Consumer Policy 37 (4): 583–88. doi:10.1007/s10603-014-9273-1.

Thaler, Richard H, and Cass R Sunstein. 2009. Nudge: Improving Decisions about Health, Wealth, and Happiness. Penguin.

Venkatesh, Viswanath, Michael G Morris, Gordon B Davis, and Fred D Davis. 2003. “User Acceptance of Information Technology: Toward a Unified View.” MIS Quarterly 27 (3): 425–78.

The Framing of Endometriosis on Instagram and its Impact on Audiences: A Mixed-Methods Approach

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Despite its severeness and high prevalence (Endometriose Dialog e. V., 2021), for years, endometriosis has received only minor public attention. Recently, however, the chronic disease has been discussed more and more on social media, which increases public attention, but—depending on the framing––could also cause unintended effects. Against this backdrop, we analyzed the framing of endometriosis on Instagram and its impact. Specifically, we identified issue specific media frames by examining textual and visual elements of Instagram posts discussing endometriosis and then tested their effects. We therefore contribute to existing framing research in two aspects: First, to date, it mostly focusses on textual elements (Dan, 2018), although visual elements are becoming increasingly important in the age of social media and can facilitate communication about health-related topics (Smith et al., 2021; Chen & Wang, 2021). Second, framing research is often limited to either media frames or their effects (Borah, 2011), whereas studies incorporating both perspectives are lacking.

Study 1: Qualitative Content Analysis

We conducted a qualitative content analysis of N = 140 Instagram posts to identify issue specific media frames in endometriosis discourse on the social media platform, by referring to Entman's (1993) frame elements, i.e., problem definition, causal interpretation, moral evaluation, and treatment recommendation, and taking both textual and visual elements into account. The posts were coded by three coders and to ensure validity, findings were discussed among the whole research group.

The analysis revealed seven frames which were mostly shared by individuals affected by endometriosis. Specifically, they emphasized individual psychological and physical problems stemming from endometriosis (often using photographs of themselves to further illustrate these issues) as well as societal challenges and solution-focused approaches. Overall, the frames can be classified into two dimensions: individual vs. societal and treatment option vs. treatment barrier (Figure 1). That is, frames especially differed regarding attributions of responsibility.

Therefore, based on prior research on responsibility framing (e.g., Sun et al., 2016), we hypothesized that the individual frame (compared to the societal frame) would lead to stronger individual attributions (H1), whereas the societal frame would lead to stronger societal attributions (H2). We further postulated that the societal frame would, in comparison to the individual frame, lead to a higher intention for online participation (H3) and a stronger be-havioral intention to get tested for endometriosis (H4).

Study 2: Online Experiment

To test our hypotheses, we conducted an online-experiment (N = 288, between-subject design with two groups) in order to test the impact of the two frames. The stimulus was an Instagram post stressing either individual treatment responsibilities or societal treatment responsibilities. As dependent measures we assessed treatment attributions as well as behavioral intentions regarding online participation and getting tested for endometriosis (see Table 1 for all measures). For data analysis, we computed several ANCOVAs.

After adjusting for covariates (see Table 1 for a list), individual attributions (H1) regarding nonmedical ($F(1, 196) = 23.31$, $p < .001$, partial $\eta^2 = .11$, corr. R2 = .13) and medical self-treatment ($F(1, 196) = 12.11$, $p < .001$, partial $\eta^2 = .06$, corr. R2 = .11) differed significantly between the individual and societal frame condition. Bonferroni-corrected post-hoc analysis showed that recipients of the individual treatment frame rated both individual attribution of nonmedical self-treatment ($p < .001$, MDiff = .70, 95%-CI[.42, 1.00]) and medical self-treatment ($p < .001$, MDiff = .45, 95%-CI[.20, .71]) significantly higher than recipients of the societal treatment frame. However, contrary to our expectations (H2) there were no significant effects of the different frames on societal attributions ($F(1, 196) = .35$, $p = .554$, partial $\eta^2 = .00$, corr. R2 = .08). Moreover, neither the intention for endometriosis-related online participation (H3, ($F(1, 197) = 2.160$, $p = .143$, partial $\eta^2 = .01$, corr. R2 = .26) nor the intention to get tested for endometriosis (H4, $F(1,153) = .110$, $p = .740$, partial $\eta^2 = .00$, corr. R2 = –.02) differed significantly.

Discussion

Despite several limitations (e.g., video content was excluded from content analysis, convenience experimental sample), our work provides important insights on how a severe chronical illness is portrayed on social media and how its portrayal influences audiences. By discussing the severeness of the disease and sharing photographs of themselves, communicators—mostly affected individuals and thus members of a vulnerable group—make an invisible illness visible. Still, stressing individual treatment options when communicating about endome-triosis on Instagram (as it is often done) enhances individual attributions among recipients and thus may deflect attention from societal solutions. This is an important finding for all who address endometriosis on social media.

Keywords: media frames, frame effects, mixed-method, endometriosis, social media

REFERENCES

Borah, P. (2011). Conceptual issues in framing theory: A systematic examination of a decade's literature. Journal of Communication, 61(2), 246–263. https://doi.org/10.1111/j.1460-2466.2011.01539.x

Chen, J., & Wang, Y. (2021). Social media use for health purposes: Systematic review. Journal of Medical Internet Research, 23(5), https://doi.org/10.2196/17917

Dan, V. (2018). Integrative framing analysis: Framing health through words and visuals. Routledge research in communication studies: Volume 4. Routledge.

Endometriose Dialog e. V. (2021). Endometriose – Fakten im Überblick. https://endo-dialog.de/endometriose/

Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. Journal of Com-munication, 43(4), 51–58.

Khan, M. L. (2017). Social media engagement: What motivates user participation and consumption on YouTube? Computers in Human Behavior, 66, 236–247. https://doi.org/10.1016/j.chb.2016.09.024

Krebs, E., & Schoenbauer, K. V. (2020). Hysterics and heresy: Using dialogism to explore the problematics of endometriosis diagnosis. Health Communication, 35(8), 1013–1022.

Lupton, D. (1994). Toward the development of critical health communication praxis. Health Communication, 6(1), 55–67. https://doi.org/10.1207/s15327027hc0601_4

Rossmann, C., Reinhardt, A. & Weber, W. (2021). Empfehlungen für Kommunikationsmaß-nah-men gegen die Pandemiemüdigkeit bei Jugendlichen und jungen Erwachsenen. Ergeb-nisse zweier Online-Befragungen und eines systematischen Literaturüberblicks. Fachli-che Expertise. Bundeszentrale für gesundheitliche Aufklärung. https://doi.org/10.17623/BZGA:2021-FE-EKPJM. https://www.bzga.de/forschung/studien/abgeschlossene-studien/studien-ab-1997/impfen-und-hygiene/empfehlungen-fuer-kommunikationsmassnahmen-gegen-die-pandemiemuedigkeit-bei-jugendlichen-und-jungen-erw/

Shadbolt, N. A., Parker, M. A., & Orthia, L. A. (2013). Communicating endometriosis with young women to decrease diagnosis time. Health Promot J Austr, 24(2), 151–154. https://doi.org/10.1071/HE12915

Shah, D. K., Moravek, M. B., Vahratian, A., Dalton, V. K., & Lebovic, D. I. (2010). Public per-cep-tions of endometriosis: Perspectives from both genders. Acta Obstet Gynecol Scand, 89(5), 646–650. https://doi.org/10.3109/00016341003657900

Smith, L. R., Clavio, G., & Lang, A. (2021). Does visual framing drive eye gaze behavior? The ef-fects of visual framing of athletes in an increasingly visual social media world. Media Psychology, 24(4), 562–579. https://doi.org/10.1080/15213269.2020.1765810

Sun, Y., Krakow, M., John, K. K., Liu, M. & Weaver, J. (2016). Framing obesity: How news frames shape attributions and behavioral responses. Journal of Health Communication, 21(2), 139–147. https://doi.org/10.1080/10810730.2015.1039676

Vissers, S., & Stolle, D. (2014). The Internet and new modes of political participation: Online versus offline participation. Information, Communication & Society, 17(8), 937–955. https://doi.org/10.1080/1369118x.2013.867356

Figure 1. Frame dimensions

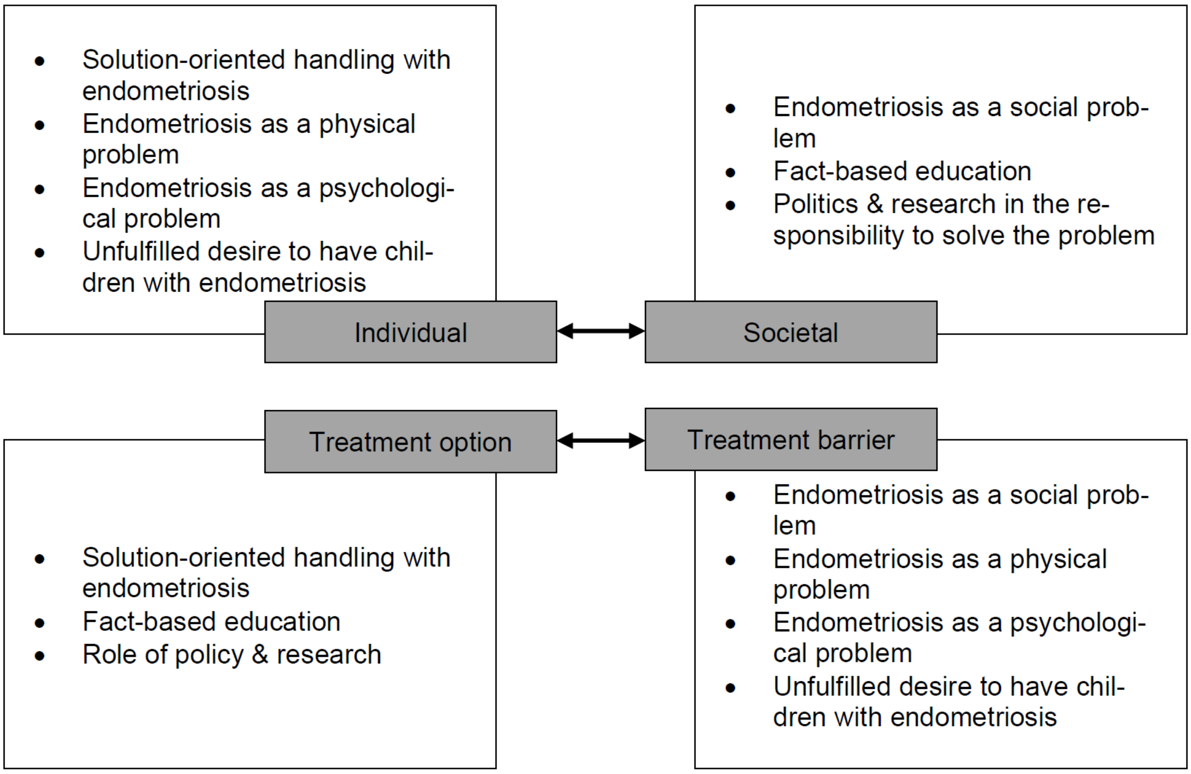

Table 1. Measures

Dependent measures		**M**	**SD**	**Cronbach's α**
Individual attributions				
Medical treatment *"Medical treatment (e.g., removal of endo-tissue by laparoscopy) should be performed for those affected."*	1 = do not agree at all 5 = totally agree	3.82	1.01	-
Medical self-treatment *"Those affected should relieve their pain with medication and treat endometriosis with birth control pills."*	1 = do not agree at all 5 = totally agree	2.01	1.0	-
Nonmedical self-treatment *"Those affected should self-treat their symptoms (e.g., hot water bottle, stress avoidance...)."*	1 = do not agree at all 5 = totally agree	2.23	1.13	-
Societal attributions				
6 items, e.g., *"Society should not dismiss endometriosis as a woman's complaint, but take symptoms seriously."* *"There should be more research on endometriosis."*	1 = do not agree at all 5 = totally agree	4.57	.54	.81
Intention for online participation				
7 items, e.g., *"I may follow endometriosis-related accounts on Instagram in the future."*	1 = do not agree at all 5 = totally agree	2.90	.91	.88
Intention to get tested for endometriosis				
4 response options (single choice), e.g., *"Yes, I had planned to be screened for endometriosis before the study"*		1.93[a]	.25	-
Control variables		**M**	**SD**	**Cronbach's α**
Healthcare employment				
2 response options (single choice) yes/no question		.17	.38	-
Previous experiences with endometriosis				
9 items, e.g., *"How often have you seen a TV commercial about endometriosis?"*	1 = never 5 = very often	1.96	.56	-
Knowledge about endometriosis				

4 Multiple-choice questions, e.g., *"Which of the following symptoms may indicate endometriosis?"*		9.80	4.25	-
Affectedness by endometriosis				
Personally affected		.06[b]	.23	-
Friends/acquaintances affected		.38	.48	-
Perceived level of severeness of the disease				
"How serious would the consequences of having endometriosis affect you?"	1 = not serious at all 2 = very serious	4.28[c]	.78	-

Note. N = 288. Online participation measures based on Khan (2017) and Vissers and Stolle (2014). Behavioral intention to get tested for endometriosis was asked only among people with uterus, and responses were dichotomized (yes/no) for data analysis. [a]*n* = 165. Knowledge about endometriosis, affliction measures based on Shah et al. (2010). Knowledge about endometriosis was turned into a knowledge score. Perceived level of severeness of the disease was based on Rossmann et al. (2021). [b]*n* = 226. [c]*n* = 277.

How do the effects of gain vs. loss frames through emotions differ among individuals with different levels of feeling restricted by Covid measures

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During the Covid pandemic, news coverage and health campaigns have used gain and/or loss frames to inform about and motivate behavior. For example, gain-framed texts focused on improvements of the situation, while loss-framed texts illustrated a negative future with more deaths (Hameleers, 2021). These different frames exert their influence, to a large part, through emotions. A meta-analysis by Nabi et al. (2020) showed that gain frames induce positive and loss frames induce negative emotions, which in turn lead to persuasive effects. As with the evidence on gain-/loss-framing in general (Gallagher & Updegraff, 2012), the evidence for effects on Covid-related outcomes, generally and mediated through emotions, is inconsistent (Dorison et al., 2022; Gong et al., 2022; Hameleers, 2021). Several studies point to the relevance of moderator variables, such as political ideology (Steffen & Cheng, 2023) or age (Reinhardt & Rossmann, 2021).

One highly relevant aspect in the context of the Covid pandemic is individuals' resistance to Covid measures (Ball & Wozniak, 2022). Therefore, the aim of this study is to examine whether the effects of message framing on attitudes and intentions regarding Covid measures as mediated by anger, fear and happiness are moderated by individuals' levels of perceived restrictions. We conducted this study during the time that 2G-Plus[1] measures were being introduced in Germany (end of 2021/early 2022).

Method

We conducted a one-factorial (control text vs. gain frame vs. loss frame) between-subject online experiment (N = 158; 67.1 % female; Mage = 35.5, SD = 17.1). The stimulus material consisted of news articles, that were adapted to emphasize either the benefits of 2G-Plus measures adoption or the risks of non-adoption. The control group read an informative article about the virus. At the beginning, participants were asked about the extent to which they feel restricted by Covid measures (M = 3.13, SD = 1.04). After reading the randomly assigned article, participants reported 2G-Plus attitudes and intentions (s. Table 1).

Results

ANOVAs showed that the loss frame elicited significantly more anger than the other groups. It also led to more fear compared to the gain frame, though neither framing condition was significantly different from the control. The gain frame significantly increased happiness compared to the other groups. There were no framing effects on the dependent variables (s. Table 1).

Moderated mediation models (PROCESS model 14; Hayes, 2018) show that feeling restricted by Covid measures moderates the effects of gain-/loss-framing on attitudes and intentions through emotions (s. Table 2). Specifically, the loss frame, compared to the other groups, has a negative effect on all outcomes through anger for those feeling highly restricted. Simultaneously, the loss frame, compared to the gain frame, has a positive effect on attitudes through fear. These relationships change for those not feeling restricted: Compared to the other groups, the loss frame resulted in higher intentions through anger, while, in comparison to the gain frame, it reduced intentions through fear. There were no effects through happiness.

Discussion

The results confirm prior research regarding the effects of gain-/loss-framing on emotions, with negative emotions elicited by the loss frame and positive emotions by the gain frame. This study extends prior research by including an indicator of potential resistance as a moderator. Two insights were gained: First, anger and fear exerted opposite influences likely resulting in nonsignificant total effects of framing. Second, the extent to which participants already felt restricted by Covid measures moderated the indirect effects of framing through emotions: While anger had a negative and fear had a positive effect on outcomes for those feeling highly restricted, the opposite held for those with low levels of restriction. Consequently, the choice of frame to motivate more positive attitudes and intentions depends on both the specific emotion being aroused and individuals' prior attitudes. In this context, if one wants to reach people who are likely more resistant, a gain frame is more beneficial when anger is a likely reaction, while a loss frame might be better when fear is expected. The opposite holds for those unlikely to be resistant. It is important to note, that the anger and fear aroused in each case might signify different aspects, e.g. anger because of a freedom threat (i.e. reactance) vs. anger as a motivator to combat a negative situation. Overall, our study provides valuable insights that open up exciting avenues for future research.

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[1] This rule refers to the rule that besides a proof of being fully vaccinated or recovered, individuals have to present a negative rapid test in addition to access public places.

REFERENCES

Ball, H., & Wozniak, T. R. (2022). Why Do Some Americans Resist COVID-19 Prevention Behavior? An Analysis of Issue Importance, Message Fatigue, and Reactance Regarding COVID-19 Messaging. Health Communication, 37(14), 1812–1819. https://doi.org/10.1080/10410236.2021.1920717

Dorison, C. A., Lerner, J. S., Heller, B. H., Rothman, A. J., Kawachi, I. I., Wang, K., Rees, V. W., Gill, B. P., Gibbs, N., Ebersole, C. R., Vally, Z., Tajchman, Z., Zsido, A. N., Zrimsek, M., Chen, Z., Ziano, I., Gialitaki, Z., Ceary, C. D., Lin, Y., … Pinto, I. (2022). In COVID-19 Health Messaging, Loss Framing Increases Anxiety with Littleto-No Concomitant Benefits: Experimental Evidence from 84 Countries. Affective Science, 3(3), 577–602. https://doi.org/10.1007/s42761-022-00128-3

Gallagher, K., & Updegraff, J. (2012). Health Message Framing Effects on Attitudes, Intentions, and Behavior: A Meta-analytic Review. Annals of Behavioral Medicine, 43(1), 101–116. https://doi.org/10.1007/s12160-011-9308-7

Gong, Z., Tang, Z., & Li, J. (2022). What Strategy Is Better for Promoting COVID-19 Vaccination? A Comparison Between Gain-Framed, Loss-Framed, and Altruistic Messages. Annals of Behavioral Medicine, 56(4), 325–331. https://doi.org/10.1093/abm/kaab070

Hameleers, M. (2021). Prospect Theory in Times of a Pandemic: The Effects of Gain versus Loss Framing on Risky Choices and Emotional Responses during the 2020 Coronavirus Outbreak – Evidence from the US and the Netherlands. Mass Communication and Society, 24(4), 479–499. https://doi.org/10.1080/15205436.2020.1870144

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford Press. Huang, Y., & Liu, W. (2022). Promoting COVID-19 Vaccination: The Interplay of Message Framing, Psychological Uncertainty, and Public Agency as a Message Source. Science Communication, 44(1), 3–29. https://doi.org/10.1177/10755470211048192

Nabi, R. L., Walter, N., Oshidary, N., Endacott, C. G., Love-Nichols, J., Lew, Z. J., & Aune, A. (2020). Can Emotions Capture the Elusive Gain-Loss Framing Effect? A MetaAnalysis. Communication Research, 47(8), 1107–1130. https://doi.org/10.1177/0093650219861256

Reinhardt, A., & Rossmann, C. (2021). Age-related framing effects: Why vaccination against COVID-19 should be promoted differently in younger and older adults. Journal of Experimental Psychology: Applied, 27(4), 669–678. https://doi.org/10.1037/xap0000378

Steffen, J., & Cheng, J. (2023). The influence of gain-loss framing and its interaction with political ideology on social distancing and mask wearing compliance during the COVID-19 pandemic. Current Psychology, 42(10), 8028–8038. https://doi.org/10.1007/s12144-021-02148-x

APPENDIX

Table 1. Total Effects of Gain-/Loss-Framing on Emotions and Persuasive Outcomes (N = 158)

	Control	Loss Frame	Gain Frame	*F*(2,157)
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	
Fear (3 items, α = .86; Renaud & Unz, 2006)	1.91^{ab} (0.88)	2.12^{a} (0.78)	1.69^{b} (0.73)	4.09, $p = .019$, $\eta^2 = .05$
Anger (3 items, α = .78; Renaud & Unz, 2006)	1.47^{a} (0.91)	2.35^{b} (0.93)	1.54^{a} (1.05)	13.72, $p < .001$, $\eta^2 = .15$
Happiness (3 items, α = .73; Renaud & Unz, 2006)	1.47^{a} (0.83)	1.33^{a} (0.66)	1.99^{b} (1.01)	9.15^{1}, $p < .001$, $\omega^2 = .09$
2G-Plus Attitude (3 items, α = .69)	3.81 (0.95)	3.79 (1.09)	3.61 (0.86)	0.66, $p = .517$
2G-Plus Intentions (2 items, $r = .68$)	4.55 (0.80)	4.63 (0.77)	4.65 (0.58)	0.27, $p = .765$

Note. One-factorial ANOVA with Tukey post hoc tests. Means with,different superscripts significantly differ at $p < .05$ or less.

[1] $F(2, 99.70) = 8.19$, $p < .001$; Welch's *F* and Games Howell post hoc tests.

Table 2. Overview of Moderated Mediation Results (N = 158)

			Indirect effects	
Independent variable	Mediator	Moderated mediation index	Highly restricted by Covid measures (+ 1*SD* = 4.00)	Little restricted by Covid measures (-1 *SD* = 2.00)
2G-Plus attitude				
Loss vs. Control	anger	*b* = -.29, *BootSE* = .10, 95%BootCI [-489, -.108]	*b* = -.38, Boot*SE* = .13, 95% *BootCI* [-.639; -.139]	
Loss vs. Gain	anger	*b* = -.26, BootSE = .09, 95%BootCI [-.434, -.096]	*b* = -.35, Boot*SE* = .11, 95% Boot*CI* [-.565; -.127]	
Loss vs. Gain	fear	*b* =.14, BootSE = .07, 95%BootCI [.025, .293]	*b* = .19, Boot*SE* = .10, 95% Boot*CI* [.034; .410]	
2G-Plus Intentions				
Loss vs. Control	anger	*b* = -.33, *BootSE* = .11, 95%BootCI [-529, -.106]	*b* = -.46, *BootSE* = .16, 95% *BootCI* [-.750; -.128]	*b* = .20, *BootSE* = .10, 95% *BootCI* [.036; .433]
Loss vs. Gain	anger	*b* = -.30, BootSE = .11, 95%BootCI [-.537, -.084]	*b* = -.42, *BootSE* = .15, 95% *BootCI* [-.707; -.099]	*b* = .19, *BootSE* = .11, 95% *BootCI* [.029; .454]
Loss vs. Gain	fear	*b* =.15, BootSE = .07, 95%BootCI [.028, .298]		*b* = -.19, *BootSE* = .09, 95% Boot*CI* [-.390; -.050]

Note. PROCESS model 14 with 10.000 bootstrap samples (Hayes, 2018); feeling restricted by Covid measures measured on 5-pt. Likert Scale.

Health communication and age

Norm Formation in Adolescents: Direct and Indirect Effects of Social Media Use in the Context of Health Behaviours

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With regard to health behaviour, adolescents constitute an exceptionally vulnerable demographic. The years of life between the ages 10 to 19 are considered “a unique stage of human development and an important time for laying the foundations of good health” (World Health Organization [WHO]). However, it is also an important phase for the development of (un)healthy habits such as for example the regular consumption of alcohol, the prevalence of which increases during adolescence from 23.8% among 15- year-olds to 68.4% among 19-year-olds (Frey & Friemel, 2021).

And while the formation of health habits during adolescence is influenced by a broad variety of factors (Wills, 2001), studies indicate that social media use might also have a very relevant impact (Purba et al., 2021; Purba et al., 2023). Multiple pathways including various moderating and mediating variables, such as adolescents’ personal identity (Geusens & Beullens, 2021) or social capital (Pouwels et al., 2021), have been suggested. Unsurprisingly, many studies also focused on social media’s direct or indirect effects on perceived social norms (Davis et al., 2019; Vanherle et al., 2022). The direct effect is based on the assumption, that media portrayal of others’ behaviour and others’ reactions to certain behaviours informs our perceptions of descriptive and injunctive social norms respectively (Geber & Hefner, 2019; for Exemplification Theory see Zillmann, 2002). For the indirect effects on the other hand, we focus on the influence of presumed media influence hypothesis, suggested by Gunther (1998) and Gunther et al. (2006). They argue, that as a result of the naïve assumption that others see the same media content as oneself and are affected by this media content. So, for example, if we see alcohol-related content on social media, we expect others to see similar content as well and further expect others to be influenced by it, resulting in the more frequent or intensive consumption of alcohol and less negative attitudes toward alcohol. We would therefore assume, that both the descriptive norm and the injunctive norm in our social environment have increased.

In the context of the selected health behaviours of alcohol consumption and physical activity, past research supports the proposed direct effect on norms (Boers et al., 2020) and the pathway via the influence of presumed media influence (Ho et al., 2016; Ho et al., 2014). In the context of Switzerland, past studies also indicated that internet use is correlated with lower physical activity and more frequent alcohol use (Delgrande Jordan et al., 2020).

Research Questions

Due to adolescents' heightened sensitivity to social norms (Da Pinho et al., 2021), the theoretical assumptions made above might help explain some of the effects observed. Hence, our research aims to investigate the extent to which the effect of exposure to media content related to health behaviours on perceived social norms is mediated by the perception of a media influence on others (RQ1).

Further, considering that behaviour change usually happens gradually it is plausible to assume that the media exposure experienced by our peers not only affects their present behaviours and attitudes but also, conceivably, exerts even greater influence on their future behaviours and attitudes. Thus, we want to investigate to what extent the effect of exposure to media content related to health behaviours on anticipated future social norms is mediated by the perception of a media influence on others (RQ2).

Methods

This study will use cross-sectional survey data from students between the ages of 14 and 18, attending schools in Switzerland. To improve the representativeness of the data, a random sample of schools from the national statistics of educational institutions (Bundesamt für Statistik [BFS], 2022) was drawn and the selected schools have been asked for their participation. The participating schools will be visited by the research team during the first weeks of the school year (August/September 2023). Students will then be informed about the purpose of the study and will be assisted in participating in the online questionnaire (CAWI).

The questionnaire consists of sociodemographic questions (i.e., age, gender, level of education, etc.), self-reported alcohol use and physical activity, questions on social media use and self-reported exposure to content referencing alcohol or physical activity, questions on perceived norms, questions on attitudes toward alcohol use and physical activity as well as various confounding variables.

To test hypotheses H1 and H2, structural equation modelling will be employed. Both models, will then be tested against a common parent model (using a X 2 difference test) to answer hypothesis H3. The presentation will focus on results from hypothesis testing. Additionally, exploratory and descriptive results will be presented.

REFERENCES

Boers, E., Afzali, M. H., & Conrod, P. (2020). A longitudinal study on the relationship between screen time and adolescent alcohol use: The mediating role of social norms. Preventive Medicine, 132, Article 105992. https://doi.org/10.1016/j.ypmed.2020.105992

Bundesamt für Statistik. (2022). Statistik der Bildungsinstitutionen (SBI), SJ 2021/22.

Da Pinho, A. S., Molleman, L., Braams, B. R., & van den Bos, W. (2021). Majority and popularity effects on norm formation in adolescence. Scientific Reports, 11(1). https://doi.org/10.1038/s41598-021-92482-8

Davis, J. P., Pedersen, E. R., Tucker, J. S., Dunbar, M. S., Seelam, R., Shih, R., & D'Amico, E. J. (2019). Long-term Associations Between Substance UseRelated Media Exposure, Descriptive Norms, and Alcohol Use from Adolescence to Young Adulthood. Journal of Youth and Adolescence, 48(7), 1311–1326. https://doi.org/10.1007/s10964-019-01024-z

Delgrande Jordan, M., Masseroni, S., & Gmel, C. (2020). Les écrans, Internet et les réseaux sociaux: Résultats de l'étude "Health Behaviour in School-aged Children" (HBSC) 2018. Rapport de recherche No 114. Lausanne. https://www.hbsc.ch/pdf/hbsc_bibliographie_373.pdf

Frey, T., & Friemel, T. N. (2021). Substanzkonsum unter Jugendlichen und jungen Erwachsenen in der Schweiz im Jahr 2021: Eine repräsentative Befragung unter 15- bis 19-Jährigen. Zürich. Universität Zürich. https://doi.org/10.5167/uzh-211166

Geber, S., & Hefner, D. (2019). Social norms as communicative phenomena: A communication perspective on the theory of normative social behavior. Studies in Communication | Media, 8(1), 6–28. https://doi.org/10.5771/2192-4007-2019- 1-6

Geusens, F., & Beullens, K. (2021). I See, Therefore I am: Exposure to Alcohol References on Social Media, but Not on Traditional Media, Is Related to Alcohol Consumption via Drinking and Non-Drinking Identity. Health Communication, 1– 9. https://doi.org/10.1080/10410236.2021.1954301

Gunther, A. C. (1998). The Persuasive Press Inference. Communication Research, 25(5), 486–504. https://doi.org/10.1177/009365098025005002

Gunther, A. C., Bolt, D., Borzekowski, D. L. G., Liebhart, J. L., & Dillard, J. P. (2006). Presumed Influence on Peer Norms: How Mass Media Indirectly Affect Adolescent Smoking. Journal of Communication, 56(1), 52–68. https://doi.org/10.1111/j.1460-2466.2006.00002.x

Ho, S. S., Lee, E. W. J., Ng, K., Leong, G. S. H., & Tham, T. H. M. (2016). For Fit's Sake: A Norms-Based Approach to Healthy Behaviors Through Influence of Presumed Media Influence. Health Communication, 31(9), 1072–1080. https://doi.org/10.1080/10410236.2015.1038772

Ho, S. S., Poorisat, T., Neo, R. L., & Detenber, B. H. (2014). Examining how presumed media influence affects social norms and adolescents' attitudes and drinking behavior intentions in rural Thailand. Journal of Health Communication, 19(3), 282–302. https://doi.org/10.1080/10810730.2013.811329

Pouwels, J. L., Valkenburg, P. M., Beyens, I., van Driel, I. I., & Keijsers, L. (2021). Some socially poor but also some socially rich adolescents feel closer to their friends after using social media. Scientific Reports, 11(1), Article 21176. https://doi.org/10.1038/s41598-021-99034-0

Purba, A. K., Henery, P. M., Thomson, R. M., Pearce, A., Henderson, M., & Katikireddi, S. V. (2021). Social media use and adolescent engagement in health risk behaviours: a systematic review and meta-analysis. The Lancet, 398, 93. https://doi.org/10.1016/S0140-6736(21)02636-2

Purba, A. K., Thomson, R. M., Henery, P. M., Pearce, A., Henderson, M., & Katikireddi, S. V. (2023). Social media use and adolescent health-risk behaviours: A systematic review and meta-analysis. Advance online publication. https://doi.org/10.1101/2023.02.24.23286415 (Preprint).

Vanherle, R., Geber, S., Geusens, F., & Beullens, K. (2022). Drinking Buddies: The Importance of Proximal Norms in Emerging Adults' Alcohol-Related Private and Public Social Media Use. Health Communication, 1–15. https://doi.org/10.1080/10410236.2022.2148086

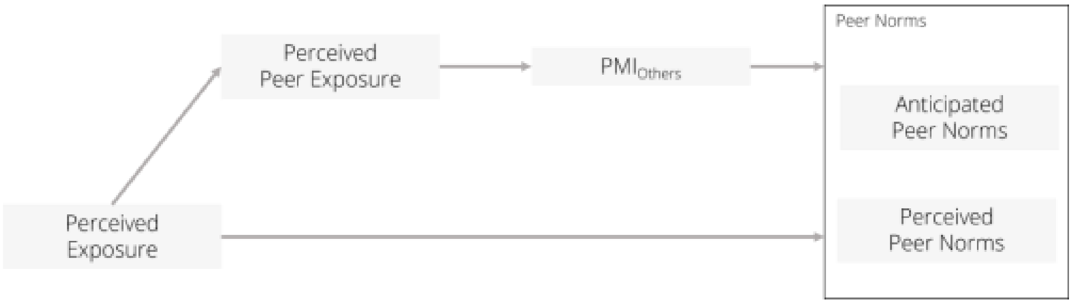
Wills, T. A. (2001). Adolescent Health and Health Behaviors. In N. J. Smelser & P. B. Baltes (Eds.), International Encyclopedia of the Social & Behavioral Sciences (pp. 105–112). Elsevier. https://doi.org/10.1016/B0-08-043076-7/03848-1

World Health Organization. Adolescent health: Overview. https://www.who.int/healthtopics/adolescent-health#tab=tab_1

Zillmann, D. (2002). Exemplification Theory Of Media Influence. In J. Bryant, D. Zillmann, & M. Beth Oliver (Eds.), Media Effects: Advances in Theory and Research (2nd ed., pp. 19–42). Routledge.

APPENDIX

Figure 1. Model of Research Questions RQ1 and RQ2



Research Questions and Hypotheses

RQ1	To what extent is the effect of exposure to media content related to health behaviours on perceived social norms mediated by the perception of a media influence on others?
H1.1	Exposure to media content related to health behaviours is associated with an increase in perceived social norms about these behaviours.
H1.2	Exposure to media content related to health behaviours is indirectly associated with perceived social norms, mediated by peers' perceived exposure to such content and the perceived influence of such content on peers
RQ2	To what extent is the effect of exposure to media content related to health behaviours on anticipated future social norms mediated by the perception of a media influence on others?
H2.1	Exposure to media content related to health behaviours is directly associated with anticipated future norms about those behaviours
H2.2	Exposure to media content related to health behaviours is indirectly associated with anticipated future norms, mediated by peers' perceived exposure to such content and the perceived influence of such content on peers.
H3	The IPMI-Model including anticipated social norms in place of current perceived social norms shows a better fit than the original model.

I dare you! Use and consequences of viral TikTok challenges for children and adolescents

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In recent years, social media challenges (SMCs) have become increasingly popular, including potentially harmful ones. SMCs refer to online content that encourages users to participate in a (more or less) challenging task. This is done either by explicit prompts (nominations), or implicitly by showing third parties attempting to master the task. These tasks reach from supporting fundraising campaigns to spreading political hashtags, or even performing a standup comedy routine. While many challenges are harmless and fun, some are potentially dangerous dares, which tend to increase in terms of severity – up to the point of self-injurious or even suicidal behavior (BLINDED). Recently, fears arose that young people might be attracted to these potentially dangerous challenges (Ortega-Barón et al., 2022; BLINDED).
Three reasons are cited for this fear:

1) Adolescents use social media more frequently than adults, which increases their likelihood of exposure to all varieties of challenges, including dangerous ones.

2) TikTok is gradually displacing other platforms among youth (Qustodio, 2022), but at the same time is considered a platform whose algorithms are particularly conducive to the spread of dangerous challenges (nytimes.com, 2022).

3) Adolescents are at a developmental stage characterized by particular vulnerability (Miller & Prinstein, 2019). At this stage, it is more difficult to cope with acute stress. Social pressure strongly affects adolescents, making it more difficult to reject dares. Adolescents are therefore considered a vulnerable, at-risk group for dangerous and potentially harmful media portrayals (O'Keeffe & Clarke-Pearson, 2011).

This vulnerability is one of the reasons why suicide remains the fourth leading cause of death in the 15-29 age group (Glenn et al., 2009; World Health Organization, 2021). A network and content analysis of the spread of one such potentially dangerous challenge (Momo Challenge) shows that particularly harmful content spreads rapidly and achieves high engagement rates (BLINDED).
Some dangerous challenges take advantage of this vulnerability by steadily increasing the degree of potential self-harm within their tasks, up to the point at which even death might occur (BLINDED). Therefore, media outlets repeatedly call for these challenges to be banned or more tightly controlled (ibid.). At the same time, creators and users continuously devise new mechanisms to circumvent such regulations (BLINDED). However, these media reports usually focus exclusively on the dangers of challenges and neglect possibly positive aspects, such as strengthening a sense of community, support for good causes, or combatting isolation and loneliness – especially in times of the Covid-19 pandemic

(Falgoust et al., 2022; OrtegaBarón et al., 2021). Therefore, a strict rejection of SMCs might negate their positive potentials and disregard the realities of young people's lives and needs. Identifying harmful challenges is a targeted, effective, yet less restrictive approach, which is already partly applied by TikTok (tiktok.com, 2023).

Therefore, we plan to dig deeper into the children's and adolescents' actual knowledge of, and engagement with SMCs. We also examine how they encounter this content and how they interact with it. Additionally, we will determine whether they perceive their interaction with the challenges as consistent with the attitudes of their personal environment (e.g., friends, parents, teachers) and identify any potential conflicts. With this approach, we aim to expose challenges that are either equally popular among all children and adolescents or more frequently engaged with by specific age cohorts. We place a strong focus on how they feel about and react to SMCs. From this, we hope to derive actual risks as perceived by both children and adolescents as well as prevention potentials.

To examine these issues, we will conduct an online survey aimed at approximately n = 700 children and adolescents aged between 10 and 16, who use TikTok on a regular basis. Due to the sensitivity of the topic and the respondents' ages, parents will be included in the recruiting process – with full disclosure on the topic and questions asked. However, they will be asked to not be present while the respondents fill out the survey. Furthermore, the particpiants will not be shown SMCs, but are instead asked to recall any known SMCs. Through this, we aim to avoid introducing them to SMCs to which they previously have not been exposed.

This project is a work in progress. The survey data will be collected during September and October 2023, allowing us to present first results at ECHC 2023.

REFERENCES

Falgoust, G., Winterlind, E., Moon, P., Parker, A., Zinzow, H., & Madathil, K. C. (2022). Applying the uses and gratifications theory to identify motivational factors behind young adult's participation in viral social media challenges on TikTok. Human Factors in Healthcare, 2, 100014. https://doi.org/10.1016/j.hfh.2022.100014

Glenn, C. R., Kleiman, E. M., Kellerman, J., Pollak, O., Cha, C. B., Esposito, E. C. et al. (2019). Annual research review: A meta-analytic review of worldwide suicide rates in adolescents. Journal of Child Psychology and Psychiatry, and Allied Disciplines. https://doi.org/10.1111/jcpp.13106

Miller AB, Prinstein MJ (2019) Adolescent suicide as a failure of acute stress-response systems. Ann Rev Clin Psychol,15, 425-450. https://doi.org/10.1146/annurev-clinpsy-050718-095625

nytimes.com (2022, June 7). Parents sue TikTok, saying children died after viewing 'Blackout Challenge'. Retrieved from https://www.nytimes.com/2022/07/06/technology/tiktokblackout-challenge-deaths.html

O'Keeffe GS, Clarke-Pearson K (2011) The impact of social media on children, adolescents, and families. Pediatrics, 127(4), 800–804. https://doi.org/10.1542/peds.2011-0054

Ortega-Barón, J., Machimbarrena, J. M., Montiel, I., & González-Cabrera, J. (2022). Viral internet challenges scale in preadolescents: An exploratory study. Current Psychology, 1-11.

World Health Organization. (2021). Suicide worldwide in 2019. Global health estimates. Qustodio. (2022). Living and learning in a digital world. The complete snapshot of how children are living and growing with technology. https://www.qustodio.com/en/living-andlearning-in-a-digital-world/

tiktok.com (2023). Online challenges. https://www.tiktok.com/safety/en/online-challenges

Vulnerable Groups in Child Injury Prevention: A Mixed-Method Study on Child Poisoning Accidents

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Adequate preventive measures could significantly reduce children's risk of poisoning accidents (Eberl et al., 2011). Parents, as primary caregivers of young children, are crucial in this context (Morrongiello & Schell, 2010). However, among children and their parents, there may be vulnerable groups that are more susceptible to injuries, less likely to take preventive measures, and hardly reached by information on prevention (Laursen & Nielsen, 2008; Reifegerste, 2021). For instance, the literature shows higher injury prevalence for children from families with lower socioeconomic status (Birken & Macarthur, 2004; Mahboob et al., 2021) or migration background (Kahl et al., 2007; Saunders et al., 2018) and for children of single parents (Tyrrell et al., 2012; Weitoft et al., 2003). Concerning prevention and information behaviour, the literature also shows that fathers are less willing to prevent minor injuries (Brussoni & Olsen, 2011) and to deal with health topics than mothers (Hiller et al., 2017).

However, up to now, we do not know if these factors are also associated with vulnerability in our specific context. Based on experts' opinions (study 1) and parents' prevention and information behaviour (study 2), we investigate to what extent parents with lower socioeconomic status, migration background/little knowledge of German, single parents and fathers are vulnerable in the context of child injury prevention. Since these vulnerable groups are especially hard to reach by interventions, we further assess which communication channels are suitable to reach them concerning child injury prevention.

Methods

In study 1, we conducted two guideline-based focus groups and four single interviews in May/June 2021 with N=15 experts who work as multipliers in the field of children's health (see Table 1). The interviews were conducted online/by phone. Transcripts were analysed using qualitative content analysis (Kuckartz, 2014). In study 2, we conducted a standardised online survey with N=1,013 parents of children under age 7 in September 2021. The sample was quota-stratified with respect to gender and education according to the distribution in the population (see Table 2). The questionnaire included items on the intention to adopt preventive behaviour, risk perception (susceptibility and severity), and information behaviour on child injury prevention.

Results

The experts mentioned people with low socioeconomic status as vulnerable due to lower risk perception and lack of money to pay for information material: “This target group probably doesn't have spare money to keep themselves well informed." (I8). The results of study 2 show that participants with lower education (indicator for low socioeconomic status) indeed showed lower perceived susceptibility but had higher intention to adopt preventive behaviour (see Table 3). People with low socioeconomic status were significantly less likely to take up information offers they need to pay for, e.g., magazines, books and first aid courses (see Figure 1).

Furthermore, the experts stated people with a migration background and/or little knowledge of German as vulnerable due to low language comprehension and cultural habits that may increase injury risks. As the sample of study 2 was not stratified for migration and language status, no further assertions on the vulnerability regarding these aspects were possible.

Another vulnerable group mentioned by the experts were single parents, as they are solely responsible for the safety of their child: "It's always a difficult situation when you're a single parent. They do the normal household things and then ..." (I24). Nevertheless, the quantitative data did not confirm higher vulnerability for single parents (see Table 4).

Contrary to the literature, men were not mentioned as vulnerable by the experts. However, in study 2, men showed lower intention to adopt preventive behaviour than women and interest in information on child injury prevention, but higher perceived susceptibility (see Table 5 & 6). Compared to women, significantly more men would ask their partners for information on child injuries (see Figure 3). For all groups, the Internet, doctors, and parents of other children were the most important sources of information (see Figure 1 – 3).

Conclusions

Not all factors of vulnerability derived from the literature could be confirmed by our data on poisoning accidents. For example, single parents and people with low socioeconomic status are often defined as vulnerable groups, which corresponds to the experts’ opinions. However, our data on parents' prevention behaviour contradicted this notion. It can be assumed that structural aspects contribute to parents’ vulnerability rather than lacking behavioural prevention. In addition, experts’ assumptions might be based on prejudices or stigmatisation. The results highlight the need for target-group-specific information material to better reach potentially vulnerable groups. Information should be free, gender as well as culturally sensitive, and multilingual.

REFERENCES

Birken, C. S., & Macarthur, C. (2004). Socioeconomic status and injury risk in children. Paediatrics & Child Health, 9(5), 323–325. https://doi.org/10.1093/pch/9.5.323

Brussoni, M., & Olsen, L. (2011). Striking a balance between risk and protection: Fathers' attitudes and practices toward child injury prevention. Journal of Developmental and Behavioral Pediatrics, 32(7), 491–498. https://doi.org/10.1097/DBP.0b013e31821bd1f5

Eberl, R., Spitzer, P., Singer, G., & Höllwarth, M. E. (2011). Kinderunfälle und deren Prävention [Child injuries and their prevention]. Monatsschrift Kinderheilkunde, 159(10), 928–937. https://doi.org/10.1007/s00112-011-2422-6

Hiller, J., Schatz, K., & Drexler, H. (2017). Gender influence on health and risk behavior in primary prevention: A systematic review. Zeitschrift Für Gesundheitswissenschaften = Journal of Public Health, 25(4), 339–349. https://doi.org/10.1007/s10389-017-0798-z

Kahl, H., Dortschy, R., & Ellsässer, G. (2007). Verletzungen bei Kindern und Jugendlichen (1-17 Jahre) und Umsetzung von persönlichen Schutzmassnahmen. Ergebnisse des bundesweiten Kinderund Jugendgesundheitssurveys (KiGGS) [Injuries among children and adolescents (1–17 years) and implementation of safety measures. Results of the nationwide German Health Interview and Examination Survey for Children and Adolescents (KiGGS)]. Bundesgesundheitsblatt, 50(5-6), 718–727. https://doi.org/10.1007/s00103-007-0233-7

Kuckartz, U. (2014). Qualitative text analysis: A guide to methods, practice and using software. SAGE Publications.

Laursen, B., & Nielsen, J. W. (2008). Influence of sociodemographic factors on the risk of unintentional childhood home injuries. European Journal of Public Health, 18(4), 366–370. https://doi.org/10.1093/eurpub/ckn034

Mahboob, A., Richmond, S. A., Harkins, J. P., & Macpherson, A. K. (2021). Childhood unintentional injury: The impact of family income, education level, occupation status, and other measures of socioeconomic status. A systematic review. Paediatrics & Child Health, 26(1), e39-e45. https://doi.org/10.1093/pch/pxz145

Morrongiello, B. A., & Schell, S. L. (2010). Child injury: The role of supervision in prevention. American Journal of Lifestyle Medicine, 4(1), 65–74. https://doi.org/10.1177/1559827609348475

Reifegerste, D. (2021). Gesundheitskommunikation in der Prävention und Gesundheitsförderung für schwer erreichbare Zielgruppen [Health communication in prevention and health promotion for hard-to-reach target groups]. In M. Tiemann (Ed.), Springer Reference Pflege - Therapie - Gesundheit. Prävention und Gesundheitsförderung (pp. 285–293). Springer. https://doi.org/10.1007/978-3-662-62426-5_16

Saunders, N. R., Macpherson, A., Guan, J., & Guttmann, A. (2018). Unintentional injuries among refugee and immigrant children and youth in Ontario, Canada: A population-based crosssectional study. Injury Prevention, 24(5), 337–343. https://doi.org/10.1136/injuryprev-2016- 042276

Tyrrell, E. G., Orton, E., Tata, L. J., & Kendrick, D. (2012). Children at risk of medicinal and nonmedicinal poisoning: A population-based case-control study in general practice. British Journal of General Practice, 62(605), e827-e833. https://doi.org/10.3399/bjgp12X659303

Weitoft, G. R., Hjern, A., Haglund, B., & Rosén, M. (2003). Mortality, severe morbidity, and injury in children living with single parents in Sweden: a population-based study. The Lancet, 361(9354), 289–295. https://doi.org/10.1016/S0140-6736(03)12324-0

Table 1. Overview of Multipliers Interviewed in Study 1

Target group of multipliers	Method	Participant ID	Professional link to child injuries
Parents	Focus group	I9	Research advisor on child health promotion and prevention
		I13	Coordinator of foundation for family support
		I14	Social worker for children and adolescents
		I18	Member of association, retailer
		I19	Member of association on child health
		I20	Paediatric nurse, lecturer for first aid courses on children
	Single interview	I8	Provider for first aid courses for children and infants
	Single interview	I16	Project manager for children's emergency app
	Single interview	I21	Scientist
Professional care personnel	Focus group	I10	Midwife
		I11	Accident insurance
		I12	Member of a foundation on child health
		I15	Nursery school teacher
		I22	Coordinator for child safety at the youth welfare office
	Single interview	I24	Member of association on child education

Table 2. Descriptive Sample Analyses for Study 2

	n	%
Gender		
Female	594	58.6
Male	419	41.4
Education		
Low	593	58.5
High	420	41.5
Parenting status		
Single parents	169	16.7
Non-single parents	841	83.3

Table 3. Differences in the Intention to Adopt Preventive Behaviour and Risk Perception Regarding Education

	Low education		High education		*t*	*df*	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*				
Intention to adopt preventive behaviour [a]	4.26	0.72	4.15	0.69	2.425	1005	.016	0.710
Risk perception (susceptibility) [b]	1.98	0.93	2.22	0.95	-4.086	1011	<.001	0.940
Risk perception (severity) [c]	3.64	1.15	3.56	1.10	1.155	1011	.248	1.126

Note. [a] 1 = does not apply at all, 5 = fully applies. [b] 1 = not likely at all, 5 = very likely. [c] 1 = not serious at all, 5 = very serious.

Table 4. Differences in the Intention to Adopt Preventive Behaviour and Risk Perception Regarding Parenting Status

	Single parents		Non-single parents		*t*	*df*	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*				
Intention to adopt preventive behaviour [a]	4.23	0.70	4.21	0.70	0.334	1002	.739	0.704
Risk perception (susceptibility) [b]	2.06	1.00	2.08	0.94	-0.316	1008	.752	0.948
Risk perception (severity) [c]	3.73	1.06	3.59	1.13	1.512	1008	.131	1.120

Note. [a] 1 = does not apply at all, 5 = fully applies. [b] 1 = not likely at all, 5 = very likely. [c] 1 = not serious at all, 5 = very serious.

Table 5. Differences in the Intention to Adopt Preventive Behaviour and Risk Perception Regarding Gender

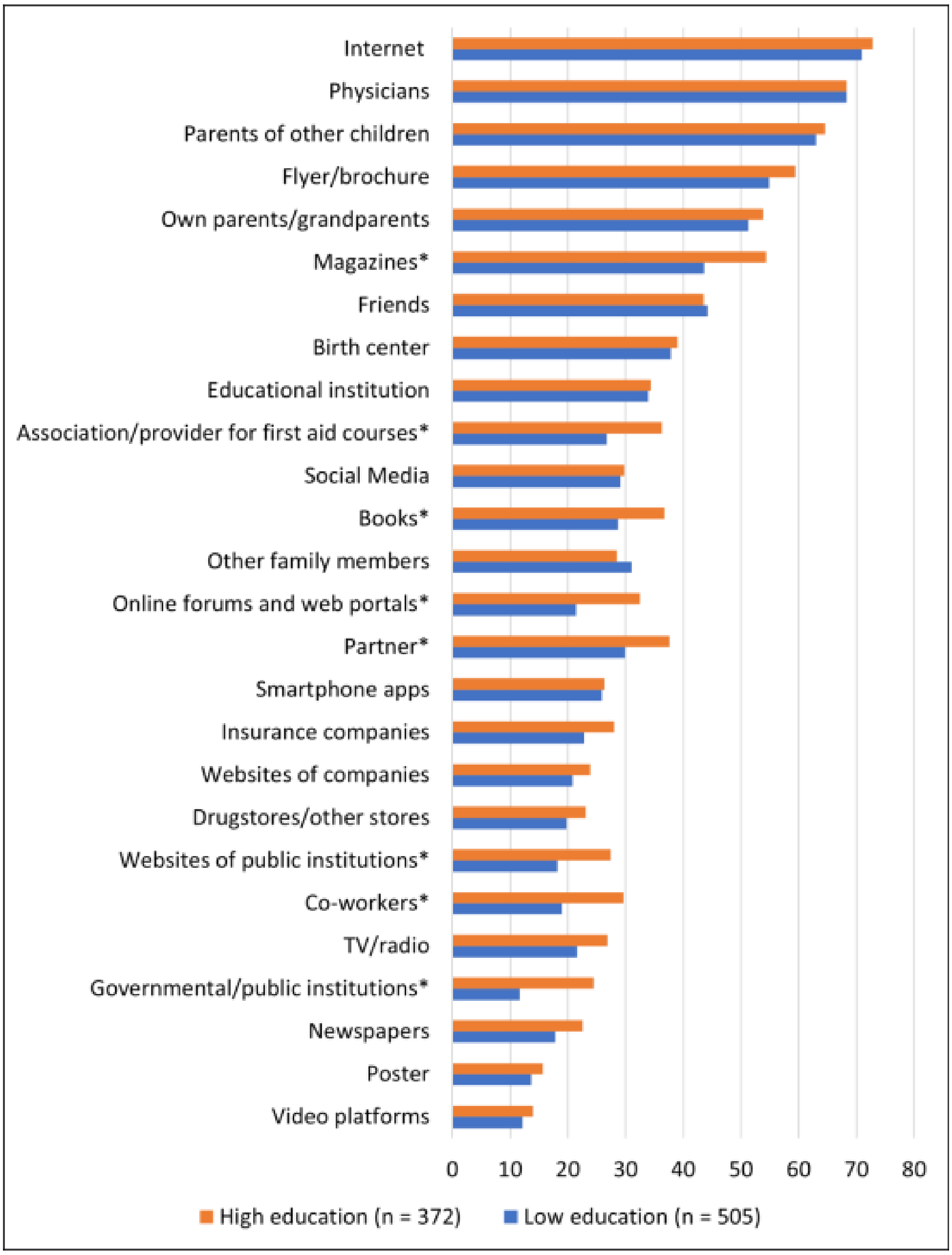
	Female		Male		*t*	*df*	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*				
Intention to adopt preventive behaviour [a]	4.26	0.69	4.15	0.74	2.425	1005	.015	0.710
Risk perception (susceptibility) [b] *	1.99	0.89	2.20	1.01	-3.263	823.599	.001	0.943
Risk perception (severity) [c]	3.61	1.15	3.60	1.09	0.101	1011	.919	1.127

Note. [a] 1 = does not apply at all, 5 = fully applies. [b] 1 = not likely at all, 5 = very likely. [c] 1 = not serious at all, 5 = very serious. * Results of Welch's *t*-test are reported as Levene's test showed no variance homogeneity.

Table 6. Correlation Analysis of Information Behaviour and Gender, Education and Parenting Status

	Interested		Not interested		*r*	*p*
	n	*%*	*n*	*%*		
Gender						
Female	531	89.4	63	10.6	.10	.002
Male	346	82.6	73	17.4		
Education						
Low	505	85.2	88	14.8	-.05	.117
High	372	88.6	48	11.4		
Parenting status						
Single parents	153	90.5	16	9.5	-.05	.103
Non-single parents	722	85.9	119	14.1		

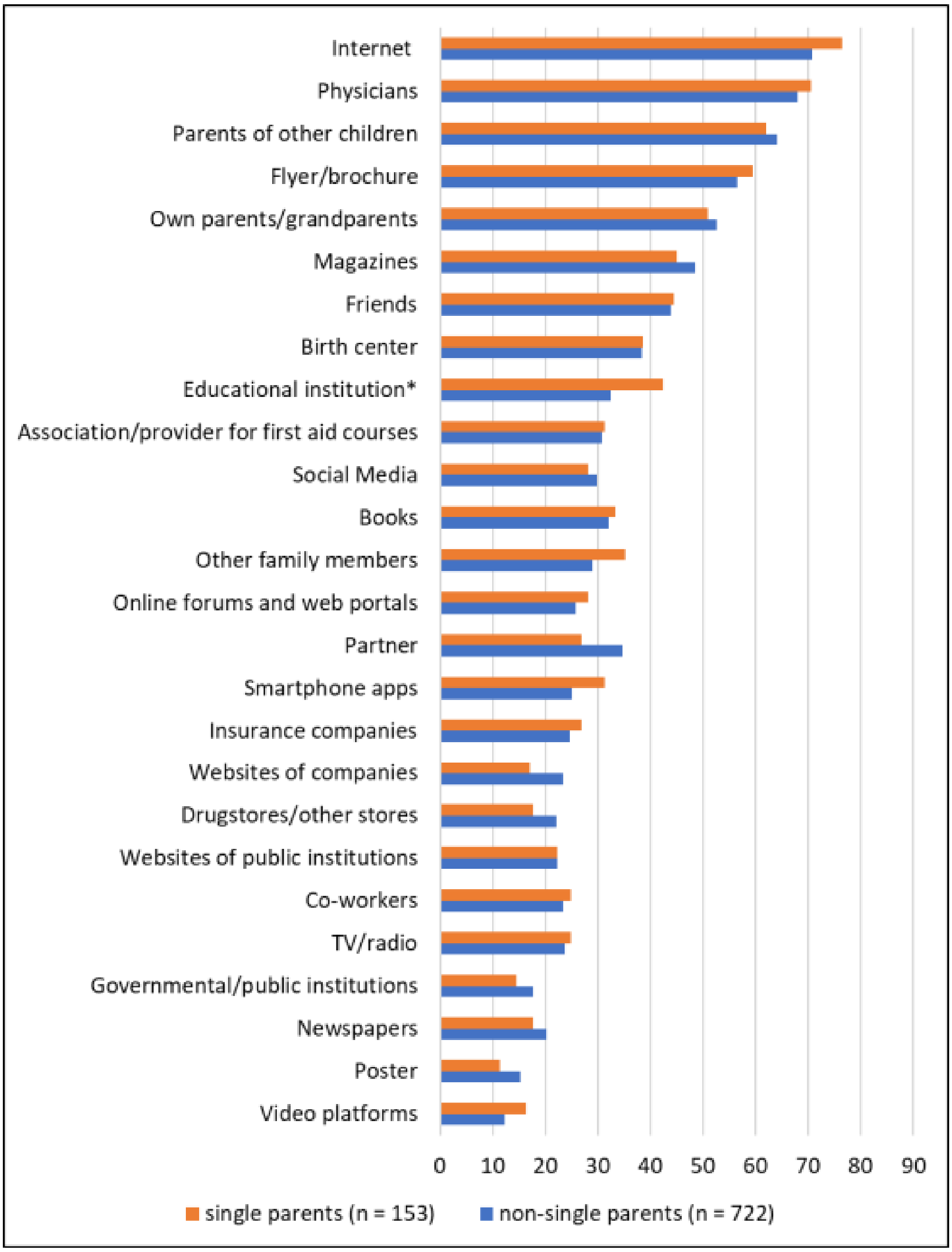
Figure 1. Usage of Information Channels Regarding Education of Parents



Note. N = 877. Percentage of participants with lower and higher education who have already used the respective channel at least once to gather information on child injury prevention.

* Significant difference on level of p < .05

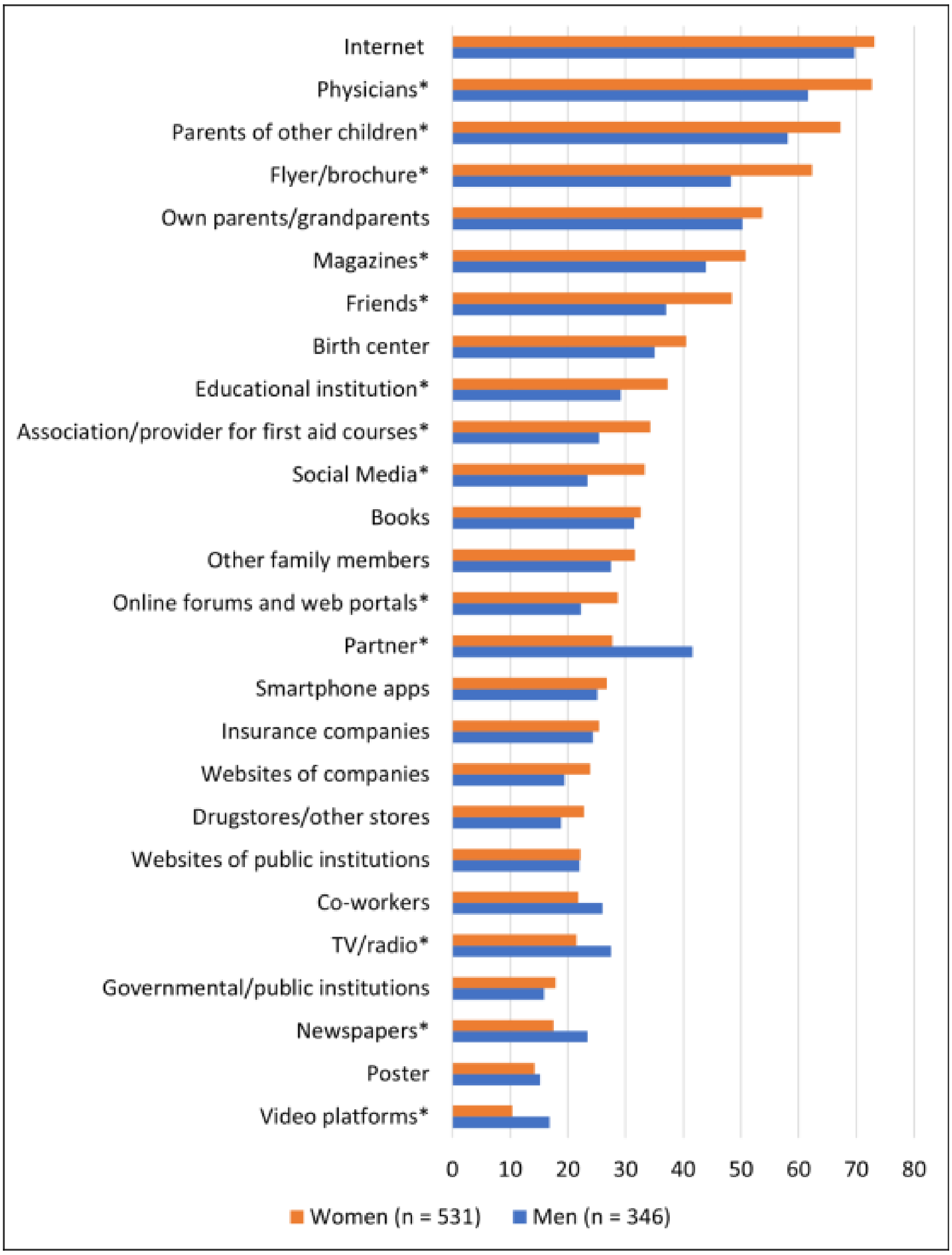
Figure 2. Usage of Information Channels Regarding Parenting Status



Note. N = 875. Percentage of single and non-single parents who have already used the respective channel at least once to gather information on child injury prevention.

* Significant difference on level of p < .05

Figure 3. Usage of Information Channels Regarding Gender of Parents



Note. N = 877. Percentage of women and men who have already used the respective channel at least once to gather information on child injury prevention.

* Significant difference on level of p < .05

Motivators and barriers of telemedicine adoption: Perspectives from elderly patients and their companions

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Introduction

Elderly population faces significant challenges in accessing medical care due to the decline in their physical and mental capacities (Stuck et al., 1999). While some elderly are capable of attending medical consultations independently, others rely on companions to provide support in terms of mobility and/or communicating with their physician (Ishikawa et al., 2005). This places a considerable burden on companions (Gratão et al., 2013). To address this issue, telemedicine has emerged as a potential solution, allowing elderly to consult with doctors from the comfort of their homes. However, there are concerns regarding the feasibility of using telemedicine with this group, as they are often perceived as resistant to adopting technology and less tech-savvy (Magdalena et al., 2015). Likewise, companions play an important role in supporting elderly patients' healthcare experiences, which may subsequently impact the likelihood of elderly patients adopting telemedicine. There is thus a need to understand perspectives regarding the use of telemedicine from both independent (dyadic) and accompanied (triadic) elderly patients, as well as their companions. This study sought to identify and understand the motivators and barriers associated with the use of telemedicine for elderly patients in Singapore, a country that accelerated the adoption of telemedicine during the COVID-19 pandemic when strict safety measures limited patients' ability to go for in-person medical consultations.

Methods

This study is part of a larger mixed-methods project exploring doctor-patient-companion communication among older adults aged 65 years or older who have had at least one consultation with a physician in the past year. The research utilizes semi-structured interviews to explore participants' expectations and experiences with telemedicine. Using purposeful sampling, 28 elderly dyadic patients, 15 elderly triadic patients, and 30 companions, were recruited for the study. Interviews were conducted either online or face-to-face, depending on their preference . Each interview was audio recorded, transcribed, and independently analyzed by three coders via thematic analysis (Braun & Clarke, 2006) to identify the motivators and barriers associated with the use of telemedicine for elderly patients in Singapore.

Results

The thematic analysis uncovered five motivators (capability, convenience, comfort, opportunity, and safety) and five barriers (technology, communication challenges, lack of physical examination, lack of trust, and preference for in-person medical consultations) to the use of telemedicine with elderly patients in Singapore. Table 1 provides detailed elaboration on each theme, supported by representative quotes.

Discussion

Themes identified in this study generally echoed existing literature (e.g., Choxi et al., 2022; Franzosa et al., 2021; Spronk et al., 2022), highlighting heterogeneity in views on the use of telemedicine by elderly patients. Some elderly patients were capable of and more comfortable with using telemedicine, corroborating with and adding to the handful of literature suggesting telemedicine as a viable alternative (e.g., Li et al., 2022; Spronk et al., 2022). However, because negative health implications may arise from the structural limitations of telemedicine, it is important to assess each elderly patient's suitability before telemedicine is implemented for him/her. Several factors should be taken into consideration, as depicted in Figure 1, including his/her healthcare needs, access to the requisite technology, as well as availability of skills or support to facilitate the use of telemedicine. Furthermore, providing tailored telemedicine communication skills training for both doctors and patients may also be helpful (e.g., Alkureishi et al., 2021; Meyer et al., 2021).

The adoption of telemedicine can affect patient autonomy and caregiving dynamics. For elderly patients with the necessary access and skills required to use telemedicine, telemedicine can be a way for them to retain or regain independence. In comparison, elderly patients who lack the necessary access and skills will have continued or increased reliance on companions. Meanwhile, companions appear to be a critical gatekeeper, as their willingness to provide technological support can affect elderly patients' use of telemedicine. At the same time, it may also be worthwhile to explore other telemedicine models like the hub-and-spoke model, which may offer a middle ground between in-person and home-based teleconsultations.

Conclusion

By gathering insights from dyadic and triadic elderly patients, as well as companions, this study garnered a more comprehensive view about the motivators and barriers for elderly's adoption of telemedicine. Findings point to the conditional feasibility of telemedicine use. By juxtaposing the perspectives of elderly patients with those of companions, a holistic view about the factors affecting telemedicine adoption was obtained. While the elderly and their companions appreciate the benefits of using telemedicine, structural barriers associated with technology use should be addressed.

REFERENCES

Alkureishi, M. A., Lenti, G., Choo, Z. Y., Castaneda, J., Weyer, G., Oyler, J., & Lee, W. W. (2021). Teaching telemedicine: the next frontier for medical educators. JMIR medical education, 7(2), e29099.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

Choxi, H., VanDerSchaaf, H., Li, Y., & Morgan, E. (2022). Telehealth and the Digital Divide: Identifying Potential Care Gaps in Video Visit Use. Journal of medical systems, 46(9), 58. https://doi.org/10.1007/s10916-022-01843-x.

Franzosa, E., Gorbenko, K., Brody, A. A., Leff, B., Ritchie, C. S., Kinosian, B., Sheehan, O. C., Federman, A. D., & Ornstein, K. A. (2021). "There Is Something Very Personal About Seeing Someone's Face": Provider Perceptions of Video Visits in Home-Based Primary Care During COVID-19. Journal of applied gerontology : the official journal of the Southern Gerontological Society, 40(11), 1417–1424. https://doi.org/10.1177/07334648211028393.

Gratão, A. C. M., Talmelli, L. F. D. S., Figueiredo, L. C., Rosset, I., Freitas, C. P., & Rodrigues, R. A. P. (2013). Functional dependency of older individuals and caregiver burden. Revista da Escola de Enfermagem da USP, 47, 137-144.

Li, M. M., Strauss, D. H., Chen, K., Davoodi, N. M., Joerg, L., Jimenez, F., & Goldberg, E. M. (2022). Qualitative interviews with physicians: Overcoming barriers to access to bring telehealth to older adults during COVID-19. Brown Hospital Medicine, 1(3).

Magdalena, M., Bujnowska-Fedak & Grata-Borkowska, U. (2015). Use of telemedicine-based care for the aging and elderly: promises and pitfalls, Smart Homecare Technology and TeleHealth, 3, 91-105. https://doi.org/10.2147/SHTT.S59498.

Meyer, B. C., Friedman, L. S., Payne, K., Moore, L., Cressler, J., Holberg, S., ... & Longhurst, C. (2021). Medical undistancing through telemedicine: a model enabling rapid telemedicine deployment in an academic health center during the COVID-19 pandemic. Telemedicine and e-Health, 27(6), 625-634.

Stuck, A., Walthert, J. M., Nikolaus, T., Büla, C. K., Hohmann, C. & Beck, J. C. (1999). Risk factors for functional status decline in community-living elderly people: A systematic literature review, Social science & medicine, 48(4), 445-469.

Spronk, R., van der Zaag-Loonen, H. J., Bottenberg-Wigbold, N., Bovee, N., Smits, R., van Offenbeek, M., Vos, J. F. J., Luttik, M. L., & van Munster, B. C. (2022). The perceived quality of video consultations in geriatric outpatient care by early adopters. European geriatric medicine, 13(5), 1169–1176. https://doi.org/10.1007/s41999-022-00678-.

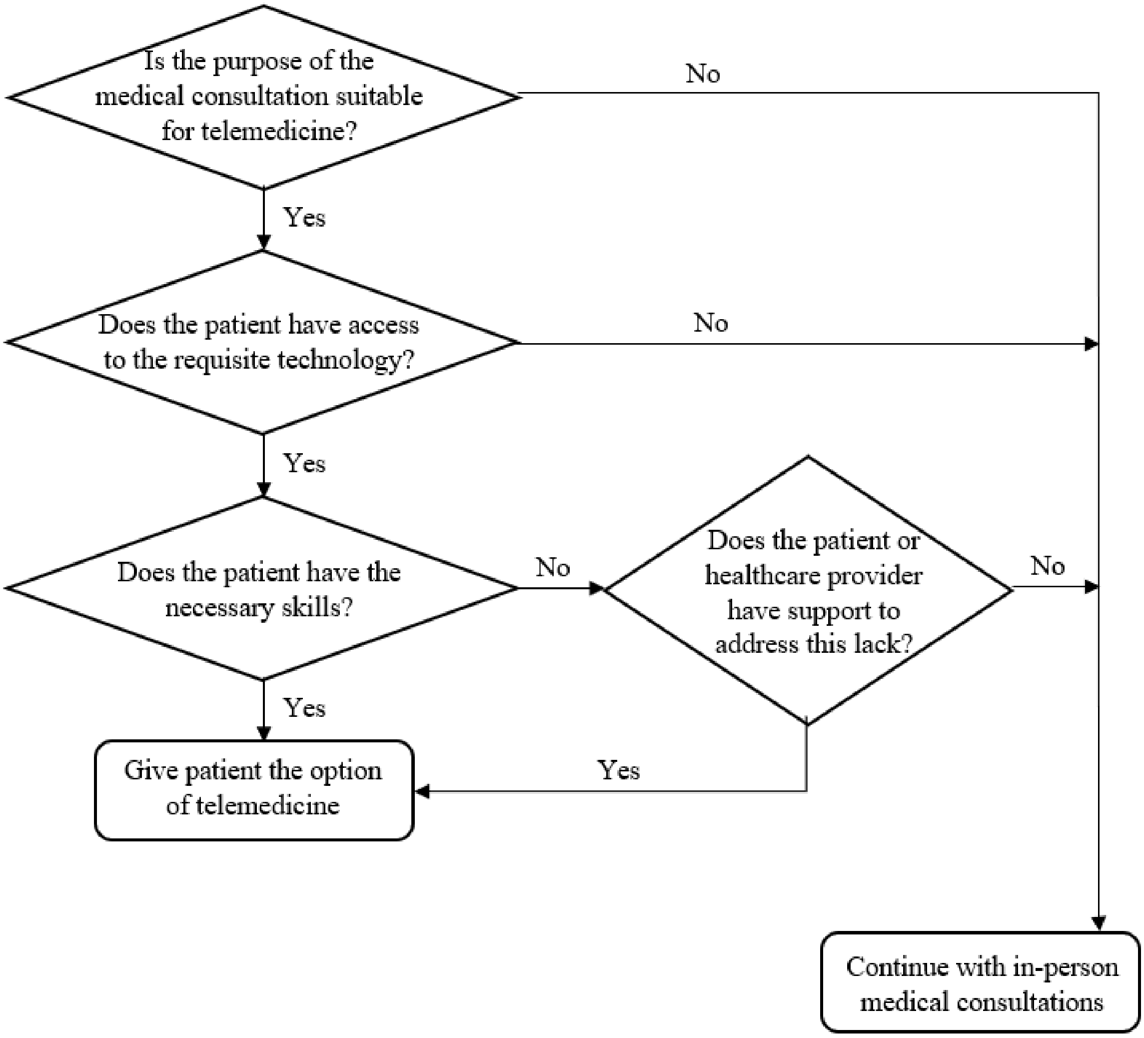
Table 1. Motivators and barriers identified and their representative quotes

Motivators	
Capability	For the participants, having the skills and knowledge to use telecommunication channels motivate them to use telemedicine. "Moving towards the telemedicine, I'm quite up for it. Because if it's something like routine check-up, without any physical examination, right, it's quite beneficial for us, because now hospitals [are] quite packed. We will try to set up, the zoom. It's just a matter of getting used to then it will become easy also." (Female, 43 years old, Companion) "Yes, I had once Zoom… I can't remember is it video or not or just audio call to tell you to go through the consultation you know after blood test week later is consultation. They proposed that we did it remotely... So I had once with that (tele-medicine). I would think that for mine it is just a screening results consultation, it is okay, that kind of thing can be accepted especially because it's covid." (Female, >65 years old, Elderly Dyadic Patient)
Convenience	Participants viewed telemedicine as a means to save time and effort spent on traveling and waiting at the healthcare institution. "I prefer this [telemedicine] because no need to take time to go to clinic. … And this one at home, while waiting, I can do my own stuff." (Female, 70 years old, Elderly Dyadic) "It will be best if someone can teach me [to use telemedicine]. It is difficult for me to move around, and not convenient for the people to bring me to the hospital as they might be short of time, which is very troublesome." (Male, > 65 years old, Elderly Triadic) "I do think that telemedicine… has quite good benefits… because of the convenience, as well as how easy [it is…] you just don't have to leave your house, especially if you're just feeling so weak and sick." (Female, >21 years old, Companion)
Comfort	Some companions believed that being able to see and speak with the doctor remotely from their own homes may be more comfortable for some elderly patients. "Travel time, we definitely overcome that, [and] I think [to] an extent, she would be more comfortable in a home setting." (Male, 33 years old, Companion) "For elderly person, ironically [I] think she might be more comfortable with a [teleconsultation] because she doesn't have to face the doctor. I feel like she'll be more secure in the home environment, but relay her concerns over the screen." (Female, 25 years old, Companion) "His mobility is kind of affected, because of old age. So, having the convenience of a teleconsultation was actually quite helpful for him. He doesn't like outside toilets also." (Male, >21 years old, Companion)
Opportunity	Both patients and caregivers acknowledge the benefits of telemedicine, and view telemedicine as an opportunity for them to work around existing limitations. "If a person comes to a certain age, they face difficulty to see the doctor. We need someone to accompany us… And also sometimes some people may have hearing problem… So these are the things that if assuming this person has a problem, either you go physically with a companion or you can consult some place where you can have this communication. So it's opportunity." (Male, 69 years old, Elderly Dyadic Patient) "There are times when we missed [the appointment] then we have to reschedule… or [we miss our] parents' appointment because [we] cannot take leave, so this [telemedicine] would be one of the way we could do it." (Female, 49 years old, Companion)
Safety	Telemedicine was perceived as a safer option for elderly patients to seek medical care, especially when there are infectious disease outbreaks, as they may be weaker and more vulnerable. "Because of COVID, telemedicine would be a much favor[able] option… I don't have to queue up [and wait] and then I don't have to mingle with other patient. So, safety." (Male, >65 years old, Elderly Dyadic Patient) "She [doesn't] want to be vaccinated, so with telemedicine it would help a bit to reduce exposure [to COVID]" (Female, 29 years old, Companion) "Recently… we went to the polyclinic… it's actually quite crowded… I mean there's some hygiene concern especially [with COVID]." (Male, > 21 years old, Companion)
Barriers	

Technology	Elderly patients are generally deemed to be lacking in both access and the skills required to use telemedicine, although there are exceptions. Some companions feel that the need to help elderly patients with telemedicine may undermine the convenience telemedicine is supposed to bring. “I need to learn how to use the telephone. I don’t have it in my house so far, so I need to see the doctor physically. There is no one to teach me how to use it and surf the Internet. It will be troublesome as I could not understand and will forget what they teach since I am old and not good at learning new things.” (Male, >65 years old, Elderly Triadic Patient) “Not everybody like[s technology]. For example, my sister, she [is] one year my junior. I don’t know why, she doesn’t keep up with all this technology. So if you ask her to Zoom, she also ask what is Zoom, you know. So for her, it is very difficult. … [whereas my brother-in-law] is quite tech-savvy… But for certain elderly people cannot. Some of my friends… Some of them tell me that they don’t Zoom… For me because I got theatre group… so sometimes meet in Zoom.” (Female, 72 years old, Elderly Dyadic Patient) “I mean, they [elderly patients] are not really tech literate. … if they want to use the telemedicine...you need the companion to be there to help them to use so that kind of defeats the purpose?” (Male, >21 years old, Companion)
Communication challenges	Participants believe that medical consultations via a mediated context may make it more difficult for doctors and patients to communicate effectively, and this may result in negative health implications. “For example, when I saw Gary [doctor], I said, ‘Hey, Gary, take care of yourself also’. … But if I see [him] over … telemedicine, I wouldn't be able to say all these sort of things. I don't feel the rapport if it is on telemedicine. I feel that after all, … the thing is a machine, not a person.” (Male, 66 years old, Elderly Dyadic Patient) “Phone is like very fast you have to finish it and that’s it and then end of the call.” (Female, >65 years old, Elderly Dyadic Patient) “She'll probably be much more closed up, because it's a very foreign experience for her… even when she's with the doctor like face-to-face, she sometimes doesn't really dare to speak up or to ask question. I would think that even more, she’ll just be accepting or whatever other doctors say online, which is actually quite scary.” (Female, >21 years old, Companion)
Lack of physical examination	Patients and companions are not confident that the doctor will be able to diagnose and address their health concern properly without conducting the physical examinations themselves. “If it's more physical ailment, right? She might not be able to properly describe like what she's actually feeling or experiencing and the doctor might be able to like have a physical look if she's like doing it face-to-face and give a better or more accurate diagnosis.” (Female, >21 years old, Companion) “Because like during the consult the doctor need to kind of like measure the heartbeat and like see the tongue color and I don't know, maybe feel and touch something, I think telemedicine might not be that efficient.” (Female, >21 years old, Companion)
Lack of trust	Some companions shared that elderly patients do not trust telemedicine. “He doesn't trust. The thing is, it's already in the head, actually, that he's [not] a doctor on the other side. You can tell him hundred times that it's a doctor on the other side. He would say, ‘No, it's not. It's just somebody with a white coat or not just a normal person on the other side.’” (Male, >35 years old, Companion) “Face to face is better because it's immediate and you can ask whatever you want. You won't worry about communication because you won’t talk to the machine alone.” (Female, >65 years old, Elderly Triadic Patient)
Preference for in-person medical consultations	In part due to the barriers listed above, some participants viewed telemedicine as less effective and consequently prefer in-person medical consultations, although some are open to using telemedicine for certain types of consultations where physical examinations are not required. “[Telemedicine is] never as good as [an] in-person, face-to-face examination… I would say the effectiveness is 90% or 80% unlike in person.” (Male, 66 years old, Elderly Dyadic Patient)

	"Face to face, [the doctor can] see your condition and you don't have to ask any question, you can already summarize. [Whereas] for telemedicine, "Can you show me your hands" and things like that, got more steps to go." (Male, >65 years old, Elderly Dyadic Patient) "I do think that the easier option will be to just bring her down [to the doctor]... from her point of view she would probably prefer to really see the doctor up close, like I do think that that's the preference of most older generation nowadays." (Female, >21 years old, Companion)

Figure 1. Assessing patient's suitability for telemedicine



Comparing older adult patients in dyadic and triadic medical consultations: A qualitative assessment on the needs, perspectives, and typology of older adult patients

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Introduction

The quality of healthcare is greatly influenced by the interaction between the healthcare provider and patient. Ensuring good quality healthcare is important, but highly challenging especially with older patients who face age-related disadvantages such as hearing loss and cognitive decline, which consequently make medical consultations more difficult. Healthcare delivery with older patients can also be further complicated by the presence of a companion during the consultation as it changes the dynamics of the doctor-patient interaction (Fioramonte & Vásquez, 2019; Laidsaar-Powell et al., 2013). However, despite the complex interactions that occur during these medical consultations, little is known about the unique needs and mechanisms at play in these health contexts.

This study is based in Singapore, a country facing tremendous aging concerns. Given the increasing demands an aging population puts on its healthcare system, it is crucial to better understand the factors that affect the needs of older adult patients during medical consultations. Thus, this study examines the needs, perspectives, and typologies of older adult patients in the absence (dyadic) and presence (triadic) of a companion during medical consultations.

Methods

A purposive sample of 43 older adult participants comprised of 28 dyadic patients and 15 triadic patients were interviewed, with sessions ranging in length from 30 to 90 minutes. For this study, dyadic patients refer to older adults who recently went by themselves for a medical consultation, while triadic patients are those who went with a companion present. The interviews were audio-recorded, transcribed, and individually analyzed by three coders using the grounded theory approach (Strauss & Corbin, 1994).

Results

Findings show that doctor-older adult patient interactions during medical consultations are often complicated by challenges in communication such as language barrier and difficulties in understanding and expressing information clearly. In situations where there is a need for the participants to better understand and communicate with the doctor, they tend to seek assistance from a companion. Physical assistance and preference for emotional support were also factors that prompted older adults to bring a companion to the medical consultation. Code-switching and translation assistance were cited as appropriate means to help ease the communication between the doctor and patients/companions. Findings also show that age, physical and mental health status, and living arrangements affect the needs of older adult patients during medical consultations. Moreover, a comparison of the demographic characteristics and excerpts from the participants shows that dyadic patients tend to be younger and have better physical and mental health than triadic patients. Overall, older adult patients can be categorized into a typology according to their needs and whether they are met or unmet during the medical consultation.

Discussion

A typology of four conceptually distinct categories of older adult patients was developed: (1) needy dependents, (2) gap care older adults, (3) social seniors, and (4) independent older adults. Table 1 presents the conceptual typology based on these dimensions.

Table 1. Two Dimensions of Older Adults' Medical Consultations

		Dimension 1: Older Adults' Needs	
		Presence of Older Adults' Needs	**Absence of Older Adults' Needs**
Dimension 2: Companion Availability	**Presence of Companion**	Category 1: Needy dependents	Category 3: Social seniors
	Absence of Companion	Category 2: Gap care older adults	Category 4: Independent older adults

Needy dependents require supportive services and are likely to rely more on their companions to meet their communication or information needs in medical consultations. *Gap care older adults* refer to older adult patients who require some form of functional assistance and/or cognitive support during the medical consultation, but have no available companion. *Social seniors,* meanwhile, represent older adult patients who can manage the medical consultation on their own, but choose to go to the consultation with a companion for psychological security. Lastly, *independent older adults* represent older adults who do not experience a decline in their physical and cognitive health and have a preference to go alone for medical consultations. Table 2 presents the definitions and data excerpts corresponding to the four conceptual typology labels identified.

Table 2. Definitions and Data Excerpts for Conceptual Typologies of Older Adults' Needs

Conceptual Typology Label	**Definition**	**Data Excerpts**
Category 1: Needy dependents	Older adults who have companions available and seek functional and/or cognitive assistance during their medical consultation.	Sometimes I don't understand English (terms) and I will ask my sister to go with me (to help explain). [Female, 67 years old, Triadic patient] Every time I go (for medical) checkup, my son comes with me. I (will) check the heart, the heart is not strong enough, and I am prone to falls. [Female, >65 years old, Triadic patient]
Category 2: Gap care older adults	Older adults who have no companion available	I go by myself since I am living alone. There is no issue with my legs now...however, the problem (of

	yet seek functional and/or cognitive assistance.	getting in and out of the car) is a slow process. They have a car that drives me there (to the medical institution)… by the company or government. [Male, >65 years old, Triadic patient] They did ask me if I need those kind of service for somebody to help me see the doctor. I think we have to pay for it. And I say, it's not necessary [Female, 71 years old, Dyadic patient]
Category 3: Social seniors	Older adults who are capable of handling medical consultation and choose to have a companion present.	Just that I need some moral support. You know when I know the doctor is going to speak to me (about the medical results)...I need another person to listen in... He (the companion) may have other questions to ask the doctor which I may not think of. [Female, 66 years old, Triadic patient] I can handle it when I go to see a doctor by myself. However, I will have a different (warm) feeling when my family is there... She (daughter-in-law) acts as a communication bridge, allowing me to understand the meaning of the doctor('s explanation) regarding my condition. [Female, 67 years old, Triadic patient]
Category 4: Independent older adults	Older adults who are independent and confident in handling the medical consultation on their own.	If I can do it by myself, why bother others? [Male, 71 years old, Dyadic patient] I am used to handl(ing) it by myself. Since there are no problems with language and mobility, there is no need for someone to accompany me. [Female, 69 years old, Dyadic patient]

Conclusion

The study findings illuminate the need for healthcare practitioners to be more mindful of the unique life stage of older adult patients, as well as the communication barriers brought about by a population with diverse cultural composition. Given the cultural make-up of Singapore, healthcare practitioners are encouraged to employ communication strategies such as code-switching and translation assistance, when necessary during medical consultations, to promote better communication and health outcomes amongst older adult patients. Moreover, the developed typology has significant implications for elderly healthcare, particularly by serving as a guide for healthcare providers to tailor their services to better cater to the four categories of older adult patients.

REFERENCES

Donabedian, A. (1980). Explorations in quality assessment and monitoring: the definition of quality and approaches to its assessment. Health Administration Press.

Fioramonte, A., & Vásquez, C. (2019). Multi-party talk in the medical encounter: Socio-pragmatic functions of family members' contributions in the treatment advice phase. Journal of Pragmatics, 139, 132-145.

Hickman, J. M., Caine, K. E., Stronge, A. J., Pak, R., Rogers, W. A., & Fisk, A. D. (2006). Doctor-patient communication: Guidelines for improvements. Proceedings of the Human

Factors and Ergonomics Society Annual Meeting 50(10), 1078-1082. https://doi.org/10.1177/154193120605001016

Laidsaar-Powell, R. C., Butow, P. N., Bu, S., Charles, C., Gafni, A., Lam, W. W., ... & Juraskova, I. (2013). Physician–patient–companion communication and decision-making: a systematic review of triadic medical consultations. Patient Education and Counseling, 91(1), 3-13. https://doi.org/10.1016/j.pec.2012.11.007

Matusitz, J., & Spear, J. (2014). Effective doctor–patient communication: an updated examination. Social Work in Public Health, 29(3), 252-266. https://doi.org/10.1080/19371918.2013.776416

Rademakers, J., Delnoij, D., & de Boer, D. (2011). Structure, process or outcome: which contributes most to patients' overall assessment of healthcare quality? BMJ Quality & Safety, 20(4), 326-331. https://doi.org/10.1136/bmjqs.2010.042358

Strauss, A., & Corbin, J. (1994) Grounded theory methodology: an overview.

Language

Using gestures, lingua franca, and informal interpreters with migrant patients in language discordant consultations

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Background

In the Netherlands, the net migration rate in 2023 increased by 5% from 2019, leading to sharp increases in language discordant medical consultations (CBS.nl, n.d.). Migrant patients with low Dutch proficiency often rely on non-professional interpreters (e.g., bilingual family members) to mitigate language barriers in medical consultations (Meeuwesen et al., 2011). Though family interpreters may provide emotional support, they often are ineffective interpreters, as they are not medically trained, often provide incorrect translations, and may withhold or change medical information (Brisset et al., 2014; Schinkel et al., 2019). As a result, the use of non-professional interpreters may negatively impact the fulfilment of migrant patients' cognitive and affective needs, leading to health inequity. Although healthcare providers can use professional interpreting services for free, the overall use of professional interpretation services is still insufficient. One reason is healthcare providers' lack awareness of the importance of using such services. The Six Function Model of Medical Communication (De Haes & Bensing, 2009) specifies the communication strategies healthcare providers should use to meet the goals related to patients' cognitive and affective needs in language concordant consultations. For instance, healthcare providers are advised to use an affective communication strategy, e.g., express empathy when responding to (negative) emotions. Nonetheless, this model does not take language barriers into consideration. Hence, an overview of the combinations of communication strategies healthcare providers can use in language discordant consultations to meet migrant patients' needs is lacking. Therefore, our research question is: What communication strategies do healthcare providers use to achieve the goals of effective medical communication to meet migrant patients' cognitive and affective needs while mitigating language barriers during language discordant consultations?

Methods

We developed a topic guide based on the Six Function Model of Effective Communication (De Haes & Bensing, 2009) and conducted 27 semi-structured interviews with healthcare providers of different disciplines (e.g., medical specialists, mental healthcare providers, nurses) (Mage = 44.93). All English interviews were transcribed verbatim and Dutch interviews were back-translated before transcribed verbatim. Using deductive and inductive approaches, two researchers coded the transcripts using constant comparative method from Grounded Theory (Charmaz, 2014) on ATLAS.ti version 22.0.2.

Results

Five sub-themes emerged: 1.) Getting-by with instrumental communication strategies (e.g., incorporation of a lingua franca); 2.) Getting-by with affective communication strategies (e.g., maintaining eye contact); 3.) Using digital tools (e.g., Google translate) to support instrumental communication strategies, such as asking questions or providing information; 4.) Working with various types of interpreters (e.g., non-professional interpreters); 5.) Involving additional support.

Healthcare providers often used communication strategies in a sequential manner. They often relied on instrumental (sub-theme 1) and affective (sub-theme 2) communication strategies that are used in language concordant consultations. When some instrumental communication strategies (e.g., repeating themselves in Dutch or English (lingua franca) multiple times to get information across or gestures) were deemed ineffective for information exchange, translation apps were used to support the consultation (sub-theme 3). When healthcare providers could not communicate with migrant patients at all, non-professional interpreters (e.g., family as interpreters, bilingual staff) were involved to tackle the language barrier and help meet migrant patients' cognitive and affective needs. Phone or in-person professionals were involved the least (sub-theme 4). Healthcare providers said that responding to migrant patients' (negative) emotions and enabling treatment-related behaviours when they did not bring family members were the most difficult. Healthcare providers also mainly relied on the 'getting-by' approach and paid more attention to migrant patients' cognitive needs compared to their affective needs. As such, healthcare providers involved additional support from others, such as migrant patients' general practitioners or mental healthcare providers to meet these goals (sub-theme 5).

Conclusion

Family as non-professional interpreters were involved frequently in triadic language discordant consultations. Next to using communication strategies that already exist in the Six Function Model of Medical Communication in dyadic language discordant consultations, using digital tools, and involving additional support emerged as new communication strategies. We propose to extend the current framework with these two strategies. To ensure effective language discordant communication, developing a detailed guideline on the combinations of communication strategies healthcare providers can use to meet each specific goal in the Six Function Model of Effective Communication can be useful. This will help to raise healthcare providers' awareness of using different strategies together and remind them of being attentive to migrant patients' affective needs. In the long run, such guideline will help re-shape their current communication behaviour suited for language discordant consultations.

Mitigating Health Disparities: The Interplay of Health Literacy and Patient-Centered Communication on Perceived Health Status

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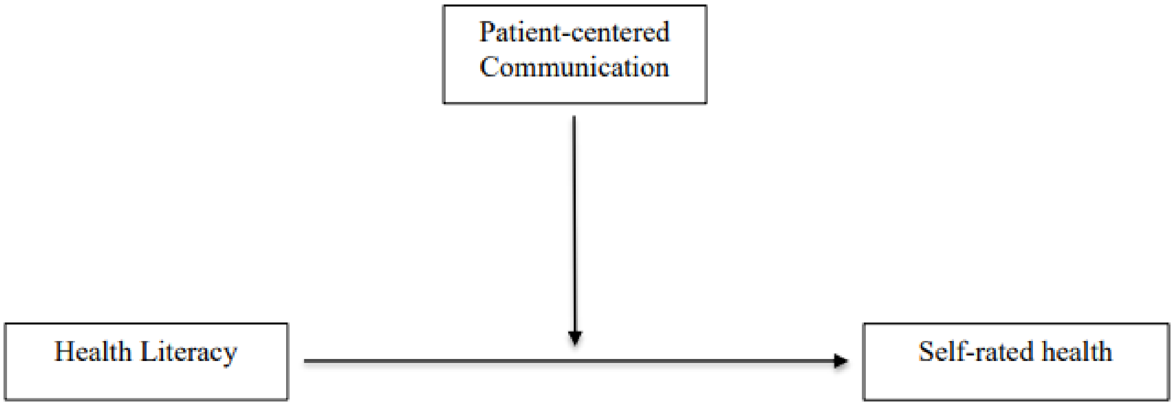
The capacity of individuals to effectively employ health resources is pivotal, whether these resources are provided via health systems or through traditional and new media. Health literacy refers to an individual's capability to seek, comprehend, and utilize information and services to make informed decisions that enhance their health and well-being (Santana et al., 2021). A significant body of research demonstrates associations between individuals' perceived deficient health literacy and a variety of adverse health outcomes including self-rated health (e.g., Nie et al., 2021). The perceived capability to process and utilize health information represents one facet of an individual's health literacy, while their capability in maintaining health through selfmanagement and forming partnerships with healthcare providers comprises another facet (Liu et al., 2020). Consequently, it is plausible to assume that the development of health literacy capabilities is also contingent upon the quality of patient-provider interactions.

Patient-centered communication (PCC) is a healthcare communication approach focusing patients' perspectives and needs (Epstein et al., 2005), aiming to enhance patients' health understanding, and stimulating their active participation in their healthcare. PCC has been linked to enhanced disease management and improved health outcomes (Croom et al., 2011). It has also been identified to be positively associated with health literacy, given that health-literate patients are more inclined to engage in PCC and perform efficient information exchange with healthcare providers (Wigfall & Tanner, 2018).

Nonetheless, the interaction between health literacy and PCC, along with their joint impact on an individual's health, remains inadequately understood. Therefore, this study focuses on the interplay between perceived health literacy and patient-centered communication in relation to individuals' self-rated health. Specifically, we aim to investigate whether PCC amplifies the impact of health literacy on health status or acts as a buffer, reducing its effects and potentially providing protection for individuals with low literacy levels (see Figure 1).

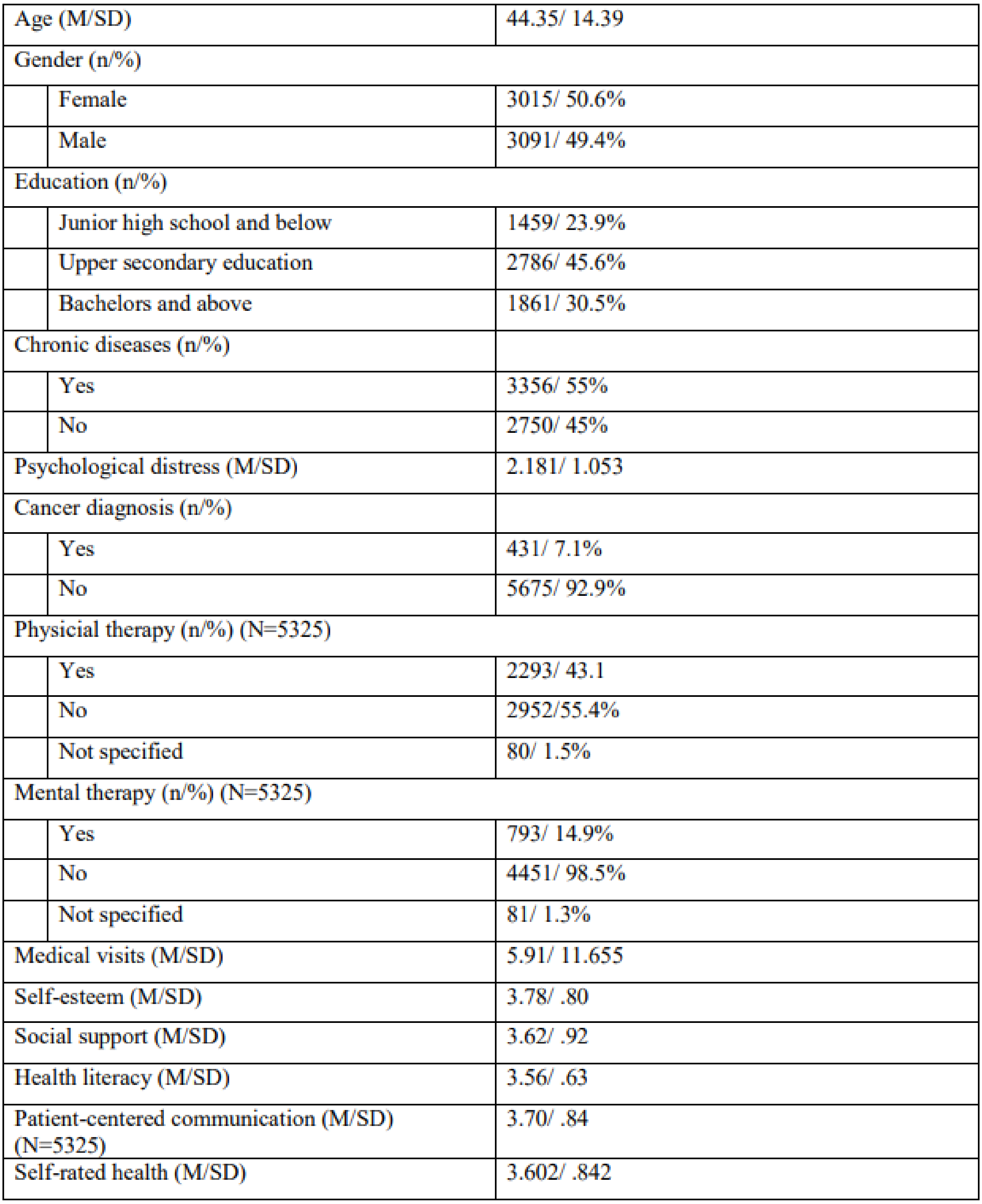
Figure 1. A conceptual model of Health Literacy and Patient-Centered Communication on Self-rated Health



The data collection was conducted through online panel surveys using stratified sampling in Germany, the Netherlands, Switzerland, and Austria. The final sample consisted of 6,160 participants (see Table 1 for descriptive statistics). Health literacy was assessed using the German version of the HLS-EU-16 inventory (16-item index; α=.908) (Jordan & Hoebel, 2015; Sørensen et al., 2015), while patient-centered communication was measured using a 7-item index (α=.930) (Moser et al., 2022). Mean scores from 5-point scales were used, with higher scores indicating higher levels of health literacy or better quality of patient-centered communication. Covariates included demographic variables and health status indicators such as psychological distress, chronic illness, medication therapies, cancer diagnoses, and the number of medical visits in the past year. Additionally, self-esteem and social support, which are often associated with individuals' health outcomes, including self-rated health, were included as covariates (Gele & Harsløf, 2010) (Appendix 1 lists the survey wording of all measures). The data were analyzed using two multiple linear regression models. In Model 1, health literacy and PCC were included as primary independent variables, with self-rated health as the dependent variable, while adjusting for covariates. Model 2 included an additional independent variable, representing the interaction between health literacy and PCC. To obtain more comprehensive details on the moderation analysis, we employed the PROCESS macro (Hayes, 2022).

Table 1. Descriptive statistics

Variables	**N=6106**



Age (M/SD)	44.35/ 14.39
Gender (n/%)	
Female	3015/ 50.6%
Male	3091/ 49.4%
Education (n/%)	
Junior high school and below	1459/ 23.9%
Upper secondary education	2786/ 45.6%
Bachelors and above	1861/ 30.5%
Chronic diseases (n/%)	
Yes	3356/ 55%
No	2750/ 45%
Psychological distress (M/SD)	2.181/ 1.053
Cancer diagnosis (n/%)	
Yes	431/ 7.1%
No	5675/ 92.9%
Physicial therapy (n/%) (N=5325)	
Yes	2293/ 43.1
No	2952/55.4%
Not specified	80/ 1.5%
Mental therapy (n/%) (N=5325)	
Yes	793/ 14.9%
No	4451/ 98.5%
Not specified	81/ 1.3%
Medical visits (M/SD)	5.91/ 11.655
Self-esteem (M/SD)	3.78/ .80
Social support (M/SD)	3.62/ .92
Health literacy (M/SD)	3.56/ .63
Patient-centered communication (M/SD) (N=5325)	3.70/ .84
Self-rated health (M/SD)	3.602/ .842

We observed positive correlations between health literacy (β=.076, P<.001) and patient-centered communication (β=.109, P<.001) with self-rated health in Model 1. Furthermore, the interaction between literacy and PCC (β=-.030, P=.045) showed a negative association with self-rated health, while both literacy (β=.186, P<.001) and PCC (β=.213, P<.001) remained individually significant in Model 2 (Table 2). The effect of health literacy at three different levels of PCC is illustrated in Table 3, indicating a decrease in the effect size of literacy on self-rated health as PCC increases. Figure 2 visually demonstrates how PCC moderates the effect of literacy on self-rated health. As PCC increases, the difference in self-rated health between individuals with low and high health literacy, one standard deviation below and above the mean, decreases. This suggests that when patients perceived high-quality PCC, the disparity in self-rated health between low-literate and high-literate individuals tends to become more comparable.

Table 2. Multiple linerar regression of Self-rated Health

Variables [a]	Model 1				Model 2			
	[a] Coefficient B	Coefficient Std. Error	95% CI	*P*	[a] Coefficient B	Coefficient Std. Error	95% CI	*P*
Age	-.007	.001	[-.008, -.005]	<.001	-.007	.001	[-.008, -.005]	<.001
Gender	-.059	.018	[-.094, .024]	<.001	-.059	.018	[-.094, -.024]	<.001
Education	.080	.012	[.055, .104]	<.001	.079	.012	[.055, .103]	<.001
Psychological distress	-.222	.011	[-.243, -.201]	<.001	-.222	.011	[-.243, -.201]	<.001
Chronic diseases	-.288	.021	[-.329, -.247]	<.001	-.287	.021	[-.328, -.246]	<.001
Cancer diagnosis	-.094	.033	[-.160, -.029]	.005	-.094	.033	[-.159, -.028]	.005
Physicial therapy [b]	-.288	.021	[-.329, -.247]	<.001	-.287	.021	[-.328, -.246]	<.001
Mental therapy [b]	.015	.027	[-.038, .068]	.585	.015	.027	[-.038, .068]	.576
Medical visits [c]	-.298	.024	[-.345, -.250]	<.001	-.298	.024	[-.345, -.251]	<.001
Self-esteem	.106	.014	[.078, .134]	<.001	.107	.014	[.079, .135]	<.001
Social support	.052	.011	[.031, .074]	<.001	.052	.011	[.030, .073]	<.001
Patient-centered communication	**.109**	.012	[.085, .133]	<.001	**.213**	.053	[.108, .318]	<.001
Health Literacy	**.076**	.016	[.044, .108]	<.001	**.186**	.057	[.074, .298]	.001
Interaction	NA				**-.030**	.015	[-.059, -.001]	.045
Adjusted R^2	.427				.428			

NA: Not available.

[a] Unstandardized Coefficients B are reported.

[b] "Yes" was coded as 1, while answeres of "No" or "Not specified" were coded as 0

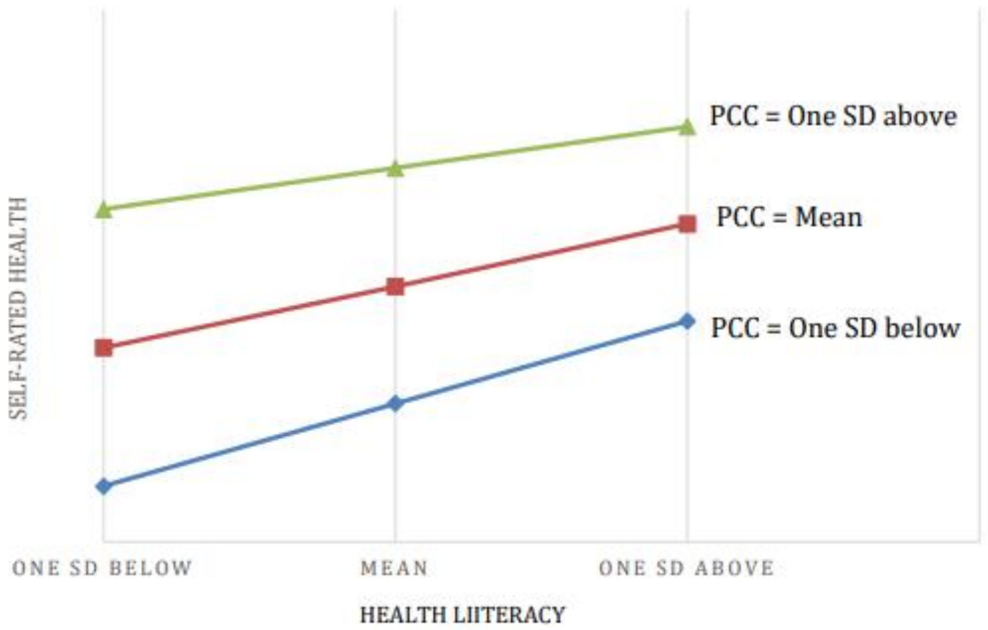
[c] The log10 transformation is applied in regression models due to skewed values in the original variable.

Table 3. Conditional effects of Health Literacy at values of Patient-centered Communication

[a] PCC	Effect	Std. Error	*P*	95% CI
3.000	.0969	.0192	<.001	[.0592,.1346]
3.8571	.0715	.0163	<.001	[.0395,.1035]
4.5714	.0504	.0206	.0145	[.0100, .0908]

[a] Values of PCC in conditional tables are the 16th, 50th, and 84th percentiles.

Figure 2. Relationship between Health Literacy and Self-rated Health at three levels of Patient-Centered Communication



$$Expected\ (Self\text{-}rated\ health) = \alpha + \delta_1 HL + \delta_2 PCC + \delta_3 PCC \times HL$$

In the existing literature, health literacy and patient-centered communication are often investigated independently. However, our study demonstrates that these two concepts can potentially have a combined impact on individuals' health. Both the individuals’ perceived health literacy and patient-centered communication in their healthcare contribute to individuals perceiving themselves as healthier. Additionally, if communication with healthcare providers is perceived as patient-centered, this moderates the relationship between health literacy and self-rated health. Thus, a patient-centered communication approach presents potential solutions to mitigate health disparities stemming from lower health literacy levels. The findings also have practical implications, indicating the importance of incorporating patient-centered communication in health interventions aimed at improving the well-being of individuals with low literacy levels.

REFERENCES

Croom, A., Wiebe, D. J., Berg, C. A., Lindsay, R., Donaldson, D., Foster, C., … Swinyard, M. T. (2011). Adolescent and Parent Perceptions of Patient-Centered Communication while Managing Type 1 Diabetes. Journal of Pediatric Psychology, 36(2), 206–215. https://doi.org/10.1093/JPEPSY/JSQ072

Epstein, R. M., Franks, P., Fiscella, K., Shields, C. G., Meldrum, S. C., Kravitz, R. L., & Duberstein, P. R. (2005). Measuring patient-centered communication in Patient–Physician consultations: Theoretical and practical issues. Social Science & Medicine, 61(7), 1516– 1528. https://doi.org/10.1016/J.SOCSCIMED.2005.02.001

Gele, A. A., & Harsløf, I. (2010). Types of social capital resources and self-rated health among the Norwegian adult population. International Journal for Equity in Health, 9(1), 1–9. https://doi.org/10.1186/1475-9276-9-8

Jordan, S., & Hoebel, J. (2015). Gesundheitskompetenz von Erwachsenen in Deutschland: Ergebnisse der Studie “Gesundheit in Deutschland aktuell” (GEDA). Bundesgesundheitsblatt - Gesundheitsforschung - Gesundheitsschutz, 58(9), 942–950. https://doi.org/10.1007/s00103-015-2200-z

Liu, C., Wang, D., Liu, C., Jiang, J., Wang, X., Chen, H., … Zhang, X. (2020). What is the meaning of health literacy? A systematic review and qualitative synthesis. Family Medicine and Community Health, 8(2), 1–8. https://doi.org/10.1136/fmch-2020-000351

Moser, R. P., Trivedi, N., Murray, A., Jensen, R. E., Willis, G., & Blake, K. D. (2022). PatientCentered Communication (PCC) scale: Psychometric analysis and validation of a health survey measure. PLOS ONE, 17(12), e0279725. https://doi.org/10.1371/JOURNAL.PONE.0279725

Nie, X., Li, Y., Li, C., Wu, J., & Li, L. (2021). The Association Between Health Literacy and Self-rated Health Among Residents of China Aged 15–69 Years. American Journal of Preventive Medicine, 60(4), 569–578. https://doi.org/10.1016/J.AMEPRE.2020.05.032

Sørensen, K., Pelikan, J. M., Röthlin, F., Ganahl, K., Slonska, Z., Doyle, G., … Consortium, on behalf of the H.-E. (2015). Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU). European Journal of Public Health, 25(6), 1053–1058. https://doi.org/10.1093/EURPUB/CKV043

Wigfall, L. T., & Tanner, A. H. (2018). Health Literacy and Health-Care Engagement as Predictors of Shared Decision-Making Among Adult Information Seekers in the USA: a Secondary Data Analysis of the Health Information National Trends Survey. Journal of Cancer Education, 33(1), 67–73. https://doi.org/10.1007/S13187-016-1052-Z/TABLES/3

APPENDIX

Overview of variables

Variable	Questionnaire	Scaling details
Dependent variable		
Self-rated health	In general, how would you say your health?	5-point scale from very bad = 1 to very good = 5.
Focal independent variables		
Health literacy	How easy is it in your opinion: 1. to find information about the treatment of mental health problems such as stress and depression 2. access to information about activities that are good for mental health. 3. get information about where you will get professional help when you are sick. 4. to find information about the treatment of your own diseases. 5. to understand the information about being healthier on the media. 6. to understand the advice of the family or friends about health. 7. to understand what your doctor tells you. 8. to understand why you need health screening. 9. to understand how your doctor or pharmacist directives how to use a prescribed medicine. 10. be aware of health warnings about behaviors such as smoking, low physical activity and excessive alcohol intake. 11. to assess the accuracy of the information on health risks in the media. 12. to evaluate when it may be necessary to get a second doctor's opinion. 13. to assess which of the daily behaviors are health related. 14. to decide how to protect himself/herself from illnesses according to the information in the media. 15. using your doctor's information to make decisions about your illness. 16. fulfill the instructions of your doctor or pharmacist.	Averaged score of 16 items (α=.908). 5-point scales from very difficult = 1 to very easy = 5.
Patient-centered communication	The following questions are about your communication with all doctors, nurses, or other health professionals you saw during the past 12 months. How often did they do each of the following: 1. Give me the chance to ask all the health-related questions I had. 2. Give the attention I needed to my feelings and emotions. 3. Involve me in decisions about my health care as much as I wanted. 4. Make sure I understood the things I needed to do to take care of my health. 5. Explain things in a way I could understand. 6. Spend enough time with me. 7. Help me deal with feelings of uncertainty about my health or health care.	Averaged score of 7 items (α=.930). 5-point scales from Never = 1 to Always = 5.
Covariates		
Psychological distress	Over the past 2 weeks, how often have you been bothered by any of the following problems? 1. Little interest or pleasure in doing things. 2. Feeling down, depressed, or hopeless. 3. Feeling nervous, anxious or on edge. 4. Not being able to stop or control worrying.	Averaged scores of 4 items (α=.904). 5-point scales from never = 1 to everyday = 5.
Chronic diseases	Has a doctor or other health professional ever told you that you had any of the following medical conditions: 1. Diabetes or high blood sugar? 2. High blood pressure or hypertension? 3. A heart condition such as heart attack, angina, or congestive heart failure?	"I have not been diagnosed with any chronic disease" = 0; others =1.

	4. Chronic lung disease, asthma, emphysema, or chronic bronchitis? 5. Arthritis or rheumatism? 6. Depression or anxiety disorder? 7. Other chronic diseases: ________________ 8. I have not been diagnosed with any chronic disease.	
Cancer diagnosis	Have you ever been diagnosed as having cancer?	Yes = 1; No = 0.
Physicial therapy	Are you currently undergoing medical or therapeutic treatment due to physical problems? This also includes alternative practitioners, homeopaths, etc.	Yes = 1; No/No answer = 0.
Mental therapy	Are you currently undergoing medical or therapeutic treatment because of psychological problems?	Yes = 1; No/No answer = 0.
Medical visits	In the past 12 months, not counting times you went to an emergency room, how many times did you go to a doctor, nurse, or other health professional to get care for yourself?	Continouse.
Self-essteem	Please indicate to what extent the following statements apply to you. 1. On the whole, I am satisfied with myself. 2. At times I think I am no good at all. 3. I feel that I have a number of good qualities. 4. I am able to do things as well as most other people. 5. I feel I do not have much to be proud of. 6. I certainly feel useless at times. 7. I feel that I'm a person of worth, at least on an equal plane with others. 8. I wish I could have more respect for myself. 9. All in all, I am inclined to feel that I am a failure. 10. I take a positive attitude toward myself.	Averaged score of 7 items (α=.904). 5-point scales from totally disagree = 1 to fully agree = 5.
Social support	Relatives are often also of great importance for one's own health. Please think of people from your personal environment, e.g. your family, your partner, friends, acquaintances, relatives or colleagues. How much do you agree with the following statements? 1. Is there anyone you can count on to provide you with emotional support when you need it - such as talking over problems or helping you to make difficult decisions? 2. Do you have friends and family members that you talk to about your health? 3. I have a close friend or relative I can turn to if I receive bad news about my health.	Averaged scores of 4 items (α=.818). 5-point scales from totally disagree = 1 to fully agree = 5.

Involving stakeholders with severe communication and/or learning disabilities during social impact measurement – lessons learned from a Social Return on Investment evaluation

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Social impact measurement has become a central issue for governments worldwide, and various measurement tools have been developed. Among these, the Social Return on Investment (SROI) has received greater attention from policymakers, scientists and non-profit organisations around the globe. As a framework, SROI supports organisations in mapping impact, attributing value to indicators, and in calculating the 'social return' on investments, or costs, that are generated in delivering a social or public service (Arvidson, Lyon, McKay & Moro, 2010). The SROI distinguishes itself from other evaluation tools (i.e. Cost-Benefit Analysis) through its intense stakeholder involvement (Arvidson, Lyon, McKay, Moro, 2010; Ariza-Montes et al. 2021). This is also reflected in the most prominent SROI guidelines (Nicholls, Lawlor, Neitzert, & Goodspeed 2012), where involving stakeholders is presented as the first fundamental principle evaluators should follow.

While the importance of involving stakeholders in SROI evaluations is undisputed, the guidelines give little assistance on how to accomplish this efficiently as well as effectively. This shortcoming is particularly taxing for organisations in the social sector (Krlev, Münscher, Mülbert, 2013), where decisions concerning stakeholder involvement may not always be straightforward because of stakeholders' attributes (i.e. people with physical disabilities and people with intellectual and/or communication disabilities). At the same time, however, this is where most SROI evaluations are conducted. Furthermore, "the decisions made on the basis of SROI and other evaluation methods are only as good as the data that go into them–and only as valid as the variety of stakeholders involved is representative of all the people in a society" (Yates & Marra, 2017b, p.139).

By presenting an SROI evaluation we conducted for a regional government in Austria, we offer insight into the process of involving vulnerable stakeholders (people with severe intellectual and/or communication disabilities) and discuss our experiences, findings, and lessons learned around the importance of involving these stakeholder groups directly during evaluations. In addition, we explore the questions "What is required to ensure the validity of involvement?" and "How does stakeholder involvement influence the results?".

The SROI evaluation of a project offering assistive technologies for people with disabilities was commissioned by a state government in Austria that used the outcomes and their corresponding social value for policy decisions. To best identify all outcomes, we based the SROI evaluation on a multiphase stakeholder involvement process during which we first called 225 contacts/clients of the project asking for participation (only a few of the contacts were the actual AT user). We then sent a link to an online survey to 141 stakeholders and a print version to six stakeholders (primarily the elderly) and asked them for snowballing. During the phone calls, 31 people (ages 8 to 72 years) with intellectual and/or communication disabilities were identified that could be interviewed. Most of these people were either full-time or half-time cared for in a facility for people with disabilities. We randomly chose 15 people with disabilities for interviews. Two people were missing at the interview appointment.

During our involvement process, we found that even today, gaining access to people with intellectual and/or communication disabilities requires endurance and, in most cases, multiple steps. Personal contact with gatekeepers and residential self-advocates seems to be a promising strategy. Nevertheless, it continues to be necessary for evaluators to stress the importance of receiving consent for participation directly from the person with disabilities (Stalker,1998; Lewis & Porter, 2004; Carlsson, Paterson, Scott-Findlay, Ehnfors, Ehrenberg, 2007). While we found that focus groups were not applicable, we successfully applied “Easy Language” based on the rules for “Easy-to-Read” in the semi-structured interviews. We thus adapted our language level to fit the level and capabilities of the interviewee with disabilities. In two cases, the interviewee’s condition required closed-ended questions to participate by nodding or eye movement. We further found that the presence of selfadvocates seems to positively affect the interviewee, whereas the presence of caregivers may cause bias in answers.

Even though the inclusion of vulnerable stakeholders - surprisingly - did not influence the SROI ratio, it had a tremendous effect on the validity of our evaluation. With a critical review and discussion of our procedures, we add to the knowledge base on creating inclusive evaluations and aim to contribute to a better understanding of the importance of directly involving vulnerable stakeholders. We also aim to ignite an exchange on the question of who needs to be involved, especially when policy decisions are to be based on the results of evaluations. Our findings call for a broader, as well as an enhanced direct inclusion of vulnerable groups in evaluations, who, in the past, have often been excluded from research (Berni, 2007; Carlsson, Paterson, Scott-Findlay, Ehnfors, Ehrenberg, 2007; de Haas, Grace, Hope, Nind, 2022).

REFERENCES

Ariza-Montes, Antonio, Sianes, Antonio, Fernández-Rodríguez, Vicente, López-Martín, Carmen, Ruíz-Lozano, Mercedes & Tirado-Valencia, Pilar (2021). Social Return on Investment (SROI) to Assess the Impacts of Tourism: A Case Study. SAGE Open. January-March 2021: 1–16

Arvidson, M., Lyon, F., McKay, S., Moro, D. (2010). The ambitions and challenges of SROI. Third Sector Research Centre Working Paper 49. University of Southampton, Middlesex University, University of Birmingham.

Berni, Kelly (2007). Methodological Issues for Qualitative Research with Learning Disabled Children, International Journal of Social Research Methodology, 10:1, 21-35, DOI: 10.1080/13645570600655159

Carlsson E, Paterson BL, Scott-Findlay S, Ehnfors M, Ehrenberg A. (2007). Methodological issues in interviews involving people with communication impairments after acquired brain damage. Qual Health Res. 2007 Dec;17(10):1361-71. doi: 10.1177/1049732307306926.

de Haas C, Grace J, Hope J, Nind M. (2022). Doing Research Inclusively: Understanding What It Means to Do Research with and Alongside People with Profound Intellectual Disabilities. Social Sciences. 2022; 11(4):159. https://doi.org/10.3390/socsci11040159

Krlev, Gorgi, Münscher, Robert, Mülbert, Katharina (2013). Social Return on Investment (SROI): State-of-the-Art and Perspectives. A Meta-Analysis of practice in Social Return on Investment (SROI) studies published 2002-2012. Centre for Social Investment, Heidelberg University. Heidelberg.

Lewis A, Porter J (2004) Interviewing children and young people with learning disabilities: Guidelines for researchers and multi-professional practice. British Journal of Learning Disabilities 32(4): 191–197.

Nicholls, Jeremy, Lawlor, Eilis, Neitzert, Eva, Goodspeed, Tim (2012). A Guide to Social Return on Investment. Update to the 2009 Guide. London.

Stalker, Kirsten (1998) Some Ethical and Methodological Issues in Research with People with Learning Difficulties, Disability & Society, 13:1, 5-19, DOI: 10.1080/09687599826885

Yates, Brian T. & Marra Mita (2017). Social Return On Investment (SROI): Problems, solutions . . . and is SROI a good investment? Evaluation and Program Planning 64. P. 136–144

Mitigating the language barrier: professionals' perspective on when to use what strategy for whom

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Background

Due to worldwide migration waves, the number of language discordant encounters between patients/clients (e.g., migrants, refugees, expats, and international students) and professionals from healthcare and the social domain (henceforth "professional") is increasing. Language barriers lead to suboptimal health communication, and consequently to (health) disparities (e.g., Al Shamsi, Almutairi, Al Mashrafi, & Al Kalbani, 2020; Kohlenberger, Buber-Ennser, Rengs, Leitner, & Landesmann, 2019). There is a need for a comprehensive and up-to-date overview of what tools are available to mitigate the language barrier, their benefits and pitfalls, and which tools are most effective in what situation and for whom.

There are tools to mitigate a language barrier, such as professional interpreters, relatives as interpreters (e.g., family members), professionals who speak multiple languages themselves, online tools (e.g., translation apps), and culture mediators (Al Shamsi et al., 2020; Boylen, Cherian, Gill, Leslie, & Wilson, 2020; Brisset, Leanza, & Laforest, 2013; Flores, 2005; Karliner, Jacobs, Chen, & Mutha, 2007). These tools all come with benefits and pitfalls. Therefore, not all tools are always useful or suitable for all actors, and in all situations, or contexts. Besides, it is known that in many cases professionals underestimate the language barrier and do not use any tool to mitigate the language barrier. Even when professionals do recognize the language barrier, they often do not consult any tool. Those who want to use a tool, often do not know what tools are available and are most suitable given a particular context, and how to get access to these tools.

Our study provides the beforementioned comprehensive and up-to-date overview by focussing on professionals' experienced barriers, perceptions of benefits and pitfalls of different tools, and opinions about what barriers are most relevant to address in a guideline concerning mitigating a language barrier in healthcare and the social domain.

Methods
As part of the guideline development project, in which evidence-based guidelines for mitigating the language barrier in healthcare and the social domain are being developed, an invitational conference was organised in March 2023. A total of 86 professionals from healthcare and the social domain first shared their experiences with mitigating language barriers in ten online focus group discussions (break-out sessions). Per session, topics related to mitigating language barriers were discussed: (1) general barriers, (2) knowledge, (3) skills and attitudes, (4) care and treatment, (5) access to tools, communication, administration, time, and quality, (6) financing, organisational culture, organisation size, and translation services, (7) professional interpreters, (8) relative as interpreters, (9) digital tools (and privacy), (10) other strategies (e.g., culture mediators). Subsequently, the professionals were asked to rank the barriers they experienced from "most important to address in the guideline" to "least important to address in the guideline". The focus groups were audio-recorded and transcribed verbatim. The transcripts were analysed by means of thematic analysis (Dixon-Woods, Agarwal, Jones, Young, & Sutton, 2005) by two coders.

Results
In general, low language proficiency and cultural aspects were important barriers during language discordant encounters. Professionals reported a gap in awareness and knowledge, both among patients and themselves, about who is responsible for mitigating the language barrier and what to do to mitigate a language barrier (e.g., access to certain tools). In terms of skills, participants indicated a vast need for proper training about how they can mitigate a language barrier during an encounter, as well as before and after an encounter. In particular at the intake and during aftercare, the presence of a professional interpreter was deemed very important. Time investment (e.g., in preparing for a language discordant consultation and administration), and the price-quality balance for interpreting services were also important barriers. Nevertheless, professionals stated that finances should not be a barrier to the use of a professional interpreter. As for relatives as interpreters, professionals were adamant about not using minors as interpreters. They deemed that more attention for digital tools was needed – preferably in different curricula already – to increase awareness of the use of digital tools, and potential dangers for patients' and professionals' privacy. Finally, for other strategies, such as translated patient information materials, ad hoc interpreters, and culture mediators, there was a need for more insight into how to optimize decision-making in choosing the most appropriate strategy.

Conclusion
There is a strong need for clear, easy-to-use, and evidence-based guidelines that can help professionals (and preferably also patients/clients) in deciding which (combination of) tools can be used best in what situation to mitigate a language barrier.

Practical implications
The results of our study help both researchers and professionals in understanding what the main barriers are to be addressed concerning the mitigation of language barriers. These

insights can be used in the development of evidence-based national and international guidelines.

REFERENCES

Al Shamsi, H., Almutairi, A. G., Al Mashrafi, S., & Al Kalbani, T. (2020). Implications of Language Barriers for Healthcare: A Systematic Review. Oman Med J, 35(2), e122. doi:10.5001/omj.2020.40

Boylen, S., Cherian, S., Gill, F. J., Leslie, G. D., & Wilson, S. (2020). Impact of professional interpreters on outcomes for hospitalized children from migrant and refugee families with limited English proficiency: a systematic review. JBI Evid Synth, 18(7), 1360-1388. doi:10.11124/jbisrir-d-19-00300

Brisset, C., Leanza, Y., & Laforest, K. (2013). Working with interpreters in health care: a systematic review and meta-ethnography of qualitative studies. Patient Educ Couns, 91(2), 131-140. doi:10.1016/j.pec.2012.11.008

Dixon-Woods, M., Agarwal, S., Jones, D., Young, B., & Sutton, A. (2005). Synthesising qualitative and quantitative evidence: a review of possible methods. J Health Serv Res Policy, 10(1), 45-53. doi:10.1177/135581960501000110

Flores, G. (2005). The impact of medical interpreter services on the quality of health care: a systematic review. Med Care Res Rev, 62(3), 255-299. doi:10.1177/1077558705275416

Karliner, L. S., Jacobs, E. A., Chen, A. H., & Mutha, S. (2007). Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. Health Serv Res, 42(2), 727-754. doi:10.1111/j.1475-6773.2006.00629.x

Kohlenberger, J., Buber-Ennser, I., Rengs, B., Leitner, S., & Landesmann, M. (2019). Barriers to health care access and service utilization of refugees in Austria: Evidence from a cross-sectional survey. Health Policy, 123(9), 833-839. doi:https://doi.org/10.1016/j.healthpol.2019.01.014

Health- and Language Coaching at Workplace as Means of Empowerment for incoming medical Professionals

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"Empowerment" in health-care mainly refers to "a process in which patients understand their role, are given the knowledge and skills by their health-care provider to perform a task in an environment that recognizes community and cultural differences and encourages patient participation." (WHO, 2009) However, medical professionals are often overwhelmed with the task to empower their patients accordingly. The cause lies usually in job-related stress factors, which, if left untreated, can even lead to burnout syndrome. (Elsässer and Sauer, 2013) In addition to dealing confidently with information hurdles in a new health system and the close interaction with people in pain, which explicitly increases their psychological stress, incoming resident physicians have to settle immediately into a highly intercultural context, which means additional challenges. Above all, they have to accept their otherness, and find their own position within this new context, while re-defining their own identity.

Based on personal narratives during language classes, workshops and 1:1 coaching sessions, it becomes evident that this specific group of incoming medical professionals manifests a sort of vulnerability which can be described in terms of health, acculturation, and leadership. Therefore, this poster aims at presenting an original systemic intervention that focuses health literacy and intercultural intelligence, especially designed to empower medical professionals during their pre-integration and their first years in the German health system.

Starting from a definition of "vulnerability" in health as the net balance of risk factors, protective factors, and healing factors (socially, biologically, in terms of health literacy and health care access), (de Groot et al. 2019) we extend the definition of "vulnerability" as when those professionals experience uncertainty, risk, and emotional exposure (Brown, 2012) within a certain intercultural working context, where vulnerabilities in caring relations are being recognized as mutual. (Gunaratnam, 2013) Finally, considering the psychological profile of medical students who after graduation seek to accomplish their post-graduate training, as well as the challenges during their acculturation in the new environment, we regard incoming medical professionals as a vulnerable group in need of empowerment as a measure to prevent their own burnout and reassure patients receiving high-quality care.

The initial idea for such a content language integrated learning intervention originates in our DaF zum Wohl! project, aiming at promoting health literacy in international students. That project has been conducted several times at the University of Bielefeld and the Aristotle University of Thessaloniki, also as part of our Erasmus+ Teaching Staff Mobility. (Kolovou, 2022; 2023) Our current project addressing medical professionals is the product of several preparation classes for the Medical Chamber examination in German as a Technical Language (Fachsprachprüfung) for medical professionals. Although those candidates manage to prove a great command of the general language (Level C1 according to Common European Framework of Reference for Languages), they still manifest a lack of intercultural readiness for their new working environment, as they experience great difficulties to simply fit in. Taking into account the fact that the daily encounter with human pain, and in a foreign cultural environment, may lead to the exhaustion of their resources, (Demir et al. 2003) we call for action according to a combinatory systemic approach.

Empowerment has recently also become important in educational fields of work. Following up regular language classes, which cover the linguistic and communication needs on an everyday general speech level, our candidates are invited to attend complementary workshops and/or 1:1 sessions that engage systemic health- and language coaching techniques. The benefits of attending such a complementary empowering offer at their workplace are individualized during the inventory survey conducted before the intervention, and they aim at the coachees' personal development, learning strategies, and work outcomes.

Far beyond the regular language classes, by combining Health- and Language-Coaching, we seek to create a common place of power, cultivate effective learning habits, practice non-violent communication methods, strengthen their intercultural readiness, so that incoming medical professionals can remain fit and resilient whilst they manage to cope with overwhelming daily workload in their clinic. In order to be successful in the long term, empowerment exercises first aim at a mindful personality self-awareness. In doing so, their trainers are also given the opportunity to step out of everyday stress and reflect on their own psychosocial resources and "resilience" too.

REFERENCES

Brown, B. (2012). Daring Greatly: How the Courage to Be Vulnerable Transforms the Way We Live, Love, Parent, and Lead. Avery.

de Groot N, Bonsel GJ, Birnie E, Valentine NB. Towards a universal concept of vulnerability: Broadening the evidence from the elderly to perinatal health using a Delphi approach. PLoS One. 2019 Feb 20;14(2):e0212633. doi: 10.1371/journal.pone.0212633. PMID: 30785926; PMCID: PMC6382270.

Demir, A., Ulusoy, M., Ulusoy, M.F. (2003). "Investigation of factors influencing burnout levels in the professional and private lives of nurses." International Journal of Nursing Studies. Vol. 40(8), 807-827.

Elsässer, J., Sauer, K.E. (2013). Die Begriffsgeschichte von Burnout. In: Burnout in sozialen Berufen. Perspektiven Sozialer Arbeit in Theorie und Praxis, vol 2. Centaurus Verlag & Media, Herbolzheim. https://doi.org/10.1007/978-3-86226-851-1_2

Gunaratnam, Y. (2013). Cultural vulnerability: A narrative approach to intercultural care. Qualitative Social Work, 12(2), 104–118. https://doi.org/10.1177/1473325011420323

Kolovou, P. (2022). „DaF zum Wohl! Sprachsensible Gesundheitsförderung internationaler Studierender". IDV Magazin (102).

Kolovou, P. (2023). „Teaching resilience in fragile Times”. Here and Now Forum in Die Unterrichtspraxis/Teaching German. American Association of Teachers of German. 2023.

WHO (2009). Guidelines on Hand Hygiene in Health Care: First Global Patient Safety Challenge Clean Care Is Safer Care. Geneva: World Health Organization (2), Patient empowerment and health care. Available from: https://www.ncbi.nlm.nih.gov/books/NBK144022/

Can metaphors promote awareness and understanding of a health problem? The case of dry eye disease

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Introduction

Metaphors play a crucial role in human communication. They shape the ways we make sense of the world and of other people and help us talk about abstract concepts (Gibbs & Franks 2002). This is also why health communication is largely structured by metaphors. Patients use metaphors to describe health and well-being conditions, such as experiencing physical or mental pain (Semino et al. 2018). Metaphors may have an empowering effect if they are used to reflect upon – and then reframe – a difficult situation people find themselves in (Nardon & Hari 2021). In addition, metaphors can be used as a tool for reaching shared understanding of complex topics (Álvarez et al. 2017).

The Centers for Disease Control and Prevention report that vision disability is one of the top 10 disabilities among adults and one of the most prevalent disabling conditions among children (cdc.gov). A particular high number (14%-33% of the population worldwide) suffers from Dry Eye Disease (DED) (Stapleton et al. 2017). Its prevalence is expected to increase even further given the frequent use of visual display terminals, increasingly aging population, and highly stressful social environments (Ding & Sullivan 2012; American Optometric Association 2020). DED causes ocular surface damage, eye discomfort, and visual impairment. Difficulties in diagnosing and properly treating the disease often leave DED patients anxious and frustrated (Dr. Thomas Dohlman, health.harvard.edu).

When people talk about emotionally-charged experiences, they often use metaphors. Furthermore, talking about eye health also almost always requires the use of metaphors since the concepts of vision, seeing, or imagination are highly metaphorical. Up to this point, no study has investigated systematically which metaphors are used in the context of DED – despite its importance. The current project analyzes metaphors in patients' narratives on their experiences with DED. The aim is two-fold. First, the analysis of metaphors aims to shed light on how different people conceptualize and experience this disease (e.g., "My eyes feel dry as the Sahara Desert"). Secondly, we will investigate which functions different metaphors may have in different communicative situations (e.g., defining symptoms, talking about experiences with doctors, offering support to other people having the same disease).

Theory & Method

The current project draws on Conceptual Metaphor Theory (CMT, Lakoff & Johnson, 1980) to analyze metaphorical concepts in the patients' narratives. CMT suggests that people automatically and unconsciously draw on the knowledge that they have about concrete concepts (e.g., journey) when they encounter abstract concepts (e.g., illness) in their everyday lives. The application of CMT may help researchers uncover less obvious/unconscious factors that shape the ways people think and talk about health and well-being (i.e., Landau et al., 2019). Additionally, it provides insights into associations people draw between abstract (i.e., disease, health product) and more concrete concepts.

Data corpus

The corpus for the proposed project is composed of patients' responses to 480 surveys (83 questions per survey) and 15 blog entries (1100 words per blog entry on average). The responses to the survey as well as the personal narratives were taken from an online forum called DryEyeZone (https://www.dryeyezone.com/).

Data collection and analysis

Our analysis of the data consists of multiple phases, going from identification, over coding to investigating patterns in the use of metaphors. To ensure reliability, one of the authors and a research assistant independently analyzed and coded the data before discussing any differences and cases of doubt. We followed a bottom-up approach (Kövecses 2008); thus, linguistic metaphors were identified before conceptual metaphors were formulated.

Results and Discussion

The metaphor analysis revealed 152 instances of metaphors. These linguistic expressions varied in their conventionality. For instance, expressions such as "I didn't want to go on" or "to keep fighting the disease" are used frequently in health-related discourses and point to the frustration that many patients experience when suffering from a disease. We also identified more creative metaphors, such as "My eyes swelled up like golf balls" or "I'm having Vaseline vision", which provide insights into how people may define and experience the symptoms of DED.

In the project, we will discuss how paying attention to metaphors may facilitate a more sensitive and effective communication that can empower affected patients and reduce their vulnerability. For instance, people might consider certain metaphors to be particularly helpful in patient-to-patient communication (e.g., talking about shared experiences) while other metaphors might help patients to define their needs to doctors. Other metaphors, by contrast, may fall flat or even backfire (see also Landau et.al. 2018). These insights may be of interest to researchers studying this and other diseases, doctors, patients, or creators of health campaigns.

REFERENCES

Álvarez, I., Selva, L., Medina, J.L. Sáez, S. (2017) Using root metaphors to analyze communication between nurses and patients: A qualitative study. BMC Med Educ 17, 216 (2017). https://doi.org/10.1186/s12909-017-1059-0

American Optometric Association. (2022). https://www.aoa.org/?sso=y; last accessed March 12, 2023.

Dryeyezone.com. Rebecca Petris. https://www.dryeyezone.com/, last accessed March 12, 2023.

Gibbs., R.W.,. & Franks, H. (2002) Embodied Metaphor in Women's Narratives About Their Experiences With Cancer. Health Communication, 14(2), 139-165, DOI: 10.1207/S15327027HC1402_1

Landau, M. J., Arndt, J., & Cameron, L. D. (2018). Do metaphors in health messages work? Exploring emotional and cognitive factors. Journal of Experimental Social Psychology.

Nardon, L., & Hari, A. (2021). Sensemaking Through Metaphors: The Role of Imaginative Metaphor Elicitation in Constructing New Understandings. International Journal of Qualitative Methods, 20. https://doi.org/10.1177/16094069211019589

Semino, E., Demjén, Z., Hardie, A., Payne, S., & Rayson, P. (2018). Metaphor, cancer and the end of life: A corpus-based study. London, UK: Routledge

Stapleton F., Alves M., Bunya V.Y., Jalbert I., Lekhanont K., Malet F., Na K.S., Schaumberg D., Uchino M., Vehof J., (2017). Epidemiology Report. Ocul. Surf. 15:334–365. doi: 10.1016/j.jtos.2017.05.003

“When I’m addressed as one sex, I feel halved”: An exploration of non-binary persons’ (barriers of) health information-seeking behaviors

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Introduction

Non-binary people whose gender-identity or lived gender varies from their sex assigned at birth (Bauer et al., 2015) have been identified as a marginalized and medically underserved population. They experience barriers to accessing healthcare (Augustaitis et al., 2021) and face stigma and discrimination within healthcare settings (Bauer et al., 2015). A systematic review (Scandurra et al., 2019) summarized that non-binary people have lower life and body satisfaction, have more pronounced health needs, and have an increased risk for physical or mental illnesses compared to cis persons.

The Structural Influence Model (Viswanath, 2006; Viswanath et al., 2007) suggests that communication inequalities play a significant role in connecting social determinants to health outcomes (Ackerson & Viswanath, 2009). These inequalities refer to differences in how different social groups access, process, and act on information (Viswanath, 2006). To understand communication inequalities among non-binary individuals, it is essential to examine their health information-seeking behaviors (HISB). HISB involves actively seeking specific health information through a multi-staged process that includes recognizing information needs, selecting sources, and seeking diverse types of information (Galarce et al., 2011; Link et al., 2021). While existing research has primarily focused on acquiring sexual or identity-oriented health information (e.g., Baker et al., 2021) and the use of online sources (Augustaitis et al., 2021; Pohjanen & Kortelainen, 2016), there is a need to comprehensively explore non-binary individuals' HISB from various sources (RQ1). Furthermore, our study aims to identify barriers that hinder information access (RQ2) and determine communication preferences that should be considered when targeting health communication efforts towards non-binary individuals (RQ3).

Methods

In a project on gender-sensitive health communication, 31 semi-structured interviews were conducted in early 2022 in Germany. As a purposive sampling strategy, we aim to equally consider the perspectives of various gender-identities (women: n = 11, men: n = 10, non-binary persons: n = 10). Additionally, we used maximum variation sampling within these groups to enroll participants who were diverse in terms of age, education level, and health status (see Table 1). The present abstract focuses on the sub-sample of non-binary persons while the other interviews are used in a comparative manner. The non-binary individuals were recruited via social media groups, non-profit and healthcare organizations, and snowball sampling through social network referral. The interviews took 26-53 min, and were conducted either face-to-face or via Zoom. The interview guide reconstructed the respondents' HISB, experienced barriers as well as preferences to communicating health information (see Table 2). All data were analyzed using qualitative content analysis (Hsieh & Shannon, 2005; Mayring, 2000), combining deductive and inductive strategies of coding.

Findings and Discussion

In terms of HISB (RQ1), interviewees emphasized its significance, as they sought information for personal health management and to address their strong interest in health. Notably, non-binary individuals highlighted mental health as a particularly important issue compared to the interviewed women and men (e.g., "I'm mainly concerned with the area of mental health - this is precisely linked to gender, to my existence as a non-binary person", 33-years-old, medium level education). The Internet is a primary source of health information. Non-binary individuals find it crucial to utilize online searches for health provider recommendations, gain knowledge about the healthcare system (e.g., communication with health insurance companies), and seek/support others through online communities and social networks.

Among the mentioned barriers (RQ2) are negative experiences with health professionals. Non-binary persons reported being misunderstood and misgendered resulting in a higher preference for online sources (e.g., "I hear a lot that people don't want to go back to their physician because he misgendered them", 35-year-old, highly educated). Another barrier is the lack of available information across sources and the limited familiarity of health professionals with issues relevant to non-binary individuals. In the absence of information, non-binary people rely on online communities or primary scientific literature for support. However, this often leads to additional barriers in understanding and evaluating the information, due to a lack of training or literacy.

Highlighted communication preferences (RQ3) include considering diverse identities and experiences, increasing representation of non-binary individuals, using neutral and inclusive language, and message presentation. Additionally, respondents expressed the need for easily accessible high-quality information and better-trained health professionals.

In conclusion, the study underscores communication inequalities and information gaps in the healthcare system, emphasizing the importance of addressing non-binary individuals based on their communication preferences. Further research is required to inclusively incorporate the perspectives of this diverse group in communication interventions. Consequently, additional interviews with non-binary individuals are planned in the upcoming months.

REFERENCES

Ackerson, L. K., & Viswanath, K. (2009). The social context of interpersonal communication and health. Journal of Health Communication, 14(1), 5–17. https://doi.org/10.1080/10810730902806836

Augustaitis, L., Merrill, L. A., Gamarel, K. E., & Haimson, O. L. (2021). Online Transgender Health Information Seeking: Facilitators, Barriers, and Future Directions. CHI '21: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems, 1–14. https://doi.org/10.1145/3411764.3445091

Baker, A. M., Jahn, J. L., Tan, A. S., Katz-Wise, S. L., Viswanath, K., Bishop, R. A., & Agénor, M. (2021). Sexual Health Information Sources, Needs, and Preferences of Young Adult Sexual Minority Cisgender Women and Non-binary Individuals Assigned Female at Birth. Sexuality Research and Social Policy, 18, 775–787. https://doi.org/10.1007/s13178-020-00501-6

Galarce, E. M., Ramanadhan, S., & Viswanath, K. (2011). Health Information Seeking. In T. L. Thompson, R. Parrott, & J. F. Nussbaum (Eds.), Routledge Communication Series. The Routledge Handbook of Health Communication (2nd ed.). Routledge.

Galarce, E. M., Ramanadhan, S., & Viswanath, K. (2011). Health Information Seeking. In Thompson, T.L., Parrott, R., Nussbaum, J.F. (Ed.), Routledge Communication Series. The Routledge Handbook of Health Communication (2nd ed., 167-180). Routledge.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. Qualitative Health Research, 15(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Johnson, J. D., & Meischke, H. (1993). A Comprehensive Model of Cancer-Related Information Seeking Applied to magazines. Human Communication Research, 19(3), 343–367. https://doi.org/10.1111/j.1468-2958.1993.tb00305.x

Link, E., Baumann, E., Linn, A., Fahr, A., Schulz, P., & Abuzahra, M. E. (2021). Influencing Factors of Online Health Information Seeking in Selected European Countries. European Journal of Health Communication, 2(1), 29–55. https://doi.org/10.47368/ejhc.2021.002

Mayring, P. (2000). Qualitative content analysis. Forum: Qualitative Social Research, 1(2).

Pohjanen, A. M., & Kortelainen, T. A. M. (2016). Transgender information behaviour. Journal of Documentation, 72(1), 172–190. https://doi.org/10.1108/JD-04-2015-0043

Scandurra, C. (2019). Health of Non-binary and Genderqueer People: A Systematic Review. Frontiers in Psychology, 10, 1453. https://doi.org/10.3389/fpsyg.2019.01453

Viswanath, K. (2006). Public communications and its role in reducing and eliminating health disparities. In G. E. Thomson, F. Mitchell, & M. B. Williams (Eds.), Examining the health disparities research plan of the national institutes of health: Unfinished business (pp. 215–253). Washington, DC: Institute of Medicine.

Viswanath, K., & Kreuter, M. W. (2007). Health disparities, communication inequalities, and eHealth. American Journal of Preventive Medicine, 32(5 Suppl), S131-3. https://doi.org/10.1016/j.amepre.2007.02.012

APPENDIX

Table 1. Demographic characteristics of participants (n = 31)

	Total sample	**Subsample of non-binary persons**
Mean Age (in years)	M = 39.7 (*min* = 18; *max* = 67)	M = 32.8 (*min* = 18; *max* = 42)
Gender		
Female	11 (35.5 %)	
Male	10 (32.3 %)	
Non-binary	10 (32.3 %)	
Education		
Certificate of lower secondary education	2 (6.5 %)	-
General certificate of upper secondary education	6 (19.4 %)	2
University entrance diploma or university degree	23 (74.2 %)	8
Health status		
Good health	17 (54.8 %)	5
Chronic health condition	14 (45.2 %)	5

Table 2. List of main domains and examples of questions covered in the interviews

Relevance of health information

- How important is it for you to be well-informed about the topic of health?

Health information-seeking behaviors

- Interest in specific health issues
  - Which health issues are particularly relevant to you and your everyday life?
  - Which health issues would you personally attribute less importance to?
- Process of health information-seeking behaviors
  - When you are confronted with a health problem yourself, how do you usually engage with information?
  - Feel free to describe in more detail how you went about it, for example, the last time you were confronted with a health issue or challenge.
- Role of online sources
  - In which situations do you choose the internet to search for health information?

Barriers to health information-seeking behaviors

- How difficult/easy is it or was it for you to access information about health issues?
- Challenges related to dimensions of health literacy
  - What challenges do you see in finding information?
  - To what extent do you think the available information is sufficient?
  - To what extent is it difficult to evaluate the information?
  - To what extent is the information found comprehensible to you?

Preferences for health information provision

- Preferences regarding online sources
  - In your opinion, what are the advantages and disadvantages of digital offerings for health information?
  - What do you particularly value in digital health offerings?
- Preferences regarding gender-sensitive health communication
  - To what extent do you think it is relevant to design health information differently for different genders?
  - How do you assess the gender-specific design of such offers?
  - What would you like to get out of gender-specific health information?

In-process evaluation of a self-learning environment for health professionals on health care for intersex and trans persons

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This paper will present results of a qualitative in-process evaluation study of an online self-learning environment for health professionals on health care for intersex and trans people. The interactive self-learning environment is the result of a publicly funded multi-year intra-disciplinary research and development project. We evaluate using patterns and learning success of this web-based self-learning environment in health care professionals.

The focus is on raising awareness of needs and barriers of intersex and trans people in accessing health care services (cf. Baiocco et al. 2022; Ayhan et al. 2020; Smith et al. 2021). Intersex is used as an umbrella term for people with innate variations of sex characteristics that are not or not only perceived as female or male. Trans is an umbrella term for people who consider themselves as trans or transgender and whose gender identity or expression does not align with the sex they were assigned at birth. In the first phase of the project, a mixed-methods empirical study identified non-accepting and culturally inadequate behaviour of health care providers as primary barrier in access to health care. Therefore, affective objectives (change of attitude), cognitive (gain of knowledge), and psychomotoric learning objectives (transfer to professional practice/change of behavior) have been set to facilitate behavioural changes of health care providers.

Trans and intersex people belong to the vulnerable groups who are at higher risk of poor mental and physical health (cf. Pöge et al. 2020: 16-19). In 2020, the European Agency for Fundamental Rights (FRA) surveyed nearly 140,000 LGBTI (Lesbian, Gay, Bisexual, transgender, intersex) persons of age 15 and older in Europe. 37% of respondents had already experienced discrimination in access to health care – for trans persons the comparable value is 55%, for intersex persons 59% (cf. FRA 2020: 20, 31). 16% of LGBTI people feel specifically discriminated against by health professionals (cf. FRA 2020: 31). Ayan et al. and Pöge et al. also conclude in their analysis of different studies that LGBTI people experience discrimination in the health care system (cf. Ayhan et al. 2020; Pöge et al. 2020). Furthermore, the FRA survey found that, in addition to discrimination, experiences of violence are the biggest problem for intersex people (cf. FRA 2020: 52). Transgender people also experience a lot of discriminatory violence (cf. BMFSFJ 2023; TGEU 2023).

These figures show the relevance of awareness raising and training for health professionals to reduce access barriers, discrimination and resulting health risks in health care. Accordingly, the self-learning environment also has a preventive function. Prevention of experiences of violence and discrimination in turn has positive effects on health (cf. Schiavo 2013; Pöge et al. 2020; Ayhan et al. 2020).

According to Schiavo, this submission belongs to the specific field of professional medical communication (cf. Schiavo 2014: 221). The criterion of peer-to-peer approach is met, as are the following communication goals outlined by Schiavo: "(1) promote the adoption of best medical and health practices; (2) establish new concepts and standards of care; (3) publicize recent medical discoveries, beliefs, parameters, and policies; (4) change or establish new medical priorities" (Schiavo 2014: 222).

For the submitted evaluation, qualitative semi-structured interviews are being designed and conducted in spring and summer 2023 with approximately 10 subjects from the primary target groups of the self-learning environment (cf. Clark et al. 2021) : physicians in private practice in somatic care, outpatient and inpatient psychotherapists, students of medicine and psychotherapy, and hospital nurses. We confirm that the data will be collected by the time of presentation and that results can be presented.

The qualitative evaluation (for qualitative approaches to evaluations, see Baumann et al. 2018: 8) examines how the intended learning goals are achieved by use of the self-learning environment. It was developed following evidence-based guidelines for learning success, its' architecture can be classified as „guided discovery architecture" (Clark & Mayer 2016: 21). A particular focus lies on the usage of different content types such as text, video, multiple choice questions, drag-and-drop questions, and decision-making scenarios. It will be explored, if an increase in knowledge and competence is perceived and experienced as positive. Especially the „joy of use" of gamification elements such as online badges (cf. Tolks 2016: 232) is addressed. In addition, usage patterns like self-determined seeking and exploration of learning content (cf. Kerres 2017: 17) are explored. These aspects are of particular interest for the evaluation, as they are crucial for the user-centered design of a self-learning environment (cf. Clark & Mayer 2016: 405).

The results of the evaluation submitted here should provide indications for a medium-term optimization and content expansion of the self-learning environment.

REFERENCES

Ayhan, C. H. B, Bilgin, H., Uluman, O. T., Sukut, O., Yilmaz, S., Buzlu, S. (2020). A Systematic Review of the Discrimination Against Sexual and Gender Minority in Health Care Settings. International Journal of Health Services, 50 (1), 44–61. https://doi.org/10.1177/0020731419885093

Baiocco, R., Pezzella, A., Pistella, J., Kouta, C., Rousou, E., Rocamora-Pérez, P., Lópes-Liria, R., Dudau, V., Doru, A.-M., Kuckert, A., Ziegler, S., Nielsen. D. S., Twisttmann Bay, L. & Papadopoulus, I. (2022). LGBT+ Training Needs for Health and Social Care Professionals: A Cross-cultural Comparison Among Seven European Countries. Sexuality Research and Social Policy, 19 (1), 22-36. https://doi.org/10.1007/s13178-020-00521-2

Baumann, E. & Hurrelmann, K. (2014). Gesundheitskommunikation: Eine Einführung [Health Communication: An Introduction]. In: Hurrelmann, K. / Baumann, E. (Ed.): Handbuch Gesundheitskommunikation [Handbook Health Communication]. Bern: Hans Huber, 8-18.

BMFSFJ (2023). Diskriminierung und Gewalt gegen transgeschlechtliche Menschen [Discrimination and Violence Against Transgender People]. URL: https://www.regenbogen-portal.de/informationen/diskriminierung-und-gewalt-gegen-transgeschlechtliche-menschen (accessed 08.05.2023).

Clark, E., Foster, L., Sloan, L. & Bryman, A. (2021). Bryman's Social Research Methods, Sixth Edition, Oxford: Oxford University Press.

Clark, R. C. & Mayer, R. E. (2016). E-Learning and the Science of Instruction – Proven Guidelines for Consumers and Designers of Multimedia Learning, 4th Edition, Hoboken: Wiley

European Union Agency for Fundamental Rights (FRA) (2020). A long way to go for LGBTI equality. URL: https://fra.europa.eu/en/publication/2020/eu-lgbti-survey-results (accessed 08.05.2023).

Kerres, M. (2017). Lernprogramm, Lernraum oder Ökosystem? Metaphern in der Mediendidaktik [Learning Programme, Learning Space or Ecosystem? Metaphores in Media Pedagogy]. In: Mayrberger, K., Fromme, J., Grell, P., Hug, T. (Ed.): Jahrbuch Medienpädagogik 13: Vernetzt und entgrenzt – Gestaltung von Lernumgebungen mit digitalen Medien [Yearbook Media Pedagogy 13: Connected and Delimited – Designing Learning Environments with Digital Media]. Wiesbaden: Springer, 15-28. https://doi.org/10.1007/978-3-658-16432-4_2

Koval, O., Engen, O. A., Kringen, J., & Wiig, S. (2022). Strategies of communicating health-related risks to vulnerable groups of immigrants during a pandemic: a scoping review of qualitative and quantitative evidence. International Journal of Health Governance, 27 (2), 127-142. https://doi.org/10.1108/IJHG-06-2021-0070

Pöge, K., Dennert, G., Koppe, U., Güldenring, A., Matthigack, E. B., & Rommel, A. (2020). Die gesundheitliche Lage von lesbischen, schwulen, bisexuellen sowie trans- und intergeschlechtlichen Menschen [The Health Situation of Lesbian, Gay, Bisexual, Transgender and Intersex People]. Journal of Health Monitoring, 5(S1), 1-30. http://dx.doi.org/10.25646/6448

Schiavo, R. (2014). Health communication: From theory to practice. Second edition, Vol. 217. San Francisco: John Wiley & Sons.

Smith, S. D., Rowan, N. L., Arms, T., Hohn, K. L. & Galbraith, C. S. (2021). An interdisciplinary approach to enhancing health knowledge and cultural awareness with LGBT older adults. Educational Gerontology, 47 (1), 1-7. https://doi.org/10.1080/03601277.2021.1876584

Tolks, D. (2016). eLearning in der medizinischen Aus-, Weiter- und Fortbildung [E-Learning in Medical Vocational and Advanced Training]. In: Fischer, Florian, Krämer, Alexander

(Hg.): eHealth in Deutschland [E-Health in Germany]. Berlin/Heidelberg: Springer, 223–239. https://doi.org/10.1007/978-3-662-49504-9_11

Transgender Europe (TGEU) (2023). Trans Murder Monitoring. URL: https://transrespect.org/en/research/tmm/ (accessed 08.05.2023)

Discussing healthcare for trans patients – community expectations & provider's knowledge (gaps) in dialogue

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In recent years trans, inter, nonbinary and other genderqueer (TIN*) people have not only become more visible in academia, but their realities are also receiving more attention in public discourse. While medicine and healthcare play a major role in the lives of TIN* people, healthcare professionals are only partly familiar with their needs (Appenroth & Castro Varela, 2019); a deficiency Tronto (1998) would describe as both a moral problem and one of professional expertise.

Marginalisation often puts people in a position of vulnerability– especially in cases where a person's marginalisation is tied to their body, medical contexts can become sites where their situatedness and social positioning are negotiated (cf. Appenroth & Castro Varela, 2019). Almost 75 % of 372 TIN* people who participated in an Austrian survey have at least once experienced discrimination in healthcare settings (Gaiswinkler, Pfabigan, Pentz, Teufl, & Winkler, 2023). As a result, 49 % of the participants reported avoiding necessary healthcare encounters and many patients do not disclose their gender identity and endure healthcare providers approaching them with false assumptions. Hence sometimes important treatment information is lost.

The provider / patient relationship has a serious influence on the success of treatment (Edgman-Levitan & Schoenbaum, 2021). Instead of building trust and practicing an uncomplicated approach to gender identity and sexuality, many healthcare providers avoid these topics altogether (Hsieh & Shuster, 2021). This supposedly neutral approach reinforces cis-hetero-normative practices and thus has a negative impact on TIN* patients. Hence in many publications (cf. Gaiswinkler et al., 2023) specific training for healthcare providers on TIN* topics has been demanded.

In June 2023, I was invited as a lecturer at such an online training, on the topic of "dealing sensitively with trans patients in general medical practice in Austria". In form of ethnographic participation, I analyse the data gathered at this event using Constructing Grounded Theory (Charmaz, 2006). According to Hamm (2013), this can best be described as reflexive hybridisation, as I was present as a trans person, potential patient, researcher, psychologist, lecturer, and activist. My analysis focusses on how general practitioners talk about healthcare for trans patients, which challenges they discuss and how they respond to inputs from trans people and experts. Especially their confessions of knowledge gaps, how they perceive the awareness of the topic in their professional environment and who they hold responsible for changes towards TIN*-sensitive healthcare are vital components.

My analysis of healthcare provider's discourse about treating TIN* patients is part of my ongoing dissertation project on "trans*forming healthcare in Austria". Other components of my project are TIN* people's positive experiences in healthcare settings and their expectations concerning TIN*-sensitive healthcare. A combination of "competence and empathy" (Ihrig, 2023a) plus a willingness to treat patients with a "compassionate gaze" (Ihrig, 2023b) seem to be crucial. To include as many TIN* perspectives as possible, I discuss all research steps with so called "community teams" in reflection labs (cf. Unger, Huber, Kühner, Odukoya, & Reiter, 2022). Those teams also reflect on the communication between research, community and healthcare providers. I can therefore contextualize the initial findings of the discourse amongst healthcare providers with TIN* people's expectations towards them.

REFERENCES

Appenroth, M. N., & Castro Varela, M. d. M. (Eds.) (2019). Gender studies (Bielefeld, Germany). Trans & Care. Trans Personen zwischen Selbstsorge, Fürsorge und Versorgung. Bielefeld: Transcript.

Charmaz, K. (2006). Constructing grounded theory. London, Thousand Oaks, Calif.: Sage Publications. Retrieved from http://www.loc.gov/catdir/enhancements/fy0657/2005928035-d.html

Edgman-Levitan, S., & Schoenbaum, S. C. (2021). Patient-centered care: Achieving higher quality by designing care through the patient's eyes. Israel Journal of Health Policy Research, 10(1), 21. https://doi.org/10.1186/s13584-021-00459-9

Gaiswinkler, S., Pfabigan, J., Pentz, R., Teufl, L., & Winkler, R. (2023). LGBTIQ+ Gesundheitsbericht 2022. Wien.

Hamm, M. (2013). Engagierte Wissenschaft zwischen partizipativer Forschung und reflexiver Ethnographie: Methodische Überlegungen zur Forschung in sozialen Bewegungen. In: Eingreifen, Kritisieren, Verändern!? Interventionen Ethnographisch Und Gendertheoretisch, Ed. By Beate Binder, Friedrich Von Bose, Katrin Ebell, Sabine Hess, Anika Keinz. Retrieved from https://www.academia.edu/3354588/Engagierte_Wissenschaft_zwischen_partizipativer_Forschun g_und_reflexiver_Ethnographie_Methodische_%C3%9Cberlegungen_zur_Forschung_in_sozialen_ Bewegungen

Hsieh, N., & Shuster, S. M. (2021). Health and Health Care of Sexual and Gender Minorities. Journal of Health and Social Behavior, 62(3), 318–333. https://doi.org/10.1177/00221465211016436

Ihrig, F. L. (2023a). „Sie ist die liebste Ärztin, die ich kenne … UND sie kennt sich aus!“: Empathie & Kompetenz als essenzielle Aspekte sensibler Gesundheitsversorgung aus der Sicht queerer Personen (accepted for publication). In Inter_Trans_Wissenschaftsnetzwerk (Ed.), Sammelband (n.n.).

Ihrig, F. L. (2023b). Das Potential ‚anerkennender Umsichtigkeit‘ gegen epistemisches Ungleichgewicht in der Mediziner*in-Patient*in-Beziehung: (submitted for publication). Re:Visit Humanities & Medicine in Dialoge, n.n.

Tronto, J. C. (1998). An Ethic of Care. Journal of the American Society on Aging, 22(3), 15–20.

Unger, H. von, Huber, A., Kühner, A., Odukoya, D., & Reiter, H. (2022). Reflection Labs: A Space for Researcher Reflexivity in Participatory Collaborations. International Journal of Qualitative Methods, 21, 160940692211424. https://doi.org/10.1177/16094069221142460

Palliative Care and Organ Donation

Palliative Care Patients and the Use of Nature Related Media

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Palliative care aims to improve the quality of life of vulnerable, terminally ill individuals. This goes beyond physical needs of patients and includes a great variety of wellbeing and quality of life related facets (Brandstätter et al., 2014; Fegg et al., 2010). Besides contact to family and friends, studies show that in this context, nature is an area of particular importance for terminally ill people (Brandstätter et al., 2014; Fegg et al., 2010). Contact with nature can have a stress-reducing effect and increase general well-being. There is a large amount of evidence for a health-promoting, preventive, but also therapeutic effect of nature (Gesler, 1993; Hartig et al., 2003; Kaplan & Kaplan, 1989; Tyrväinen et al., 2014; Ulrich, 1984). However, contact with nature often proves difficult, especially for palliative patients, due to limited accessibility. As palliative patients increasingly lose self-determination, mediated experiences of nature in particular, e.g. by viewing documentation or photos, could enable low-threshold nature encounters and trigger positive effects (Stevenson et al., 2018). Therefore, we focused on the following research questions:

RQ1: To what extent can nature, especially nature-related media content, help palliative patients increase their well-being?

We conducted 12 qualitative interviews with palliative care patients. The patients (4 male, 8 female) were all over 50 years old, not all of them mentioned their age specifically. The interviews lasted between 7 and 24 minutes and were transcribed verbatim. We then used the thematic analysis (Braun, & Clarke, 2006) to analyze the data. The names in the following examples do not correspond to the actual names of the patients.

Some of the interviewees use nature specifically to increase mental well-being, including Max (64 years). Moreover, he refers to the bright colors as well as the sounds and smells: "It's very nice, it's a bit colorful. [....] It's a nice summer uh autumn meadow. I have one in my garden at home. [….] You could still hear it humming and buzzing.". This is in line with Mayer and Maier's (2019) observations on the stimulation of the senses, which are often very sensitive and responsive, especially at the end of life. However, the physical limitations of the patients sometimes make it difficult to go out into nature independently. At this point, nature-related media use could help. The interviewees report that they use nature films, not only as a pure pastime, but also as a source of comfort. Wolf (66 years old) explains that nature documentaries calm him down and distract him: "Such forest and meadow landscapes. That's something wonderful. A few animals, deer in it or something, that's something beautiful. [...] And that's what calms a patient down and he needs less painkillers. [...] Because a happy patient thinks about something else and then automatically has less pain." Another patient, Heidi (age 58), also explains, "I pick that out specifically. Besides, they report so many well-founded things in their documentary. And then the speakers are very pleasant. And that's something I'm very happy to let it lull me to sleep."

Also noteworthy is the function of nature-related media content as a mental bridge to past periods of life, evoking pleasant memories and serving a compensatory function. Interviewee Heidi (age 58) explains, "I can’t go there anymore, I won't see it like that. [...] And from that point of view, I think it's nice that I can still look at it." Rainer (tied to the hospital bed) also confirms this: "It distracts you. And you just remember how it used to be. [...] I have traveled around a lot, as far as that is concerned. Thank God I did that." Only three participants report that they only receive nature films by chance, since they prefer real nature.

The present study shows that nature can increase general well-being, stimulating various senses, and help passing time. But mediated nature experiences can also serve for distraction, pain relief or calming down. Moreover, patients sometimes consciously use media to evoke memories of earlier trips and stays in nature. Palliative care tries to improve the quality of life of patients (Brandstätter et al., 2014; Fegg et al., 2010). Virtual nature experiences could be helpful in this context and enable vulnerable people to independently fulfill some of their needs in a low-threshold way. This also gives patients back some of their self-determination, which is of great value to those with the disease (Mayer & Maier, 2019). Further research should start at this point and especially focus on the role of media in this process.

REFERENCES

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2). 77–101, doi:10.1191/1478088706qp063oa

Brandstätter, M., Kögler, M., Baumann, U., Fensterer, V., Küchenhoff, H., Borasio, G. D., & Fegg, M. J. (2014). Experience of meaning in life in bereaved informal caregivers of palliative care patients. Supportive Care in Cancer, 22(5), 1391–1399. doi:10.1007/s00520-013-2099-6

Fegg, M. J., Brandstätter, M., Kramer, M. R., Kögler, M., Haarmann-Doetkotte, S., & Borasio, G. D. (2010). Meaning in life in palliative care patients. Journal of Pain and Symptom Management, 40(4), 502–509. doi:10.1016/j.jpainsymman.2010.02.010

Gesler, W. M. (1993). Therapeutic Landscapes: Theory and a Case Study of Epidauros, Greece. Environment and Planning D: Society and Space, 11(2), 171–189. doi:10.1068/d110171

Hartig, T., Evans, G. W., Jamner, L. D., Davis, D. S., & Gärling, T. (2003). Tracking restoration in natural and urban field settings. Journal of Environmental Psychology, 23, 109–123. doi:10.1016/S0272-4944(02)00109-3

Kaplan, R., & Kaplan, S. (1989). The experience of nature. A psychologcial perspective. New York: Cambridge University Press.

Mayer, P., & Maier, R. (2019). Die Bedürfnisse Sterbender und ihrer Angehörigen. [The needs of terminally ill patients and their families.] In G. Huber & C. Casagrande, Sterben begleiten. Interdisziplinäre und naturheilundliche Konzepte. [Assist dying. Interdisciplinary and natural healing concepts.] Stuttgart: Thieme Verlagsgruppe.

Stevenson, M. P., Schilhab, T., & Bentsen, P. (2018). Attention restoration theory II: a systematic review to clarify attention processes affected by exposure to natural environments. Journal of Toxicology and Environmental Health, Part B. doi:10.1080/10937404.2018.1505571

Tyrväinen, L., Ojala, A., Korpela, K., Lanki, T., Tsunetsugu, Y., & Kagawa, T. (2014). The influence of urban green environments on stress relief measures: A field experiment. Journal of Environmental Psychology, 38.

Ulrich R.S. (1984). View through a window may influence recovery from surgery. Science, 224, 420–421. doi:10.1126/science.6143402

Online Content on Palliative Care: A Content Analysis of Website Information

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Background

Palliative care plays a crucial role in enhancing the quality of life for patients and their families facing challenges associated with terminal illness. Patients and caregivers involved in palliative care often need substantial amounts of information. While health professionalsserve as a vital source of information, patients and caregivers also actively engage in information seeking to improve their skills and comprehension of palliative care. Over the years, the Internet has emerged as a trusted resource of relevant information on palliative care. While certainly helpful, it is important to recognize that the online information landscape of palliative care is largely unregulated. This raises questions about the quality and nature of palliative care websites, which are publicly available and poised to be broad resources of relevant information. Given the importance of reliable, quality content in providing informational support to patients and caregivers alike, this study comprehensively reviewed the most top searched palliative care websites.

Methods

Our sampling strategy imitated the online information seeking behavior of caregivers involved in palliative care. Based on existing literature and interviews with caregivers and field experts, search terms were generated and a popular online search engine (i.e., Google) was used to retrieve the top 180 palliative care websites. To mitigate the potential influence of search history bias, the research team disabled the web history and removed the personal account access prior to the web search (Cheng et al., 2022). A codebook was developed from related literature, and four themes were adopted for this study: Content provider profile, navigational characteristics, content characteristics, and provided support. Two researchers independently went through the data and coded accordingly to the identified themes.

Results

An analysis of a subset of the sample revealed noteworthy preliminary findings regarding the sources of the online content. Majority of the content providers are from the healthcare sector, followed by policymakers and governments, and civil societies. In terms of content navigation, search tools were found to be available on most of the webpages. Additionally, contact numbers, email addresses, and social media handles for platforms such as YouTube and Facebook were also provided. Notably, LinkedIn was more prominent in Singapore-based webpages, while the presence of Twitter handles was more prevalent among websites based in the UK and USA. Regarding the content characteristics, the use of images depicting caregiving scenarios were a common feature on the webpages, as well as the provision of general information about palliative care, practical guide for caregiving, and personal testimonies. The analysis, likewise, revealed an evident absence of materials designed for health professionals, as well as a lack of interactive and visually engaging formats such as videos and illustrations (i.e., graphs, tables). Materials relating to the provision of psychological and spiritual support for patients and their caregivers were similarly lacking.

Discussion

Study findings present biased perspectives towards healthcare content providers, which highlights the need for a balanced representation that promotes a more comprehensive understanding of palliative care. Accessibility and engagement by prioritizing userfriendly interfaces, such as search tools and extended contact information, can facilitate meaningful interactions and support individuals seeking palliative care information. These can help healthcare organizations, policymakers, and civil societies as they develop, design, and disseminate these online resources to patients and caregivers. Our analysis also revealed notable deficiencies in materials for healthcare professionals, raising concerns about the availability of comprehensive and specialized resources. The lack of interactive and visually appealing formats further highlights the potential to leverage on engaging formats to enhance the learning experience. Moreover, the absence of psychological and spiritual support materials suggests the need for greater attention to these important aspects of holistic care.

Conclusion

Our findings shed light on the nature of online palliative care information, highlighting the key domestic and foreign sources and prominent navigation features. However, there are significant gaps in the availability of certain types of information, including the absence of psychological and spiritual support information. By addressing these, stakeholders can enhance the quality, accessibility, and relevance of online palliative care information, ultimately supporting patients, caregivers, and healthcare professionals, thus ensuring the delivery of optimal care. The limited content coverage of these materials suggests an area for further attention and development within the online palliative care landscape, especially if the content providers are aiming for widespread inclusivity.

REFERENCES

Cheng, H-L., Leung, D. Y. P., Chung, M. W. & Ko, P. S. (2022). The Nature and Types of Community Palliative and end-of-Life Care Services: A Content Analysis of Service Provider Websites in Hong Kong. Journal of Palliative Care, 38(2), 101-110. https://doi.org/10.1177/08258597221125285

Docherty, Owens, A., Asadi-Lari, M., Petchey, R., Williams, J., & Carter, Y. H. (2008). Knowledge and information needs of informal caregivers in palliative care: a qualitative systematic review. Palliative Medicine, 22(2), 153–171. https://doi.org/10.1177/0269216307085343

Freckelton, I. R. (2020). Internet Disruptions in the Doctor-Patient Relationship. Medical Law Review, 28(3), 502-525. https://doi.org/10.1093/medlaw/fwaa008

Huo, J., Hong, Y. R., Grewal, R., Yadav, S., Heller, I. W., Bian, J., & Wilkie, D. J. (2019). Knowledge of palliative care among American adults: 2018 health information national trends survey. Journal of pain and symptom management, 58(1), 39-47.

Liu, M., Cardenas, V., Zhu, Y., & Enguidanos, S. (2019). YouTube videos as a source of palliative care education: a review. Journal of palliative medicine, 22(12), 1568-1573.

Masel, Kitta, A., Huber, P., Rumpold, T., Unseld, M., Schur, S., Porpaczy, E., & Watzke, H. H. (2016). What makes a good palliative care physician? A qualitative study about the patient's expectations and needs when being admitted to a palliative care unit. PloS One, 11(7), e0158830–e0158830. https://doi.org/10.1371/journal.pone.0158830

Matthys, Dierickx, S., Deliens, L., Lapeire, L., Hudson, P., Van Audenhove, C., De Vleminck, A., & Cohen, J. (2022). How are family caregivers of people with a serious illness supported by healthcare professionals in their caregiving tasks? A cross-sectional survey of bereaved family caregivers. Palliative Medicine, 36(3), 529–539. https://doi.org/10.1177/02692163211070228

Patel, M., D'Anna, R., Troy, J., Goswami, R. & Kamal, A. (2022) Insights from Google: Trends in Public Interest in Hospice and Palliative Care, Associations with Hospice Use, and Implications for Hospice Access. Journal of Pain and Symptom Management, 63(6), 1101-1102.

Pereira, J., & Bruera, E. (1998). The Internet as a resource for palliative care and hospice: A review and proposals. Journal of pain and symptom management, 16(1), 59-68.

Sak, G., Diviani, N., Allam, A., & Schulz, P. J. (2015). Comparing the quality of proand antivaccination online information: a content analysis of vaccinationrelated webpages. BMC Public Health, 16(1), 1-12.

Xiao, J., Brenneis, C., & Fassbender, K. (2022). Palliative care stakeholders in Canada. Health Research Policy and Systems, 20(1), 1-9.

Individual and contextual vulnerability: The case of switching from an opt-in to an opt-out organ donation system

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Introduction

Organ Donation is considered as one of the greatest medical advances in the 20th century, but its application is still limited due to a shortage of available organs. Therefore, strategies to increase donation rates are subject to academic but also political debates (Scholz, 2020). In the domain of deceased donation two opposing systems can be distinguished: the opt-in and the opt-out system. The opt-in system requires people to consent prior to their death to become organ donors. In an opt-out system, everybody is assumed to be a potential donor unless an explicit objection is made. Based on a public vote in 2022, Switzerland has decided to switch from an opt-in to an opt-out system in the coming years. While this change is welcomed by organ donation associations (Swisstransplant, 2022) it requires substantial communicative efforts to inform all citizens about this change. Furthermore, this includes the challenge not to increase the knowledge gap between the well informed and empowered groups vs. the disadvantaged and vulnerable groups (Tichenor et al., 1970). Hereby, vulnerability can be defined as being a) not informed that the system changes, b) having not sufficient knowledge about the new system, having not shared the will c) orally or d) documented it in written manner (i.e., organ donor card, patient decree, or electronic patient record). The aim of this project is first to identify the individual and contextual vulnerability when switching from an opt-in to an opt-out organ donation system (RQ1). Second, it aims to identify strategies to avoid increasing knowledge gaps (RQ2).

Hypotheses regarding RQ1

Education: Based on the literature, education level can be assumed to be a relevant predictor for being informed about health topics and political decisions (Bonfadelli & Friemel, 2012). Therefore, it is assumed, that people with lower education are more vulnerable by being less informed on the system change (H1a), having less knowledge about the opt-out system (H1b), are less likely having shared their will with their relatives (H1c), or documented it in a written manner (H1d).

Citizenship: People with foreign nationality are often found to be less familiar with national regulations. Among others, this can be explained by societal stratification and their limited embeddedness in domestic networks. Therefore, it is assumed that people without Swiss citizenship are more vulnerable with respect to information (H2a), knowledge (H2b), and oral (H2c) or written documentation (H2d).

Documenting the will: In an opt-out system a person that is not willing to donate its organ is vulnerable to a false decision by medical staff and relatives if the will is not documented. Even though oral and written documentation allow to share positive and negative decision, the former opt-in system did not require to share a negative decision. Therefore, it is assumed that people who do not want to donate their organs are more vulnerable with respect to lacking information (H3a), knowledge (H3b), and oral (H3c) or written documentation (H3d).

Methods

The project applied a mixed method design to provide quantitative data for the general population and qualitative insights for selected societal groups that are likely to be underrepresented in such surveys (i.e., SES disadvantaged and people not speaking a local language). For the standardized survey a sample of 6'914 persons (age 15-74) was drawn by the federal office of statistics from the Swiss household registry. People were invited by postal mail to fill in an online questionnaire that was provided in German, French, Italian, and English. After two reminders and after exclusions based on quality checks at total of 3'270 cases were included in the analyses (48% response rate of valid addresses). Personal interviews and focus group discussions with 28 people were conducted by trained interviewers in German, Portuguese, Turkish, Albanian, and Tamil.

Results

Frequencies of the four dependent variables show substantial difference for all subgroups (Table 1). People with lower education, no Swiss citizenship, and no intention to donate are less likely to know about the system change (H1-3a), know less what this means (H1-3b), and have fewer shared their will orally (H1-3c) or documented it in a written manner (H1-3d). These bivariate findings are confirmed by multivariate (logistic) regressions (including controls for additional variables) and support the hypotheses with respect to individual and contextual vulnerability (Table 2-5).

With respect to campaign strategies (RQ2), the findings suggest promoting different forms of written documentation (i.e., not solely focusing on a planned donation registry), use simple language, provide information in foreign languages, and complement traditional communication channels by information events, doctor-patient counseling, and second-generation citizens to reach people not speaking a local language.

REFERENCES

Bonfadelli, H. & Friemel, T.N. (2012) The Role of Knowledge in Political Campaigns. In: Kriesi, H. (Ed.): Political Communication in Direct Democratic Campaigns. Palgrave Macmillan, p. 168-187.

Scholz, N. (2020) Organ donation and transplantation. Facts, figures and European Union action. In: EPRS. https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/649363/EPRS_BRI(2020)649363_EN.pdf

Swisstransplant (2022) Transplantationsgesetz angenommen. Swisstransplant begrüsst Systemwechsel. https://www.swisstransplant.org/de/infocenter/media-corner/medienmitteilungen/detailansicht/transplantationsgesetz-angenommen

Tichenor, P., Donohue, G.; Olien, C. (1970) Mass Media Flow and Differential Growth in Knowledge. In: Public Opinion Quarterly, 34(2), 159-170. https://doi.org/10.1086/267786

Identifying Situational HISB Patterns for Uncertainty Management in Cochlear Implant Patient Journeys

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Background

For patients with profound hearing loss, cochlear implants (CI) can restore the functionality of the ear (Schvartz-Leyzac et al., 2023), but their journey from initial indication to successful functioning (e.g., Ellis et al., 2021) is also associated with the perception of diverse uncertainties and vulnerability. These perceptions are a result of being in complex and unpredictable situations as well as feeling insecure in one's state of knowledge (Brashers, 2001). Medical (e.g., symptoms, treatment options), social (e.g., relationships), and personal (e.g., abilities) uncertainties (Brashers et al., 2003; Kuang, 2018) can appear simultaneously, overlap each other (Brashers, 2001), and occur at different points of a patient journey (Stone & Olsen, 2022).

Which strategies such as health information-seeking behaviors (HISB) are applied to manage uncertainties, depends on the appraisal of the uncertainty perception (Brashers, 2001; Kuang & Wilson, 2017). If uncertainty is appraised as negative, information seeking can help to resolve ambiguity and support decision-making (e.g., Brashers & Hogan, 2013). When uncertainty is perceived as positive, avoiding information can serve to maintain uncertainty (Barbour et al., 2012). Besides choosing a strategy, source selection is crucial for uncertainty management (UM) efforts (Johnson & Meischke, 1993). Criteria for source selection include availability, expected outcome, and trustworthiness (Link et al., 2022). UM is considered successful when the desired level of uncertainty has been achieved. This can be accomplished by turning to or avoiding single sources, or after the patient has turned to several sources. The interplay of sources for UM purposes is captured in the concept of multichannel HISB (Link et al., 2022).

As the multidimensional and temporal nature of uncertainty and its consequences for UM strategies are seldom covered in health communication research (Kuang, 2018; Nanton et al., 2009), we aim to extend the understanding of multichannel HISB distinguishing various phases of the patient journey (Webb et al., 2022). In doing so, we pursue a holistic and situational perspective on CI patients' HISBs. Consequently, we ask the following exploratory research questions:

RQ1: What uncertainties do CI patients experience at which points of their patient journey?
RQ2: How do CI patients manage these situational uncertainties using HISB?

Method

A total of 13 qualitative interviews with patients who received a CI within six years prior to the study were conducted in 2022 by members of the research team (see Table 1 for sample description and Table 2 for interview guide dimensions). The heterogeneous sample was recruited with purposive and theoretical sampling methods through various ways such as cooperation with patient associations. The study was approved by the University Institutional Review Board of the first authors. For analysis, we transcribed the audio-recorded interviews verbatim and analyzed each interview using qualitative content analysis (Mayring, 2010) with a combination of inductive and deductive coding in ATLAS.ti software (version 9) (see Table 3 for a coding scheme overview).

Results

Identifying Uncertainties in the Phases of the CI Patient Journey (RQ1)

The Patient Journey of CI patients could be divided into seven phases, from the first symptoms to living with the CI after treatment, characterized by different constellations and intensities of physical, psychological, personal/social, or treatment-related uncertainties (see Table 4). For example, physical uncertainties were prevalent throughout the patient journey, psychological uncertainties occurred in the beginning, and social and personal uncertainties appeared in the beginning and at the end of the patient journey.

Uncertainty-associated HISB-patterns (RQ2)

Patients reported frequent information seeking to manage their uncertainties: Across various types, they described interpersonal sources such as health professionals, other affected patients, and their family and friends as most relevant. Media sources were mentioned only for distinct uncertainties such as choosing a CI manufacturer. Which sources were preferred varied with the type of uncertainty. For example, in the early phase of symptoms, patients focused on sources with medical expertise regarding the physical uncertainty referring to their hearing loss. For social and personal uncertainties, such as social interactions, relatives seemed to be more important for UM (see Table 4 for detailed results). Whether various sources were combined was also associated with the type of sources as some sources appeared to be more appropriate than others for achieving UM goals. Medical experts have often been rated ambivalently, while other patients and family and friends were considered helpful.

Discussion

Our study reveals situational uncertainties experienced by CI patients and their corresponding HISB patterns, which will be further discussed in the presentation. These findings inform health communication efforts to strengthen patients' UM skills, train health professionals to offer patient-centered care, and develop programs to support CI patients.

REFERENCES

Barbour, J. B., Rintamaki, L. S., Ramsey, J. A., & Brashers, D. E. (2012). Avoiding Health Information. Journal of Health Communication, 17(2), 212–229. https://doi.org/10.1080/10810730.2011.585691

Brashers, D. E. (2001). Communication and Uncertainty Management. Journal of Communication(September), 477–497. https://doi.org/10.1111/j.1460- 2466.2001.tb02892.x

Brashers, D. E., & Hogan, T. P. (2013). The appraisal and management of uncertainty: Implications for information-retrieval systems. Information Processing & Management, 49(6), 1241–1249. https://doi.org/10.1016/j.ipm.2013.06.002

Brashers, D. E., Neidig, J. L., Russell, J. A., Cardillo, L. W., Haas, S. M., Dobbs, L. K., Garland, M., McCartney, B., & Nemeth, S. (2003). The medical, personal, and social causes of uncertainty in HIV illness. Issues in Mental Health Nursing, 24(5), 497–522. https://doi.org/10.1080/01612840305292

Ellis, S., Sheik Ali, S., & Ahmed, W. (2021). A review of the impact of hearing interventions on social isolation and loneliness in older people with hearing loss. European Archives of Oto-Rhino-Laryngology, 278(12), 4653–4661. https://doi.org/10.1007/s00405-021-06847-w

Johnson, J. D., & Meischke, H. (1993). A Comprehensive Model of Cancer-Related Information Seeking Applied to Magazines. Human Communication Research, 19(3), 343–367. https://doi.org/10.1111/j.1468-2958.1993.tb00305.x

Kuang, K. (2018). Reconceptualizing uncertainty in illness: commonalities, variations, and the multidimensional nature of uncertainty. Annals of the International Communication Association, 42(3), 181–206. https://doi.org/10.1080/23808985.2018.1492354

Kuang, K., & Wilson, S. R. (2017). A Meta-Analysis of Uncertainty and Information Management in Illness Contexts. Journal of Communication, 67(3), 378–401. https://doi.org/10.1111/jcom.12299

Link, E., Baumann, E., & Klimmt, C. (2022). Understanding the importance of trust in patients' coping with uncertainty via health information-seeking behaviors. Communications, 0(0). https://doi.org/10.1515/commun-2021-0117

Mayring, P. (2010). Qualitative Inhaltsanalyse: Grundlagen und Techniken (11., aktual. und überarb. Aufl.). Pädagogik. Beltz. https://doi.org/25533

Nanton, V., Docherty, A., Meystre, C., & Dale, J. (2009). Finding a pathway: Information and uncertainty along the prostate cancer patient journey. British Journal of Health Psychology, 14(Pt 3), 437–458. https://doi.org/10.1348/135910708X342890

Schvartz-Leyzac, K. C., Colesa, D. J., Swiderski, D. L., Raphael, Y., & Pfingst, B. E. (2023). Cochlear Health and Cochlear-implant Function. Journal of the Association for Research in Otolaryngology, 24(1), 5–29. https://doi.org/10.1007/s10162-022-00882-y

Stone, L., & Olsen, A. (2022). Illness uncertainty and risk management for people with cancer. Australian Journal of General Practice, 51(5), 321–326. https://doi.org/10.31128/AJGP-05-21-5992

Webb, S. M., Kristensen, J., Nordenström, A., Vitali, D., Amodru, V., Wiehe, L. K., & Bolz-Johnson, M. (2022). Patient journey experiences may contribute to improve healthcare for patients with rare endocrine diseases. Endocrine Connections, 11(12). https://doi.org/10.1530/EC-22-0385

APPENDIX

Table 1. Sample characteristics

	≤ 50 years of age*	> 50 years of age*
Female	*n* = 4	*n* = 4
Male	*n* = 2	*n* = 3

Notes: Interviews lasted between 30–180 minutes. Participants were compensated €25 for their participation. *CI patients were aged between 27 and 75 years (*M*=53.15).

Table 2. Lists of main domains and examples covered in the interviews

Experiences and uncertainty at different stages of the disease, e.g.:

- ‘How would you describe the situation when you first noticed symptoms/were diagnosed/decided to be implanted/underwent surgery/were discharged from hospital?’
- What happened next? How would you describe the stage/situation when you ...?
- ‘What were the most important questions and issues you were concerned about? Which challenges occurred?’
- ‘How did you feel with regard to your questions, issues, or challenges? Why?’

Information behavior – processes and dynamics, e.g.:

- ‘Regarding your question/issue/challenge: To what extent have you acquired information or discussed the topic with someone else?’
- ‘Where or by whom did you get information when you wanted to know more? Why?’
- ‘How was the information helpful to you? Why/Why not?’

Table 3. Overview of the deductive coding scheme

Dimension Patient Journey	**Dimension HISB**
Phase in patient journey	Information source(s)
Question/issue/challenge	Evaluation of information source(s): helpful/not helpful
Emotional appraisal of situation	Trust in information source(s)
Coping: good/bad	

Table 4. Patient Journey of CI patients according to uncertainty perception and uncertainty management behavior

		Patient Journey						
grouped uncertainties	**uncertainties**	**first symptoms**	**diagnosis**	**therapy decision**	**before implantation**	**after implantation**	**status quo**	**Overall**
physical uncertainties	hearing experience	ME: ++/-- EE: + SE: + Other: -		ME: + EE: ++ SE: 0 Other: -	ME: 0 EE: 0 SE: 0 Other: 0	ME: ++ EE: 0 SE: 0 Other: +	ME: 0 EE: + SE: 0 Other: 0	Physical uncertainties are prevalent throughout the patient journey, with varying intensity of sources used to manage them. Important sources are those with medical expertise, experiential expertise, and people from the patients' social environment.
	additional physical conditions (e.g., tinnitus, dizziness)	ME: ++/-- EE: 0 SE: 0 Other: 0						
psychological uncertainties	depression	ME: +/- EE: + SE: + Other: 0						Psychological uncertainties occur in the beginning of the patient journey and to a lesser extent before/after implantation. Sources with experiential expertise and people from the patient's social environment play an important role; medical expertise seems to be of less importance (except for psychological uncertainties concerning therapy decision).
	general stress	ME: - EE: 0 SE: + Other: 0			ME: 0 EE: 0 SE: + Other: 0	ME: 0 EE: + SE: + Other: 0		
	coping		ME: +/- EE: + SE: 0 Other: 0	ME: ++ EE: ++ SE: 0 Other: +				
Social and personal uncertainties	worklife	ME: + EE: 0 SE: ++ Other: 0		ME: + EE: 0 SE: 0 Other: +/-			ME: - EE: 0 SE: - Other: -	Social and personal uncertainties appear at the beginning and in the end of the patient journey and when patients decide to be implanted. In the beginning, people from the patients' social environment seem to be an important option for managing these uncertainties. In the phase of therapy decision only very few sources are mentioned. The source use at the end of the patient journey appears to be more heterogenous and also includes sources with medical and experiential expertise.
	hobbies	ME: 0 EE: 0 SE: + Other: 0		ME: 0 EE: 0 SE: 0 Other: 0			ME: -- EE: - SE: + Other: +	
	social interaction	ME: 0 EE: 0 SE: ++ Other: 0		ME: 0 EE: 0 SE: 0 Other: 0			ME: + EE: + SE: 0 Other: +	
	own outer appearance with CI		ME: 0 EE: 0 SE: 0 Other: 0					
treatment-related uncertainties	information and communication about treatment	ME: -- EE: + SE: 0 Other: -	ME: ++/-- EE: 0 SE: 0 Other: 0	ME: ++/-- EE: + SE: 0 Other: +/-	ME: +/- EE: + SE: 0 Other: 0			Treatment related uncertainties are mentioned the most, but the causing aspects vary over the course of the patient journey.

		Patient Journey						
grouped uncertainties	**uncertainties**	**first symptoms**	**diagnosis**	**therapy decision**	**before implantation**	**after implantation**	**status quo**	**Overall**
	technical and bureaucratic procedures (e.g. concerning diagnosis, rehab)	ME: ++/-- EE: 0 SE: 0 Other: -	ME: ++/-- EE: + SE: 0 Other: -	ME: 0 EE: 0 SE: + Other: +/- (only mentioned by 1 person)	ME: +/- EE: 0 SE: + Other: 0	ME: ++ EE: - SE: + Other: -		Sources with medical expertise play an important role, sometimes supplemented by sources with experiential expertise and people from the patient's social environment. All in all, the heterogeneity of source use seems to increase over time.
	choice of treating physician/clinic				ME: ++ EE: + SE: 0 Other: +			
	choice of type of CI				ME: +/- EE: + SE: + Other: ++			
	training with CI/aftercare					ME: ++ EE: + SE: + Other: +	ME: - EE: 0 SE: + Other: -	
	healing process/complications			ME: ++/-- EE: ++ SE: 0 Other: -		ME: +/- EE: - SE: 0 Other: 0	ME: ++ EE: + SE: 0 Other: 0	
	functionality of CI			ME: +/- EE: + SE: 0 Other: +/-		ME: +/- EE: 0 SE: 0 Other: 0 (mentioned by 1 person)	ME: +/- EE: ++ SE: + Other: +/-	
Overall		The main uncertainties are physical, social and psychological. Relevant sources of information are persons with medical expertise and from the patient's social environment.	Treatment-related uncertainties dominate this phase. Medical experts are the most important source of information.	Treatment-related uncertainties again are especially important. Patients seek information especially from medical experts and other affected persons with CI.	Treatment related uncertainties dominate, but there are also few physical and psychological uncertainties mentioned. Interpersonal sources with medical or experiential expertise or the patient's social environment are especially important.	Treatment related uncertainties dominate this phase of the patient journey. Especially interpersonal sources with medical or experiential expertise or the patient's social environment are important.	Social uncertainties are mentioned again and also few treatment related uncertainties. The source use appears to be very heterogeneous and diverse. Sources with medical expertise are often rated less helpful than sources with experiential expertise or Social environment.	

Notes: ME = Sources with medical expertise (e.g., physicians, medical personnel); EE = Sources with experiential expertise (e.g., other patients); SE = Social environment (e.g., family, friends, work partners); Other (e.g., manufacturer, insurance, media sources)
0 = source not used; + = source used & rated helpful; ++ = source often used & rated very helpful; - = source used & rated not helpful; -- = source often used & rated not helpful at all; +/- = source used & rated ambivalently; ++/-- = source often used & rated ambivalently

Don’t forget those who made it through! Cancer information seeking needs and behaviors among long-term cancer survivors

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Being diagnosed with cancer implies manifold decisions to be made, and undergoing treatment is not just a physical challenge, but also poses tremendous emotional and psychological challenges (O'Hair et al., 2008). Late effects of the tumor(s) and treatment(s) are often associated with increased morbidity, reduced quality of life, and mental health burdens (Byrne et al., 2022). Even though the development of new treatment options has significantly improved cure rates for cancer (Siegel et al., 2021), long-term cancer survivors (LTCS) face manifold constraints and thus can be considered a particularly vulnerable group. As of 2017, the number of cancer survivors in Germany was 4.65 million, with about two-thirds of them being LTCS (Arndt et al., 2021).

On their Cancer Journeys from diagnosis to survivorship or palliative care (Mistry et al., 2010) patients and their families face many critical, complex, and unpredictable situations (Ferrell et al., 1998; Mishel, 1990; O'Hair et al., 2008; O'Hair et al., 2003; Thompson & O'Hair, 2008). Over the course of this Cancer Care Continuum (Squiers et al., 2005), feelings of uncertainty about what is happening, which decisions need to be made and who can accompany in this process arise again and again. In their individual situational contexts and conditions of life—shaped by stress and fears, but also by hope and optimism—, patients often perceive their level of knowledge as inconsistent and unsuitable for adequately handling these challenges and coping with these situations (Brashers, 2001; Mishel, 1990). According to Uncertainty Management Theory (Brashers et al., 2000), individuals engage in information seeking and avoiding behaviors as means to maintain, increase or decrease uncertainty.

Thus, parallel to the Cancer Journey runs a Cancer Information Seeking Journey with changing informational and supportive needs and behaviors (Grimm & Baumann, 2019; Mistry et al., 2010; Squiers et al., 2005). Information acquisition from various sources, such as doctors, the Internet, other media, support groups, and cancer information services, can help to cope with uncertainties, positively influence emotional, cognitive, and behavioral disease management (Grimm & Baumann, 2019; Hesse, 2009). But the longer the diagnosis and treatment is in the past, the more diverse the survivors’ information interests and needs are suggested to be. While some may wish to be wellinformed about all aspects of their disease (Mistry et al., 2010), others may distance themselves from this episode in life—also in communication and informational respects (Link & Baumann, 2022). Thus, to provide cancer survivors with information and support tailored to their individual needs and behaviors, these first have to be identified and characterized comprehensively.

Cancer information seeking behavior has already been studied quite extensively—also guided by established models of health information seeking such as the PRISM (e.g., Hovick et al., 2014) or CMIS (e.g., van Stee & Yang, 2018)—, but scientific knowledge appears to focus on information needs of cancer survivors in general or during diagnosis and treatment (Fletcher et al., 2017). To the best of our knowledge, the existing evidence of research about cancer-stage-specific informational needs and behaviors of cancer patients has not been systemized with a focus on LTCS.

Against this background, this study aims to map current knowledge about LTCS' information needs and behaviors in survivorship. On this basis, implications for targetgroup oriented interventions and priorities for future research can be derived. A systematic scoping review on LTCS' information needs and behaviors according to the PRISMA-ScR (Tricco et al., 2018) was conducted. Five common research databases were searched using a comprehensive keyword search string. Inclusion and exclusion criteria for study selection were defined using the Population-Concept-Context framework (Peters et al., 2020). Reviews, theoretical articles, and intervention studies were excluded resulting in n = 36 articles (qualitative and quantitative studies). Mixedmethods analysis consisted of standardized data extraction of descriptive characteristics via quantitative content analysis and a qualitative summary of findings. Categories were derived from literature (e.g., Fletcher et al., 2017) and from screening the articles. Besides general study information and methodology, characteristics of study participants (type(s) of cancer, age, gender, ethnicity), context factors (e.g., region), and information needs and seeking behaviors (e.g., topic, sources of information) were coded. As per PRISMA-ScR, a formal quality assessment of the included studies was not conducted (Tricco et al., 2018).

The study is a work in progress and will be finalized in August. The current state of research on information needs and behaviors among LTCS' will systematically be described. On this basis, targeting strategies to adequately address this neglected group with informational support discussed, and priorities for future research will be suggested.

REFERENCES

Arndt, V., Dahm, S., & Kraywinkel, K. (2021). Krebsprävalenz in Deutschland 2017. Der Onkologe, 27(8), 717–723. https://doi.org/10.1007/s00761-021-00988-7

Brashers, D. E. (2001). Communication and Uncertainty Management. Journal of Communication, 51(3), 477–497. https://doi.org/10.1111/j.1460- 2466.2001.tb02892.x

Brashers, D. E., Neidig, J. L., Haas, S. M., Dobbs, L. K., Cardillo, L. W., & Russell, J. A. (2000). Communication in the management of uncertainty: The case of persons living with HIV or AIDS. Communication Monographs, 67(1), 63–84. https://doi.org/10.1080/03637750009376495

Byrne, J., Schmidtmann, I., Rashid, H., Hagberg, O., Bagnasco, F., Bardi, E., Vathaire, F. de, Essiaf, S., Winther, J. F., Frey, E., Gudmundsdottir, T., Haupt, R., Hawkins, M. M., Jakab, Z., Jankovic, M., Kaatsch, P., Kremer, L. C. M., Kuehni, C. E., Harila-Saari, A., . . . Grabow, D. (2022). Impact of era of diagnosis on cause-specific late mortality among 77 423 fiveyear European survivors of childhood and adolescent cancer: The PanCareSurFup consortium. International Journal of Cancer, 150(3), 406–419. https://doi.org/10.1002/ijc.33817

Ferrell, B. R., Grant, M., Funk, B., Otis-Green, S., & Garcia, N. (1998). Quality of life in breast cancer. Part II: Psychological and spiritual well-being. Cancer Nursing, 21(1), 1–9. https://doi.org/10.1097/00002820-199802000-00001

Fletcher, C., Flight, I., Chapman, J., Fennell, K., & Wilson, C. (2017). The information needs of adult cancer survivors across the cancer continuum: A scoping review. Patient Education and Counseling, 100(3), 383–410. https://doi.org/10.1016/j.pec.2016.10.008

Grimm, M., & Baumann, E. (2019). Mediale Kommunikation im Kontext von Krebserkrankungen. In C. Rossmann & M. R. Hastall (Eds.), Handbuch der Gesundheitskommunikation (pp. 555–566). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-10727-7_44

Hesse, B. W. (2009). Cancer communication: Status and future directions. Journal of Health Communication, 14 Suppl 1, 109–127. https://doi.org/10.1080/10810730902806851

Hovick, S. R., Kahlor, L., & Liang, M.-C. (2014). Personal cancer knowledge and information seeking through PRISM: The planned risk information seeking model. Journal of Health Communication, 19(4), 511–527. https://doi.org/10.1080/10810730.2013.821556

Link, E., & Baumann, E. (2022). Explaining cancer information avoidance comparing people with and without cancer experience in the family. Psycho-Oncology, 31(3), 442–449. https://doi.org/10.1002/pon.5826

Mishel, M. H. (1990). Reconceptualization of the uncertainty in illness theory. Image-- the Journal of Nursing Scholarship, 22(4), 256–262. https://doi.org/10.1111/j.1547-5069.1990.tb00225.x

Mistry, A., Wilson, S., Priestman, T., Damery, S., & Haque, M. (2010). How do the information needs of cancer patients differ at different stages of the cancer journey? A cross-sectional survey. JRSM Short Reports, 1(4), 30. https://doi.org/10.1258/shorts.2010.010032

O'Hair, H. D., Kreps, G. L., & Sparks, L. (2008). Conceptualizing Cancer Care and Communication. In H. D. O'Hair, G. L. Kreps, & L. Sparks (Eds.), The Hampton Press communication series. The Handbook of Communication and Cancer Care (pp. 1–10). Hampton Press.

O'Hair, H. D., Villagran, M. M., Wittenberg, E., Brown, K., Ferguson, M., Hall, H. T., & Doty, T. (2003). Cancer survivorship and agency model: Implications for patient choice, decision making, and influence. Health Communication, 15(2), 193–202. https://doi.org/10.1207/S15327027HC1502_7

Peters, M., Godfrey, C., McInerney, P., Munn, Z., Tricco, A. C [A. C.], & Khalil, H. (2020). Chapter 11: Scoping reviews. In Aromataris E & Munn Z. (Eds.), JBI Manual for Evidence Synthesis. JBI. https://doi.org/10.46658/JBIMES-20-12

Siegel, R. L., Miller, K. D., Fuchs, H. E., & Jemal, A. (2021). Cancer Statistics, 2021. CA: A Cancer Journal for Clinicians, 71(1), 7–33. https://doi.org/10.3322/caac.21654

Squiers, L., Finney Rutten, L. J., Treiman, K., Bright, M. A., & Hesse, B. (2005). Cancer patients' information needs across the cancer care continuum: Evidence from the cancer information service. Journal of Health Communication, 10 Suppl 1, 15–34. https://doi.org/10.1080/10810730500263620

Thompson, S., & O'Hair, H. D. (2008). Advice-giving and the management of uncertainty for cancer survivors. Health Communication, 23(4), 340–348. https://doi.org/10.1080/10410230802229712

Tricco, A. C [Andrea C.], Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., . . . Straus, S. E. (2018). Prisma Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Annals of Internal Medicine, 169(7), 467–473. https://doi.org/10.7326/M18-0850

van Stee, S. K., & Yang, Q. (2018). Online Cancer Information Seeking: Applying and Extending the Comprehensive Model of Information Seeking. Health Communication, 33(12), 1583–1592. https://doi.org/10.1080/10410236.2017.1384350

Navigating on Facebook when your child has a rare disease; coping with hope and uncertainty

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Aim: Traditionally, pediatric healthcare professionals have been the gatekeepers of specialized knowledge about conditions in children. However, information about rare diseases in children is often limited and difficult to find. As a result, informal caregivers of children diagnosed with a rare disease face various obstacles in obtaining relevant information for coping and disease management, such as a shortage of specialized and coordinated care and limited treatment options. Additionally, communication with inexperienced clinicians who lack experience may lead to insufficient perceived support, misunderstandings, and unfulfilled information and emotional needs (Boettcher et al., 2021). Consequently, informal caregivers turn to other sources to fulfill their informational and social support needs, such as social media (Titgemeyer et al., 2020). Social media has the potential to fulfill instrumental and emotional needs, and it would be interesting to explore how social media is used in a situation where most other avenues of information transfer are unavailable, what emotions are evoked through its use, and how the information is utilized by caregivers. This study aims to: 1) explore which needs informal caregivers have fulfilled on social media, 2) examine their experiences when interacting with other informal caregivers in fulfilling these needs, and 3) investigate how caregivers utilize the information obtained from these interactions in their communication with healthcare professionals. Gaining insight into these interactions and experiences can provide valuable guidance for more effective and tailored health communication in uncertain situations.

Method: Semi-structured interviews were conducted with informal caregivers of children with FOXP1 syndrome, a genetic deviation characterized by intellectual disability, developmental delay, delayed speech and language, and high rates of neurobehavioral symptoms, including features of autism, attention deficit hyperactivity disorder, and anxiety disorders (Trelles et al., 2021). The FOXP1 community has an active Facebook group with over 1000 members, consisting of caregivers of approximately 230 individuals diagnosed with FOXP1. Caregivers (N=20) from different countries were interviewed online using Microsoft Teams. The interviews explored caregivers' experiences upon receiving the diagnosis, how

they utilize the Facebook community to fulfill their informational and emotional needs, which emotions are evoked within the Facebook community, and how they employ the acquired information in their communication with pediatric healthcare professionals. Maximum variation was sought regarding the age of the individual diagnosed with FOXP1, the date of diagnosis, and the education level of the caregivers. Thematic analysis was employed to qualitatively analyze the anonymized transcripts using ATLAST.TI. In total, 10% of the transcripts were independently double-coded to facilitate researcher triangulation.

Results: All participants highly valued the Facebook community, particularly at the time of diagnosis, as it provided essential support to cope with the diagnosis, uncertainty, and lack of information. Uncertainty arising from interactions on Facebook was particularly prevalent when comparing children and encountering others who were facing the same challenges in their lives. Preliminary findings also suggest that the use and significance of Facebook evolve over time. Initially, caregivers primarily use Facebook to gain knowledge about FOXP1 and connect with fellow caregivers. During this phase, the information and experiences shared by other caregivers offer hope, especially after receiving the diagnosis from their doctors. As time passes, caregivers become more selective about the content they engage with on Facebook. With the passage of years, caregivers feel compelled to give back to the community by sharing their experiences, aiming to provide hope to others. Caregivers reported receiving mixed responses (i.e., open and taking it seriously vs ignoring and dismissing) from healthcare professionals when attempting to discuss and share their internet and social media interactions and the information they have acquired.

Conclusion: This study contributes to the growing body of research on internet use by parents of children with rare conditions to seek information about their child's condition. The social media community provides parents with vital information necessary to cope with and manage their child's condition. However, the Facebook community also triggers emotional responses, such as uncertainty and hope. In their communication, pediatric healthcare professionals should acknowledge the information that is being shared in these communities while also being open to the emotions involved in using this community.

Google or Call Mom? A Multi-Method Study on First-Generation Immigrants' Health Information Repertoires and Acculturation Strategies

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One in ten citizens in Germany is a first-generation immigrant, i.e., themself immigrated (BpB, 2022). In many cases, immigrants have limited access to health information, e.g., due to language or cultural barriers (Agudelo-Suárez et al., 2012). These barriers often result in immigrants being unaware of the health services available to them (Zanchetta, & Poureslami, 2006), which often leads to a decline in health status (Ro, 2014).

In order to learn how to effectively reach this vulnerable group, this study examines the health information repertoires of first-generation immigrants in Germany and their interaction with acculturation.

Previous studies have found that immigrants use different search modes (e.g., mobile phones, face-to-face), mediating functions (e.g., search engines, messengers), and sources (e.g., online sources, print media, doctors) to seek health information (see Ahn, & Chae, 2018; Chae et al., 2021; Christancho et al., 2014; Islam et al., 2016). However, little is known about immigrants' health information seeking in Germany. Therefore, we first ask:

RQ1: What search modes, mediating functions and sources do first-generation immigrants in Germany use to search for health information?

Individuals use multiple information sources, which they compose into coherent patterns, called repertoires (Bachl, & Mangold, 2017). Hasebrink and Popp (2006) understand media repertoires as comprehensive patterns of media use resulting from individual combinations of media contacts. Since interpersonal sources such as doctors are also relevant for health information, we refer to information repertoires. Previous research has examined the use of different search modes, mediating functions, and sources individually, rather than their combination in repertoires. We therefore ask:

RQ2: What health information repertoire types can be identified among firstgeneration immigrants in Germany?

Repertoires consist of communicative practices that individuals engage in to strengthen their public connection (Hasebrink, & Popp, 2006). Scholars suggest that the diversity of immigrants' repertoires is related to the diversity of their social and cultural connections, i.e., connections to the host and/or home country (Hasebrink, & Hepp, 2017). Therefore, we ask:

RQ3: What are the characteristics of the health information repertoire types in terms of the (country of) origin of their information sources?

Changes in social and cultural contexts resulting from migration are captured by the concept of acculturation. Acculturation strategies are based on ties to the home and/or host country (Berry, 1980; see Figure 1).

Because access to health information is highly dependent on social connections (Hepp, & Hasebrink, 2014), acculturation is likely to shape the size, composition, and diversity of immigrants' repertoires. Most likely, the proportions of home and host country sources should closely follow acculturation strategies. Therefore, we conclude by asking:

RQ4: To what extent is there an interaction between immigrants' acculturation strategies and (the origin of) the information sources in their repertoires?

Methods

We conducted a multi-method study including diary studies, semi-structured interviews, and sorting techniques with 15 international students in Germany (eight female, seven male).

The two-week online diary study (July-August, 2022) assessed the search modes, mediating functions, and sources the participants had used to seek health information. We also asked about the origin of the information, proxy searches, and the topic, among other things.

Interviews including sorting techniques (March-May, 2023) involved questions about social and cultural connections to the home country and Germany, (the relevance of and trust in) their information sources, and barriers to health information, among other questions.

Results

The diary study shows that smartphones, search engines, and online sources were frequently used to seek health information (RQ1; see Tables 1, 2, and 3). Confidants were consulted more often than experts.

A qualitative typology (Kluge, 2000) identified three types of information seekers: Online seekers, Confidant consulters, and Expert consulters[1] (RQ2). The types show different characteristics with regard to the origin of their sources (RQ3). Online seekers use sources of unknown origin or from other countries, while Confidant consulters and Expert consulters use sources both from Germany and/or their home country.

The interview data and the sorting techniques support these findings. Consistent with our assumptions, tendencies of interactions between participants' acculturation strategies and (the origin of) their sources become apparent (RQ4). Assimilating participants tend to use German sources more often, while separating participants tend to use sources from their home country more often. Integrating participants tend to use sources from Germany, their home country, and other countries equally.

Further results and limitations will be presented at the European Conference on Health Communication.

[1] Latent class analysis supports these findings (see Tables 4 and 5) and was used to verify the grouping of the cases.

REFERENCES

Agudelo-Suarez, A. A., Gil-Gonzalez, D., Vives-Cases, C., Love, J. G., Wimpenny, P., & Ronda-Perez, E. (2012). A Metasynthesis of Qualitative Studies Regarding Opinions and Perceptions about Barriers and Determinants of Health Services' Accessibility in Economic Migrants. BMC Health Services Research, 12(461). https://doi.org/10.1186/1472-6963-12- 461

Ahn, J., & Chae, D. (2018). The Influences of Socio-Individual Determinants and Health Information Seeking on Health-Promoting Behaviors among Migrant Women: A CrossSectional Study. Japan Journal of Nursing Science, 16, 481-490. https://doi.org/10.1111/ jjns.12259

Bachl, M., & Mangold, F. (2017). Gesundheitsbezogene Informationsrepertoires: Ein nutzerorientierter Ansatz zur Analyse der Informationsnutzung im Gesundheitskontext. [Health-related Information Repertoires: A User-centred Approach to the Analysis of the Use of Information in the Context of Health]. In C. Lampert, & M. Grimm (Ed.), Gesundheitskommunikation als transdisziplinäres Forschungsfeld [Health Communication as a Transdisciplinary Research Field] (pp. 81-92). https://doi.org/10.5771/9783845285290- 79

Berry, J. W. (1980). Acculturation as Varieties of Adaptation. In A. Padilla (Ed.), Acculturation: Theory, Models and Findings (pp. 9-25). Westview.

BpB [Federal Agency for Civic Education] (2022, January 1). Bevölkerung mit und ohne Migrationshintergrund [Population with and without a Migrant Background]. https://www.bpb.de/kurz-knapp/zahlen-und-fakten/soziale-situation-in-deutschland/61649/ bevoelkerung-mit-und-ohne-migrationshintergrund/#:~:text=Eine%20Person%20hat%20d ann%20eine,Absatz%201%20des%20Grundgesetzes%20sind.

Chae, S., Lee, Y.-J., & Han, H.-R. (2021). Sources of Health Information, Technology Access, and Use Among Non–English-Speaking Immigrant Women: Descriptive Correlational Study. Journal of Medical Internet Research, 23(10), e29155, https://doi.org/10.2196/29155

Christancho, S., Peters, K., & Garces, M. (2014). Health Information Preferences among Hispanic/Latino Immigrants in the U.S. Rural Midwest. Global Health Promotion, 21(1), 40-49. https://doi.org/10.1177/1757975913510727

Hasebrink, U., & Hepp, A. (2017). How to Research Cross-Media Practices? Investigating Media Repertoires and Media Ensembles. Convergence, 23(4), 362-377. https://doi.org/ 10.1177/1354856517700384 Hasebrink, U., & Popp, J. (2006). Media Repertoires as a Result of Selective Media Use. A Conceptual Approach to the Analysis of Patterns of Exposure. Communications, 31(2), 369- 387. https://doi.org/10.1515/COMMUN.2006.023

Hepp, A., & Hasebrink, U. (2014). Human Interaction and Communicative Figurations: The Transformation of Mediatized Cultures and Societies. In K. Lundby (Ed.), Mediatization of Communication (S. 249-272). De Gruyter. https://doi.org/10.1515/9783110272215.249

Islam, N. S., Patel, S., Wyatt, L. C., Sim, S.-C., Mukherjee-Ratnam, R., Chun, R., Desai, B., Tandon, S. D., Trinh-Shevrin, C., Pollack, H., & Kwon, S. C. (2016). Sources of Health Information Among Select Asian American Immigrant Groups in New York City. Health Communication, 31(2), 207-216, https://doi.org/10.1080/10410236.2014.944332

Kluge, S. (2000). Empirisch begründete Typenbildung in der qualitativen Sozialforschung. [Empirically Founded Typology in Qualitative Social Science]. Forum Qualitative Sozialforschung [Forum of Qualitative Social Research], 1(1). http://nbn-resolving.de/urn:nbn:de:0114-fqs0001145.

Ro, A. (2014). The Longer You Stay, the Worse Your Health? A Critical Review of the Negative Acculturation Theory among Asian Immigrants. International Journal of Environmental Research and Public Health, 11, 8038-8057, https://doi.org/10.3390/ijerph110808038

Zanchetta, M. S., & Poureslami, I. M. (2006). Health Literacy within the Reality of Immigrants' Culture and Language. Canadian Journal of Public Health, 97(2), 26-30.

Figure 1. Acculturation strategies (Berry, 1980)

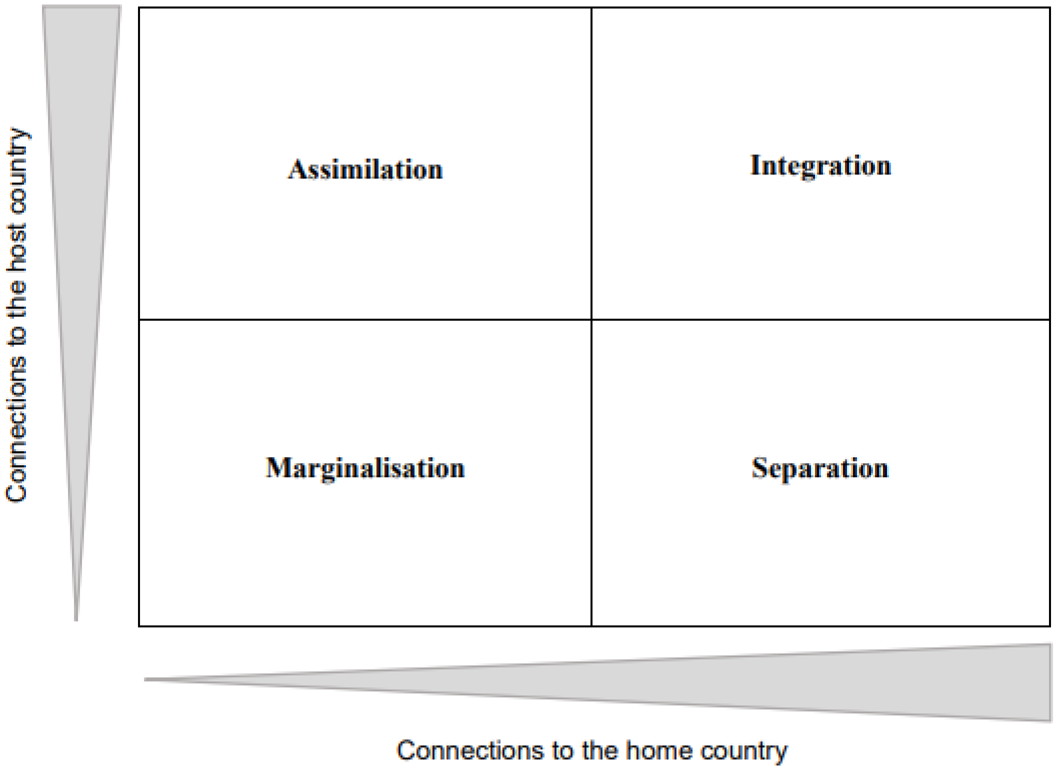


Table 1. Search modes used

	n	%
Electronic devices	89	87
Mobile phone	54	53
Computer or laptop	26	26
Smart watch	8	8
Tablet	1	1
Face-to-face communication	10	10
Traditional devices	3	3
Brochure or flyer	2	2
Television	1	1
Total	102	100

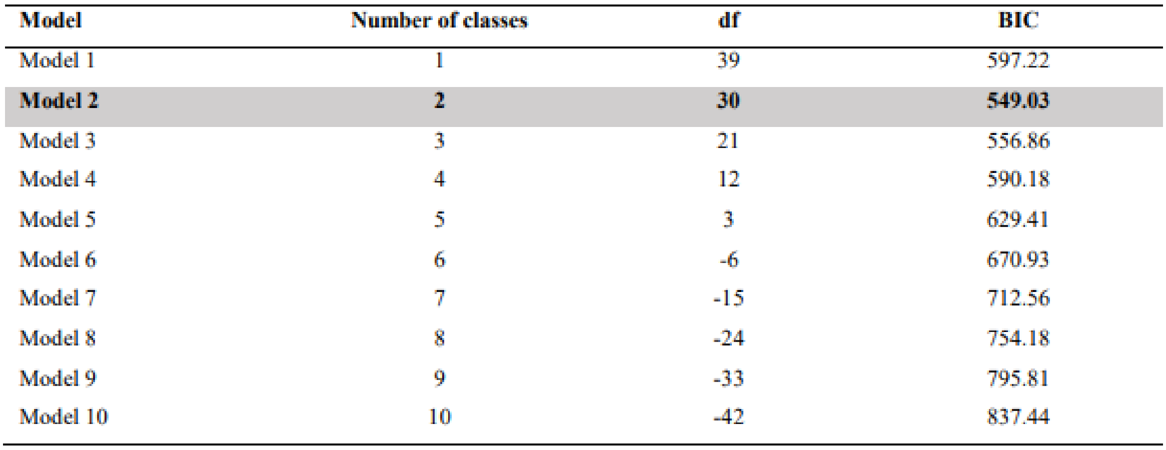
Table 2. Mediating functions used

	n	%
None	49	48
Search engine	38	37
Phone call	8	8
Messaging service	7	7
Total	102	100

Table 3. Health information sources used

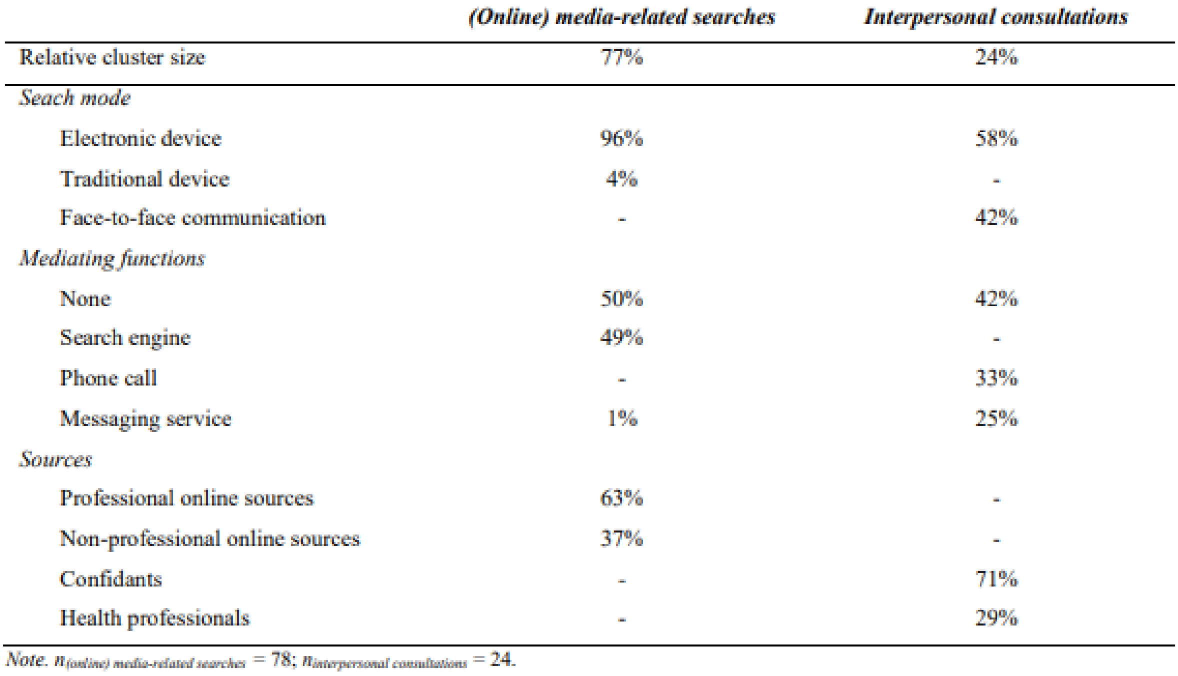
	n	%
Health-related professional (online) media sources	49	48
Health app	11	11
Online pharmacy	10	10
Health portal	8	8
Smart watch	8	8
Practice or hospital website	7	7
Other online source	3	3
Brochure or flyer	2	2
Non-professional (online) media source	29	28
Webblog	11	11
Other online source	6	6
YouTube	5	5
Q&A forum	4	4
Online encyclopaedia (Wikipedia)	1	1
TV channel (CNN)	1	1
Social Network (Reddit)	1	1
Confidant	17	17
Family member	8	8
Friend	7	7
Acquaintance	2	2
Health professional	7	7
Total	102	100

Table 4. Model fit 1- to 10-cluster solutions



Model	**Number of classes**	**df**	**BIC**
Model 1	1	39	597.22
Model 2	**2**	**30**	**549.03**
Model 3	3	21	556.86
Model 4	4	12	590.18
Model 5	5	3	629.41
Model 6	6	-6	670.93
Model 7	7	-15	712.56
Model 8	8	-24	754.18
Model 9	9	-33	795.81
Model 10	10	-42	837.44

Table 5. 2-Cluster-solution: Conditional item response probabilities



	(Online) media-related searches	***Interpersonal consultations***
Relative cluster size	77%	24%
Seach mode		
Electronic device	96%	58%
Traditional device	4%	-
Face-to-face communication	-	42%
Mediating functions		
None	50%	42%
Search engine	49%	-
Phone call	-	33%
Messaging service	1%	25%
Sources		
Professional online sources	63%	-
Non-professional online sources	37%	-
Confidants	-	71%
Health professionals	-	29%

Note. $n_{(online)\ media\text{-}related\ searches} = 78$; $n_{interpersonal\ consultations} = 24$.

Empowerment in Health Communication: Conceptualizations, Theory, and Methodological Approaches

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The concept of empowerment has become increasingly present in health communication research and literature, although it is widely studied in other academic fields. In the 1990s, the concept of empowerment was introduced in studies of chronic illness, mental illness and disability, diabetes, and emotional and behavioral disorders in children, whit a focus on health education interventions (Herbert et al., 2009). Empowerment in healthcare is not only seen as a set of specific social processes and outcomes that are being researched and studied in various health care contexts, but it has also become part of a theory or even a paradigm that involves "a fundamental redefinition of roles and relationships of healthcare professionals and patients" (Anderson & Funnell, 2005). Specifically, patient empowerment moves away from the traditional biomedical model of care to a more patient-centered approach to health care (Palumbo, 2017; Prigge et al., 2015; Fadda et al., 2016). Empowerment has therefore become a central concept in healthcare reforms in Western countries, emphasizing patient involvement and engagement in the design and delivery of healthcare services (Selman et al., 2017). Patient empowerment has been associated with improved health outcomes, reduced healthcare costs, increased patient satisfaction, enhanced effectiveness of care, and an improved quality of health services (Palumbo, 2017, Selman et al., 2017, Chen et al., 2014). Because several advantages are associated with patient empowerment, it has been prioritized by the WHO (2006), who regards it as a viable public health strategy (Delnoij & Hafner, 2013).

With the increasing importance of studying empowerment in various health communication contexts, the conceptual, theoretical, and empirical bases of empowerment have multiplied, and many scholars have proposed various and often diverging conceptualizations of empowerment (Rosell et al., 2016; Prigge et al., 2015). Empowerment in health can be studied at both the individual and collective levels and can be applied to the domains of personal health or the health professional-patient-relationship (Atanasova & Koinig, 2023). The study of empowerment is complex and often challenging, given that empowerment is not uniformly defined and conceptualized; it is context-dependent; it presents an outcome or a process; it is multidimensional; and it has been measured using different methodological approaches and measurement instruments (Fadda et al., 2016; McAllister et al., 2018).

As a result, research on empowerment tends to be scattered across fields of application in health communication studies, lacking a common platform for discussing similarities/differences in conceptualizations, theoretical perspectives, and methodological approaches used to study empowerment amongst different populations and in different contexts. By bringing together researchers from four European countries, this panel aims to expand the conceptual, theoretical, and methodological understanding of empowerment in health communication by focusing on specific approaches to and applications of empowerment in health communication. The panel will be used to showcase and discuss currently relevant empowerment studies in the European research community.

REFERENCES

Anderson, R. M., & Funnell, M. M. (2005). Patient empowerment: reflections on the challenge of fostering the adoption of a new paradigm. Patient education and counseling, 57(2), 153-157.

Atanasova, S., & Koinig, I. (2023). Empowerment. In Ho, E.Y. (Ed.), The international encyclopedia of health communication, pp. 1-7. Chichester: J. Wiley & Sons, ICAZ-Wiley Blackwell-ICA international encyclopedias of communication. doi:10.1002/9781119678816.iehc0677.

Chen, J., Mortensen, K., & Bloodworth R. (2014) Exploring contextual factors and patient activation: evidence from a nationally representative sample of patients with depression. Health Education & Behavior: The Official Publication of the Society for Public Health Education 41(6): 614–624.

Delnoij, D., & Hafner, V. (2013). Exploring patient participation in reducing health-care related safety risks. World Health Organization.

Fadda, M., Galimberti, E., Carraro, V., & Schulz, P. J. (2016). What are parents' perspectives on psychological empowerment in the MMR vaccination decision? A focus group study. BMJ Open, 6(4), 9. doi:10.1136/bmjopen-2015-010773

Herbert, R. J., Gagnon, A. J., Rennick, J. E., & O’Loughlin, J. L. (2009). A systematic review of questionnaires measuring health-related empowerment. Res Theory Nurs Pract, 23(2), 107-132.

McAllister, M., Payne, K., Macleod, R., Nicholls, D., Donnai, D., & Davies, L. (2008). Patient empowerment in clinical genetics services. Journal of Health Psychology 13, 895-905.

Palumbo, R. (2017). The bright side and the dark side of patient empowerment: Co-creation and co-destruction of value in the healthcare environment. Springer.

Prigge, J.-K., Dietz, B., Hamburg, C., Hoyer, W.D., & Burton, J. (2015). Patient empowerment: A cross-disease exploration of antecedents and consequences. International Journal of Research in Marketing 32, 375-386.

Rosell, A. M.; Pena, L. D. M.; Schoch, K.; Spillmann, R.; Sullivan, J.; Hooper, S. R. et al. (2016): Not the End of the Odyssey: Parental Perceptions of Whole Exome Sequencing (WES) in Pediatric Undiagnosed Disorders. Journal of Genetic Counseling 25 (5), S. 1019–1031. DOI: 10.1007/s10897-016-9933-1.

Selman, L. E.; Daveson, B. A.; Smith, M.; Johnston, B.; Ryan, K.; Morrison, R. S. et al. (2017): How empowering is hospital care for older people with advanced disease? Barriers and facilitators from a cross-national ethnography in England, Ireland and the USA. Age and ageing 46 (2), S. 300–309. DOI: 10.1093/ageing/afw193.

WHO. (2006). Constitution of the World Health Organization. WHO. Retrieved from https://www.who.int/publications/m/item/constitution-of-the-world-health-organization [accessed 7.4.2023]

The evolution of the patient empowerment concept through the study of four measurement scales

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Anyone interested in patient empowerment is faced with the instability of a concept whose definition is constantly evolving. Patient empowerment is shaped by multiple influences: the progress of health democracy (Domin, 2014), advances in the human sciences, psychology (Zimmerman, 1995), social psychology (Rappaport, 1981) by patient centered care theory (Epstein, & Street, 2011; TouretteTurgis, 1996). Finally, new technologies made health information easily available and offered patients better opportunities for communication and cooperation and transformed them into networked digital learners capable of influencing their community (Lamas et al. 2017).

The empowered patient is a partner in care and sometimes an expert, a critical consumer, increasingly involved in the creation of resources, a social reformer, an engaged citizen, a member of a collective.

To appreciate his multi-dimensional status, we propose to analyze four measurement scales developed with patients by leading authors (Rogers et al. 1997; Small et al. 2013; Petrič et al. 2014; Atanasova et al. 2019).

The patient's motivations for involvement in the empowerment process will be analyzed as well as the various forms of exchange and cooperation, and the benefits gained individually and collectively.

We will highlight the parameters selected, showing the increasingly important role accorded to collectives and exchanges found at various community, collaborative and societal levels (Fayn, 2019). The organizational dimension will also be addressed through criteria specifying collective functioning and cooperation modalities.

Correlations will be highlighted, particularly those associating structural properties, the forms of involvement they foster and the individual and collective empowerment they shape.

REFERENCES

Atanasova, S., & Petric, G. (2019). Collective empowerment in online health communities: scale development and empirical validation. Journal of medical Internet research, 21(11), e14392.

Castro, E. M., Van Regenmortel, T., Vanhaecht, K., Sermeus, W., & Van Hecke, A. (2016). Patient empowerment, patient participation and patient-centeredness in hospital care: A concept analysis based on a literature review. Patient education and counseling, 99(12), 1923-1939.

Domin, J. P. (2014). De la démocratie sociale à la démocratie sanitaire: une évolution paradigmatique?. Sève, (5), 21-29.

Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P., ... & Barry, M. (2012). Shared decision making: a model for clinical practice. Journal of general internal medicine, 27, 1361-1367.

Epstein, R. M., & Street, R. L. (2011). The values and value of patient-centered care. The Annals of Family Medicine, 9(2), 100-103.

Lamas, E., Salinas, R., Coquedano, C., Simon, M. P., Bousquet, C., Ferrer, M., & Zorrilla, S. (2017). The meaning of patient empowerment in the digital age: the role of online patient-communities. Stud Health Technol Inform, 244, 43-7.

Petrič, G., & Petrovčič, A. (2014). Individual and collective empowerment in online communities: the mediating role of communicative interaction in web forums. The Information Society, 30(3), 184-199.

Rappaport, J. (1981). In praise of paradox: A social policy of empowerment over prevention. American journal of community psychology, 9(1), 1-25.

Rogers, E. S., Chamberlin, J., & Ellison, M. L. (1997). Measure empowerment among users of mental health services. Psychiatric services, 48(8), 1042-1047.

Small, N., Bower, P., Chew-Graham, C. A., Whalley, D., & Protheroe, J. (2013). Patient empowerment in longterm conditions: development and preliminary testing of a new measure. BMC health services research, 13(1), 1-15.

Tourette-Turgis, C. (1996). Le counseling. Presses universitaires de France.

Zimmerman, M. A. (1995). Psychological empowerment: Issues and illustrations. American journal of community psychology, 23, 581-599.

From Patient Empowerment to Health [Consumer] Empowerment

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Researchers agree that empowerment presents a core concept in health promotion (Woodall et al., 2012). Against the background of an increasing commercialization of health (Prewo, 2000), which is based on several pillars, such as privatization, individual responsibility, and freedom of doctor's choice, responsibility for health-related decisions has shifted to the private sphere (Gill & Scharff, 2011; Bell et al., 2011), turning previous (passive) patients into consumers of health services. Empowered health consumers are equipped with the possibility to choose from a variety of options available in the healthcare marketplace. Health consumer empowerment has received only limited attention to date (Koinig, 2016; Koinig et al., 2017). In the present contribution, we will investigate core antecedents of health consumer empowerment, including knowledge, health literacy and management skills (Laverack, 2004).

Knowledge, for instance, is closely linked to individuals' health literacy (Behringer et al., 2004). Given that individual (health) decision making takes place in an ever more complex communication environment, different forms of (health) literacy must be distinguished, such as informational (health) literacy, aesthetic (health) literacy, rhetorical (health) literacy, digital (health) literacy, and promotional (health) literacy amongst others (Malmelin, 2010).

Skills, on the other hand, describe individuals' capabilities to pro-actively change their behaviors and adopt healthy behaviors. Important skills are individuals' self-efficacy, self-sufficiency, and self-care behaviors (Nutbeam, 2000).

As part of our contribution, we will discuss the conceptual differences between patient and health consumer empowerment, scrutinizing whether the two forms require different skills and knowledge to arrive at qualified health decision and reduce individuals' vulnerability to external influences.

REFERENCES

Bell, K., Salmon, A. & McNaughton, D. (2011). Editorial: Alcohol, tobacco, obesity, and the new public health. Critical Public Health 21, 1-8.

Gill, R. & Scharff, C. (2011). New femininities: postfeminism, neoliberalism, and subjectivity. Basingstoke: Palgrave.

Koinig, I. (2016). Pharmaceutical Advertising as a Source of Consumer Self-Empowerment: Evidence from Four Countries . Wiesbaden: Springer.

Koinig, I., Diehl, S., & Mueller, B. (2017). Are pharmaceutical ads affording consumers a greater say in their health care? The evaluation and self-empowerment effects of different ad appeals in Brazil: International Journal of Advertising, 1 - 30.

Laverack, G. (2004). Health promotion practice: power and empowerment. London: SAGE.

Malmelin, N. (2010). What Is Advertising Literacy? Exploring the Dimensions of Advertising Literacy. Journal of Visual Literacy 29 (2), 129-142.

Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. Health Promotion International 15(3), 259-267.

Prewo, W. (2000). Consumer empowerment as a solution to health system financing. Pharmacoeconomics 18(1), 77-83.

What does it mean to be empowered in the field of health and is that enough to improve one's health? Reflecting on facilitators and barriers of empowerment with the theory of capital

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Empowerment is an increasingly popular concept in contemporary behaviour and social change discourse in the field of health, sometimes used as a vague goal in itself (Kamin et al, 2022). In this paper, we aim to reflect on the attempts of health education and promotion professionals to solve health problems by ‘empowering’ specific populations.

To achieve empowerment in health, we must address accessibility and allocation of valued resources related to specific problems (Laverack, 2006; Zimmerman, 1999). Finding out what resources individuals need to empower themselves and improve their health outcomes is of great importance, but it is not necessarily enough. Resources are not equally distributed among people, and health related interventions can further affect this distribution in a positive or negative way (Kamin and Anker, 2014). Drawing on Bourdieu's (2002[1986]) theory of capital, we aim to show how certain forms of resources (economic, social, and cultural capital) influence individual empowerment, which can then lead to positive (or sometimes negative) health outcomes.

Based on data collected in the project Barriers and facilitators to the Slovenian adult population's response to the "Together for Health" prevention and health promotion program, we will show how different forms of capital influence individual empowerment in relation to personal health care. These insights can greatly enrich the debate about (health-related) resources and their use by health practitioners to meet individual health needs and achieve (positive) empowerment outcomes in different social and health-related settings.

REFERENCES

Bourdieu, P. (2002[1986]). The Forms of capital. In N. Woosley Biggart (Ed.), Reading in Economic Sociology (pp. 280-291). Malden and Oxford: Blackwell Publishers.

Kamin, T., Kubacki, K., & Atanasova, S. (2022). Empowerment in social marketing: systematic review and critical reflection. Journal of Marketing Management, 38(11-12), 1104-1136.

Laverack, G. (2006). Improving health outcomes through community empowerment: A review of the literature. Journal of Health, Population and Nutrition, 24(1), 113-120.

Kamin, T., & Anker, T. (2014). Cultural capital and strategic social marketing orientations. Journal of Social Marketing, 4(2), 94-110.

Zimmerman, M. A. (1999). Empowerment theory: Psychological, organizational and community levels of analysis. In J. Rappaport & E. Seidman (Eds.), Handbook of Community Psychology (pp. 43-63). New York: Plenum.