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Lived Experience of Predictive Dashboard Use in Clinical Decision-Making by Healthcare Professionals

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ABSTRACT

The growing integration of predictive analytics into healthcare systems has transformed clinical decision-making and introduced new dynamics in human-technology interaction. Despite advancements in system design, limited attention has been given to how healthcare professionals subjectively experience and interpret predictive dashboards in high-stakes environments. Existing studies often focus on performance metrics and adoption rates, leaving unexplored how these systems influence the clinicians' emotional, ethical, and cognitive engagement.

This study addresses this gap by asking: How do healthcare professionals experience the use of predictive analytics dashboards in their clinical decision-making processes?

Using an interpretative phenomenological approach (IPA), this study reveals how clinicians perceive, trust, and adapt to algorithmic tools in their routine medical practice. In-depth, semi-structured interviews were conducted with eight medical professionals (five physicians and three nurses, aged between 29 and 54 years) working in the emergency and intensive care units of a major urban referral hospital in Indonesia. Data were analyzed thematically through multiple interpretative stages.. The findings highlight four core themes: conditional trust in algorithmic outputs, increased cognitive load under time pressure, emotional and ethical tensions in accountability, and challenges in system integration and digital literacy. These results illuminate the multifaceted nature of clinicians' engagement with predictive dashboards, grounded in lived experience rather than technical functionality.

The study contributes to a deeper understanding of how predictive technologies are internalized and interpreted by clinical users, offering critical insights for designing more human-centered digital health systems and guiding future qualitative inquiries into the experiential dimension of healthcare innovation.

INTRODUCTION

The integration of predictive analytics into healthcare systems represents a transformative shift in how clinical decisions are informed and executed (Martinasek dkk., 2021). As health institutions around the world adopt data-driven technologies, predictive dashboards have emerged as critical tools for forecasting patient risks, managing workloads, and optimizing care pathways (Kalhan dkk., 2020; Petkovic dkk., 2021). This evolution reflects a broader movement within the medical field towards digitalization and algorithmic intelligence, driven by the promise of enhanced accuracy, efficiency, and resource allocation.

Despite the technological sophistication and increasing prevalence of such systems, the human dimensions of their use remain less understood. Healthcare delivery is not merely a technical process but a profoundly human endeavor, embedded within social, emotional, and ethical contexts (Daniels dkk., 2023; Deleemans dkk., 2021). Clinicians are no longer interacting solely with patients and peers; they now also engage with complex computational systems that influence, support, and sometimes challenge their judgment. The interaction between healthcare professionals and predictive

tools does not occur in a vacuum but is shaped by institutional cultures, individual beliefs, trust dynamics, and the emotional weight of clinical responsibility.

Within this landscape, the subjective experience of medical professionals becomes a vital site of inquiry. Understanding how they perceive, interpret, and emotionally respond to algorithmic predictions is essential to ensuring that technology serves as a meaningful and ethical extension of clinical expertise (Azagba dkk., 2020). The increasing reliance on predictive dashboards necessitates a deeper exploration of how these tools are assimilated into the lived experiences of those who use them. Such exploration goes beyond performance metrics, inviting attention to the nuanced ways technology mediates human action and decision-making in the healthcare environment.

Given these complexities, there is a growing need to move beyond quantitative assessments of system performance and toward a phenomenological understanding of how predictive analytics are experienced in practice (Ben Taleb dkk., 2019; Pentz dkk., 2019). A phenomenological approach allows for the examination of meaning as it is constructed and lived by clinicians, providing insights that are crucial for the development, implementation, and ethical governance of data-driven technologies in healthcare.

In recent years, there has been increasing scholarly attention toward understanding how healthcare professionals experience and interpret the integration of digital technologies in clinical environments. Among these, predictive analytics dashboards have emerged as critical yet complex tools, often altering how clinicians perceive, prioritize, and respond to patient data (Hatsukami & Carroll, 2020). Investigating the lived experience of using such systems is not merely an academic exercise; it holds practical implications for usability, trust, decision-making, and professional identity in data-intensive care settings.

However, efforts to study this experience have been largely dominated by positivist paradigms, particularly through the use of surveys, performance metrics, and other quantitative instruments (Johnson dkk., 2019; Rizvi dkk., 2020). While valuable for measuring adoption rates or technical efficiency, these approaches fall short in capturing the deeper, subjective layers of how predictive tools are actually used, trusted, and interpreted in real-world practice. The richness of human experience—characterized by emotions, ethical tensions, and evolving perceptions—remains underrepresented in the literature.

This methodological imbalance underscores a significant limitation: previous research has often lacked the conceptual and methodological tools to access the meaning structures embedded in clinicians' interactions with algorithmic systems (Benarroch-Gampel dkk., 2020; Boutrous dkk., 2019). Studies rooted in descriptive statistics or system usability frameworks may overlook the existential and interpretative dimensions that shape how healthcare professionals relate to technology in high-stakes, emotionally charged environments. As a result, much of the nuance surrounding the human-technology interface in clinical practice remains obscured.

Addressing this gap requires a research approach that privileges meaning over measurement. Interpretative phenomenological analysis (IPA), grounded in the philosophical traditions of Heidegger, offers a robust framework for exploring how individuals construct, negotiate, and reflect upon their experiences (Corsi-Zuelli, Marques, dkk., 2022). It enables the researcher to access the essence of a phenomenon as lived by the subject, making it particularly well-suited for examining the evolving role of predictive dashboards in healthcare settings.

Most current approaches to understanding the use of predictive analytics in healthcare rely heavily on functional or operational evaluations (Gravbrot dkk., 2020; Sivanesan dkk., 2019). These often include technical performance metrics, usability assessments, and adoption statistics, which offer practical insights into how such tools perform in clinical environments. While these studies have contributed to refining system design and implementation strategies, they frequently treat healthcare professionals as passive users rather than active interpreters of technology within complex social and emotional contexts.

Such conventional methods tend to overlook the deeply personal and interpretive dimensions of how clinicians actually experience these tools in their day-to-day practice (Anichini dkk., 2020;

Srivastava dkk., 2019). Quantitative frameworks rarely capture the nuances of trust, hesitation, ethical tension, or emotional labor that accompany decision-making in environments shaped by data-driven technologies. As a result, the lived reality of using predictive dashboards remains underexplored, and the voices of practitioners who engage with these systems are often marginalized in academic discourse.

This limitation signals a critical gap in the literature: while it is known that predictive tools influence clinical workflows, it remains unclear how these systems are perceived, negotiated, and integrated into the subjective experiences of healthcare professionals (Nawi dkk., 2021). There is a lack of in-depth qualitative inquiry into the meaning-making processes that unfold as clinicians interpret algorithmic output in the face of uncertainty, responsibility, and institutional demands.

A more holistic and reflective approach is thus necessary—one that does not merely ask whether predictive systems are used, but how they are experienced. Phenomenology, particularly its interpretative strand, provides a powerful alternative by allowing researchers to investigate the essence of human interaction with technology through the lens of lived experience. This perspective is crucial for uncovering the subtle yet significant ways predictive analytics reshape the cognitive, emotional, and ethical landscapes of clinical decision-making.

Previous research on predictive analytics in healthcare has primarily focused on system performance, clinical outcomes, or user acceptance through quantitative measures. However, several qualitative studies have begun to explore the human side of technology use in clinical settings. These studies highlight the importance of trust, autonomy, and professional judgment in interactions with algorithmic systems (Vieira dkk., 2020). Theoretical perspectives such as sociotechnical systems theory and human-centered design support the view that user experience is shaped by both technological and institutional factors. Yet, a gap remains in understanding the lived experience of clinicians who rely on predictive dashboards for high-stakes decision-making.

This study adopts an interpretative phenomenological approach (IPA) to address this gap. IPA is well-suited to uncovering how individuals interpret and make sense of specific experiences within their social and emotional contexts. Through in-depth interviews with healthcare professionals, the study reveals how predictive dashboards are perceived, trusted, questioned, and integrated into clinical practice. This method allows for the exploration of meaning, rather than measurement, providing a deeper view of the human-technology interface. The findings offer rich insights into how clinicians construct meaning in relation to predictive systems, thereby responding to the limitations of prior approaches.

The structure of this article is as follows. First, the introduction outlines the social and theoretical context of predictive analytics in healthcare (Hausleiter dkk., 2023; Woods dkk., 2019). Next, the methods section details the phenomenological approach, participant selection, and procedures for data collection and analysis. The results present emergent themes from the interview data, supported by direct quotations that illustrate the depth of experience (Liese & Monley, 2021). Finally, the discussion connects these findings to existing literature and highlights implications for practice, followed by a conclusion that reflects on the broader meaning of the phenomenon studied.

RESEARCH METHODS

Study Design

This study employed an interpretative phenomenological approach (IPA) to explore the lived experiences of healthcare professionals in utilizing predictive analytics dashboards for clinical decision-making within a referral hospital setting (Hillman & Radel, 2018; Migdal, 2018). The phenomenological framework was chosen due to its capacity to uncover the depth and complexity of individual experiences as they are lived and interpreted by the participants themselves (Shin, 2021). IPA is grounded in the philosophical foundations of Heideggerian phenomenology, emphasizing interpretation, contextual understanding, and reflexivity rather than mere description of phenomena.

By focusing on subjective perceptions and meaning-making processes, this design enabled a rich and nuanced understanding of how clinical professionals interact with algorithmic decision support tools. The interpretative dimension allowed for an examination of not only what participants experienced but how they made sense of those experiences within their institutional and emotional contexts.

Participants

Participants included healthcare professionals—such as physicians, nurses, and medical analysts—who regularly engaged with predictive dashboards in their clinical workflows (Carreiras & Castro, 2012; Iosifides, 2016). A purposive sampling strategy was applied to select individuals who possessed direct and sustained experience with the phenomenon under study. Inclusion criteria comprised: (1) active employment in a clinical unit using predictive analytics tools, (2) a minimum of six months of experience with the dashboard system, and (3) willingness to provide informed consent.

Exclusion criteria included professionals in training or those with no direct interaction with predictive systems (Iosifides, 2011; Longhofer dkk., 2012). A total of eight participants were involved, representing diverse clinical roles. The group consisted of five physicians and three nurses, aged between 29 and 57 years, with an average clinical experience of 12.4 years. This diversity in professional background and experience enriched the data, ensuring multiple perspectives on the use of predictive technologies.

Data Collection

Data were collected through semi-structured, in-depth interviews conducted face-to-face in a private room within the hospital premises to ensure participant comfort and confidentiality (Daly, 2007). An interview guide with open-ended prompts was used to elicit detailed narratives, focusing on how participants perceived, interpreted, and acted upon dashboard-generated predictions in their daily practice. Each interview lasted between 45 and 70 minutes and was audio-recorded with participant consent.

The interviews were conducted in the participants' preferred language and were subsequently transcribed verbatim (Corsi-Zuelli, Schneider, dkk., 2022). Field notes and reflective memos were also recorded to capture non-verbal cues and contextual insights. No modifications were made to the standard interview protocol, though additional probing questions were introduced as needed to explore emerging themes during the conversations.

Data Analysis

Interview transcripts were analyzed using interpretative phenomenological analysis (IPA), involving multiple, systematic stages to identify and interpret key themes (Murphy & Dingwall, 2017). First, each transcript was read repeatedly to ensure immersion in the data. Meaning units were identified and initially coded using NVivo software to facilitate organization and retrieval. These codes were then clustered into preliminary themes based on conceptual similarity.

Subsequent iterations involved theme refinement and cross-case comparison to ensure consistency and depth (Gray dkk., 2021). Through thematic reduction, only essential experiential elements were retained, with attention paid to both convergence and divergence across participant accounts. This analytic process yielded a set of superordinate themes that encapsulated the essential structure of participants' lived experiences with the predictive dashboard.

Ethical Considerations

Ethical approval was obtained from the institutional research ethics committee prior to data collection (Clair, 2003; Fenton & Baxter, 2016). All participants were provided with detailed information about the study objectives, procedures, and confidentiality assurances. Written informed consent was obtained from each participant, and all identifying details were removed during transcription to protect anonymity (Galimov dkk., 2022). The study adhered to the ethical principles outlined in the Declaration of Helsinki and followed all applicable national guidelines for research involving human subjects.

RESULTS

Navigating Trust in Algorithmic Recommendations

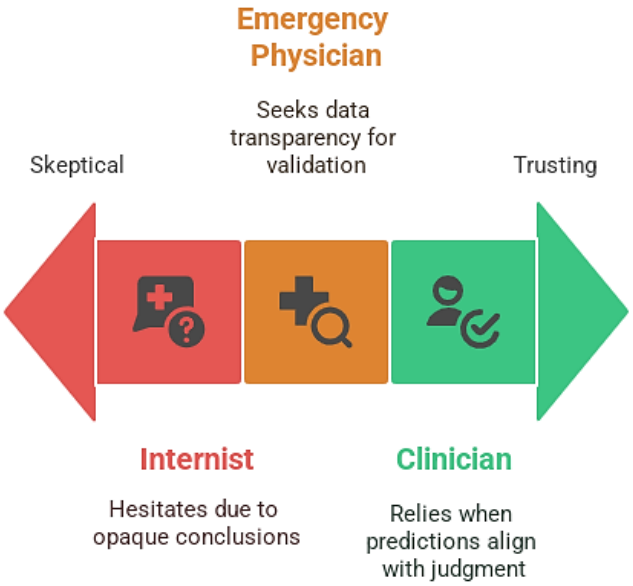
Participants expressed varying degrees of trust toward the predictive insights generated by the dashboard. While some perceived the system as a valuable aid in clinical decision-making, others remained skeptical due to limited transparency and occasional inconsistencies with clinical intuition.

"Sometimes, the dashboard gives a prediction that makes sense and helps me act faster. But other times, I hesitate… I don't know how it came to that conclusion. I still rely on my gut." (P3, Internist)

This ambivalence often arose from the perceived "black box" nature of the algorithms, prompting clinicians to seek corroboration through manual validation or second opinions.

"I wish I knew what exact data the system used to make that prediction. It's like working with a smart assistant that won't tell you why it suggested something." (P7, Emergency Physician)

Trust was generally higher when predictions aligned with clinical judgment, suggesting a conditional reliance shaped by experience and familiarity with the dashboard.



Trust in algorithmic recommendations varies from skepticism to reliance.

Cognitive Load and Decision-Making Under Time Pressure

Several participants highlighted that the use of the dashboard altered their cognitive workflow, particularly during high-pressure situations. While the tool was designed to reduce uncertainty, it occasionally introduced additional layers of interpretation that demanded cognitive effort.

"During peak hours, I sometimes skip the dashboard entirely. There's just no time to analyze more data when patients are waiting." (P5, Triage Nurse)

Rather than simplifying decisions, the interface occasionally created decision fatigue, especially when the output lacked immediate clarity or required manual cross-referencing.

"It's ironic. It's supposed to save time, but I find myself spending more time trying to understand the color codes and probability scores." (P1, ICU Resident)

Despite these challenges, some participants acknowledged that once mastered, the dashboard could streamline prioritization, particularly for complex cases.

Emotional Tensions and Ethical Reflections

The emotional dimension of relying on data-driven systems emerged as a significant theme. Several participants reported feelings of anxiety, particularly when predictive suggestions conflicted with their clinical judgment or when the consequences of inaction were potentially severe.

"If I ignore the dashboard and something goes wrong, it's on me. But if I follow it blindly and it's wrong, it's still on me. It's a dilemma." (P6, Internal Medicine Specialist)

There were also ethical reflections concerning accountability and professional autonomy. The presence of a predictive system, while useful, was sometimes perceived as undermining the clinician's role.

"The machine doesn't take the responsibility if something bad happens. That's on us, the human doctors." (P4, Senior Consultant)

This emotional strain underscores the need for clearer guidelines and shared accountability frameworks when integrating predictive technologies into clinical practice.

The Challenge of System Integration and Digital Literacy

Participants shared mixed experiences regarding the technical integration of the dashboard into their existing hospital information systems. While some noted seamless access, others experienced lag, redundancy, or incompatible data formats that hindered workflow efficiency.

"Switching between systems is frustrating. The lab results are in one place, vitals in another, and the prediction in a separate tab." (P2, Ward Nurse)

In addition, disparities in digital literacy among staff influenced the extent to which the dashboard was trusted or used effectively. Senior professionals, in particular, expressed difficulty in navigating certain features or interpreting the visualizations.

"I sometimes ask the younger nurses to help me read the screen. It's not very intuitive for someone of my generation." (P8, Senior Cardiologist)

These insights suggest that successful adoption of predictive tools depends not only on system design but also on targeted training and institutional support.

The findings reveal a nuanced picture of how healthcare professionals experience predictive analytics dashboards. While generally perceived as beneficial, the dashboard also introduces new complexities in trust, cognitive processing, emotional burden, and workflow adaptation. These results highlight the interplay between human judgment and technological mediation in contemporary clinical environments and set the foundation for further exploration in the discussion section.

DISCUSSION

The findings of this study reveal a complex and emotionally charged landscape in which healthcare professionals engage with predictive analytics dashboards. Participants' experiences were shaped by a combination of trust, cognitive demands, ethical reflection, and institutional integration—each contributing to a deeper understanding of how algorithmic tools are negotiated in clinical practice. These themes respond directly to the central question of how clinicians experience and interpret the presence of predictive dashboards in their decision-making processes.

The study offers a meaningful response to this question by uncovering the subjective realities that underlie interactions with algorithmic systems (Langley dkk., 2019). It shows that predictive dashboards are not merely tools for efficiency but are interpreted through lenses of professional responsibility, emotional labor, and institutional trust. Clinicians do not passively accept technological outputs; instead, they weigh, question, and sometimes resist them, reflecting a dynamic process of meaning-making. This insight underscores the importance of considering human experiences in the implementation and evaluation of predictive systems in healthcare.

These results align with and extend prior studies that have examined clinician trust in artificial intelligence and data-driven tools. For example, Zong dkk. (2023) identified that trust is contingent upon system transparency and alignment with clinical intuition, a theme echoed in this study. Similarly, Strong dkk. (2021) emphasized that the value of predictive tools lies not just in accuracy but in their integration into the clinician's workflow and cognitive space. However, this study moves beyond these insights by revealing the emotional tension and ethical dilemmas clinicians face when relying on automated predictions—an aspect less emphasized in earlier work. In doing so, the study deepens our understanding of the moral and psychological dimensions of human-machine interaction in healthcare, reinforcing the need for user-centered design and institutional support mechanisms.

The implications of these findings extend beyond individual experiences, offering important considerations for institutional policies, system design, and clinical education. The emotional tension and ethical reflection reported by participants suggest that predictive systems cannot be meaningfully implemented without acknowledging the human and moral dimensions of care. From a sociocultural perspective, these results highlight the need for more participatory approaches to digital transformation in healthcare—approaches that respect clinicians' autonomy and professional judgment. Practically, institutions must develop clearer guidelines for interpreting algorithmic output, support systems for navigating uncertainty, and continuous training to bridge digital literacy gaps. The study thereby contributes to a broader understanding of how technology reshapes the lived experience of clinical decision-making in modern health systems.

Despite its contributions, this study has several limitations that must be acknowledged. The sample was limited to healthcare professionals within a single referral hospital, which may affect the transferability of findings to other institutional or cultural contexts (Kalhan dkk., 2020). The interpretative nature of the analysis, while yielding rich insights, also introduces a level of subjectivity that depends on both the participant’s narrative and the researcher's interpretive lens. Additionally, although the study focused on depth rather than breadth, a larger sample might reveal greater variability in experience. These limitations do not undermine the study’s value but rather contextualize its findings within a particular setting and worldview.

Future research may build upon this work by exploring similar experiences across different healthcare systems, specialties, or levels of technological integration. Comparative phenomenological studies could illuminate how institutional cultures influence the reception and interpretation of predictive tools. Longitudinal designs might also provide insight into how trust and meaning evolve over time as clinicians gain familiarity with such systems (Petkovic dkk., 2021). Ultimately, this line of inquiry contributes to a deeper theoretical and practical understanding of how digital health technologies become embedded in the moral, emotional, and experiential fabric of clinical life.

CONCLUSION

This study explored the lived experiences of healthcare professionals in using predictive analytics dashboards for clinical decision-making in a referral hospital setting. The findings revealed that clinicians navigate these systems through a complex interplay of trust, emotional tension, ethical responsibility, and institutional adaptation. The study addressed a critical gap in existing research by highlighting how predictive tools are not only used but also interpreted, questioned, and emotionally processed in real-world practice. These insights offer valuable contributions to the development of more human-centered, ethically grounded, and contextually responsive digital health systems. While the findings are context-specific, they offer meaningful implications for broader healthcare environments undergoing digital transformation. Future studies may expand this work by including comparative, cross-cultural perspectives or exploring longitudinal changes in clinicians' engagement with predictive technologies.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest related to the conduct or publication of this research. The funding body had no role in the design of the study, collection, analysis, or interpretation of data, nor in the writing of the manuscript.

REFERENCES

Anichini, R., Brocco, E., Caravaggi, C. M., Da Ros, R., Giurato, L., Izzo, V., Meloni, M., Uccioli, L., Calenda, P., Federici, G., Ludovico, O., Simonetti, D., & Stoico, V. (2020). Physician experts in diabetes are natural team leaders for managing diabetic patients with foot complications. A position statement from the Italian diabetic foot study group. *Nutrition, Metabolism and Cardiovascular Diseases*, *30*(2), 167–178. Scopus. https://doi.org/10.1016/j.numecd.2019.11.009

Azagba, S., Shan, L., Latham, K., & Qeadan, F. (2020). Trends in cigarette smoking among American Indians and Alaska Natives in the USA: 1992–2015. *Cancer Causes and Control*, *31*(1), 73–82. Scopus. https://doi.org/10.1007/s10552-019-01250-7

Ben Taleb, Z., Laestadius, L. I., Asfar, T., Primack, B. A., & Maziak, W. (2019). #Hookahlife: The Rise of Waterpipe Promotion on Instagram. *Health Education and Behavior*, *46*(1), 106–113. Scopus. https://doi.org/10.1177/1090198118779131

Benarroch-Gampel, J., Pujari, A., Aizpuru, M., Rajani, R. R., Jordan, W. D., & Crawford, R. (2020). Technical success and short-term outcomes after treatment of lower extremity deep vein thrombosis with the ClotTriever system: A preliminary experience. *Journal of Vascular Surgery: Venous and Lymphatic Disorders*, *8*(2), 174–181. Scopus. https://doi.org/10.1016/j.jvsv.2019.10.024

Boutrous, M. L., Alvarez, A. C., Okoye, O. T., Laws, J. C., Jacobs, D. L., & Smeds, M. R. (2019). Stent-Graft Length Is Associated with Decreased Patency in Treatment of Central Venous Stenosis in Hemodialysis Patients. *Annals of Vascular Surgery*, *59*, 225–230. Scopus. https://doi.org/10.1016/j.avsg.2019.01.024

Carreiras, H., & Castro, C. (2012). *Qualitative methods in military studies: Research experiences and challenges* (hlm. 194). Taylor and Francis; Scopus. https://doi.org/10.4324/9780203099223

Clair, R. P. (2003). *Expressions of ethnography: Novel approaches to qualitative methods* (hlm. 303). State University of New York Press; Scopus. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84896556900&partnerID=40&md5=d14cc6ba1608309f0398c418b0c86e4b

Corsi-Zuelli, F., Marques, L., da Roza, D. L., Loureiro, C. M., Shuhama, R., Di Forti, M. D., Menezes, P. R., Louzada-Junior, P., & Del-Ben, C. M. (2022). The independent and combined effects of cannabis use and systemic inflammation during the early stages of psychosis: Exploring the two-hit hypothesis. *Psychological Medicine*, *52*(16), 3874–3884. Scopus. https://doi.org/10.1017/S0033291721000726

Corsi-Zuelli, F., Schneider, A. H., Santos-Silva, T., Loureiro, C. M., Shuhama, R., Menezes, P. R., Guimarães, F. S., Gomes, F. V., Cunha, F. Q., Louzada-Junior, P., & Del-Ben, C. M. (2022). Increased blood neutrophil extracellular traps (NETs) associated with early life stress: Translational findings in recent-onset schizophrenia and rodent model. *Translational Psychiatry*, *12*(1). Scopus. https://doi.org/10.1038/s41398-022-02291-4

Daly, K. J. (2007). *Qualitative methods for family studies & human development* (hlm. 293). SAGE Publications Inc.; Scopus. https://doi.org/10.4135/9781452224800

Daniels, T. E., Mathis, K. J., Gobin, A. P., Lewis-de los Angeles, W. W., Smith, E. M., Chanthrakumar, P., de la Monte, S., & Tyrka, A. R. (2023). Associations of early life stress with leptin and ghrelin in healthy young adults. *Psychoneuroendocrinology*, *149*. Scopus. https://doi.org/10.1016/j.psyneuen.2022.106007

Deleemans, J. M., Zwicker, H. M., Reynolds, K. A., & Schulte, F. S. M. (2021). Associations among Health Behaviors and Psychosocial Outcomes in Adolescent and Young Adult Cancer Survivors. *Journal of Adolescent and Young Adult Oncology*, *10*(6), 675–681. Scopus. https://doi.org/10.1089/jayao.2020.0224

Fenton, N. E., & Baxter, J. (2016). *Practicing Qualitative Methods in Health Geographies* (hlm. 266). Taylor and Francis; Scopus. https://doi.org/10.4324/9781315601946

Galimov, A., Vassey, J., Galstyan, E., Unger, J. B., Kirkpatrick, M. G., & Allem, J.-P. (2022). Ice Flavor-Related Discussions on Twitter: Content Analysis. *Journal of Medical Internet Research*, *24*(11). Scopus. https://doi.org/10.2196/41785

Gravbrot, N., Jahnke, H., White, W. L., & Little, A. S. (2020). Resumption of Positive-Pressure Ventilation Devices for Obstructive Sleep Apnea following Transsphenoidal Surgery: An Institutional Experience of a Surgical Cohort. *Journal of Neurological Surgery, Part B: Skull Base*, *81*(3), 237–243. Scopus. https://doi.org/10.1055/s-0039-1688795

Gray, K. E., Hoerster, K. D., Taylor, L., Krieger, J., & Nelson, K. M. (2021). Improvements in physical activity and some dietary behaviors in a community health worker-led diabetes self-management intervention for adults with low incomes: Results from a randomized controlled trial. *Translational Behavioral Medicine*, *11*(12), 2144–2154. Scopus. https://doi.org/10.1093/tbm/ibab113

Hatsukami, D. K., & Carroll, D. M. (2020). Tobacco harm reduction: Past history, current controversies and a proposed approach for the future. *Preventive Medicine*, *140*. Scopus. https://doi.org/10.1016/j.ypmed.2020.106099

Hausleiter, J., Stocker, T. J., Adamo, M., Karam, N., Swaans, M. J., & Praz, F. (2023). Mitral valve transcatheter edge-to-edge repair. *EuroIntervention*, *18*(12), 957–976. Scopus. https://doi.org/10.4244/EIJ-D-22-00725

Hillman, W., & Radel, K. (2018). *Qualitative methods in tourism research: Theory and practice* (hlm. 294). Channel View Publications; Scopus. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85050434848&partnerID=40&md5=7ea1e3f0b2027993b53f6a795804ee51

Iosifides, T. (2011). *Qualitative methods in migration studies: A critical realist perspective* (hlm. 266). Ashgate Publishing Ltd; Scopus. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899389680&partnerID=40&md5=35186fde14469e33457eba07ebfb205a

Iosifides, T. (2016). *Qualitative Methods in Migration Studies: A Critical Realist Perspective* (hlm. 266). Taylor and Francis; Scopus. https://doi.org/10.4324/9781315603124

Johnson, A., Yang, F., Gollarahalli, S., Banerjee, T., Abrams, D., Jonassaint, J., Jonassaint, C., & Shah, N. (2019). Use of mobile health apps and wearable technology to assess changes and predict pain during treatment of acute pain in sickle cell disease: Feasibility study. *JMIR mHealth and uHealth*, *7*(12). Scopus. https://doi.org/10.2196/13671

Kalhan, T. A., Un Lam, C., Karunakaran, B., Chay, P. L., Chng, C. K., Nair, R., Lee, Y. S., Fong, M. C. F., Chong, Y. S., Kwek, K., Saw, S. M., Shek, L., Yap, F., Tan, K. H., Godfrey, K. M., Huang, J., & Hsu, C.-Y. S. (2020). Caries Risk Prediction Models in a Medical Health Care Setting. *Journal of Dental Research*, *99*(7), 787–796. Scopus. https://doi.org/10.1177/0022034520913476

Langley, T., Bell-Williams, R., Pattinson, J., Britton, J., & Bains, M. (2019). 'I felt welcomed in like they're a little family in there, i felt like i was joining a team or something': Vape shop customers' experiences of E-cigarette use, vape shops and the vaping community. *International Journal of Environmental Research and Public Health*, *16*(13). Scopus. https://doi.org/10.3390/ijerph16132341

Liese, B. S., & Monley, C. M. (2021). Providing addiction services during a pandemic: Lessons learned from COVID-19. *Journal of Substance Abuse Treatment*, *120*. Scopus. https://doi.org/10.1016/j.jsat.2020.108156

Longhofer, J., Floersch, J., & Hoy, J. (2012). *Qualitative Methods for Practice Research* (hlm. 224). Oxford University Press; Scopus. https://doi.org/10.1093/acprof:oso/9780195398472.001.0001

Martinasek, M. P., Wheldon, C. W., Parsons, C. A., Bell, L. A., & Lipski, B. K. (2021). Understanding Adverse Childhood Experiences as Predictors of Cigarette and E-Cigarette Use. *American Journal of Preventive Medicine*, *60*(6), 737–746. Scopus. https://doi.org/10.1016/j.amepre.2021.01.004

Migdal, A. B. (2018). *Qualitative Methods in Quantum Theory* (hlm. 460). CRC Press; Scopus. https://doi.org/10.1201/9780429497940

Murphy, E., & Dingwall, R. (2017). *Qualitative methods and health policy research* (hlm. 230). Taylor and Francis; Scopus. https://doi.org/10.4324/9781315127873

Nawi, A. M., Ismail, R., Ibrahim, F., Hassan, M. R., Manaf, M. R. A., Amit, N., Ibrahim, N., & Shafurdin, N. S. (2021). Risk and protective factors of drug abuse among adolescents: A systematic review. *BMC Public Health*, *21*(1). Scopus. https://doi.org/10.1186/s12889-021-11906-2

Pentz, M. A., Hieftje, K. D., Pendergrass, T. M., Brito, S. A., Liu, M., Arora, T., Tindle, H. A., Krishnan-Sarin, S., & Fiellin, L. E. (2019). A videogame intervention for tobacco product use prevention in adolescents. *Addictive Behaviors*, *91*, 188–192. Scopus. https://doi.org/10.1016/j.addbeh.2018.11.016

Petkovic, J., Duench, S., Trawin, J., Dewidar, O., Pardo Pardo, J., Simeon, R., DesMeules, M., Gagnon, D., Hatcher Roberts, J., Hossain, A., Pottie, K., Rader, T., Tugwell, P., Yoganathan, M., Presseau, J., & Welch, V. (2021). Behavioural interventions delivered through interactive social media for health behaviour change, health outcomes, and health equity in the adult population. *Cochrane Database of Systematic Reviews*, *2021*(5). Scopus. https://doi.org/10.1002/14651858.CD012932.pub2

Rizvi, S. M. H., Schopf, T., Sangha, A., Ulvin, K., & Gjersvik, P. (2020). Teledermatology in Norway using a mobile phone app. *PLoS ONE*, *15*(4). Scopus. https://doi.org/10.1371/journal.pone.0232131

Shin, S. H. (2021). Preventing E-cigarette use among high-risk adolescents: A trauma-informed prevention approach. *Addictive Behaviors*, *115*. Scopus. https://doi.org/10.1016/j.addbeh.2020.106795

Sivanesan, E., Bicket, M. C., & Cohen, S. P. (2019). Retrospective analysis of complications associated with dorsal root ganglion stimulation for pain relief in the FDA MAUDE database. *Regional Anesthesia and Pain Medicine*, *44*(1), 100–106. Scopus. https://doi.org/10.1136/rapm-2018-000007

Srivastava, K., Bozic, K. J., Silverton, C., Nelson, A. J., Makhni, E. C., & Davis, J. J. (2019). Reconsidering Strategies for Managing Chronic Periprosthetic Joint Infection in Total Knee Arthroplasty: Using Decision Analytics to Find the Optimal Strategy between One-Stage and Two-Stage Total Knee Revision. *Journal of Bone and Joint Surgery - American Volume*, *101*(1), 14–24. Scopus. https://doi.org/10.2106/JBJS.17.00874

Strong, D. R., Pierce, J. P., Pulvers, K., Stone, M. D., Villaseñor, A., Pu, M., Dimofte, C. V., Leas, E. C., Oratowski, J., Brighton, E., Hurst, S., Kealey, S., Chen, R., & Messer, K. (2021). Effect of Graphic Warning Labels on Cigarette Packs on US Smokers' Cognitions and Smoking Behavior after 3 Months: A Randomized Clinical Trial. *JAMA Network Open*, *4*(8). Scopus. https://doi.org/10.1001/jamanetworkopen.2021.21387

Vieira, I. S., Pedrotti Moreira, F., Mondin, T. C., Cardoso, T. D. A., Branco, J. C., Kapczinski, F., Jansen, K., Souza, L. D. D. M., & da Silva, R. A. (2020). Resilience as a mediator factor in the relationship between childhood trauma and mood disorder: A community sample of young adults. *Journal of Affective Disorders*, *274*, 48–53. Scopus. https://doi.org/10.1016/j.jad.2020.04.011

Woods, L. S., Duff, J., Roehrer, E., Walker, K., & Cummings, E. (2019). Patients' experiences of using a consumer mHealth app for self-management of heart failure: Mixed-methods study. *JMIR Human Factors*, *6*(2). Scopus. https://doi.org/10.2196/13009

Zong, P., Hu, W., Huang, Y., An, H., Zhang, Q., Chai, Z., Lei, Y. K., Wang, J., Li, D., & Cai, W. (2023). Effects of adding cocoa fermentation medium on cigar leaves in agricultural fermentation stage. *Frontiers in Bioengineering and Biotechnology*, *11*. Scopus. https://doi.org/10.3389/fbioe.2023.1251413