

# Design and Development of a Scalable, User-Centered Interface for Mental Wellness Platforms: A Case Study of HAVN

Nilesh Patil<sup>1</sup>, Priyan Parmar<sup>2</sup>, Darshit Adhiya<sup>3</sup>, Akhil Padmanabhan<sup>4</sup>, Sahil Singh<sup>5</sup>,  
Krishi Shah<sup>6</sup>

<sup>1,2,3,4,5,6</sup>SVKM's Dwarkadas J Sanghvi College of Engineering, Mumbai, India

Email: nilesh.p@djsce.ac.in<sup>1</sup>, priyanparmar64@gmail.com<sup>2</sup>, darshitadhiya735@gmail.com<sup>3</sup>,  
akhil07pc@gmail.com<sup>4</sup>, singhsahil140404@gmail.com<sup>5</sup>, krishishah1211@gmail.com<sup>6</sup>

---

Received: 18.01.2024

Revised: 22.02.2024

Accepted: 24.02.2024

---

## ABSTRACT

HAVN is a smartphone application that offers emotional support in a friendly and engaging digital setting. It was designed in response to the growing need for easily accessible mental health services. In order to establish a helpful environment for those dealing with mental health issues, this paper examines the user interface design (UI) of HAVN, which encourages participation and community involvement. It focuses on elements such as user profiles, discussion boards, and private messaging. HAVN's gamification feature, which features daily challenges, mood tracking sliders, and incentives to encourage users to take charge of their mental health, is a significant breakthrough. The application's customizable home screen further improves the experience by enabling users to access relaxing music, engage in real-time mental health monitoring, and provide content that is tailored to you. This paper shows how HAVN encourages users to take charge of their emotional health in a secure, fun, and encouraging virtual community by carefully examining its design principles, gamification tactics, and scalability.

**Keywords:** Gamification, Interface Design, Community, Mental health, emotional support, user interface, mobile app, wellness monitoring, virtual community

## 1. INTRODUCTION

The growing number of people experiencing emotional issues highlights the necessity for easily navigable, encouraging online spaces that encourage community involvement and offer vital services. Conventional channels of assistance, such counselling and encouragement groups, are frequently constrained by judgment, expense, and accessibility. HAVN is a revolutionary smartphone software that aims to solve these problems by offering a secure, welcoming virtual community where people dealing with mental health concerns may interact, exchange stories, and obtain expert assistance.

HAVN presents an user-focused strategy for emotional assistance by fusing a useful feature set that promotes engagement with an empathy-driven design. Its primary features, which include user profiles and discussion boards, are designed to encourage participation while providing essential assistance. The application's dynamic home screen, which lets users monitor their mental health in immediate time and has daily emotion sliders and relaxing music controls, further improves the consumer's experience. This paper explores the impact that HAVN helps people feel less alone and more a part of the wider world by utilizing features like private messages, group-driven debates, and tailored help. These elements are frequently linked to mental health difficulties.

The subject matter emphasizes the revolutionary impact that online platforms may play in psychological care through a thorough examination of HAVN's design values, functionality, and eventual scalability. The study looks at how HAVN helps people take charge of their mental wellness in a secure and encouraging environment by bridging the distance between technological advancement and psychological health. It does this by providing an approachable and compassionate solution.

## 2. LITERATURE SURVEY

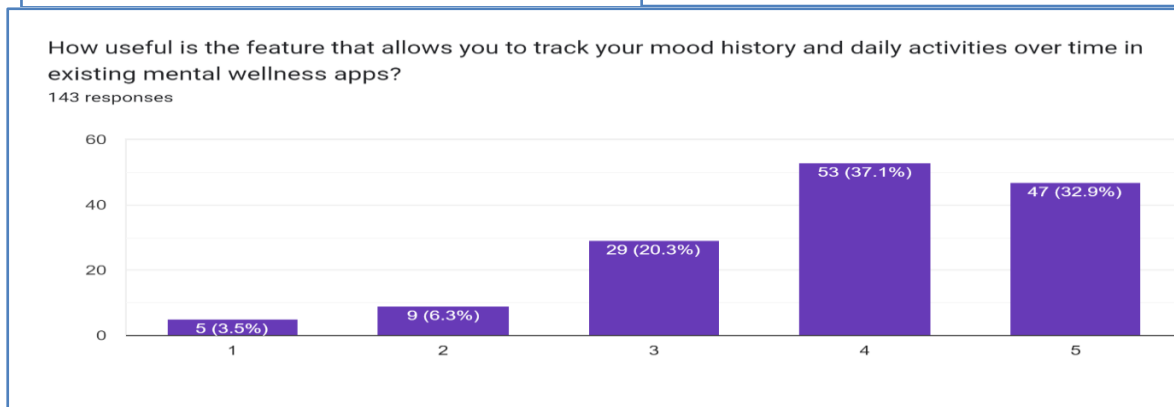
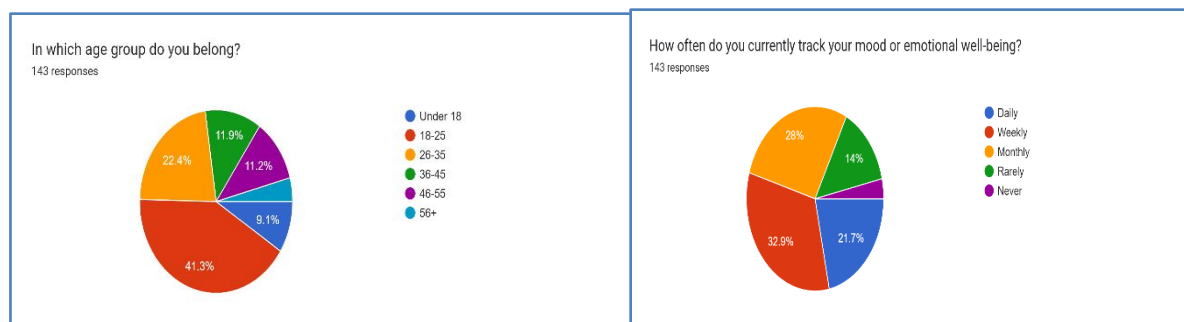
Mendis et al. [1] introduces a mobile mental health application that combines machine learning techniques to offer individualized mental health assistance. In order to increase user involvement while enhancing mental health outcomes, the article emphasizes the importance of applying based on artificial intelligence initiatives. Teles et al. [2] examines a range of smartphone apps intended to help with

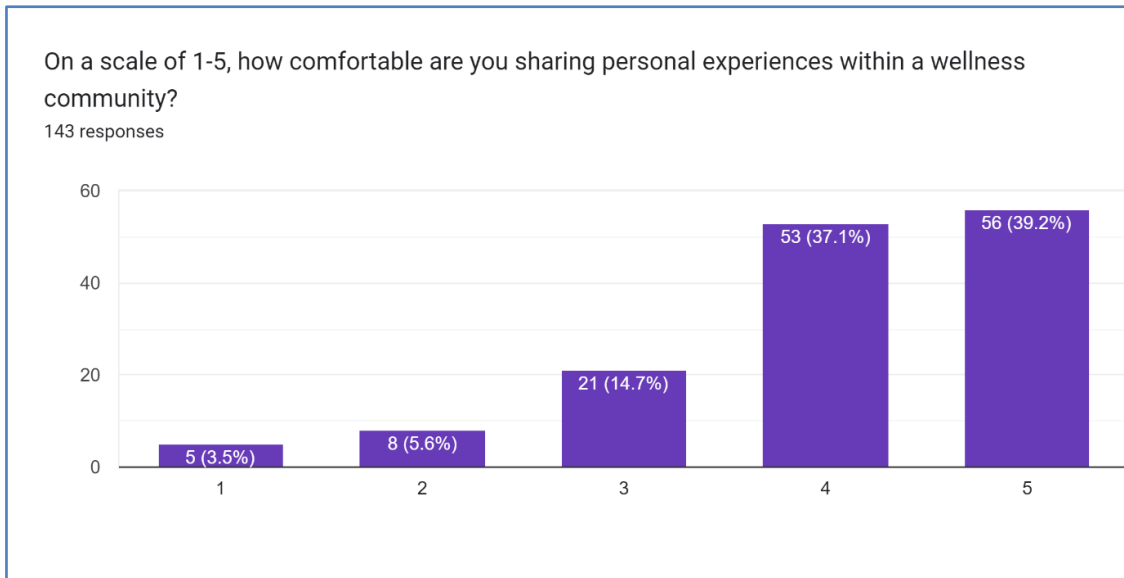
depression, evaluating their usefulness and potential to supplement conventional mental health treatments. Saini et al. [3] examine the way smartphone mental health apps balance user data security with app functionality, exploring the dual nature of these apps as either useful instruments for intervention or possible privacy invasions. Lim et al. [4] highlights "Companion," a smartphone software for mental health created especially for students that provides individualized support and guidance. The importance of student-centered design for mental health technologies is emphasized in the study. Goodings et al. [5] describes the idea of mental health applications, examines their emergence, and talks about user adoption patterns and their effects on mental health treatment. Li and Li [6] examines the advantages and disadvantages of mental health applications for mobile devices, especially as they relate to user engagement and the potential applications of mobile connectivity in the healthcare industry. Parikh et al. [7] analyzes the user interface of an app for mental health counselling offered by a university, emphasizing the value of a well-designed UI in fostering student welfare and enabling mental health support. Seraj et al. [8] investigates the guidelines and specifications for UI design in mobile educational mobile applications, providing information on how UI design ideas can be used to improve the user experience and usability of applications for mental health. Hasani et al. [9] study user-centered design techniques in online education interfaces, highlighting the applicability of these techniques in developing user-friendly mobile health application interfaces. Wills et al. [10] gives engineers a solid understanding of user interface design that they may utilize to enhance the technical elements of mental wellness mobile applications, guaranteeing their usability and functionality.

### 3. METHODOLOGY

HAVN focuses on building up the mental health and well-being of university students by offering a safe HAVN, supportive platform where students may share their experiences, seek guidance, and access valuable mental health resources. Most universities offer counselling programs, but finding the services can be made extremely difficult or lost within larger websites covering academics. With HAVN, the hope is to fill this gap in integrating mental wellness more readily into the lives of students.

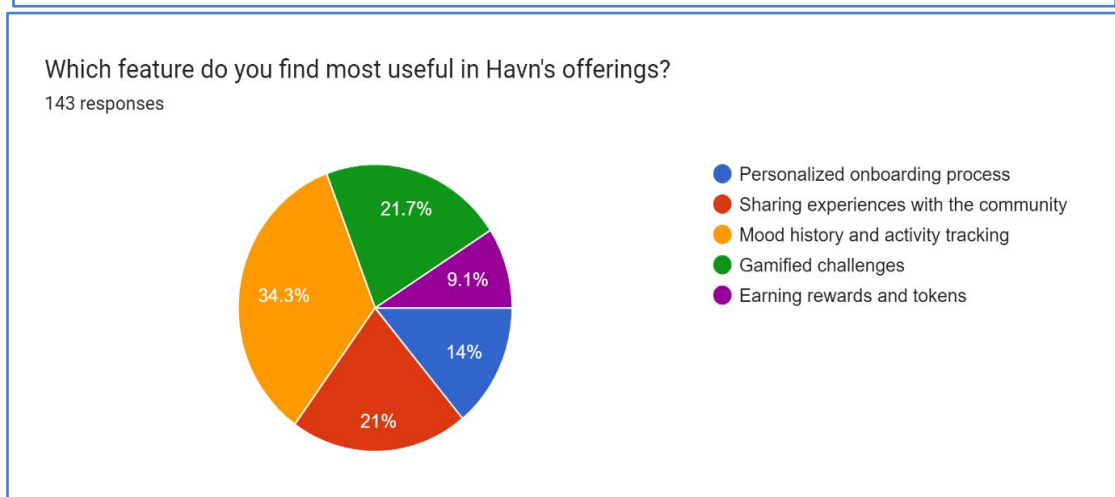
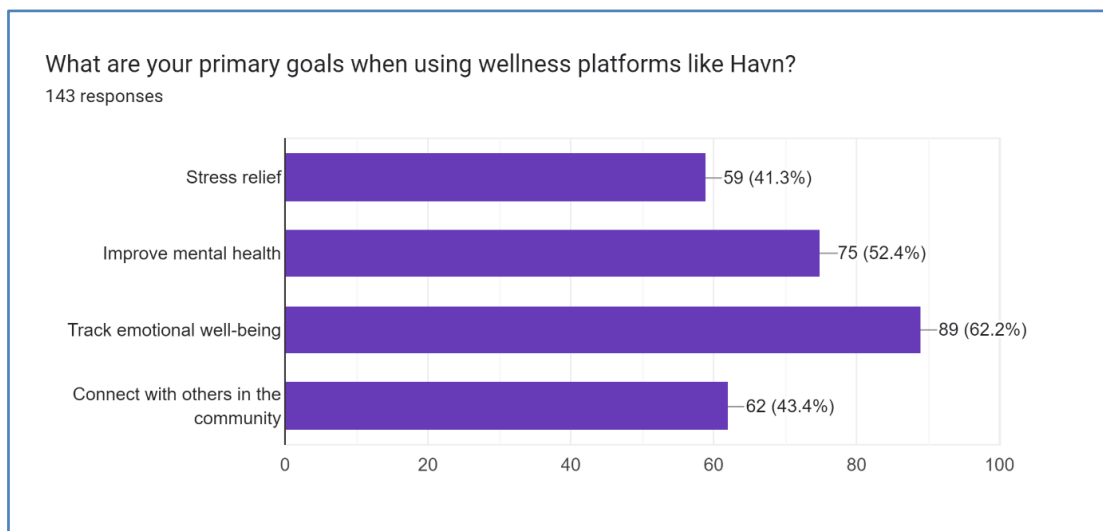
Havn provides a unique experience from the very beginning, with an automatic onboarding process using a simple questionnaire to tailor resources and support accordingly. It is a place to share feelings, experiences, and other de-stressing content with an empathetic community, almost like sharing stories on social media. The self-reflection feature of the system is engaged by the 'Grow' tab where users monitor mental wellness, review mood history and achieve a sense of accomplishment by completing various set challenges in a gamified fashion. Achieving such rewards as tokens and badges encourage users to continue their journey towards becoming healthy, productive people. And above all, Havn gives empowering relationships to young students-to converse with such like-minded peers who share common interests and also find the most important mental health resources for holistic well-being.

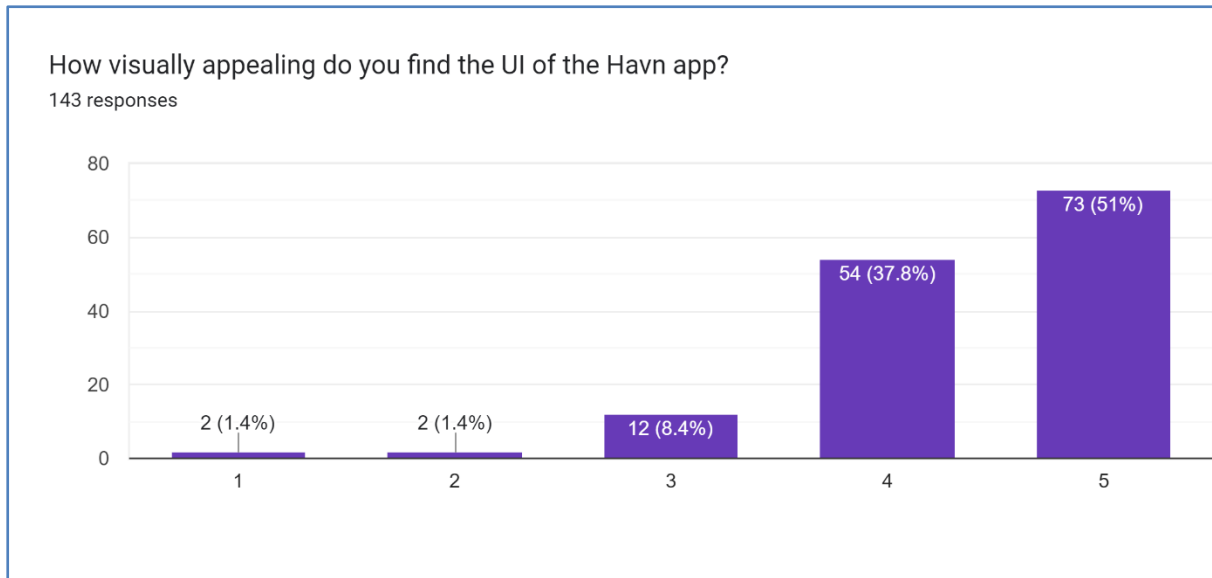




**Fig. 1.** Visual representation of statistics obtained as part of the initial questions of the Survey

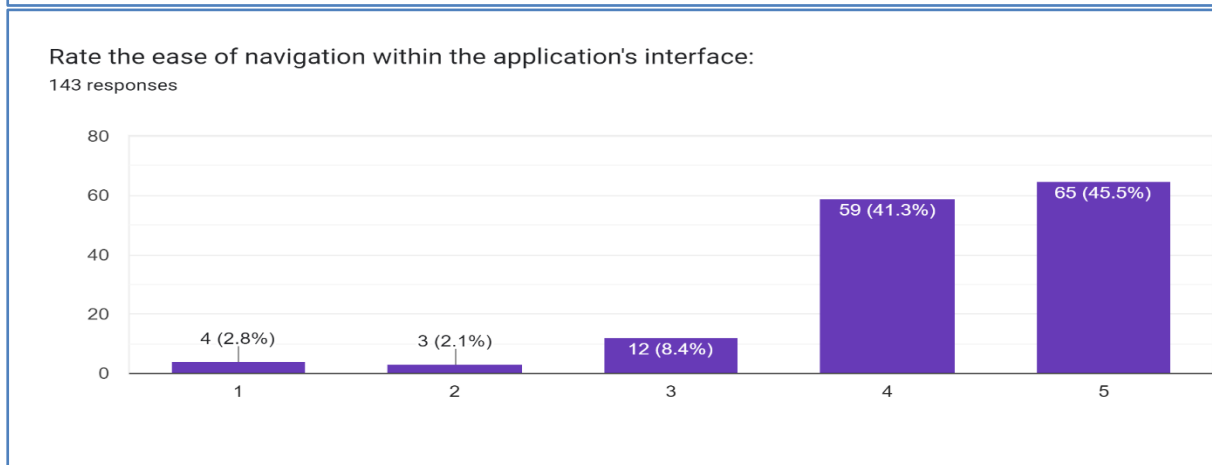
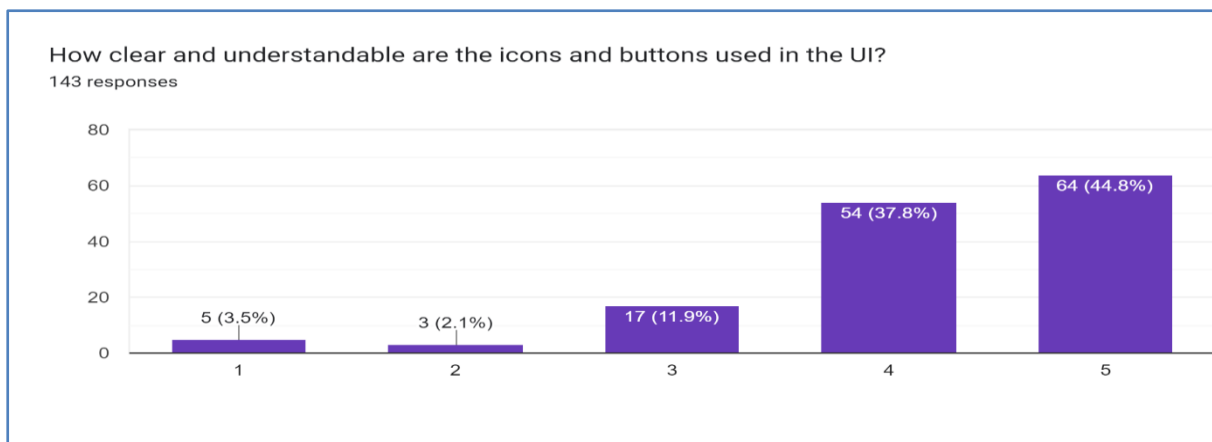
The statistics represented in Fig. 1 provide an insight into the age demographic of the people surveyed and the basic awareness of emotional health. Out of 143 responses, 96.6% of respondents indicated that they tracked their emotional health sources provided by the university. Around 70% of respondents responded positively for the usefulness of an app to track their emotional wellbeing.





**Fig. 2.** Graphical representation of the favorable reception of the “HAVN” app among students.

Data in Fig. 2 depicts that overall, people liked the UI of the proposed application. The majority, that is, 78.9% people believe that the experience the "Havn" application would provide concerning counselling experience would be much better than that of other applications or that of counselling through traditional ways. The most preferred feature voted by users is "Sharing experiences with the community" at 34.3%. That is followed by "Gamified challenges" at 21.7%, then "Mood history and activity tracking" at 21%. "Personalized onboarding process" and "Earning rewards and tokens" came in as less favored, with 14% and 9.1% votes respectively.



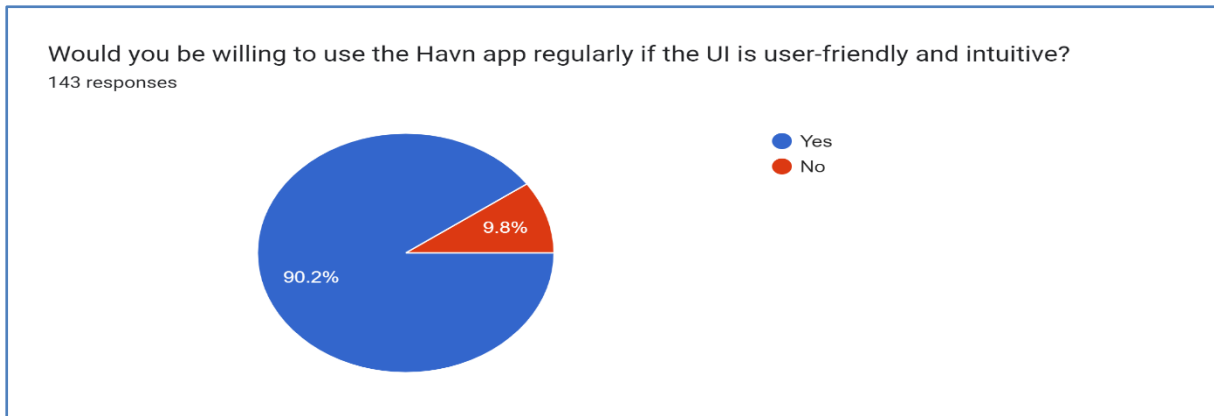


Fig 3: Overall Usefulness and usability of the “HAVN” App.

When the respondents were asked to rate the ease of the interface, 86.4% gave it a 4 or 5 which means the usability was very smooth and intuitive. Similarly, when asked on the clarity and understandability of the icons and buttons, 82.6% of the respondents rated it as highly satisfactorily. The willingness to use the Havn app frequently was profoundly affirmative, with respondents having a strong inclination to keep going with the app if the UI remains user-friendly and intuitive. Results from this app indicate that it is well designed, thereby striking a good chord with its users; however, it still has grounds for improvement in some sections for even higher appreciation.



Fig 4: Proposed application User Interface (UI)



Fig 5: Proposed application user interface for different pages

Fig. 4 and 5 depict the intuitive user interface of the "HAVN" application in terms of promoting mental health. There is a friendly launch page for the application and an almost straightforward login and registration process. Upon successful authentication, it leads them to their own personal home page containing activities that are available to help improve their mental health status. Its facilities include an intuitive user interface, a soothing playlist, quiz facilities and chat options with buddies. A user can listen to his favorite songs, share distressful moments with trusted friends and have a therapeutic conversation with registered counsellors. With greater awareness of mental health among social circles, Havn aims at drastically reducing the detrimental impact of mental health issues.

#### 4. CONCLUSION

The current study tackles the urgent need for readily available open platforms that assist those dealing with mental health issues. It highlights that although there is importance within conventional mental health assistance techniques, there is a great deal of room for change in the digital domain. With its user-centered design and empathy, HAVN is a big step forward in changing the way we think about behavioral health care in a connected world. By utilizing cutting-edge UI ideas and encouraging a feeling of belonging, HAVN aims to dispel the stigma associated with difficulties with mental health by giving users a secure environment in which to exchange stories and obtain essential information.

Fundamentally, HAVN uses features like mood monitoring, interaction, and immediate communication assistance to leverage the strength of technology to build deep connections. Via an exciting, interactive interface, these cutting-edge tactics seek to both promote psychological well-being and provide consumers with timely, individualized help. HAVN is a game-changing tool for mental health support because of its smooth combining of interfaces and forums for discussion, which furthermore guarantees that assistance is constantly there while needed.

The approaches presented in what follows offer an encouraging seeing of how innovations can be used to establish nurturing, supportive environments that enable people to prioritize and handle their mental health, as psychological wellness grows in recognition as a crucial aspect of overall well-being. All things considered, HAVN is a prime example of the cooperation between innovation and care, providing a window into the coming years of behavioral support through creative, user-centered solutions.

#### REFERENCES

- [1] E. S. Mendis, L. W. Kasthuriarachchi, H. P. K. L. Samarasinha, S. Kasthuriarachchi and S. Rajapaksa, "Mobile Application for Mental Health Using Machine Learning," 2022 4th International Conference on Advancements in Computing (ICAC), Colombo, Sri Lanka, 2022, pp. 387-392, doi: 10.1109/ICAC57685.2022.10025036.
- [2] A. Teles et al., "Mobile Mental Health: A Review of Applications for Depression Assistance," 2019 IEEE 32nd International Symposium on Computer-Based Medical Systems (CBMS), Cordoba, Spain, 2019, pp. 708-713, doi: 10.1109/CBMS.2019.00143.
- [3] S. Saini, D. Panjwani and N. Saxena, "Mobile Mental Health Apps: Alternative Intervention or Intrusion", 2022 19th Annual International Conference on Privacy, Security & Trust (PST), Fredericton, NB, Canada, 2022, pp. 1-11, doi: 10.1109/PST55820.2022.9851975.
- [4] O. O. Lim, D. H. Hareva, E. Steven, D. Sentausa and F. A. Abineno, "Companion: Mental Health Mobile Applications for Students," 2022 1st International Conference on Technology Innovation and Its Applications (ICTIIA), Tangerang, Indonesia, 2022, pp. 1-6, doi: 10.1109/ICTIIA54654.2022.9935882.
- [5] Goodings, L., Ellis, D., Tucker, I. (2024). *Introducing Mental Health Apps*. In: *Understanding Mental Health Apps*. Palgrave Studies in Cyberpsychology. Palgrave Macmillan, Cham. [https://doi.org/10.1007/978-3-031-53911-4\\_1](https://doi.org/10.1007/978-3-031-53911-4_1)
- [6] Li, E., Li, S. (2024). *Mental Health Mobile Applications: Opportunities and Challenges*. In: Wei, J., Margetis, G. (eds) *Human-Centered Design, Operation and Evaluation of Mobile Communications*. HCII 2024. Lecture Notes in Computer Science, vol 14737. Springer, Cham. [https://doi.org/10.1007/978-3-031-60458-4\\_6](https://doi.org/10.1007/978-3-031-60458-4_6)
- [7] Parikh, R., Nimonkar, H., Karra, S., Dalvi, A., Siddavatam, I. (2024). *Enhancing Student Welfare: A Comprehensive Analysis of the User Interface for a University Mental Health Counselling App*. In: Rajagopal, S., Popat, K., Meva, D., Bajaja, S. (eds) *Advancements in Smart Computing and Information Security*. ASCIS 2023. Communications in Computer and Information Science, vol 2040. Springer, Cham. [https://doi.org/10.1007/978-3-031-59107-5\\_13](https://doi.org/10.1007/978-3-031-59107-5_13)
- [8] M. Seraj and Chui Yin Wong, "A study of User Interface Design principles and requirements for developing a Mobile learning prototype," 2012 International Conference on Computer &

- Information Science (ICCIS), Kuala Lumpur, Malaysia, 2012, pp. 1014-1019, doi: 10.1109/ICCISci.2012.6297174.
- [9] L. M. Hasani, D. I. Sensuse, Kautsarina and R. R. Suryono, "User-Centered Design of e-Learning User Interfaces: A Survey of the Practices," 2020 3rd International Conference on Computer and Informatics Engineering (IC2IE), Yogyakarta, Indonesia, 2020, pp. 1-7, doi: 10.1109/IC2IE50715.2020.9274623.
- [10] C. E. Wills, "User interface design for the engineer," Proceedings of ELECTRO '94, Boston, MA, USA, 1994, pp. 415-419, doi: 10.1109/ELECTR.1994.472682.