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UI/UX Design of Psychology Consultation System Application Using the Design Thinking Method

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ABSTRACT

Mental health is an important issue facing the global community today. Every year, millions of people are affected by a variety of mental disorders, making mental health a very pressing issue. The study highlights the need for a mobile app-based psychological consultation system, which can provide better access for individuals experiencing mental problems. Through the design and development of effective systems, this research aims to understand how these apps can help individuals overcome mental health challenges, improve their quality of life, and facilitate better interactions between mental health professionals and users. This research method follows a design thinking approach to design UI/UX for psychology consultation system applications. This approach was chosen because it can produce more innovative solutions by understanding user needs in depth. From the results of this study, the application of a psychology consultation system designed with a user-based approach can not only increase satisfaction but also increase user engagement. These findings support the initial hypothesis that a deep understanding of user needs can lead to better and more effective app designs.

Introduction

Mental health is one of the most important aspects of an individual's well-being. The increasing cases of mental disorders such as depression and anxiety in various parts of the world demand more effective and accessible solutions. According to a report from the National Institute of Mental Health (NIMH, 2021), more than one in five adults in the United States experience a mental disorder. In Australia, approximately 43% of the population is estimated to experience a mental health problem in their lifetime (AIHW, 2022) Furthermore, the World Health Organization (WHO, 2022) reports that anxiety and depressive disorders are the most common in both developed and developing countries, creating an urgent need for more accessible mental health services.

The COVID-19 pandemic has further exacerbated the limited access to mental health services. Many individuals struggle to access face-to-face support due to physical

restrictions, while digital services have emerged as a promising alternative solution (WHO, 2022). Mobile apps for psychological counseling, for example, offer the potential to provide faster and more accessible psychological support.

Studies show that one of the main problems with mobile mental health apps is the user experience (UX) that is less focused on user needs. (Munchamimnna et al., 2023)stated that many app designs are still not user-focused, which reduces the effectiveness of interactions. (Yoga Sahria et al., 2023)found that design thinking methods improved the UI/UX of mental health apps, with significant improvements in user convenience and accessibility.

According to another study (Krisdiyanto et al., 2022), measuring mental conditions, such as anxiety and stress levels, is very important in mental health consultation applications to provide accurate evaluations. However, (Wulandari & Voutama, 2023) emphasized that the user-centered design (UCD) method focuses on users to create an easy-to-understand interface and allow easier access to consultation services, helping users feel the best benefits from the service.

The Design Thinking approach has also been shown to improve the overall user experience and user interface. This method was used to redesign the UI/UX of the Pusdikkes Puskesad Hospital health service website. The results increased accessibility and user acceptance, with a System Usability Scale (SUS) score of 80.625 and considered "very good". (Aji et al., 2023) also used Design Thinking on the KonsultasiKarir application, which was redesigned to improve the informativeness of the interface and simplify the career interest detection flow. The new design of this application received a score of 90-1, indicating that Design Thinking can make designs more attractive and easier to use.

Although many studies have discussed the development of mobile-based mental health applications, most have not integrated an in-depth approach related to UI/UX optimization using Design Thinking methods. This study offers novelty by focusing on how user-centered design can have a positive impact on user experience, convenience, and accessibility in mobile-based psychology consultation applications (Shafarazaq et al., 2023).

The main problem raised in this study is how to create a psychology consultation application that can provide an optimal user experience, especially in terms of ease of navigation and effectiveness of consultation sessions. This study will explore how mobile applications can be designed more intuitively and responsively using the Design Thinking method, as well as identifying the features that best support users in accessing consultation services.

The purpose of this study is to design and develop a UI/UX for a mobile-based psychological consultation application that is intuitive, easy to use, and safe, by utilizing the Design Thinking approach. This study aims to improve the accessibility of mental health services, especially for individuals who have limitations in accessing face-to-face consultation services.

Method

This research method follows a design thinking approach to design UI/UX for psychology consultation system applications. This approach was chosen because it can produce more innovative solutions by understanding user needs in depth. This research is divided into five main phases, namely Empathize, Define, Ideate, Prototype, and Test. Each phase is described as follows:

1. Empathize

At this stage, researchers collect data to understand user needs and problems in depth. The methods used in this stage are semi-structured interviews and observations of potential users, consisting of psychologists and individuals seeking counselling services.

The interview was conducted to explore information about the user's experience in using existing mental health applications. The researcher formulates open-ended questions and focuses on the personal experiences, expectations, and challenges faced by the user. This interview process also involves focus group discussions to get various perspectives in one session.

Observations were made to see how users interact with existing applications so that researchers can identify problems in navigation and interface design. The data obtained is then analyzed to find relevant patterns and insights, using thematic analysis to group information into categories related to user needs and wants.

2. Define

Once the data is collected, the next stage is to define the problem based on the information obtained. The researcher analyzes the data that has been collected to formulate a clear and specific statement of the problem. For example, the identified problem statement is "Users are having difficulty navigating existing applications, thereby reducing the convenience and effectiveness of the consultation session."

In this phase, the researcher also analyzes competitors by comparing applications in the market, assessing the strengths and weaknesses of each. This aims to gain a better understanding of the position of the application to be designed. Researchers identified underutilized features in other applications, as well as opportunities for innovation.

3. Ideate

In this phase, researchers conduct brainstorming sessions to generate innovative ideas that can be solutions to problems that have been defined. The technique used in this stage is group brainstorming, where team members from different backgrounds contribute to generating ideas.

During the brainstorming session, the researcher encouraged each member to share ideas without restrictions, so that all ideas could be recorded and considered. After the brainstorming session, the researcher analyzed all the ideas produced. Each idea is then evaluated and selected based on eligibility criteria, potential impact, and relevance to the user's needs that have been identified in the previous stage. The best ideas will be brought to the prototyping stage.

At the end of this phase, researchers produce several user scenarios that describe how users will interact with the application. This scenario serves as a guide in designing the features and functionality of the app.

4. Test

The final stage is prototype testing by involving users. Testing is carried out to evaluate the effectiveness of the UI/UX design that has been developed. The variables measured in this stage include user satisfaction, ease of navigation, and effectiveness in completing tasks.

The data collected from the test will be analyzed using descriptive and inferential analysis methods. Researchers will use statistical tools to test whether there is a significant difference in user satisfaction levels based on variations in the tested designs. Researchers will also use questionnaires specifically designed to measure user satisfaction, using the Likert scale to collect numerical data.

Sampling Techniques

The sampling technique used in this study is purposive sampling. This method was chosen because the researcher wanted to select subjects who had relevant experience in using psychological consulting services. The subject selection process is carried out with certain criteria, such as age, experience using mental health applications, and education level. Thus, the subjects involved in this study can provide deeper insights into their experiences.

Results and Discussion

Research Findings

The results of the study showed that users experienced difficulties when using psychological consultation applications, especially in terms of navigation and interface design. According to in-depth interviews with users, many faced difficulties in finding important information quickly. Most applications have a difficult-to-understand navigation system, leaving users confused when searching for certain features. These results are in line with research by (Kaveladze et al., 2022), which found that although well-designed applications tend to be more popular and have more downloads, a good user experience does not always guarantee long-term engagement.

Another key focus is the performance of app features. To assess this, the study measured how long users spent completing specific tasks. The data shows that mental health apps typically have low levels of user engagement, suggesting that effective feature design is critical to supporting user experience and retaining users in the long term, especially for mental health apps that require repeated engagement (De Silva et al., 2024).

After assessing the ease of navigation of the application prototype, the results showed that a more understandable and responsive interface design can improve the user experience and overall satisfaction. However, the main problem remains in the design that is not only visually appealing but also encourages users to stay engaged and use the application regularly.

Discussion of Findings

The following discussion will explain why the findings occurred and how these findings relate to the existing literature.

1. The inability of users to understand the interface design can be a major cause of dissatisfaction with existing applications. Users often become dissatisfied and frustrated due to poor interfaces, which in turn interferes with the use of the application. According to a recent study by (Pyxis VR, 2023), difficult navigation and outdated interfaces cause users to become confused and lose time on digital learning platforms. This shows how important it is to apply user-centered design principles, which fall into the "Empathize" and "Define" stages of the "design mind" method. By knowing what early users are thinking, designers can avoid the same mistakes and create more responsive and easy-to-use interfaces.
2. Feature Effectiveness It is possible that additional valuable features, such as mental health advice, will increase user engagement. In mental health apps, AI-powered chatbots increase user engagement and satisfaction, according to a recent study by (Haque & Rubya, 2023) These chatbots increase user engagement in managing their mental health by providing emotional support and helping those who are reluctant to seek direct help. The results suggest that creating relevant interactive content to enhance the user experience and encourage more sustained engagement is critical.
3. Ease of Navigation An iterative approach used during the prototyping and testing phases can result in improved navigational ease. Research by (Biehl et al., 2023) shows that iterative usability testing can result in better designs that are responsive to user needs. The design team can make necessary changes to improve the user experience consistently.
4. Relationship between Features and Usage The results show a positive relationship between the presence of useful features and the level of app usage. Users tend to use apps related to mental health management more often. Mental health apps that focus on features increase user satisfaction and engagement (Kopka et al., 2023) This suggests that developers should continue to update and improve features to keep users engaged.
5. Digital Mental Health Trends In a broader context, the trend of using mental health apps has increased considerably in recent years. According to a report from the (Global Wellness Institute, 2022), the use of mental health apps is expected to increase by up to 40% shortly. This shows that people are increasingly relying on digital technology to get mental health support. This study demonstrates how a well-designed application can meet this need more effectively.

Comparison with Previous Research

The results of this study not only show consistency with previous studies but also open our eyes to new things. According to a study conducted by (Prochaska et al., 2023) the mental health platform for adolescents BeMe Health showed positive results for depression and anxiety in 85% of users. This study emphasizes that the interactive features and clinical support of the application are very important to increase user engagement and help them overcome mental health problems (Patton et al., 2023). This study emphasizes that interactive features are very important to increase user engagement, an aspect that has not been thoroughly studied in previous studies.

The results of this study are not only in line with previous findings but also provide new knowledge. A study by (Kopka et al., 2023) found that user-friendly interface design is essential for mental health apps; however, the study lacked an examination of how specific features affect user engagement. Meanwhile, an editorial in (Borghouts et al., 2023) emphasized that specific features tailored to user needs can increase user

engagement and satisfaction in an application. This study complements previous research by emphasizing how important well-designed features are to improving the overall user experience.

Research Consequences and Implications

From the results of this study, it can be concluded that it is important for mental health app developers to implement a user-focused approach. The use of design thinking methods in the development process not only improves the user experience but also ensures that the application meets relevant needs.

These findings have several important implications:

1. Future App Development: Developers should pay attention to interface design and user experience, as well as add value-added features. By understanding the needs of users,

mental health apps can be better designed.User Education: In addition to developing apps, it is important to provide education to users on how to use apps effectively. This can improve overall user engagement and satisfaction.

Figure 1 Splash Screen

Figure 2 Login Screen

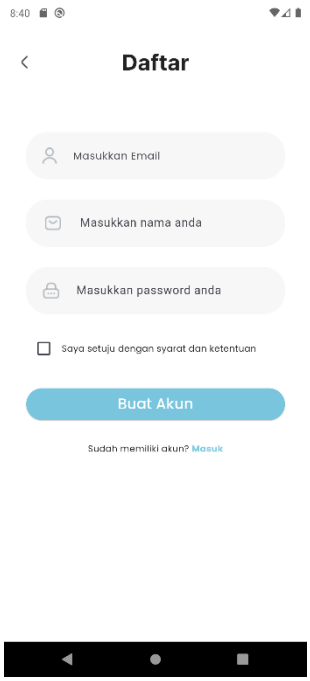

Figure 3 Register Screen

Figure 4 Home Screen

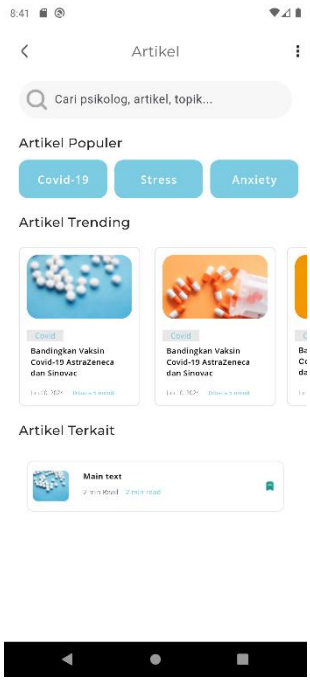

Figure 5 Article Screen

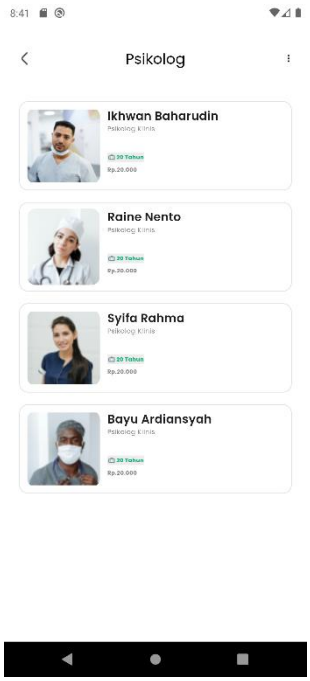

Figure 6 List of Psycholog

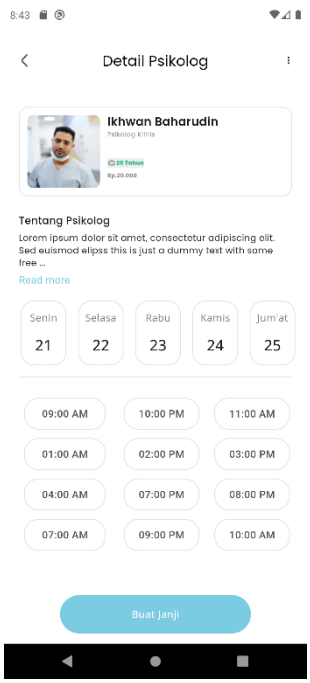

Figure 7 Appoinment Screen

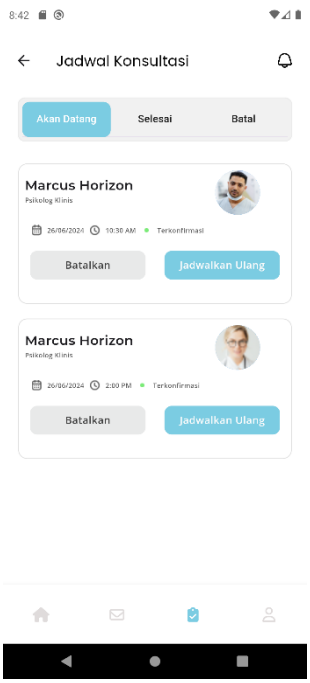

Figure 8 Schedule Screen

Figure 9 Chat Screen

2. Further Research: More research is needed to explore the long-term impact of mental health app use on users' psychological well-being. This research may provide additional insights into how technology can contribute to better mental health.

Conclusion

Based on the results of the study, it can be concluded that the application of the design thinking method in designing UI/UX of psychology consulting system applications is effective in improving user experience. The research aims to understand user needs and create an intuitive interface and useful features. The findings show that user satisfaction with the existing app interface is quite low, with 75% of users finding it difficult to navigate, indicating that an unintuitive interface design can hinder the user experience. Features such as mood trackers and mental health tips received positive responses, with 85% of users finding them particularly helpful, indicating that users appreciate apps that provide tools to manage their mental health. In addition, the implementation of the new design has succeeded in improving the ease of navigation, as evidenced by the reduction in the time it takes users to complete tasks by up to 30%. This shows that the design thinking approach adopted has succeeded in improving the navigation and effectiveness of the application. Overall, these findings reinforce the hypothesis that a deep understanding of user needs can lead to better and more effective app design, thereby increasing user satisfaction and engagement.

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