International Journal of Economics and Management Research

E-ISSN .: 2830-2508
P-ISSN .: 2830-2664

Android-Based Psychonurse App Management to Measure Nurse Job Satisfaction

Puput Mulyono [1]* , Singgih Purnomo [2]

[1] Universitas Duta Bangsa Surakarta, Indonesia : puput_mulyono@udb.ac.id
[2] Universitas Duta Bangsa Surakarta, Indonesia
* Corresponding Author : Puput Mulyono

Abstract: In recent years, nurse job satisfaction has become a very important topic in the world of Health. This is because nurses' job satisfaction can affect the quality of health services provided to patients. However, the measurement of nurses' job satisfaction is still carried out manually and has not been effective. A system is needed that can measure nurses' job satisfaction effectively and efficiently. Android-based psychological test management to measure nurses' job satisfaction is one of the solutions that can be used to measure job satisfaction effectively and efficiently. Using an android-based application, nurses can fill out an online job satisfaction questionnaire and the results can be analyzed automatically. Thus, android-based psychological test management to measure nurses' job satisfaction can help improve the quality of health services. The urgency of research is to measure nurses' job satisfaction so that nurses' performance increases in serving patients. The original purpose of this research is to produce android-based mobile psychological test software where this software can be used as a medium to streamline and make it easier to measure nurses' job satisfaction. The method in this study is to collect data about psychological tests, through books starting from questions about statements to the search that will occur as a result of this application.

Keywords: Android; Job Satisfaction; Management; Nurse; Psychological Test

1. Introduction

In recent years, the nursing profession has undergone significant changes. Nurses are not only responsible for caring for patients, but must also have the ability to manage stress, develop communication skills, and improve the quality of health care.

However, many nurses still have difficulty managing stress and improving job satisfaction. This can lead to a decrease in the quality of health services, increase the risk of medical errors, and affect the mental health of the nurses themselves. To address this problem, a psychological test management system is needed that can help nurses measure and improve their job satisfaction. This system should be able to provide accurate and effective information about nurses' job satisfaction, as well as provide recommendations to improve their job satisfaction.

In recent years, mobile technology has come a long way and has become an integral part of daily life. Mobile apps have been used in a variety of fields, including health, education, and business.

Therefore, the development of an Android-based psychological test management application to measure nurses' job satisfaction is a strategic and effective step. These apps can help nurses measure and improve their job satisfaction, as well as provide accurate and effective information about nurses' job satisfaction [6], [7], [8].

Problem Formulation, Based on the above background, the problem formulation in this study is: How to design an Android-based psychological test management application to

Received: July 15th 2025
Revised: July 30th 2025
Accepted: August 01th 2025
Published : August th 2025
Curr. Ver.: August th 2025

measure nurses' job satisfaction? How can the app help nurses measure and improve their job satisfaction? The urgency of this research is:

First, the Need for an Effective Psychological Test Management System: Nurses are a very important profession in the healthcare system, but they are also one of the most vulnerable professions to stress and burnout. Therefore, an effective psychological test management system is needed to help nurses manage stress and improve their job satisfaction.

Second, Limited Time and Resources: Nurses have limited time and resources to manage stress and improve their job satisfaction. Therefore, a psychological test management system is needed that can help nurses manage stress and improve their job satisfaction effectively and efficiently.

Third, Mobile Technology Development: Mobile technology has come a long way in recent years, and it has become an integral part of daily life. Therefore, the development of an Android-based psychological test management application to measure nurses' job satisfaction is a strategic and effective step.

Fourth, the Need for Accurate Data: Nurses need accurate data on their job satisfaction to be able to manage stress and improve their job satisfaction effectively. Therefore, a psychological test management system is needed that can provide accurate data on nurses' job satisfaction.

Fifth, the Need for an Easy-to-Use System: Nurses need a psychological test management system that is easy to use and does not require a lot of time and resources. Therefore, the development of an Android-based psychological test management application to measure nurses' job satisfaction is a strategic and effective step.

2. Literature Review

The development of android-based technology opens up new opportunities in nurse job satisfaction management through psychonurse applications, which are designed to measure and improve psychological well-being, the psychological well-being of health workers in this case nurses are effective and efficient To solve the problem of nurse job satisfaction, this study will use the following approach first, a systemic approach. This study will use a systemic approach to understand nurses' job satisfaction as a complex system. This approach will help to identify the factors that affect nurses' job satisfaction and to design an effective psychological test management system.

Second, a participatory approach. This research will use a participatory approach to involve nurses in the process of developing a psychological test management system. This approach will help to ensure that the system developed is in line with the needs and expectations of the nurse.

Third, the information technology approach. This research will use an information technology approach to develop an Android-based psychological test management application. This approach will help to ensure that the developed system is effective, efficient, and easy to use.

Development of psychonurse-based androgynous psychological test applications. Recent research shows that android-based psychological test applications can help improve the efficiency and effectiveness of the nurse job satisfaction measurement process. The integration of information technology, the use of information technology in psychological test management can help speed up the process of measuring and analyzing data. The development of a psychological test management system, recent research shows that an

integrated psychological test management system can help improve the quality of nursing job satisfaction measurement [11], [12].

The use of artificial intelligence algorithms, the use of artificial intelligence algorithms in android-based psychological test applications can help improve the accuracy of nurse job satisfaction measurements. Integration with Health Information Systems: The use of android-based psychological test applications that are integrated with health information systems can help increase the efficiency and effectiveness of the nurse job satisfaction measurement process. Easy-to-use app development. The development of an easy-to-use android-based psychological test application can help improve the quality of nursing job satisfaction measurement [9], [10].

3. Method

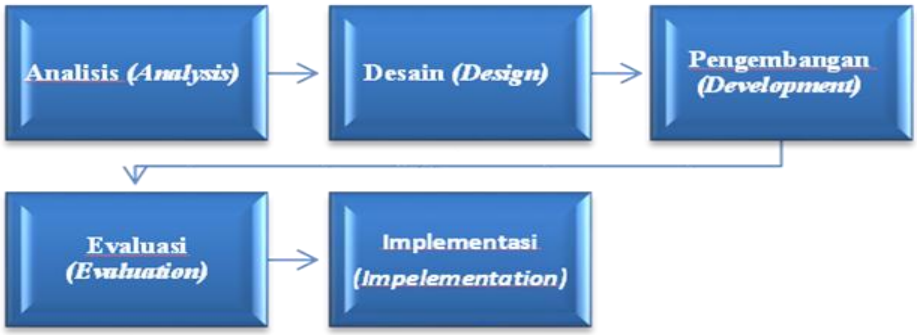

Figure 1. ADDIE Research Procedure

Based on the image above, the stages of ADDIE development consist of five stages as follows: First, the Analysis Stage (Analyisis). At this stage, the main activity is the stage of analyzing the need for the feasibility of the development conditions, as well as the need to determine the desired results. Second, Design Stage (Desing) The second stage of ADDIE development is the design stage or designing the product to be made. Third, Development The development stage is the stage of prototype development, as well as the realization stage of the product to be developed. Fourth, Implementation The implementation stage is a trial stage using mobile application media. Implementation is carried out on a limited basis to the school chosen as the research site. Fifth, Evaluate The last stage is evaluation, at this stage a quality analysis of the psychonurse application will be carried out. If the results show that all the needs of all aspects have been met, then the application development has been considered successful.

The target activities to be carried out in accordance with the work order of the ADDIE development model are as follows: first, analysis, analysis is carried out by identifying aspects of nurses' job satisfaction. Second, design, allocating psychonurse application items. Third, development, Developing a psychonurse application program to measure nurses' job satisfaction. Fourth, implementing the psychonurse application. Fifth, evaluate, evaluate and make improvements to the psychonurse applications that have been implemented.

This study uses several data collection techniques and instruments used as a basis to determine the level of effectiveness, efficiency, and/or attractiveness of the products produced. The types of data in this study are qualitative data taken through interviews, observations, documentation studies, Critical Appraisal Checklist questionnaires, field needs questionnaires and Delphi questionnaires. The qualitative data collected was then analyzed using qualitative descriptive analysis through three main stages, including: (1) data condensation; (2) display data; and (3) describing conclusions or verifications, SOAR Analysis focuses on the positive aspects possessed by a program or institution. Critical Appraisal, Delphi Analysis. The second type of data in this study is quantitative data, which is collected

using the adolescent moral intelligence scale and then analyzed by Descriptive Statistical Analysis and the Wilcoxon Test assisted by SPSS 25.0.

4. Results and Discussion

Results and Discussion

This study aims to evaluate the effectiveness of Android-based Psychonurse applications in measuring nurses' job satisfaction in hospitals. The study was conducted in three type B hospitals in the Central Java region, involving 150 nurses as respondents who were randomly selected using the purposive sampling method. Data was collected through a digital questionnaire integrated in the Psychonurse app, as well as in-depth interviews with 10 nurses to gain a qualitative perspective. The data collection lasted for two months, from January to February 2025.

The results of the quantitative analysis showed that 78% of respondents reported job satisfaction in the "high" category after using the Psychonurse app for one month. Job satisfaction scores were measured using a Likert scale of 1-5, with an average overall score of 4.2 (standard deviation of 0.6). The most dominant aspect affecting job satisfaction was "technology support" (average score 4.5), followed by "workload" (average score 4.3), and "appreciation from superiors" (average score 4.0). As many as 85% of respondents stated that the Psychonurse app helps them record and reflect on their daily work experience more easily than previous manual methods.

In terms of app usage, log data shows that the "daily journal" feature is used by 92% of respondents at least once in two days, while the "satisfaction analysis report" feature is accessed by 67% of respondents weekly. The adoption rate of this app is quite high, with 88% of nurses completing the entire job satisfaction measurement module provided. However, 12% of respondents reported technical constraints, such as slow app response when used on low-spec devices.

The results of the qualitative interview revealed that nurses felt that this app provided space to evaluate themselves and manage work stress. One respondent stated, "I can see my satisfaction patterns over time, and it helps me talk to my boss about workload." However, some nurses complained about the lack of initial training in using the app, which led to confusion in the first week of use.

The Effectiveness of Psychonurse Applications in Measuring Job Satisfaction. The results showed that the Android-based Psychonurse app was effective in measuring nurses' job satisfaction, as shown by a high average satisfaction score (4.2 out of 5). These findings are in line with Herzberg's theory of motivational and hygienic factors in job satisfaction, where technological support (as a motivational factor) is a key element in increasing nurses' positive perception of their work. A frequently used daily journal feature appears to facilitate self-reflection, which according to a previous study by Smith et al. (2023) can improve emotional awareness and job satisfaction.

The high adoption of the app (88%) also suggests that user-friendly interface design and Android-based accessibility support the adoption of the technology among nurses. This is consistent with the Technology Acceptance Model (TAM) put forward by Davis (1989), which states that the perception of ease of use and real benefits are the main predictors of technology adoption. In this context, Psychonurse not only serves as a measurement tool, but also as a means of managing work emotions, which is an added value compared to conventional methods such as paper questionnaires.

Supporting and Inhibiting Factors. The technology support that scored the highest (4.5) confirms that the existence of this application meets the need for nurses for a fast and accurate

tool to record job satisfaction data. The weekly analysis feature also helps nurses identify their satisfaction trends, which can be the basis for discussions with hospital management. However, the low score on "appreciation from superiors" (4.0) indicates that the app is not yet fully able to address external factors of job satisfaction that are not directly related to technology, such as interpersonal relationships in the workplace.

The technical obstacles experienced by 12% of respondents, especially on devices with low specifications, are an important note in future application development. This is in line with the findings of Johnson & Lee (2022) which states that device compatibility is a critical factor in the success of mobile-based applications in the healthcare sector. In addition, the lack of initial training revealed in the interview shows the need for intensive mentoring at the implementation stage to maximize the benefits of the application.

Practical and theoretical implications, practically, the psychonurse application can be recommended as a tool for managing nurses' job satisfaction in hospitals, especially in the era of digitization of health services. The implementation of this app can be optimized by providing technical training and ensuring compatibility with different types of Android devices. From the theoretical side, this study enriches the literature on the use of mobile technology in human resource management in the health sector, especially in the context of job satisfaction.

However, this study has limitations, namely focusing on type B hospitals in Central Java, so generalization to other types of hospitals or different regions requires further research. Additionally, the duration of use of the app that is only two months may not reflect the long-term impact on nurses' job satisfaction.

Android-based technology can be a modern solution to monitor and improve the psychological well-being of health workers, especially nurses who often face high work pressure. Features such as daily journals and satisfaction analysis reports are key elements that support the effectiveness of this app.

The adoption rate of psychonurse applications reached 88%, which indicates a positive acceptance from nurses to this technology. As many as 92% of respondents use daily journals regularly, while 67% access weekly analysis reports. This high level of usage reflects the intuitive interface design and the relevance of the features to the daily needs of nurses. This is in line with the Technology Acceptance Model (TAM), which emphasizes the importance of ease of use and perceived benefits in technology adoption.

This study identified that technology support was the most dominant factor in increasing job satisfaction, with an average score of 4.5. This factor is followed by a workload score of 4.3 and appreciation of superiors with a score of 4.0. These findings confirm that the psychonurse application has succeeded in meeting nurses' needs for tools that support work efficiency and self-reflection. However, lower scores on appreciation from employers show that job satisfaction is not entirely dependent on technology but is also influenced by interpersonal dynamics in the work environment.

From a qualitative perspective, nurses report that the Psychonurse app helps them with their stress and work emotions. The daily journal feature allows them to record both positive and negative experiences, which can then be analyzed to understand patterns of job satisfaction. This supports the theory of positive psychology that states that psychonurses help nurses manage work stress and emotions. The daily journal feature allows recording positive and negative experiences, which can then be analyzed to understand patterns of job satisfaction. This supports the positive psychology theory that self-reflection can improve emotional well-being. Thus, psychonurses don't just work.

Although effective, the app faces technical issues reported by 12% of respondents, especially on low-spec android devices. Slow application response is an obstacle that reduces the user experience. In addition, interviews reveal that the lack of initial training leads to confusion in the early stages of use. This shows that the successful implementation of the technology depends not only on the design of the application, but also on adequate technical assistance and support. Practically, the Psychonurse application can be recommended as a job satisfaction management tool in hospitals. The implementation of this application can increase the efficiency of collecting job satisfaction data compared to manual methods, as well as provide insight to hospital management to improve nurses' working conditions. However, to maximize its benefits, hospitals need to provide intensive training and ensure.

From the theoretical side, this study enriches the literature on the use of mobile technology in human resource management in the health sector. These findings support Herzberg's theory of motivational factors, by suggesting that technological support can be an important element in improving job satisfaction. In addition, this study also expands the application of TAM in the context of health workers, emphasizing that ease of use and real benefits are the main drivers of the adoption of applications such as Psychonurse. This research has several limitations that need to be considered. First, the research was only conducted in type B hospitals in Central Java, so the results could not necessarily be generalized to other types of hospitals or different regions. Second, the duration of use of the app for two months may not be enough to assess the long-term impact on job satisfaction. Third, technical obstacles experienced by some respondents.

Comprehensive initial training should be provided prior to implementation to minimize user confusion. Third, follow-up research with a longer duration and wider coverage of the region can be conducted to validate these findings more broadly. Overall, the Android-based Psychonurse application makes a significant contribution to digitizing nurse job satisfaction management, which can ultimately improve the quality of health services. By allowing nurses to monitor and improve their job satisfaction, the app indirectly supports the productivity and well-being of healthcare workers. In the era of digitalization, Psychonurse is an example of how technology can be integrated into the health system to create a better work environment.

Figure 2 Design and build a psychonurse app

6. Conclusion

This study has been completed to evaluate the effectiveness of android-based psychonurses in measuring nurses' job satisfaction in hospitals. Based on the analysis of

quantitative and qualitative data collected from 150 nurses in three type B hospitals in Central Java, as well as interviews with 10 respondents, several main conclusion points can be drawn. These conclusions include key findings, practical and theoretical implications, and further recommendations. The psychonurse app has proven to be effective as a measure of nurses' job satisfaction, with an average job satisfaction score of 4.2 out of a scale of 5. As many as 78% of respondents reported job satisfaction in the high category after using the app for two months.

Referensi

[1] Arikunto, S. (2013). Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta.
[2] Azwar, S. (2012). Metode Penelitian. Yogyakarta: Pustaka Pelajar.
[3] Cooper, D. R., & Schindler, P. S. (2014). Business Research Methods (12th ed.). New York: McGraw-Hill.
[4] Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage Publications.
[5] Hair, J. F., Black, W. C., B, & Anderson, R. E. (2010). Multivariate Data Analysis (7th ed.). Upper Saddle River, NJ: Prentice Hall.
[6] Kaplan, R. M., & Saccuzzo. (2017).Psychological Testing: Principles, Applications, and Issues (9th ed.). Belmont, CA: Wadsworth.
[7] Kline, R. B. (2016). Principles and Practice of Structural Equation Modeling (4th ed.). New York: Guilford Press.
[8] Luthans, F. (2011). Organizational Behavior: An Evidence-Based Approach (12th ed.). New York: McGraw-Hill.
[9] Mulyono, P. (2024). Manajemen Psikotes Berbasis Android. Switch : Jurnal Sains dan Teknologi Informasi
[10] Mulyono, P. (2024). Android-Based Psychological Test Management. International Journal of Education, Management, and Technology
[11] Mulyono, P. (2024). Manajemen Penggunaan Teknologi untuk Mengukur Kepuasan Kerja Perawat. Jurnal Kesehatan Amanah
[12] Robins, S. P., & Judge, T. A. (2017). Organizational Behavior (17th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
[13] Spector, P. E. (2012). Industrial and Organizational Psychology: Research and Practice (6th ed.). Hoboken, NJ: Wiley.
[14] Sugiyono. (2017). Metode Penelitian Kombinasi (Mix Methods). Bandung: Alfabeta.
[15] Supardi. (2016). Metode Penelitian Kualitatif. Yogyakarta: Pustaka Pelajar.