Indonesian Journal of Global Health Research
Volume 6 Number S6, December 2024
e-ISSN 2715-1972; p-ISSN 2714-9749
http://jurnal.globalhealthsciencegroup.com/index.php/IJGHR

EVALUATION OF THE USE OF ESS BAR (ENTEBE SMART SYSTEM) BASED ON ANDROID AS A SAJIWA PROGRAM SCREENING APPLICATION

Nur Arifatus Sholihah[1]*, Harmili[2], Luh Putu Sri Yuliastuti[3]
[1]Bachelor of Public Health Study Program, Sekolah Tinggi Ilmu Kesehatan Griya Husada Sumbawa, Jl. Kebayan, Brang Biji, Sumbawa, Sumbawa, Nusa Tenggara Barat 84312, Indonesia
[2]Bachelor of Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan Griya Husada Sumbawa, Jl. Kebayan, Brang Biji, Sumbawa, Sumbawa, Nusa Tenggara Barat 84312, Indonesia
[3]Diploma 3 Midwifery Study Program, Sekolah Tinggi Ilmu Kesehatan Griya Husada Sumbawa, Jl. Kebayan, Brang Biji, Sumbawa, Sumbawa, Nusa Tenggara Barat 84312, Indonesia
*arifatus93@gmail.com

ABSTRACT
Mental health problems are currently considered a serious problem that requires comprehensive treatment. In this context, the development of ESS-BAR applications has become an interesting and important research topic. The aim of this research is to evaluate the use of the ESS-BAR application as an appropriate SAJIWA (Mental Health Awareness) Program screening application both in terms of measurement content and accuracy values The method used is evaluation of Android-based application development, which is then measured for accuracy and program evaluation using the End User Computing Satisfaction (EUCS) method. This research involved 10 key informants to obtain an evaluation of the application being developed. The research findings show that the evaluation of the Black Box testing of the application being developed went according to the evaluation checklist sheet. Then, testing the accuracy of mental health screening results involving 10 key informants showed that 75% of respondents strongly agreed that the application could be used as a screening measure for someone's mental health. However, in developing ESS-BAR, further evaluation still needs to be carried out regarding personalization and adjustment of user data Conclusions So further development is still needed. The benefits of this program are expected to increase the use of technology in providing mental health services so that follow-up can be done to receive counseling services and subsequent intervention plans according to the problems faced.

Keywords: evaluation; ESS-BAR; sajiwa; screening

How to cite (in APA style)
Sholihah, N. A., Harmili, H., & Yuliastuti, L. P. S. (2024). Evaluation of the Use of ESS BAR (Entebe Smart System) Based on Android as A Sajiwa Program Screening Application. Indonesian Journal of Global Health Research, 6(S6), 825-836. https://doi.org/10.37287/ijghr.v6iS6.5196.

INTRODUCTION

Increasingly advanced technological developments require humans to create innovative work and facilitate human performance, especially in terms of technological innovation (Ngafifi, (2014.). Increasingly advanced technological developments require humans to create innovative works and facilitate human performance, especially in terms of communication. Thanks to new technology such as the internet, all human needs can be met. Starting from the need to socialize, access information to being able to fulfill needs and also become entertainment. With easy access to mobile devices, mobile devices are the main market for applications created by most developers. As time goes by, mobile applications are increasingly becoming the main requirement for most information systems, this can be proven by the number of applications on the Google Play Store, namely 2.9 million in December 2019 and in the Apple Store there are almost 2 million applications (Pambudi,et al., 2021)

Mental disorders are an international problem that is increasing every year. WHO states that mental disorders include depression, bipolar disorder, schizophrenia, psychosis, dementia, developmental disorders, noting that the number of people suffering from schizophrenia mental disorders in the world has reached 24 million (Silviyana et al., 2020) As time goes by,

mental health problems are also increasing (Guracho et al., 2024) Riskesdas data (2018) shows an increase in several mental health problems compared to 2013. The prevalence of Schizophrenia from 1.7% to 1.8%, Mental Emotional Disorders from 6% to 9 .8%, Pasung from 14.3% to 31.1% and Depression 6.1%. Meanwhile in NTB Province the prevalence of schizophrenia from 2.1% to 2.6%, GME from 6.8% to 12.8%, Pasung from 14.3% to 31.1% and depression 8%. Mental health disorders are influenced by many factors (Cheng And C. C. Lo, (2024). Some of them are authoritarian parenting, permissive parenting and peer influence which can trigger mental health problems in adolescents. Then gratitude can also influence teenagers' mental health and positive self-functioning (Rahmawaty et al., 2024).

The development of Android-based applications for mental health screening is becoming increasingly urgent due to accessibility, efficiency, and the need for more inclusive mental health support. Worldwide, Android is the most widely used operating system, especially in developing countries. By utilizing this platform, more people, including those in remote areas or who have limited access to mental health services, can find it easier to carry out initial screening (Hafidz et al., 2024) Another advantage is that this application allows real-time data collection, which can be used to provide more personalized recommendations according to the user's conditions and needs. This not only helps individuals maintain their mental health, but also reduces the burden on the healthcare system, as the app allows mental health professionals to focus on patients who truly need intensive intervention (Rathnayaka et al., 2022).

The Urgency of this Research is a similar research topic that has not been widely researched and developed further. The existence of the ESS-BAR application provides a new color as an application that can overcome mental health problems. By understanding the ESS BARR Application, this research can provide solutions, both interventions in the form of actions/plans to overcome mental health problems. The development of Android applications for mental health screening has high urgency in an effort to increase access, speed up early detection, and provide affordable alternatives to support mental health. Previous research conducted by (Agarwal et al., 2024) shows that with increasing access to the internet, especially on mobile devices, awareness and recognition of mental health as an important aspect in individuals' lives is increasing. This also paves the way for overcoming the stigma associated with mental disorders and seeking help from mental health professionals (MHP). Then, subsequent research conducted by (Javakhishvili et al., 2023) on interventions using easily accessible digital media showed that people with mental disorders were more easily treated. Then, research conducted by (Krokos et al., 2024) using early screening with an easily accessible application provided more information regarding the possibility of using mental disorder prevention to increase mental health literacy in the community.

The research gap in this research is that there is still limited research on how screening applications can be integrated with formal health services and used by health workers as a diagnostic aid. This research could include the development of platforms that enable interaction between users and health professionals. So, the aim of this research is to evaluate the ESS-BAR application as a screening application for the SAJIWA (Mental Health Awareness) Program that is appropriate both in terms of measurement content and accuracy values so that it can be used by the outside community as an effort to early detect mental health disorders.

METHOD

Application Development Methods

This research begins with the Android-based application development process. Android application development for ESS – BAR uses the following system as seen in Figure 1.

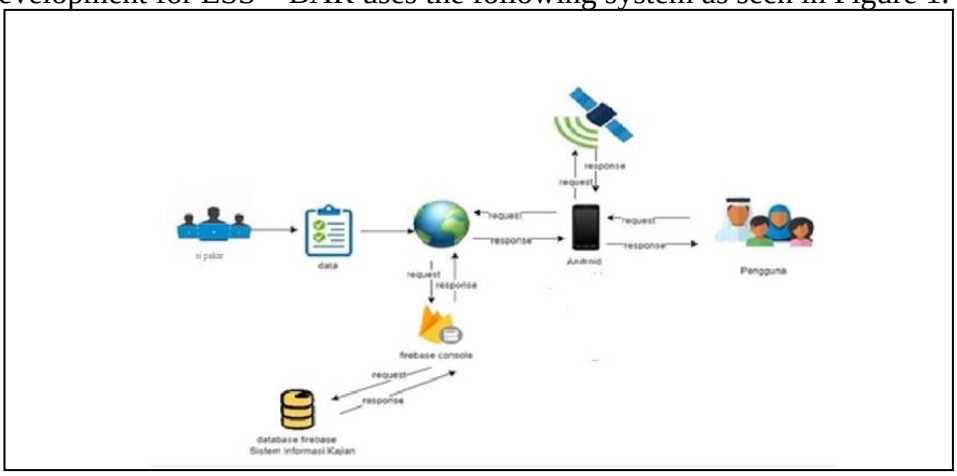

Figure 1. Android system that will be operated by the user

Accuracy Evaluation Method by User

Application accuracy assessment uses the End User Computing Satisfaction (EUCS) method. In this research, application quality measurements will be carried out for all dimensions of EUCS. First of all, all the features of the ESS - BAR Application are analyzed and grouped into the Content dimension, Accuracy dimension, Menu Format dimension, Ease of Use dimension and Timeliness dimension. After that, a questionnaire was distributed to collect data from key informants. Mental health measurement content used the validated Generalized Anxiety Disorder - 7 (GAD-7) questionnaire. Evaluation of the accuracy of the application involved 10 key informants as expert users consisting of health workers, client companions, and patients who were survivors of mental health disorders. The flow of the EUSC method is shown in Figure 2.

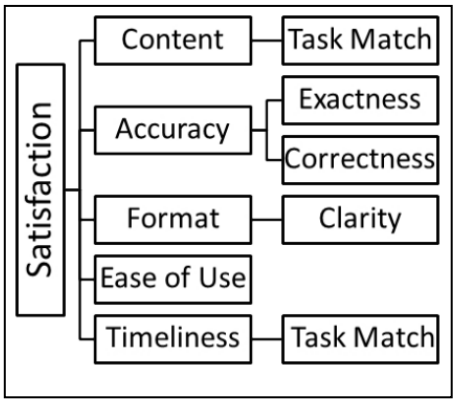

Figure 2. EUCS Method Flow (Ardana,S (2023))

RESULT

After developing the application, the research continued by evaluating the application's black box system by paying attention to aspects of the display menu in the ESS – BAR application. After implementation, system testing was carried out on the ESS BARR Application as a SaJiwa (Mental Health Awareness) Program Screening application, to find out the advantages and disadvantages of the Sajiwa Program design, evaluation and user responses were carried out. This assessment determines whether the ESS BARR Application is suitable for use, and if not, what needs to be changed to make it more suitable. Testing of the ESS BAR Application is carried out using two methods, namely testing by giving questionnaires to a

sample of users and black block testing, namely testing related to the compatibility of applications implemented on smartphone devices.The admin menu displays the admin menu used by users which contains an edit menu for patient biodata, so patients can make changes according to their interests. Functions on the User menu include:

a. Patient data information
b. Companion Data Information,
c. Dekat Sajiwa (Results of patient and companion questionnaires)
d. Manage Users
e. Can change password

In the instrument menu, Detak Sajiwa functions to regulate the questions that appear in the ESS BAR application. The questionnaire instrument is divided into two, namely Companion Instruments and Patient Instruments. In this menu, administrators and community health center admins can add questions, change questions and delete questions. Data recap, both data from patients and companions, will be included in the recap and monitoring by the puskesmas admin. So all questionnaire fillers will be monitored well and early detection action will be taken immediately.

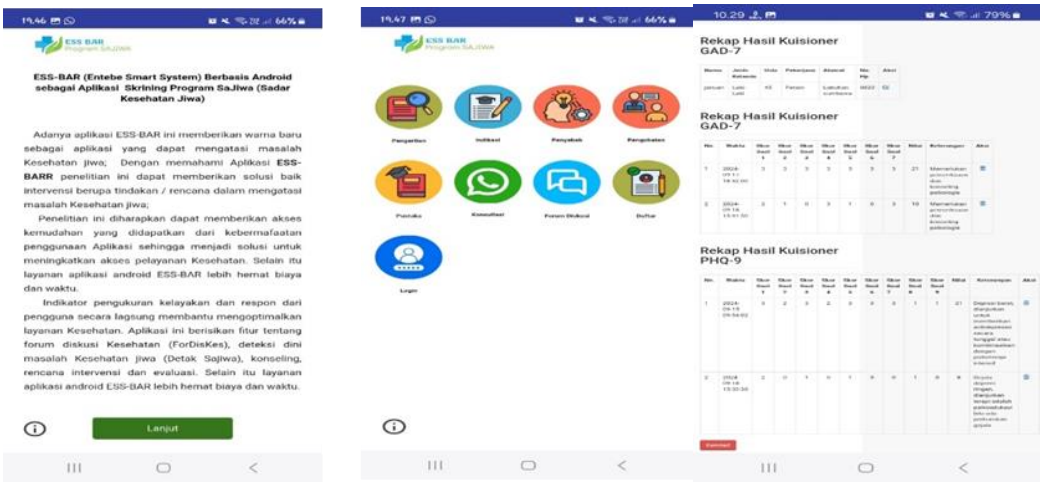

Figure 3. ESS BAR Application Display

DISCUSSION

Evaluation of ESS - BAR Application Accuracy

The appearance of the ESS - BAR application is evaluated using a checklist form between what is expected and what happens. After implementation, system testing was carried out on the ESS BARR Application as a SaJiwa (Mental Health Awareness) Program Screening application, to find out the advantages and disadvantages of the Sajiwa Program design, evaluation and user responses were carried out. This assessment determines whether the ESS BARR Application is suitable for use, and if not, what needs to be changed to make it more suitable. Testing of the ESS BAR Application is carried out using two methods, namely testing by giving questionnaires to a sample of users and black box testing, namely testing related to the compatibility of applications implemented on smartphone devices. Testing was also carried out with a list of questions on the Detak serving menu to users about mental health. Testing with questionnaires was given to research subjects. The test results are presented in Table 1.

Table 1.
Application Menu Test Results using the Black Box Method

No.	Input Data	Testing Phase	Exodus Expectations	Conclusion
1.	Menu Pengertian	Muncul tampilan Pengertian / definisi kesehatan mental/jiwa	Muncul tampilan Pengertian / definisi kesehatan mental/jiwa	In Accordance
2.	Menu Indikasi	Muncultampilan indikasi/ ciri-ciri kesehatan mental/ jiwa	Muncul tampilan indikasi/ ciri- ciri kesehatan mental/ jiwa	In Accordance
3.	Menu Penyebab	Menu Penyebab	Muncul tampilan Menu Penyebab	In Accordance
4.	Menu Pengobatan	Menu Pengobatan	Muncul tampilan Menu Pengobatan	In Accordance
5.	Menu Forum diskusi Kesehatan (ForDisKes)	Forum diskusi Kesehatan digunakan sebagai layann chat pribadi klien sebagai bahan diskusi untuk menemukan solusi dari permasalahan	Tampilan Forum diskusi Kesehatan digunakan sebagai layann chat pribadi klien sebagai bahan diskusi untuk menemukan solusi dari permasalahan bisa digunakan oleh user melalui email	In Accordance
6.	Menu jiwa (DetakSajiwa)	Berisi kuisioner yang akan di jawab oleh klien baik sebagai pasien maupun pendamping	Tampilan Skor kuisioner keluar sesuai jawaban klien	In Accordance
7.	Menu Konseling	Berisi nama, *contact person dari* pemegang program Sajiwa danjadwal layanan konsultasi	Tampilan Berisi nama, *contact person dari* pemegang program Sajiwa danjadwal layanan konsultasi	In Accordance
8	Menu Daftar	Memasukkan nama lengkap, nomor *whatsap*, *username* dan *password* dan memilih sebagai pendamping / pasien, kemudian submit	Muncul tampilan pada menu daftar yaitu nama lengkap, nomor *whatsap*, *username* dan *password* dan memilih sebagai pendamping / pasien, kemudian submit	In Accordance
9	Menu *Login*	Melakukan *Login* dengan, memasukan *username, password, captcha,* dan memilih sebagai pasien, pendamping, atau admin.	Muncul tampilan *Login* dengan, memasukan *username, password, captcha,* dan memilih sebagai pasien, pendamping, atau admin.	In Accordance
10.	Menekan "kembali"	Kembali ke menu sebelumnya	Kembali ke menu sebelumnya	In Accordance
11	Menu Hapus pada User Admin	Menghapus user pada menu klien	Menghapus user pada menu klien	In Accordance
12.	Menu edit password	Menu edit password	Menu edit password pada user	In Accordance

Table 1 shows the evaluation of the ESS – BAR application display 100% appropriate. System quality can be measured subjectively by users based on the purpose of implementing a system (Wibisono And M. Iqbal, 2020) These tests are alpha (functional) and beta (performance) testing. Alpha testing is carried out using the black box testing method as an effort to ensure that the application meets the goals and needs that have been determined from the start. Black box testing starts from simulating each feature to evaluating the workflow and appearance of the application (Ross, A. S. Arrohmah (2024) Apart from measuring using a checklist sheet, assessment was also carried out by conducting interviews with key informants. All key informants agreed with the Android-based ESS – BAR application because this application follows technological developments so it is easy to obtain and easy to use. Increasing the quality of information presented by Android applications can increase user satisfaction with the Android application system.

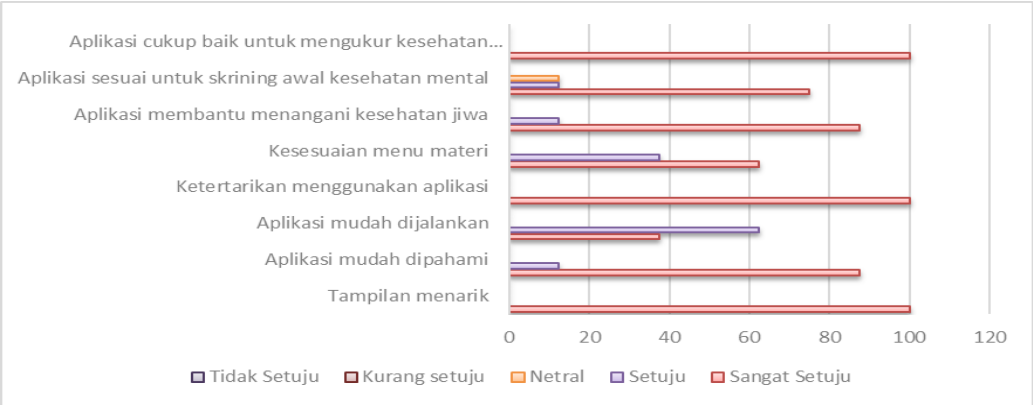

Figure 4. Results of the Key Informant Assessment Evaluation Questionnaire for the ESS - BAR Application

Figure 4 shows that all key informants stated that the appearance and compatibility of the ESS BAR in measuring mental health was good. More than 75% of key informants stated that the application was easy to use. Then, when follow-up interviews were conducted, aspects that were still a problem for key informants from community health centers and health workers were validation of user data and accuracy of assessments. This is because the ESS – BAR application is included in the self-screening category. Because self-screening relies on subjective responses from users, the results obtained can be greatly influenced by personal bias. For example, users may underestimate or exaggerate the symptoms they experience, either consciously or unconsciously, due to certain perceptions or feelings when screening (Guracho et al., 2024)

Content Dimension Assessment

In the ESS BAR application there is menu content for companions and menu for patients/clients. The results of both assessments can be a method for validating patient answers. The assessment of the companion aspect can be seen in Table 2 below,

Table 2.
Testing of UAT Screening Form on Sajiwa Display
(Carviger questionnaire of survivors)

No.	Input Data	Testing Phase	Exodus Expectations	Conclusion
1.	Apakah pasien sering kali terlihat marah tanpa sebab yang jelas? (Seperti mudah menangis, mudah tersinggung, atau bereaksi berlebihan terhadap hal-hal yang sudah biasa dihadapinya?)	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
2.	Apakah pasien tampak menghindari dari teman-teman atau anggota kelaurganya? (seperti ingin merasa sendiriaan, menyendiri atau merasa sedih sepanjang waktu, kehilangan minat terhadap hal-hal yang biasa sangat dinimati)	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
3.	Apakah pasien terlihat berperilaku merusak dan menantang terhadap lingkungan di sekitarnya? (Seperti melanggar pearturan yang ada, mencuri, sering kali melakukan perbuatan berbahaya bagi dirinya, atau menyiksa binatang atau anak-anak lainnya) dan tampak tidak peduli dengan nasihat-nasihat yang sudah diberikan padanya?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance

4.	Apakah pasien memperlihatkan adanya oerasaan keatkutan atau kecemasan berlebihan yang tidak dapat dijelaskan asalnya dan tidak sebanding dengan anak lain seusianya?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
5.	Apakah pasien mengalami keterbatsaba oleh karena adanya konsentrasi yang buruk atau mudah teralih perhatiannya, sehingga mengalami penurunana dalam aktivitas seharihari atau prestasi belajarnya?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
6.	Apakah pasien menunjukkan perilaku kebingungan sehingga mengalami kesulitan dalam berkomunikasi dan membuat keputusan?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
7.	Apakah pasien menunjukkan adanya perubahan pola tidur? (Seperti sulit tidur sepanjang waktu, terjaga sepanjang hari, sering terbangun di waktu tidur malam oleh mimpi buruk, mengigau)	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
8.	Apakah pasien mengalami perubahan pola makan? (Seperti kehilangan nafsu makan, makan berlebihan atau tidak mau makan sama sekali)	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
9.	Apakah pasien sering kali mengeluh sakit kepala, sakit perut atau keluhan-keluhan fisik lainnya?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
10.	Apakah pasien seringkali mengeluh putus asa atau berkeinginan untuk mengakhiri hidupnya?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
11.	Apakah pasien menunjukkan adnaya kemunduran perilaku atau kekampuan yang sudah dimilikinya? (Seperti mengompol Kembali, meghisap jempol, atau tidak mau berpisah dengan orang tua / pengasuhnya)	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance
12.	Apakah pasien melakukan perbuatan yang berulang- ulang tanpa alasan yang jelas?	0= Ya 1= Tidak	Muncul Skor 0= Ya 1= Tidak	In Accordance

Table 2 shows that the display for the patient companion menu is running as planned. The findings of this research show that Firebase plays a role in storing, managing, and processing data collected by applications. This includes demonstrating Firebase's reliability in handling the number of requests and responses, as well as its ability to store data securely (Gunadi et al., 2020). The findings from this research offer comprehensive insight into how this Firebase-based Android application can be an effective, safe, and affordable solution to support mental health screening (Rathnayaka et al., 2022)

Dimensional Accuracy Assessment

The accuracy dimension assessment in this case is not based on measuring the diagnosis of mental disorders, but focuses on the accuracy of the application when used. The key informant's assessment is shown in Figure 5.

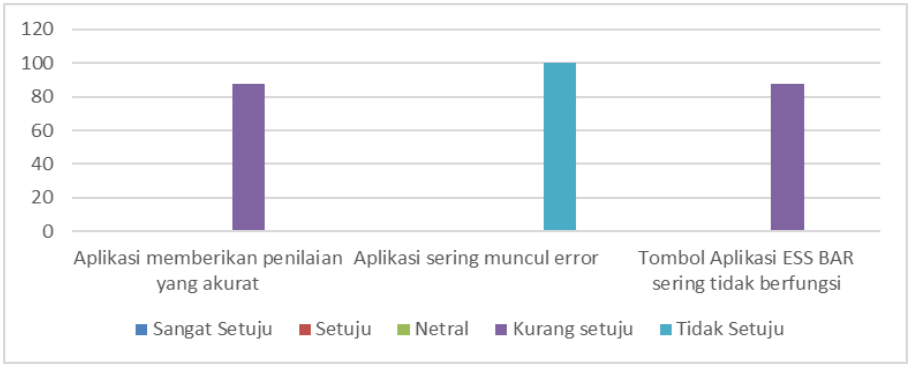

Figure 5. Results of the Key Informant Assessment Evaluation Questionnaire for the ESS – BAR Application in the Accuracy Aspect

The important aspect in this case is that measurement accuracy for self-screening is very important. As many as 87.5% of key informants stated that they did not agree that the application provided accurate assessments. This is because direct validation has not been carried out on patients with a larger number of respondents. The assessment of accuracy dimensions in the Android-based mental health self-screening application ESS – BAR aims to evaluate the extent to which this application produces accurate and reliable results. Accuracy is very important because it determines the validity of the screening results provided to users. This measurement involves checking the accuracy of the algorithms used in the data analysis process as well as the quality of the instruments or questionnaires used as screening tools (Fadilah et al., 2024) Applications that have high accuracy will be able to detect mental health symptoms correctly, which means the screening results will be closer to the user's actual mental condition. Accuracy also considers the accuracy of the algorithm in interpreting the data so that the results provided can be used as a basis for determining next steps, such as advice to consult a mental health professional (Radwan, et al., 2024)

Menu Format dimension assessment

The assessment of the dimensions of the menu format in this application includes an evaluation of the layout and interface design that influences the user experience. Menus in applications must be designed clearly, easy to understand, and not too complicated so that users can find the features they need quickly (Radwan, et al., 2024)

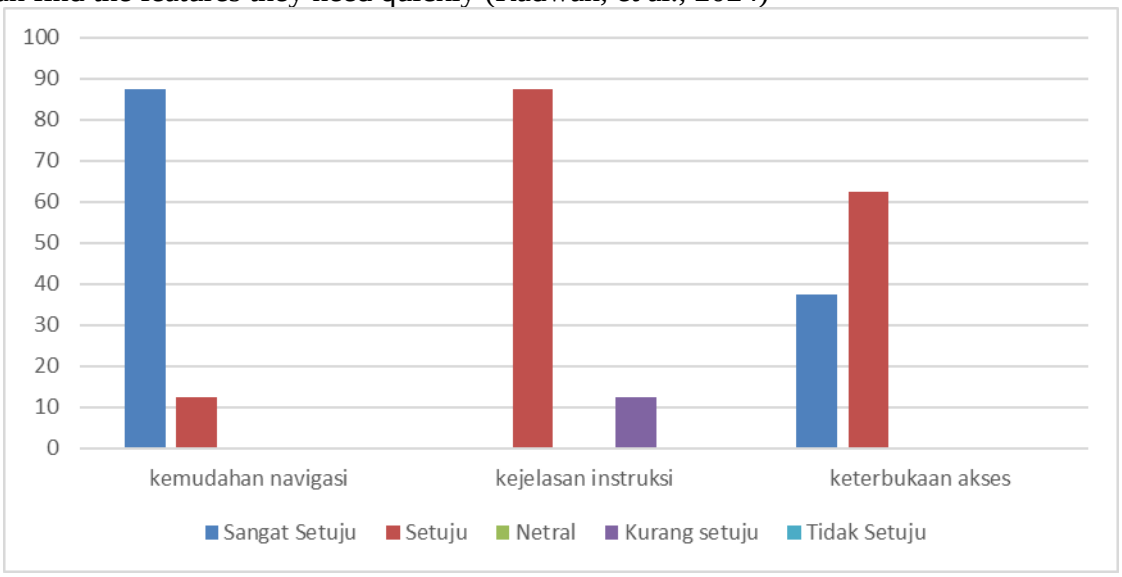

Figure 6. Results of the Key Informant Assessment Evaluation Questionnaire for the ESS – BAR Application on the Menu Format Aspect

Figure 6 shows that the ESS – BAR application has a menu display format that is preferred by key informants. An intuitive menu format can increase user comfort in using the application, especially for users who may be undertaking mental health self-screening for the first time (Wisnu et al., 2023). Good design will direct users to the steps that need to be followed without confusion, helping them go through the screening process smoothly and reducing the possibility of errors in filling out the questionnaire or instrument provided.

Ease of Use dimension assessment

The ease of use dimension aims to assess how easily this application can be operated by users from various backgrounds, including users who are not very technologically savvy. These assessments include ease of navigation, clarity of instructions, and open access to features without requiring much explanation or training.

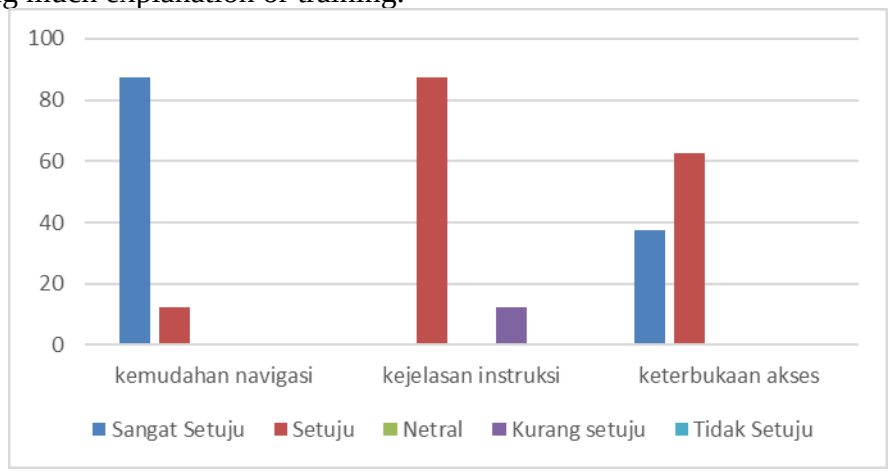

Figure 7. Results of the Key Informant Assessment Evaluation Questionnaire for the ESS – BAR Application on the Ease of Use Aspect

An easy-to-use application will make users more comfortable and more likely to complete the screening to the end. Ease of use also includes aspects of application responsiveness, ensuring that every user interaction, such as clicking a button or filling out a form, runs smoothly and without technical obstacles (Paramita And Y. Pernando, (2023).

Timeliness Dimension Assessment.

The timeliness dimension refers to the application's ability to provide screening results quickly and in accordance with user expectations (Trisya, et al., 2024) In the context of mental health self-screening, time is important because users may need immediate results to understand the user's condition. Applications that have good timeliness can process data and provide results in seconds or minutes, reducing waiting time and increasing user satisfaction. In addition, timeliness also includes application updates to maintain system reliability and accuracy of data used in the analysis process. In this study, the waiting time to wait for the screening results was 0.5 minutes or 30 seconds.

CONCLUSION

This research aims to evaluate the ESS-BAR application as a SAJIWA (Mental Health Awareness) Program screening application that is appropriate both in terms of measurement content and accuracy values so that it can be used by the outside community as an effort to early detect mental health disorders. The evaluation results show that the ESS – BAR application being developed still experiences challenges in further validation related to the accuracy of the assessment so that it is not subjective to the user's filling results. The accuracy value of the application display based on key informant assessments is more than 80%. For test results on application use using the EUCS method, the ESS - BAR application meets the

criteria for the Content dimension, Accuracy dimension, Menu Format dimension, Ease of Use dimension and Timeliness dimension.Although the developed web-based animal recognition application still experiences challenges in accuracy, these results show that there is still much room for improvement in terms of accuracy and model performance. The main challenge lies in validating the measurement results based on the application with direct measurements by specialist psychiatric medical personnel.Recommendations for further research are to triangulate the results of respondents' filling in with expert judgment. Then, the results of the triangulation of these measurement results were continued with a second trial using more respondents. So that the results provided can be more accurate.

REFERENCES

Ngafifi, (2014.) "Kemajuan Teknologi Dan Pola Hidup Manusia Dalam Perspektif Sosial Budaya," Jurnal Pembangunan Pendidikan: Fondasi Dan Aplikasi, Vol. 2, No. 1

Pambudi, S. Aminah, B. K. Kristanto,(2021) "Aplikasi Mobile Pendeteksi Gangguan Mental Mahasiswa Dengan Menggunakan Metode Forward Chaining," Prosiding Sisfotek, Vol. 5, No. 1, Pp. 7–13

Silviyana, H. Kusumajaya, N. Fitri, P. Studi, I. Keperawatan, And F. Keperawatan,(2020) "Faktor-Faktor Yang Berhubungan Dengan Kekambuhan Pada Pasien Skizofrenia." [Online]. Available: Http://Jurnal.Globalhealthsciencegroup.Com/Index.Php/Jppp

Guracho, S. J. Thomas, And K. T. Win, (2024) "Mobile Mental Health Application Use, And App Feature Preferences Among Individuals With Mental Disorders In Ethiopia: A Cross-Sectional Survey," Int J Med Inform, Vol. 192, Dec., Doi: 10.1016/J.Ijmedinf.2024.105628.

Cheng And C. C. Lo, (2024) "Factors In Use Of Mental Health Services For Bullied Children: An Application Of The Behavioral Model Of Health Services Utilization," Child Youth Serv Rev, Vol. 162, Jul. 2024, Doi: 10.1016 / J.Childyouth .. 107691.

Rahmawaty, R. P. Silalahi, T. Berthiana, And B. Mansyah (2022) "Faktor-Faktor Yang Mempengaruhi Kesehatan Mental Pada Remaja: Factors Affecting Mental Health In Adolesents," Jurnal Surya Medika (Jsm), Vol. 8, No. 3, Pp. 276–281.

Hafidz, F. Al Huda, And A. P. Kharisma, 2024 "Pengembangan Aplikasi Edukasi Kesehatan Mental Berbasis Progressive Web App," Jurnal Pengembangan Teknologi Informasi Dan Ilmu Komputer, Vol. 8, No. 8

Rathnayaka, N. Mills, D. Burnett, D. De Silva, D. Alahakoon, And R. Gray, (2022) "A Mental Health Chatbot With Cognitive Skills For Personalised Behavioural Activation And Remote Health Monitoring," Sensors, Vol. 22, No. 10, May, Doi: 10.3390/S22103653.

Agarwal, K. Gupta, A. Singh, And S. K. Kar, (2022) "Conceptual Model Of Remotely Accessed Mobile Application For Psychiatric Disorder Screening (Roadmaps): A Self-Screening And Referral Aid For Mental Health In India," Doi: 10.1177/002076402.

Javakhishvili, N. Makhashvili, P. Winkler, N. Votruba, And R. Van Voren (2023) "Providing Immediate Digital Mental Health Interventions And Psychotrauma Support During Political Crises," Sep. 01, , Elsevier Ltd. Doi: 10.1016/S2215-0366(23)00120-7.

Krokos, I. Brandhorst, L. Seizer, C. Gawrilow, And J. Löchner, (2024) "Improving Mental Health By Improving The Mental Health Literacy? Study Protocol For A Randomised Controlled Evaluation Of An E-Mental Health Application As A Preventive Intervention For Adolescents And Young Adults," Internet Interv, Vol. 36, Jun., Doi: 10.1016/J.Invent.2024.100733.

M. Sugi Ardana (2023) "Evaluasi Usability Aplikasi Android Dharmadana Menggunakan Metode End User Computing Satisfaction (Eucs)," Syntax Idea, Vol. 5, No. 7, Pp. 960–978, Jul., Doi: 10.46799/Syntax-Idea.V5i7.2623.

Wibisono And M. Iqbal, 2020 "Aplikasi Perencanaan Menu Makanan Berbasis Android Di Pesantren Dan Kelayakan Penggunaannya," Ilmu Gizi Indonesia, Vol. 3, No. 2, Pp. 93–102

Ross, A. S. Arrohmah, M. Hasanah, N. Yusran, And N. Wijareni, (2023)"Perancangan Aplikasi Kesehatan Mental 'Nafs'(Islamic Psycho Spiritual Therapy) Berbasis Android Menggunakan Metode Pdca (Plan-Do-Check-Action)," Jurnal Informatika Universitas Pamulang, Vol. 6, No. 4, Pp. 849–856.

Gunadi, R. Tanone, And Y. R. Beeh, (2020) "Penerapan Firebase Cloud Storage Pada Aplikasi Mobile Android Untuk Melakukan Penyimpanan Image Lahan Pertanian," (Jurti) Jurnal Teknologi Informasi, Vol. 4, No. 2, Pp. 282–291

Fadilah, N. Rahaningsih, And R. D. Dana, (2024) "Evaluasi Usabilitas Sistem Menggunakan Metode System Usability Scale (Sus) Pada Aplikasi Akhlaqu Dengan Penerapan Teknik Indexing Mongodb," Jurnal Sistem Informasi Dan Informatika (Simika) P-Issn, Vol. 7, No. 1, Pp. 2622–6901

Radwan, M. Amarneh, H. Alawneh, H. I. Ashqar, A. Alsobeh, And A. A. A. R. Magableh, (2024), "Predictive Analytics In Mental Health Leveraging Llm Embeddings And Machine Learning Models For Social Media Analysis," International Journal Of Web Services Research, Vol. 21, No. 1, Doi: 10.4018/Ijwsr.338222.

Wisnu, C. Bagaskara, A. Voutama, And A. A. Ridha (2023) "Perancangan Tampilan Antarmuka Aplikasi Self-Care Berbasis Mobile Untuk Mengatasi Kesehatan Mental Dengan Metode Design Thinking," Information Management For Educators And Professionals, Vol. 7, No. 2, Pp. 124–133

Paramita And Y. Pernando, (2023) "Optimalisasi Pelayanan Laundry: Perancangan Dan Pengembangan Aplikasi Mobile Android Easy Wash," Klik: Kajian Ilmiah Informatika Dan Komputer, Vol. 4, No. 3, Pp. 1888–1897

Trisya, T. K. Ahsyar, S. Syaifullah, And M. Fronita, (2024)"Analisis Kepuasan Pengguna Aplikasi Jenius Menggunakan Metode End User Computing Satisfaction Dan Importance Performance Analysis," Jurnal Teknologi Sistem Informasi Dan Aplikasi, Vol. 7, No. 3, Pp. 951–962, Jul., Doi: 10.32493/Jtsi.V7i3.40802.