

ORIGINAL ARTICLE

User experience evaluation of the Israqah mental health self-assessment tool: A cross-sectional study in Saudi Arabia

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ABSTRACT

Background: Mental health self-assessment tools are essential for early detection and intervention. The Israqah mental model is a culturally sensitive model that was developed for use during the initial self-assessment of mental well-being in Saudi Arabia. The present research assessed the user experience and psychometric quality of the Israqah tool among Saudi Arabian users.

Methods: This descriptive cross-sectional survey was carried out online survey that was self-administered to 150 respondents who had already used the Israqah platform. The questionnaire of 19 items evaluated usability, clarity, precision, confidentiality, and influence on mental health awareness. Data interpretation was conducted in the form of IBM SPSS Statistics, whereby reliability analysis (Cronbach's alpha) and exploratory factor analysis were conducted as a measure of construct validity.

Result: The sample comprised both male and female (50/50); most (72.7) were aged between 35 and 55 years, and most of them (91.3) had bachelor's degrees and above. The scores for user experience were always high in all dimensions (mean = 4.34, SD = 0.67 on a 5-point scale). Internal consistency of the tool was excellent (Cronbach's alpha = 0.974). Factor analysis indicated that there was sufficient sampling adequacy (KMO = 0.735) and significant correlations (Bartlett's test, $p < 0.001$), indicating construct validity.

Conclusion: The Israqah mental health self-assessment tool was found to be highly user-satisfied, reliable, and not too low for construct validity. Its privacy capabilities, user-friendliness, and contribution to psychological awareness were especially appreciated by users, which makes it a promising mental health self-reflection tool that is easily accessible in Saudi Arabia.

Keywords: Mental health assessment, self-assessment tools, user experience, psychometric validation, Saudi Arabia, digital health.

Introduction

The growing importance of mental well-Being and Early Intervention

Mental health is a dynamic and complex phenomenon that refers to personal experiences, social life, psychological issues, and behavioral health strategies [1]. Early detection and timely intervention are important elements of mental health promotion as they have been shown to positively influence the outcome of individuals with mental health problems [3]. Self-assessment tools are crucial tools that lead to more productive communities and economic stability [2].

The Israqah mental model

Based on the concept of the Arabic word light or enlightenment (Israqah), the mental model is the

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systematic but intuitively based framework of the first self-assessment of mental health. Its main aim is to make people aware of potential mental health issues in order to be able to seek proper professional assistance whenever they need it. The Israqah model encourages a holistic assessment of an individual's state in three intersecting pillars: cognition (thought patterns), emotion (feeling states), and behavior (actions and habits) [5].

Mental health context in Saudi Arabia

In Saudi Arabia, mental health is a problem that society has never discussed. Conventional views encourage people to use their traditional coping strategies to overcome emotional problems, such as family support, prayer, and patience, when faced with a problem [2]. The pursuit of professional help used to be considered bizarre or even disgraceful, and mental illness was misconceived and perceived as a phenomenon that carries social stigma [6]. Mental health is an urgent issue in this age of fast transformation, with all the motivating forces of governmental strategic priorities and the increasing power of the digitally connected young generation [2].

Mental health treatment has been normalized in the Saudi government by the facilitation of the Mental Health Law passed in 2014, which was deemed a major accomplishment for protecting patient rights and destigmatization of mental illness by ensuring that people with mental health issues are not isolated, persecuted, or refused medical treatment (2018) [7].

Digital mental health tools and self-assessment

Self-report scales are one of the foundations of assessment in both clinical psychology and psychiatry and provide a tool to determine the severity of identified mental health disorders based on subjective symptoms and indicators [9]. However, these tools also have several limitations, including vulnerability to social desirability bias, low levels of introspection, poor memory, and possible cross-cultural bias [8].

To be considered scientifically sound and useful in clinical practice, a psychological assessment instrument must have high psychometric properties. Validity describes how a tool measures what it intends to measure, such as content validity, convergent validity, and discriminant validity. Cultural adaptation and measurement invariance are particularly relevant to the instruments to be used with diverse populations, where the tool should be able to work in different linguistic and cultural groups in a similar manner [10].

Study rationale and objectives

Although mental health accessibility in Saudi Arabia continues to increase, there are still severe barriers to seeking help, especially those related to stigma [6]. Digital self-assessment platforms, such as Israqah, provide an alternative, non-threatening way to get an individual to think about their mental state before

they think of consulting sustainably. Nevertheless, the usefulness and usefulness of such tools should be carefully considered from the user.

This study was conducted to evaluate the user experience of the Israqah mental health self-assessment tool in Saudi Arabian people in a systematic manner. The main goals of this study were to explore participants' views on how clear, accurate, and easy to use the Israqah tool was, as well as their opinions regarding the privacy of their information. The research also aimed to examine how the tool might influence users' awareness of mental health and their willingness to seek professional support. In addition, the reliability and construct validity of the user experience questionnaire were examined, and participants were invited to share what they appreciated about the tool and what aspects they believed could be improved.

Materials and Methods

Study design

This study used a descriptive cross-sectional research design to comprehensively evaluate the user experience of the Israqah mental health self-assessment tool. The list of key quality indicators included in the scope of the evaluation was as follows: tool usability, content clarity, perceived result accuracy, compliance with data privacy and confidentiality measures, and self-reported effectiveness and usefulness of the evaluation in raising mental health awareness and encouraging help-seeking behavior. The empirical data were obtained through an online survey instrument that was self-administered and sent to a convenience sample of people who had already had experience with the Israqah platform. This design was also justified because it offered a reliable and all-inclusive picture of the perception and satisfaction of the participants with the instrument over a specific period of time.

Participants

The participants of the study had already utilized the Israqah tool, and their ages were between 18 and 58 years old. We invited both men and women to join this study, as well as those representing different educational backgrounds, ranging from high school, while others held a diploma, a bachelor's, or a postgraduate degree. Everyone who took part could read Arabic and fill out the online form on their own. Taking part was optional, and each person agreed to participate before starting the survey. They all said they were willing to have their anonymized responses utilized in the research.

Instrument

The research employed a designed 19 item self-administered questionnaire designed by scholars. The instrument comprised five items: (1) informed consent with a confirmation of willingness to take part in it and to give data use consent in the research; (2) a confirmation of the previous use of Israqah tools; (3) demographic items (gender, age, educational



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level); (4) Likert-scale items [1-5] about usability, clarity, accuracy, privacy, perceived usefulness, awareness, and future use intentions; and [5] open-ended questions in which the participants could answer what they liked the most and what they wished to be improved.

Specific items of the Likert scale, which were assessed, were ease of using the Israqah tool (Q6), understanding and comprehension of the assessment questions (Q7), correctness of findings and suggestions (Q8), whether the tool caused participants to reflect on their mental state or seek help (Q9), relevance of the time of usage (Q12), respect of privacy (Q11), contribution to deeper psychological reflection (Q13), general satisfaction (Q10), recommendation to others (Q14), and the probability of recommending the tool to others.

Procedure

All data were collected on the Internet through a survey link sent through online services. When the survey was completed, participants were informed of the purpose of the study, guaranteed confidentiality, and voluntary participation. Informed consent was acquired electronically, and a participant could not pass the questionnaire without obtaining informed consent. The survey took about 10 to 15 minutes to complete. In addition, no personal information that could identify any participant was collected. The participants were free to back out at any time before submission.

Ethical considerations

The research procedure was conducted in tandem with the ethical principles of the Declaration of Helsinki. The study participants provided informed consent online and then completed the questionnaire, and all information was gathered anonymously, and no personally identifiable information was obtained. The study was not very risky to the participants, as it included only answering a survey regarding their past

experiences with a publicly available mental health self-assessment tool.

Data analysis

IBM SPSS Statistics software was used to analyze the collected data. The participants' demographic characteristics and their responses to the items of the Israqah tool evaluation were summarized using descriptive statistics such as frequencies, percentages, means, and standard deviations. The internal consistency of the user experience items was analyzed by determining the reliability of the items using Cronbach's alpha. To evaluate construct validity, exploratory factor analysis (EFA) was conducted to examine the existence of underlying user experience dimensions and their capacity to merge items into conceptual factors. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and test of sphericity were obtained to determine the suitability of the data in the factor analysis. A KMO of more than 0.6 and a significant Bartlett's test ($p < 0.05$) were deemed satisfactory to continue with factor analysis [11].

Results

Demographic characteristics

One hundred and fifty participants who had used the Israqah tool before completing the survey. The sex distribution was equal; 75 males (50.0%) and 75 females (50.0) were used as samples. The age distribution showed that most of the participants were middle-aged and older adults. The highest age group was 45 years and older ($n = 58, 38.7\%$), then the 35-44 age bracket ($n = 51, 34.0\%$), and then the 25-34 age bracket ($n = 32, 21.3\%$). The lowest proportion was observed in the youngest age group (18-25 years) ($n = 9, 6.0\%$). In terms of education level, most participants had a bachelor's degree ($n = 87, 58.0\%$), a similar percentage had postgraduate education ($n = 50, 33.3\%$), and a very small percentage had high school education ($n = 13,$

Table 1. Demographic characteristics of participants (N = 150.)

Variable	Category	Frequency	Percent	Cumulative percent
Gender	Male	75	50.0	50.0
	Female	75	50.0	100.0
Age (years)	18-25	9	6.0	6.0
	25-35	32	21.3	27.3
	35-45	51	34.0	61.3
	45-55	58	38.7	100.0
Education	High school	13	8.7	8.7
	Bachelor	87	58.0	66.7
	Graduate studies	50	33.3	100.0



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8.7%). Table 1 provides a summary of the demographic characteristics.

User experience variables

There was a high rating of user experience in all dimensions that were rated. Table 2 shows the descriptive statistics of the ten user experience variables. The general mean score of all the items was 4.34 (SD = 0.67 on a 5-point scale), which means that the study participants generally perceived the Israqah tool as a very useful tool in terms of self-assessing mental health.

Reliability analysis

The approximate usage duration (Q12; M = 4.62, SD = 0.50) was rated the highest, and there was low variation in responses, indicating that the time needed to complete the assessment was appropriate and manageable. The question measuring the probability of recommending the tool to others (Q15) was also rated highly (M = 4.42, SD = 0.63), indicating that the respondents were highly endorsed and satisfied with the tool. The understandability of questions (Q7; M = 4.41, SD = 0.64) was also rated high, which proved that the assessment questions were simple and well understood by the participants.

The items that evaluated the contribution of the tool to psychological reflection and awareness were rated similarly. Measurement Q13, which requires the participant to think more about his or her psychological state, had a mean score of 4.39 (SD = 0.67), whereas Q9, which requires the participant to think more about his or her mental state or seek help, had a mean score of 4.35 (SD = 0.71). The issue of privacy, especially in the context of Saudi culture, was adequately dealt with, with privacy respect (Q11) obtaining a final score of 4.31 (SD = 0.81).

Regarding usability, the rate of ease of use of the Israqah tool (Q6) was 4.32 (SD = 0.71), which means that the participants found the tool easy to navigate and user friendly. The least rated item, yet positive, was the accuracy of results and recommendations (Q8; M = 4.05, SD = 0.75), indicating that even though the majority of users considered the outputs of the tool to be accurate, there was a potential opportunity to improve the situation in this aspect.

The internal consistency of the ten user experience items was assessed using Cronbach's alpha coefficients. The analysis revealed excellent reliability ($\alpha = 0.974$), indicating that the participants' responses were highly stable and consistent across the different dimensions of user experience (Table 3). This high internal consistency suggests that the items measured a coherent underlying construct, user satisfaction with the Israqah tool, and that participants interpreted the items in a consistent manner.

Construct validity

Construct validity was examined through exploratory factor analysis to determine whether the participants' experience items clustered into conceptually meaningful dimensions. In addition, prior to conducting the factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used to evaluate the appropriateness of the data for factor analysis (Table 4).

A KMO value of 0.735 indicated adequate sampling adequacy for factor analysis, exceeding the commonly accepted threshold of 0.6. [11] Bartlett's test of sphericity was statistically significant ($\chi^2 = 2990.104$, $df = 45$, $p < 0.001$), confirming that the correlations among items were sufficiently strong for further analysis. These results demonstrate that the scale's items were interrelated and suitable for representing a coherent construct, the

Table 2. Descriptive statistics of user experience variables (N = 150).

Variable	Mean	SD	Min	Max
Ease of using the Israqah tool (Q6)	4.32	0.71	3	5
Clarity of questions (Q7)	4.41	0.64	3	5
Accuracy of results and recommendations (Q8)	4.05	0.75	2	5
Tool helped reflect on mental state/seek help (Q9)	4.35	0.71	3	5
What you liked (Q10)	4.18	0.66	3	5
Tool respects privacy (Q11)	4.31	0.81	2	5
Appropriateness of usage duration (Q12)	4.62	0.50	3	5
Tool helped think deeply about psychological state (Q13)	4.39	0.67	3	5
Recommend for others (Q14)	4.39	0.72	3	5
Likelihood of recommending to others (Q15)	4.42	0.63	3	5
Overall Mean	4.34	0.67		



Table 3. Reliability statistics.

Cronbach's Alpha	N of Items
0.974	10

Table 4. KMO and Bartlett's test.

Test	Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.735
Bartlett's test of sphericity: approx. Chi-Square	2990.104
df	45
Sig.	< 0.001

user experience with the Israqah tool, thus supporting acceptable construct validity.

Discussion

Interpretation of results

This study systematically evaluated the user experience of the Israqah Mental Health Self-Assessment Tool among a sample of 150 Saudi Arabian users. The findings showed consistently high levels of user satisfaction for all dimensions evaluated, with a general mean score of 4.34 out of 5.0. The tool demonstrated good internal consistency (Cronbach's $\alpha = 0.974$) and construct validity (KMO = 0.735), and possesses empirical support for its reliability and structural soundness as an instrument of user experience.

The highest ratings were witnessed in the appropriateness of use duration, which suggests that the users found the time to be reasonable and manageable. This is especially true for self-reporting instruments because too much length produces survey fatigue and decreases response rates [12]. The low clarity-of-questions and ease-of-use scores indicate that the Israqah instrument successfully achieved its goal of providing a user-friendly, easy-to-use interface for mental health self-awareness. This is particularly pertinent in the Saudi context, where cultural and language influences may be relevant to users' uptake of digital health interventions [13].

Notably, the participants strongly endorsed the privacy functions of the instrument (M = 4.31), a finding of significance given the current mental health stigma in Saudi Arabia [6]. The ability to undertake private self-examination without fear of social judgment or disclosure is potentially a significant facilitator of first contact with mental health self-examination. This finding is in line with research that indicates that online mental health interventions can reduce help-seeking barriers through anonymity and ease of access [14].

The capacity of the tool to bring about psychological thinking and consciousness was rated very high, with the participants reporting that it caused them to ponder more about their psychological condition (M = 4.39) and ponder their mental condition or seek assistance (M = 4.35). This is indicative of the fact that Israqah is successful in serving as a self-reflection guide rather than as a diagnostic guide. By encouraging self-reflection on the three legs of cognition, emotion, and action, the tool can serve as a useful bridge between personal concerns and formal help seeking [15].

The high frequency of recommending the tool to others (M = 4.42) indicated generalized endorsement and suggested that participants found value in the Israqah process. This scale is also important, as peer endorsements can facilitate broader use and socialize mental health self-assessment practices among groups [16].

The lower accuracy of recommendations and outcome ratings (M = 4.05), while still favorable, shows one area for future development. This finding could reflect the limitations of self-assessment tools in delivering personalized, evidence-based feedback. Future releases of Israqah tools can embed improved algorithms, incorporate evidence-based screening instruments, or provide more explicit feedback on the use of the tool as an initial self-reflection tool rather than a clinical diagnostic tool.

Comparison with literature

The psychometric properties observed in this study are similar to those reported in other mental health self-reports and digital health measures. High internal consistency ($\alpha = 0.974$) was above the generally accepted research tool threshold of 0.7, and comparable to published reliability coefficients for well-established mental health inventories [17]. The KMO of 0.735, while adequate, is below the values reported for highly refined clinical scales, which can be above 0.8 [11]. This would mean that while the user experience questionnaire has acceptable construct validity, additional validation in larger and more representative samples will help improve its psychometric properties.

The acceptable user experience that is observed in this research is also supported by the results of culturally tailored digital mental health interventions. Experiments have established that culture-sensitive design elements, including language, imagery, and content that echo cultural values, substantially improve users' participation and acceptability [18]. Israqah model's Arabic linguistic origin (enlightenment) and non-pathologizing approach to mental health self-reflection are apparently well accepted by Saudi users, potentially overcoming stigma-related utilization barriers.

The privacy value features highlighted by participants align with the results of research on mental health app preferences. A systematic review of mental health



app user attitudes found data security and privacy to be the most critical concerns, particularly for health data considered sensitive [19]. The Israqah tool in this category suggests that developers successfully addressed these top-priority user requirements.

Participants' demographics, 72.7% of whom were aged 35 and above and 91.3% of whom had bachelor's or higher degrees, are a close approximation of the current early adopter segment for digital mental health material in Saudi Arabia. This pattern is also more prevalent in the adoption of digital health, where higher levels of education and middle-aged groups tend to exhibit higher use of health technology [20]. As awareness campaigns continue with respect to mental health, and digital literacy continues to grow, higher demographic penetration can be anticipated [21–30].

Strengths and limitations

Implications for practice and research

This study has several strengths. First, it provides an initial systematic evaluation of user experience for the Israqah mental health self-assessment tool, filling a substantial knowledge gap in the literature on culturally adapted digital mental health interventions in Saudi Arabia. Second, the study employed a systematic questionnaire with proven reliability and correct construct validity, constructing a rudimentary foundation for monitoring and assessing purposes. Third, the sample was sex-stratified to ensure that both men and women were represented.

However, this study has certain limitations that must be referred to. First, convenience sampling limited the applicability of the results to the entire Saudi population. The participants were volunteers who had opted to use the Israqah tool, which may have introduced selection bias in favor of more educated, digitally literate, and health-conscious people. The higher proportion of highly educated participants (91.3% with bachelor's degrees or above) and middle-aged participants means that the findings might not generalize to young adults, elderly adults, or less educated adults.

Second, the cross-sectional design cannot measure the long-term user experience and temporal stability. Long-term studies employing longitudinal designs could examine whether initial positive responses persist over time, and whether multiple uses of the tool yield long-term benefits in mental health awareness and help-seeking.

Third, the study was based on self-reporting alone, which is susceptible to social desirability bias, recall bias, and limited introspective capacity [9]. While the use of anonymous questionnaires would have diminished some social desirability issues, response bias cannot be ruled out. Follow-up studies incorporating objective assessments of use (e.g., completion rates, time taken, navigation patterns) may complement self-reporting

and provide a more nuanced portrayal of the user experience [31,32].

Fourth, the research did not include a clinical validation component to assess the tool's accuracy in differentiating between individuals who may or may not benefit from professional mental health care. While the overall user ratings of accuracy were encouraging, empirical validation via standardized clinical instruments is needed to establish the usefulness of the tool as a screener [33].

Fifth, the user experience questionnaire, despite indicating strong psychometric properties with this sample, has not been broadly validated across populations. Further psychometric testing in larger, more representative samples is needed to confirm its reliability, validity, and measurement invariance across groups.

Conclusion

This cross-sectional study provides empirical evidence that the Israqah mental health self-assessment tool is extremely acceptable to Saudi Arabian users, with high levels of satisfaction in many dimensions of the user experience. Participants particularly valued the simplicity of the tool, its ease of use, privacy, and contribution to psychological awareness and reflection. The user experience questionnaire showed excellent internal consistency and satisfactory construct validity, demonstrating its usability for ongoing assessment and quality improvement programs.

The findings suggest that privacy-sensitive, culturally adapted digital self-assessment tools have significant potential to serve as broad entry points for mental health self-discovery in settings where stigma is a significant barrier to organized help-seeking. The non-pathologizing and enlightenment (تفكير) -oriented strategy of the Israqah tool appears to be well-received by Saudi users, offering an encouraging prototype for mental health promotion interventions within the Kingdom.

However, several key measures must be implemented to maximize the potential of the tool. Systematic clinical validation research will have to be carried out to identify the precision of the tool in making people who would require professional mental health services. Longitudinal research will have to be conducted to measure extended use, long-term consumer satisfaction, and genuine impacts on help-seeking behavior and mental health-related outcomes. More comprehensive sampling methods are required to make the tool available to large populations such as young adults, older adults, and individuals with different levels of education.

As Saudi Arabia continues to reengineer its mental health environment through the Vision 2030 reforms, online self-assessment tools such as Israqah will continue to play a pivotal role in normalizing mental health consciousness, reducing stigma, and providing avenues



for seeking professional assistance. This study provides a firm foundation for the continuous development, evaluation, and deployment of the Israqah tool within the evolving mental health landscape of Saudi Arabia.

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List of Abbreviations

ACHD	Adult Congenital Heart Disease
CBT	Cognitive Behavioral Therapy
CDS	Cognitive Distortions Scale
DMH	Department of Mental Health
EFA	Exploratory Factor Analysis
EMDR	Eye Movement Desensitization and Reprocessing
EMS	Emergency Medical Services
ERQ	Emotion Regulation Questionnaire
ICD	Inventory of Cognitive Distortions
ICMJE	International Committee of Medical Journal Editors
IOL	Induction of Labor
IRB	Institutional Review Board
JHAH	Johns Hopkins Aramco Healthcare
KAP	Knowledge, Attitudes, and Practices
KFSH&RC	King Faisal Specialist Hospital & Research Center
KMO	Kaiser-Meyer-Olkin
MOH	Ministry of Health
MMSE	Mini-Mental State Exam
MoCA	Montreal Cognitive Assessment
NCMHP	National Center for Mental Health Promotion
OCD	Obsessive-Compulsive Disorder
SD	Standard Deviation
SLUMS	Saint Louis University Mental Status Exam
SPSS	Statistical Package for the Social Sciences
TMS	Transcranial Magnetic Stimulation

Conflict of interest

The authors declare that they have no conflicts of interest regarding the publication of this article.

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