

Mindfulness for Teenagers Students: Designing an Effective Islamic Digital Therapeutics Through Adult Insights

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Abstract

This study explored the development of an Islamic digital therapeutic application designed to enhance mindfulness and mental well-being among Muslim student teenagers from adult's perspective. Acknowledging the critical role of mindfulness in adolescent mental health, this study addressed the significant gap in digital mental health support for these users. This study aimed to identify key Islamic design elements and mindfulness practices suitable for digital adaptation, develop a prototype application, and evaluate its impact on Muslim teenagers' mental well-being. Additionally, this research conducted an extensive investigation into the development of an innovative Islamic digital therapeutic application with the goal of enhancing mindfulness and overall mental well-being among Muslim teenage students. It was determined through this study that mindfulness plays a crucial role in the mental health of adolescents, and there is a substantial lack of digital mental health resources specifically tailored to this demographic. To bridge this gap, the research aimed to identify the essential Islamic design components and mindfulness practices that are suitable for adaptation into a digital therapeutic platform (Dtx). Subsequently, a prototypical app was created, based on adults' perceptions on impact of the mental well-being of Muslim teenagers was assessed. The methodology employed in this research comprised a combination of quantitative methods for content development, user interface design founded on Islamic art principles. The perspectives of adults, including mental health professionals and parents, were crucial in informing both the design and content of the app to ensure its effectiveness and authenticity. This comprehensive approach resulted in the successful development of prototype mobile app appropriately named "Islamic Mindfulness for Teens." The app seamlessly integrates evidence-based psychological interventions with Islamic principles and design elements. The outcomes of this evaluation have far-reaching implications for the advancement of inclusive digital therapeutic solutions and the integration of religious facets into mental health interventions specifically targeting youth populations. The research paper explores the efficacy and acceptance of "Islamic Mindfulness for Teens," a specialized digital therapeutics mobile application designed to address the mental health concerns of teenagers within the Islamic community. The app blends evidence-based psychological interventions with relevant Islamic design and content, offering a holistic mental health support system.

Keywords: student teenager, mental health, digital therapeutics, mobile app

1. Introduction

This is a design study to explore the design for Islamic digital therapeutics that boost mindfulness among Muslim student teenagers. As a significant part of the adolescent segment of the Muslim community, teenagers have unique needs, enrichments, and constraints. Digital therapeutics are not merely replacing the time of the conventional approach, but they are commonly combined; however, they are practiced in a modern way that positively impacts human health. Most of the literature examines the results of secular digital therapeutics, which ignore the comparison of this research with the potential of Islamic digital therapeutics to boost mindfulness habits. Therefore, this design study attempts to construct digital Islamic therapeutics that align with religious and cultural adherence, especially for Muslim teenagers, making them stronger than secular digital.

The World Health Organization (WHO) defines mental health as "a state of well-being in which individuals are able to realize their potential, deal with the normal stressors of life, work productively, and contribute to their community" (Galderisi, Heinz, Kastrup, Beezhold, & Sartorius, 2015). To achieve this, the authors use a robust research methodology that includes quantitative surveys with users, carers, and mental health. This study aims to validate the app's efficacy and add to the increasing corpus of research on digital treatments, Islam specific design, and adolescent mental health. In today's fast-paced environment, when teens are stressed and anxious, effective mental health interventions are essential. Adolescence is a time of many problems as young people manage their identities, relationships, and goals.

In today's society, it is essential to teach adolescents about mindfulness. Mindfulness involves experiencing life without judgement while being aware of thoughts, emotions, and the environment. This shows how children's attention, self-perception, and emotional management develop. Mindfulness is a universal idea that may be taught in different religions. N. Firdous & N. Firdous (2023, Oct. 5). The values and teachings of Islam help Muslim teens achieve mental health and balance in life. Mindfulness, a practice rooted in ancient traditions, has gained significant recognition in recent years because of its potential to alleviate stress, enhance focus, and promote emotional wellbeing. Certain promising treatments are also applicable to other faith communities, such as talk therapy, which was developed in a traditional Muslim context. According to her, the most profound insight is that Islamic align with conventional notions of comprehensive well-being and recovery. Certain promising treatments are also applicable to other faith communities, such as talk therapy, which was developed in traditional Muslim contexts. the most profound insight has been that Islamic methods align with the conventional notions of comprehensive well-being and recovery. Similar to others, Muslims believe that mental health is a prerequisite for physical health. The future of Muslim mental health. Thus, similar to other Muslims, mental health is a prerequisite for physical health.

This study aims to rigorously evaluate "Islamic Mindfulness for Teens, a pioneering digital therapeutic application meticulously crafted to meet the unique mental health needs of teenagers in the Islamic community. The app incorporates a synergy of evidence-based psychological treatments, such as Cognitive Behavioral Therapy (CBT), with traditional Islamic teachings, prayers, and design aesthetics to offer a nuanced, particular mental health solution. (Tanhan & Young, 2021) highlighted that Western Muslims face biopsychosocial, spiritual, and economic issues as their numbers increase. Muslims underuse mental health treatment despite Islam's emphasis on mental health. Researchers, practitioners, and trainers in schools, colleges/universities, mental health organizations, and research institutions can help Muslims. Muslim biopsychosocial and spiritual difficulties can be addressed by mental health specialists to improve quality of life. Thus, the primary aim of this study was to assess the

efficacy of the app in reducing prevalent mental health issues, such as stress, anxiety, and depression among Muslim teenagers.

2. Problem Statement

The field of digital mental health resources for Muslim teenagers faces significant challenges, including a scarcity of Islamic-based resources tailored to this demographic and a lack of integration between evidence-based psychological interventions and Islamic principles. This gap in appropriate care that aligns with religious values is exacerbated by insufficient research on the effectiveness of Islamic-based digital therapeutic applications in enhancing mindfulness and mental well-being among Muslim teenagers. Designers encounter difficulties in creating user interfaces that incorporate Islamic art principles, while maintaining functionality and appeal for adolescent users. Moreover, there is a notable lack of understanding of how adult perspectives, including those of mental health professionals, Islamic scholars, and parents, can inform the development of effective digital mental health interventions for teenagers. Limited knowledge exists regarding the impact of faith-tailored digital therapeutics on stress, anxiety, and depression symptoms among Muslim adolescent students. The absence of a comprehensive framework to develop inclusive digital mental health interventions that integrate religious elements underscores the need for further research and development in this field. By cultivating present-moment awareness and non-judgmental acceptance, mindfulness empowers individuals to navigate life challenges through resilience and equanimity. However, while numerous digital therapeutics apps exist to support mindfulness practices, there is a noticeable dearth of platforms that specifically cater to the unique needs of Muslim teenagers. Braun and Gepp (2021) further noted that such apps can provide easy support between treatment sessions, office visits, and after-therapy. Truschel and Tzeses (2021) predicted that mental health applications would significantly impact mental health care by offering unique self-management choices. Many experts and psychologists expect these new digital apps to be used in traditional therapies. Experts who work with patients benefit from mental health apps. Recognizing the significance of cultural sensitivity and inclusivity, the authors propose an innovative approach to address this gap by incorporating Islamic design and content into a digital therapeutics' app for balanced youth mental well-being. By infusing mindfulness practices with Islamic principles, the authors aim to create a holistic tool that not only nurtures the mental Well-being of Muslim teenagers but also strengthens their spiritual connections.

3. Literature Review

3.1 Overview on Digital Therapeutics

Digital therapeutics (DTx) are evidence-based interventions (DTx) that can be delivered within a software program to prevent, manage, or treat a medical disorder or disease. One of the most rapidly growing areas of research to which digital technology is being applied today is mental well-being. In particular, digital solutions facilitate enhancing mindfulness to contemplate well-being as well as the individual's attitudes toward the people and things in daily life. Many components of digital therapeutics are ubiquitous in health psychology and behavioral medicine interventions, which have traditionally been delivered face-to-face or in group therapy sessions. It has been demonstrated that technology is already facilitating the delivery of behavioral health interventions and is effective in terms of changing traditional practices in this space.

Some particularly pertinent examples of this are cultivating mindfulness through digital means to manage stress, digital psychotherapy treatment for children and youth with anxiety disorders, and the development and evaluation of new game apps for physical, mental, and social well-being. Most current student well-being work focuses on online interventions in e-mental health

for topics like mindfulness training, managing anxiety, depression, and sleep problems. The reviewed application of digital therapeutics is indeed conceptually connected, which holds value in its potential to bridge between the newly developed digital character-building application and some of the known critical thought leaders in this area. In addition, new treatment options require the evaluation of cultural adaptations and underrepresented populations. Only a few studies have evaluated digital mental health interventions in diverse populations or cultural contexts. The value of digital mental health interventions for diverse populations is unclear.

3.2 Existing Muslim Mental Health Apps Containing Islamic Design and Feature

The World Health Organization (WHO) defines mental health as "a state of well-being where individuals can realize their potential, cope with normal life stressors, work productively, and contribute to their community" (Galderisi et al., 2015).

Table 1: A brief overview of Muslim mental health apps

Application	Overview
Sabr	<p>a) Islamic Design Features: The app seems to incorporate Islamic principles into its design by offering guided meditation and content through an Islamic lens. The mention of working with prominent Muslim therapists, scholars, and Nasheed artists suggests an effort to align the design with Islamic values.</p> <p>b) Contents Related to Health: The app includes guided meditation sessions with a focus on mental health, particularly addressing issues like anxiety. The collaboration with Muslim therapists and professionals suggests a commitment to providing content that is relevant to the mental well-being of the Muslim community.</p> <p>c) Language Support: The description doesn't explicitly mention language support, but the inclusion of contents curated by professionals and scholars from across the globe implies a potential diversity in languages to cater to a broader audience.</p> <p>d) Privacy and Security: Sabr prioritizes user privacy, collecting minimal data for analytics and services. No data is shared or sold. Children's privacy is protected. The CEO, Subhaan Ahmad, oversees secure data processing in Illinois. The app doesn't support Do Not Track. Regular updates are transparently communicated. Users have rights to control their data.</p> <p>e) User Interface / User Experience (UI/UX): The app appears to have a user-friendly interface by offering guided meditation, uplifting courses, and vocal tracks. The segmentation of content into categories like guided meditation, courses, and vocals suggests an organized and intuitive user experience.</p> <p>f) Reliability of Health Information: The mention of working with reputable scholars, professionals, and artists implies a commitment to providing reliable and credible information. However, users should still verify the credentials of those involved and check if the app cites sources for its health information.</p>
Sakeenah	<p>a) Islamic Design Features: Sakeenah incorporates Islamic mindfulness by blending modern science and religion. It uses guided Islamic stories, mindfulness audio sessions, and courses to enhance emotional and mental well-being through a state of conscious self-awareness in one's relationship with Allah.</p>

	<p>b) Contents Related to Health: The app addresses stress, anxiety, hope, and fear through research-categorized sessions. It aims to provide comfort and relaxation during crises, promoting a deep state of relaxation and a tranquil mind.</p> <p>c) Language Support: The application supports multiple languages to cater to a diverse audience.</p> <p>d) Privacy and Security: The app does not share its user data and privacy with third party. However, the app collects personal data, lacks encryption during transmission, and doesn't offer a secure connection. Users cannot request data deletion, raising concerns about privacy and control.</p> <p>e) User Interface / User Experience (UI/UX): Sakeenah offers a user-friendly experience with features like daily meditation, sleep stories meditation, and emotions meditation. Users can choose their speaker, enhancing personalization.</p> <p>f) Reliability of Health Information: While the app provides mindful content, the reliability of health information is not explicitly mentioned. Users should evaluate the credibility of the sources and whether the app cites references for the health-related information provided.</p>
Mindful Muslim	<p>a) Islamic Design Features: The app emphasizes authenticity by sourcing content from renowned scholars like Mufti Menk and referencing Islamqa.info. It adheres to Quran and Sunnah principles, focusing on Sahih Bukhari and Sahih Muslim for hadith.</p> <p>b) Contents Related to Health: The app provides gentle, hopeful stories in a relaxing voice, with topics like "Miracles of my Prophet" and "Who is Allah," promoting a peaceful sleep experience. There are no typical meditation app elements like deep breathing or body sensations.</p> <p>c) Language Support: The app supports English language.</p> <p>d) Privacy and Security: Mindful Muslim collects personal data for app services, ensuring security but acknowledging internet transmission risks. Users have rights, and data may be shared with specific recipients. Privacy Policy updates are notified, and queries can be directed to the Data Protection Officer.</p> <p>e) User Interface / User Experience (UI/UX): The app appears user-friendly, focusing on customizable playlists featuring dua, ruqyah, night Quran, and Islamic stories for better sleep. The absence of typical meditation cues differentiates it from non-Islamic sleep apps.</p> <p>f) Reliability of Health Information: The app claims authenticity by referencing scholars and relying on Sahih Bukhari and Sahih Muslim for hadith. The inclusion of a reference list adds transparency and reliability to the content.</p>
Halaqah	<p>a) Islamic Design Features: Halaqah integrates Quranic wisdom (Quran 13:28) and Islamic traditions, creating a digital spiritual circle. It offers dhikr sessions, aligning users with the source of life for tranquility.</p> <p>b) Contents Related to Health: The app addresses common issues like anxiety, sadness, and stress. It promotes mental well-being through daily remembrance, guided meditation, and mindfulness sessions, providing a holistic approach to health.</p> <p>c) Language Support: The app supports English language.</p> <p>d) Privacy and Security: Halaqah prioritizes user privacy on its app, collecting data for specified purposes. It employs log files and respects</p>

	<p>browser cookie preferences. Users can exercise rights under CCPA and GDPR. The privacy policy undergoes updates, and parents are urged to monitor children's online activities.</p> <p>e) User Interface / User Experience (UI/UX): Halaqah appears user-friendly, featuring daily remembrance, guided sessions, offline playback, and progress tracking. The focus on simplicity and functionality enhances the overall user experience.</p> <p>f) Reliability of Health Information: While the app emphasizes mental well-being, it doesn't provide specific health information. Users should assess the credibility of the content, and the app's references, to ensure reliability.</p>
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3.3 Islamic Perspectives on Teenage Mental Health: A Holistic Approach for Youth Well-Being

In Islamic teachings, mental health is considered an integral part of overall well-being and closely aligned with physical and spiritual health. The Qur'an and Hadith often emphasize the importance of a balanced life ("Tawazun"). Although, as Kim and Esquivel (2011) note, there has been a more recent upswing of interest in the Relation of Spiritual Development to Youth Health and Well-Being 1105 spirituality and religious influences on adolescent well-being, the evidence continues to suggest that the great majority of studies have investigated these dynamics among older adults more so than among young people, mental health is a critical concern in today's fast-paced and challenging world. It is essential to address the unique needs of Muslim teenagers by incorporating Islamic principles and teaching into mental-health interventions. By blending mindfulness techniques with Islamic identity and values, a digital therapeutic app can provide a holistic approach to support the mental well-being of Muslim youths.

3.3.1 Islamic Teachings on Mental Health

Islam prioritizes mental well-being, emphasizing the integration of physical, emotional, and spiritual health. Quranic verses, such as Surah Al-Baqarah (2:286), advocate resilience and self-care and guide believers to find balance. Mindfulness practices aligned with Islamic values, including deep breathing and meditation, can enhance digital therapeutic application. Surah Al-Hadid (57:4) highlights constant divine presence, fostering 'muraqabah'—awareness of Allah. Incorporating prayer ('salah') as mindfulness aids Muslim teenagers in spiritual connection and solace. Muslim mindfulness ('al-muraqabah') signifies conscious awareness of Allah and inner states, reaching the pinnacle in fully realized faith ('al-ihsan').

3.3.2 Balancing Mind and Soul: How Islam Guides Teenagers Toward Mental Well-Being

Islam offers a comprehensive framework of well-being, valuing the mind ('Aql') and soul ('Ruh'). In challenging teenage years, Islamic teachings provide wisdom and guide young individuals to balance their mental and spiritual health. Today's digital world presents overwhelming pressure, making it essential for teenagers to integrate mindfulness and self-care. Islam is not merely a religion; it guides teenagers to seek mental well-being. Embracing Islamic principles, teachings, and practices allows youth to find comfort and strength amidst life challenges. Islam encourages mindfulness, exemplified in concepts like 'Taqwa', fostering awareness of God and actions. Mindfulness enhances self-awareness and aids stress and anxiety management (Human Assistance & Develop Intl, 2019).

3.3.3 Quranic Guidance for Emotional Well-Being

The Quran, a source of profound guidance, addressed emotional well-being through stories of prophets facing adversity. The Quran depicts human experiences from Prophet Ya'qūb's grief-induced blindness to Maryam's childbirth anxiety. Prophet Muhammad's losses in the Year of Sorrow teach resilience. Incorporating verses that promote patience, gratitude, forgiveness, and trust aids teenagers in cultivating positivity and emotional resilience. Reflection on Quranic teaching forms a robust foundation for mental well-being (Studio Arabiya, 2023).

3.4 Developing the Digital Therapeutics App

To create an effective digital therapeutic app for Muslim teenagers, a research methodology rooted in Islamic psychology and mental health principles could be employed. According to Wang et al. (2018), mental health applications may help to improve the monitoring and management of mental health disorders, particularly depression. Furthermore, these applications are practical because they are simple to use and convenient for encouraging participation in treatment regimens and monitoring symptoms. This involves conducting surveys, interviews, and focus groups within the Muslim community to understand the specific challenges faced by the youth and their preferred strategies for coping with mental health issues.

3.4.1 Impact on Cultural Identity

Incorporating Islamic design into an app is vital for Muslim teenagers, fostering cultural and religious identity, providing support through teaching, aiding health challenges, and promoting overall well-being. The app blends Islamic principles with mindfulness, empowering the youth for mental well-being, resilience, and inner peace. Islam guides strategies like prayers ("Salah") and Qur'an recitation for mental health, emphasizing mindfulness ("Tafakkur"), seeking knowledge ("Ilm"), and community ("Ummah"). Prophet Muhammad's (PBUH) holistic approach considers spiritual and practical solutions, advocating seeking treatment when needed. In summary, Islam offers a comprehensive well-being approach for teenagers, integrating spirituality, emotions, and community to provide lasting value. Table 2 provides detailed explanations of the psychological and physical challenges faced by teenagers.

Table 2: Psychology and physical challenge

Challenges	Explanation
Mindfulness and Prayer	One of the central aspects of Islamic practice that fosters mental Well-being is Salah (prayer). The ritual of bowing down five times a day acts as a reminder to detach from worldly distractions and focus on inner peace. For teenagers dealing with the stress of academics, relationships, and the journey of self-discovery, Salah can serve as a grounding mechanism.
Self-Reflection and Introspection	Islamic teachings emphasize the importance of thoughtfulness and contemplation which greatly aid in self- reflection. These practices are particularly beneficial for teenagers as they navigate their thoughts and emotions. Additionally, these methods align with behavioral techniques that promote mindfulness as an effective approach to address mental health challenges.

Community and Social Support	Being a part of a knit community, known as the Ummah, is highly valued in teachings. It has been recognized that belonging to such a community can serve as a shield against health challenges like anxiety and depression. In accordance with the principle of Shura (consultation) teenagers are encouraged to seek guidance and advice (referred to as "Mashwara"), from elders, peers and mental health experts.
Seeking Knowledge and Wisdom	In Islam the quest, for knowledge ("Ilm") goes beyond exploration – it encompasses a comprehensive understanding of one’s mental and emotional well-being. This becomes especially significant for teenagers as they navigate the intricacies of adolescence. The Prophet Muhammad (PBUH) emphasized the importance of seeking knowledge and even consulting medical experts, acknowledging that mental Well-being is part of overall health.
Balance and Moderation	Finally, Islam advocates for a balanced lifestyle (“Tawazun”) that harmonizes the needs of the body, mind, and soul. For teens, this means balancing academic pressures with recreational activities, social engagements, and spiritual commitments.

By aligning with these Islamic perspectives and practices, teenagers can achieve a more balanced mental and spiritual state, and are better equipped to face the challenges that arise.

3.4.2 The Complications Encountered by Teenagers in The Contemporary Society

Muslim teenagers face diverse mental health challenges, including unique issues related to their cultural and religious identity, alongside universal concerns such as depression and anxiety. Azhari et al., 2022, suggest that religiously integrated mental health treatments hold promise. However, limited research has explored how Islamic practices impact the mental wellbeing of Muslims. This study employed a randomized controlled trial to assess the impact of an intentionally crafted Islamic intervention on anxiety and depressive disorders in 62 Muslim patients. Divided by genders, the participants were randomly assigned to the treatment or control groups. Refer to Table 3 for additional details on teenagers’ mental health.

Table 3: Mental health issues among the teenagers

Mental Health Issues	Explanation
Anxiety and Depression	Teenagers, including Muslims, do suffer anxiety and depression because of societal pressure, discrimination, and stress to conform to societal norms in addition to sticking to Islamic principles. Mental health problems associated with diverse factors in adolescence, a developmental period, highlight support, socio-emotional learning, and accessibility for mental health care. Globally, an estimated 1 in 7 (14%) teenagers grapple with mental health problems, often overlooked and untreated (World Health Organization: WHO, 2021).
Identity Crisis	“Identity crisis” among young Muslim Americans, who find themselves divided between home, community, Islam and secular society and may be radicalised (Ali, 2018). The challenge of reconciling their Islamic identity with the secular world they live in can often result in an identity crisis contribute to mental health issues such as low self-esteem and social anxiety.

Familial Pressure	Muslim teenagers navigate increased expectations from family and community, encompassing academics, career decisions, and religious commitments, leading to heightened stress and anxiety disorders. College students often experience academic stress influenced by various factors, including psychological health and self-worth (Azhari et al., 2022).
Academic Stress	Forty-eight studies connected academic pressure or exam proximity to mental health difficulties, but cross-sectional nature limits determining causation (UCL, 2023). High academic expectations in some Muslim families induce emotional and psychological stress, impacting teenagers' mental well-being (Academic Stress Arising: Topics by Science Gov, n.d.).
Unusual Behavioral	Mood and emotion regulation are also affected by adolescent behavior as a result of the changes in the hormones. These may lead to situations such as depression or anxiety. Peer pressure, low self-esteem, and hormones induce such risky behaviours. This is a very challenging but interesting period when one needs support from parents, brothers or sisters, therapists, teachers, and coaches (Staff, 2023). Fluctuations in adolescence can cause mental foginess, anxiety, low self-esteem, and mood swings (K. R. Lcsw, 2023).

Understanding the mental health challenges faced by Muslim teenagers in modern society is important. Mood swings and emotional volatility stem from hormonal fluctuations and neurological changes during adolescence that are characterised by enhanced testosterone and oestrogen levels. This is crucial in recognising these aspects to tackle and deal with cases of depression and anxiety among Muslim youths.

3.5 The Imperative of Teen-Centric Mental Health Apps with Islamic Elements

To create an effective digital therapeutic app for Muslim teenagers, a research methodology rooted in Islamic psychology and mental health principles could be employed. According to Wang et al. (2018), mental health applications may help to improve the monitoring and management of mental health disorders, creating a teen-centric app with an Islamic design is crucial to address the specific mental health needs of Muslim adolescents. The increasing prevalence of mental health challenges among teenagers necessitates tailored intervention. Abdusalam (2023) underscored Islam's emphasis on mental health, which is essential for meaningful relationships with Allah. Investigating Islam's role in mental health, particularly in the context of contemporary therapy, is essential. The digital era offers an avenue for support; however, there is a gap in culturally and religiously tailored resources for Muslim teenagers. Embedding Islamic elements in mental health apps aligns with Islam's holistic approach to life, and promotes spiritual, mental, and physical well-being. Practices such as Islamic mindfulness integrated into digital platforms address unique challenges including stigma and the need for confidential support.

Developing such apps requires an understanding of both the technological and cultural aspects. User reviews provide insights into users' needs and shortcomings. Collaboration between mental health experts, Islamic scholars, app developers, and teenagers ensures technological robustness and cultural relevance. In summary, there is a pressing demand for teen-centric mental health apps in Muslim countries that present an opportunity to support Muslim teens, enhance resilience, provide coping strategies, and contribute positively to their overall well-being (Hassan, 2022).

3.6 Incorporation of Islamic Design Thinking in Teenager Centric App

Integrating Islamic elements into teen-centric mental health apps is essential to align with Islam's holistic approach to well-being. Practices, such as prayer and meditation, have been linked to improved mental resilience. This integration presents a unique opportunity to provide mental health support in line with Muslim teenagers' values, thereby increasing their acceptance. To address these unique challenges, apps must be carefully designed considering the intersection of technology, culture, and religion. Collaborative efforts involving mental health professionals, scholars, developers, and teenagers ensure both technological soundness and cultural relevance, incorporating the adolescent perspective to resonate with their experiences and cultural contexts. This study contributes to the growing research on digital therapeutics, Islam-specific design, and teenage mental health, which is crucial in today's fast-paced environment where stress and anxiety are prevalent during the formative period of adolescence. Non-compliance with Islamic teachings and principles can lead to criticisms and accusations about empowered adaptors and therapists with false teachings and practices, who utilize the wrong therapeutic tools that lead to hazardous impacts. Islamic spiritual and psychological therapeutics have to be certified by religious authorities. Muslim users should consult ethical or background Islamic knowledge sources, and if they do not find their inquiries, they should consult religious authorities at any time for better results. However, there are challenges in engaging teenagers to use digital therapeutic tools regularly. The current knowledge, online programs, and resources may influence the teenagers' regular browsing. The participants might select the digital programs and services according to the offered discounts and the salaries of the professionals. The programs should be designed for long-term face-to-face activities. They might also access traditional, evidence-based, and Muslim youth-friendly digital psychological services that are personal affairs and kept secret. As the majority of adolescents use digital platforms, there is an opportunity to access these services digitally in an online environment. It is suggested that opportunities and challenges in designing digital therapeutic tools can be engaged with children, youths, adults, and older adults. It is known that the daily activities, beddings, and uses of Muslim individuals are connected to Islam; Islam controls physical and non-physical communication. It is tangible in daily activities that incorporate diurnal prayers, the use of Halal, marriage according to Islamic teaching, and activities conducted on events related to Islam. The immeasurable idea is to provide digital therapeutic tools that respect human beings as the psychological and spiritual aspects equally. Future digital therapeutic tools and programs could be integrated between tech developers, mental health professionals, and scholars of Islamic teaching. They manage human beings equally by their disciplines. They might create digital therapeutic tools based on real human needs and Islamic teaching.

3.6.1 Using Islamic Design Elements and Aesthetics.

By incorporating the features explained in Table 7, this app can become a comprehensive resource that Muslim teenagers find both relatable and useful, thereby promoting a holistic approach to mental health that aligns with faith. With the increasing prevalence of health issues among adolescents it has become evident that accessible and targeted interventions are crucial. Smartphones and tablets have proven to be platforms for health applications that offer immediate support to those in need. However, there is a lack of resources specifically tailored to meet teenagers' religious needs. This is especially relevant in areas where such resources can play a vital role in supporting the mental well-being of adolescents. Table 4 shows the Islamic design features that should be adopted in an application's development.

Table 4: Islamic design features

Features	Explanation
Islamic Counsellor Access	Offer a feature to connect users with certified counsellors who are trained in Islamic teachings, ensuring that professional advice is in alignment with their faith.
Fasting and Nutrition Tips	Provide evidence-based tips on how fasting during Ramadan or other times can affect one's mental health and offer advice on how to maintain nutritional balance.
Islamic Finance Stress Relief	Since financial stress is a common concern among teenagers looking forward to their future, offering Islamic finance tips based on Zakat and other principles could be beneficial.
Salah and Mindfulness	Include a feature that merges the Islamic practice of Salah
Qur'anic Verses and Hadiths	Incorporate relevant Qur'anic verses and Hadiths that talk about mental Well-being, patience, and resilience. This offers an authentic Islamic perspective on mental health issues.
Islamic Calendar Reminders	Utilize the Islamic calendar to send notifications for important dates, like Ramadan and Hajj, and suggest coping strategies or self-care tips for these specific times.
Du'a and Dhikr Recommendations	The app could suggest specific Du'as (supplications) and Dhikr (remembrance of Allah) that could be recited to alleviate stress, anxiety, or depression.
Salah and Mindfulness Tools	Include a feature that merges the Islamic practice of Salah (prayer) with modern mindfulness techniques. This could include a guided prayer experience that promotes focus and calm.
Secure Ummah Community Forum	A secure and moderated community forum based on the concept of Ummah can allow teenagers to share experiences, seek advice, and offer support to each other in a confidential and culturally sensitive setting.

To address this gap, it is imperative to develop health apps that are specifically designed for teenagers to incorporate Islamic elements. These resources have the potential to bring about changes by supporting overall mental health, promoting resilience, providing coping mechanisms, and aligning with cultural backgrounds.

4. Research Methodology

This study explores how Islam guides and supports teenagers in achieving well-being. To achieve this, the study employs a mixed-methods approach with a qualitative bias that seeks to understand the experiences and perspectives of Muslim teenagers regarding the role of Islam in their well-being. The comprehensive research design methodology outlined the strategies for data collection and analysis.

4.1 Research Design

This study adopted a mixed-method design, giving prominence to qualitative exploration to understand how Islamic influence affects adolescents' well-being. The structured interviews focused on experiences, beliefs, and practices from an Islamic perspective. This is supported by surveys with established scales that assess demographic aspects, level of devotion, and self-reported mental health. To achieve quantitative results to create the high-fidelity prototype, authors distributed surveys. This complete design intends to bring out both detailed personal stories and general tendencies, explaining the complexity of the interaction between Islam and youth wellbeing in detail.

4.2 Data Collection Methods

A structured survey approach was used in the data collection stage to assess the influence of Islam on teenagers' well-being. A specifically tailored questionnaire was used to collect various categories of data. The interviews were kicked off by acquiring demographic details to help comprehend the answers, encompassing aspects such as age, gender, and culture. The survey subsequently evaluated the degree of devotion in the participant and self-reported mental well-being through established scales, such as the Brief Multidimensional Measure of Religiousness/Spirituality and the Warwick Edinburgh Mental Well-being Scale. Demographics will be combined with a number of standardized scales to provide a complete, measurable exploration of the link between Islam and teenagers' well-being.

A survey was conducted to determine how social media affects teenagers' brains and whether Islamic content applications can deal with teenagers' mental illness. A total of 143 participants participated in the study and were selected through purposeful sampling, taking age, sex, and environmental and health conditions into consideration. Anonymity was ensured as the survey was conducted using online questionnaires. The participants filled questionnaire forms containing questions on how they used social media, how it affected their mental health, and their willingness to use an Islamic content application as a mental health support tool. This comprehensive approach sought to explore the intricate relationship between social media, mental health, and the advantages of introducing Islamic material to address adolescents' mental health issues.

4.3 Data Analysis

This complete design intends to bring out both detailed personal stories and general tendencies, explaining the complexity of the interaction between Islam and youth wellbeing in detail. The survey results offer valuable insights into the perceptions and experiences related to teenagers' mental health. Figure 1 shows that a substantial majority (77.6%) believed that regular counselling or therapy sessions could effectively assist teenagers in overcoming stress, encompassing academic and financial pressures. This indicates the recognition of the potential benefits of professional mental health support in addressing diverse stressors commonly experienced during adolescence.

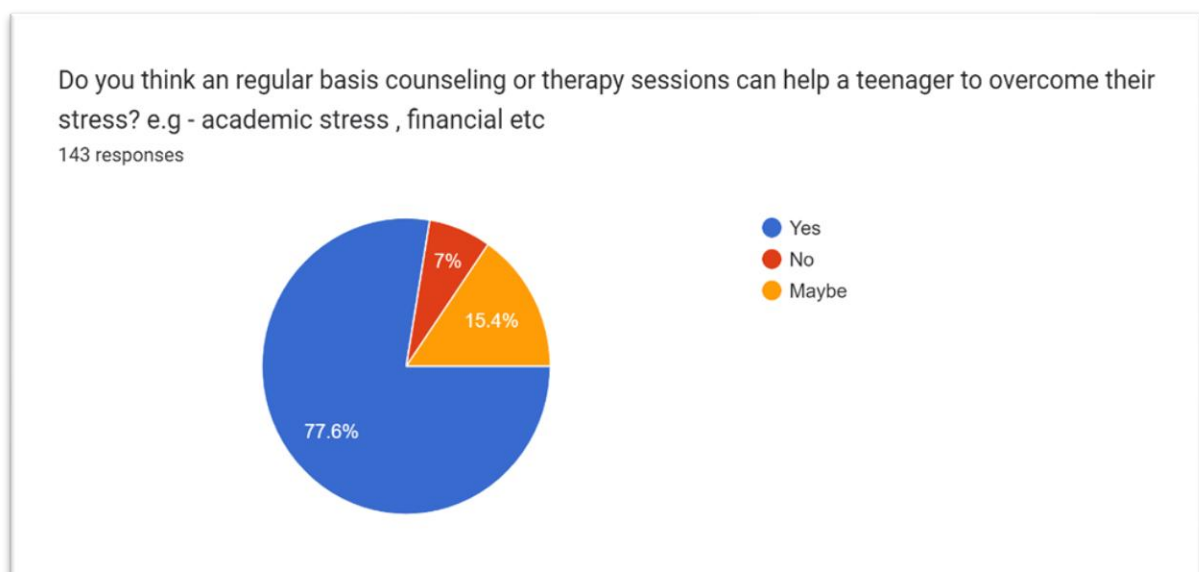


Fig. 1: Perceptions of the Effectiveness of Regular Counseling or Therapy Sessions for Teenagers' Stress

Concerning familial influences, Figure 2 shows that 30.8% of respondents acknowledged having siblings currently facing mental health challenges, whereas the majority (51.7%) reported no such challenges among their siblings. These findings highlight the prevalence of mental health issues within family dynamics, emphasising the need for familial support and awareness.

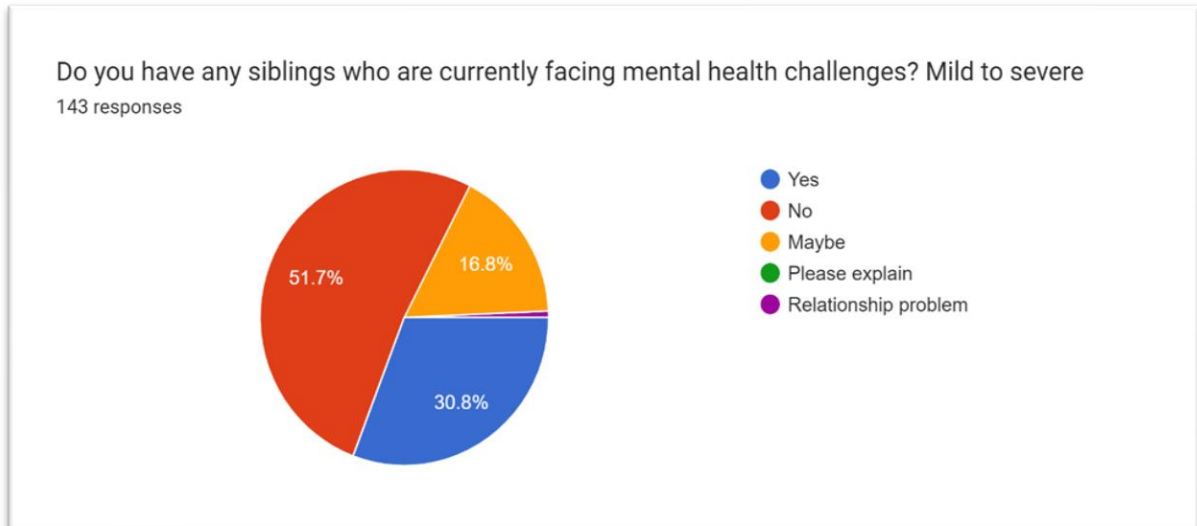


Fig. 2: Presence of Mental Health Challenges Among Siblings of Survey Participants

Additionally, the impact of social media on teenagers' mental health has emerged as a significant concern. Figure 3 shows that an overwhelming 90.2% of the respondents acknowledged its potential influence. This widespread acknowledgement suggests a collective awareness of the role social media plays in shaping the mental well-being of teenagers, necessitating attention and potentially indicating a need for digital literacy and mental health education.

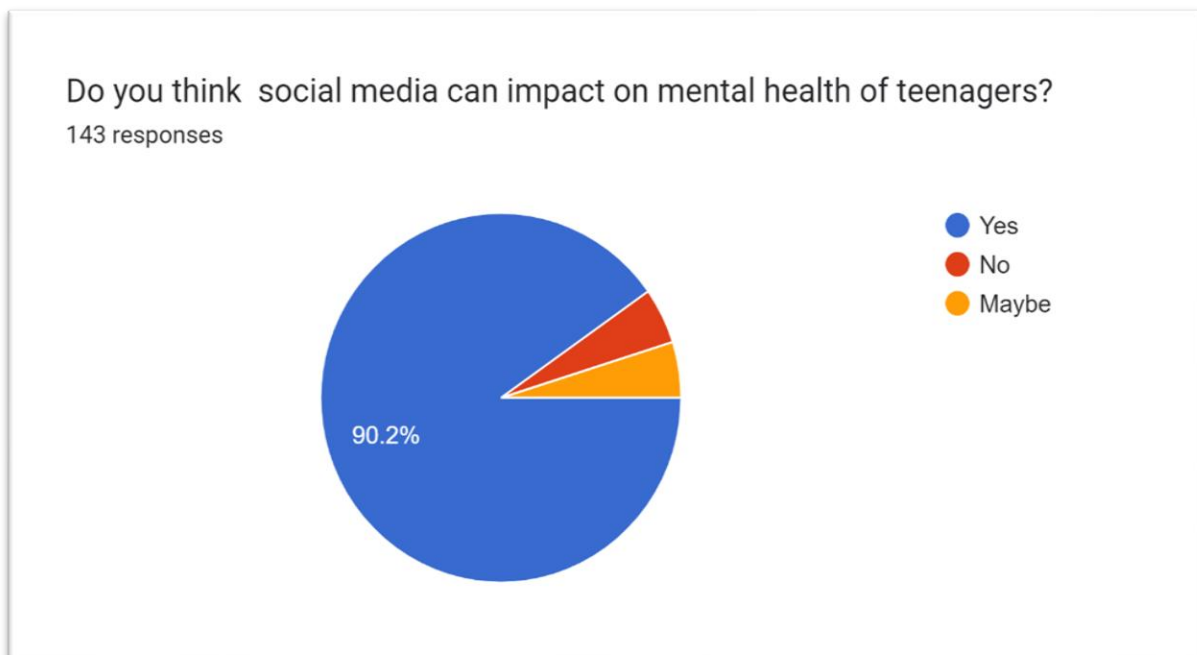


Fig. 3: Recognition of Social Media Impact on Teenagers' Mental Health

Regarding cultural considerations, opinions vary on whether Muslim teenagers face more inconveniences in mental health counselling than their non-Muslim counterparts do. Figure 4 shows that, while 47.6% perceived such challenges, 28.7% disagreed, indicating a nuanced perspective that warrants further exploration. This finding underscores the importance of tailoring mental health support to diverse cultural contexts to ensure inclusivity and effectiveness.

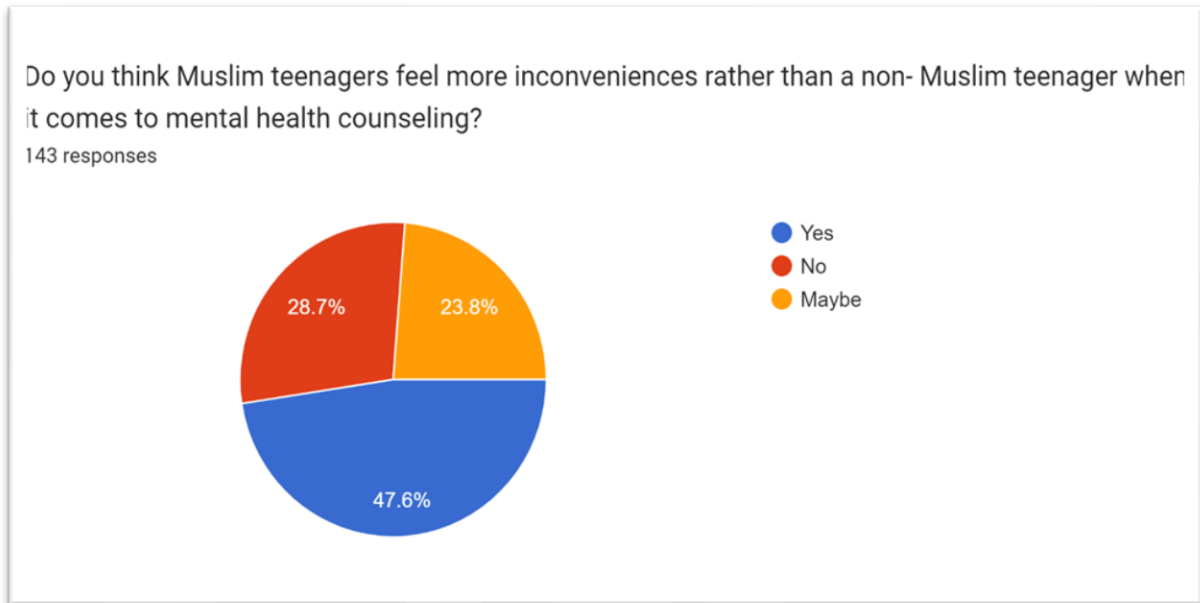


Fig. 4: Perceived Inconveniences Faced by Muslim Teenagers in Mental Health Counseling

The survey also probed the potential effectiveness of an Islamic-based app for aiding Muslim teenagers in managing their mental health. Figure 5 shows a significant 67.8% express optimism in the efficacy of such an app, suggesting a potential avenue for leveraging technology to provide culturally sensitive mental-health resources.

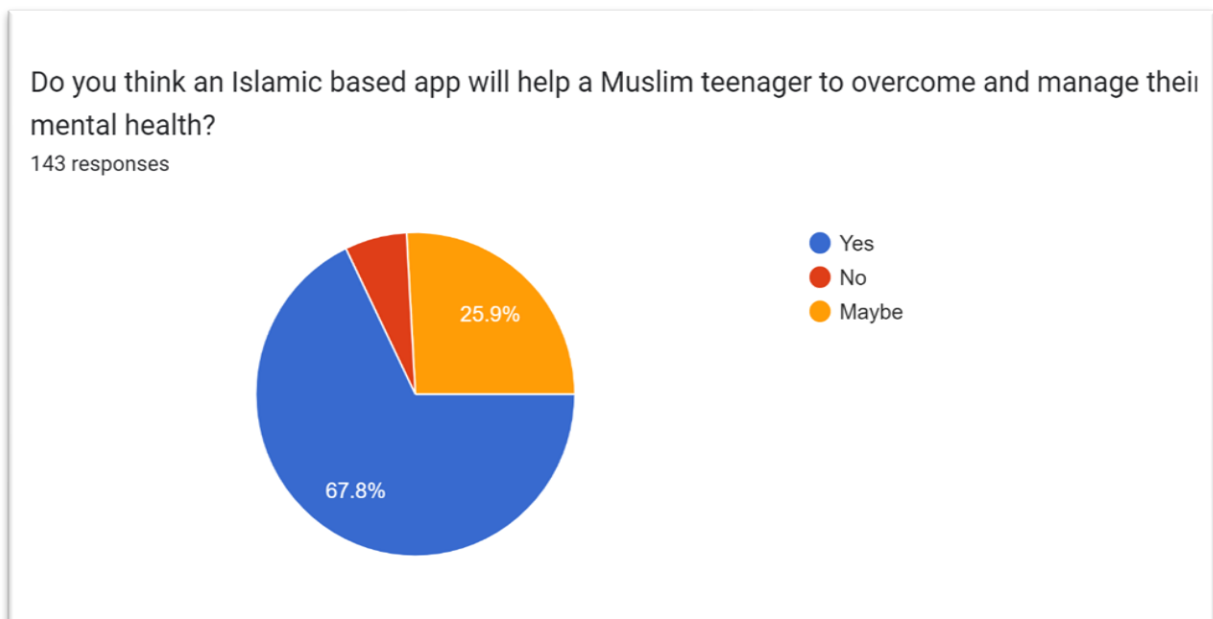


Fig. 5: Belief in the Efficacy of Islamic-Based App for Muslim Teenagers' Mental Health

Finally, the survey addressed the sensitive issue of Islamophobia and its potential sources such as the Netflix series. Figure 6 shows that 67.8% of respondents affirmed the role of various media sources in instigating Islamophobia. This underscores the importance of media literacy education and critical thinking skills in empowering teenagers to discern and challenge negative portrayals that may contribute to harmful stereotypes.

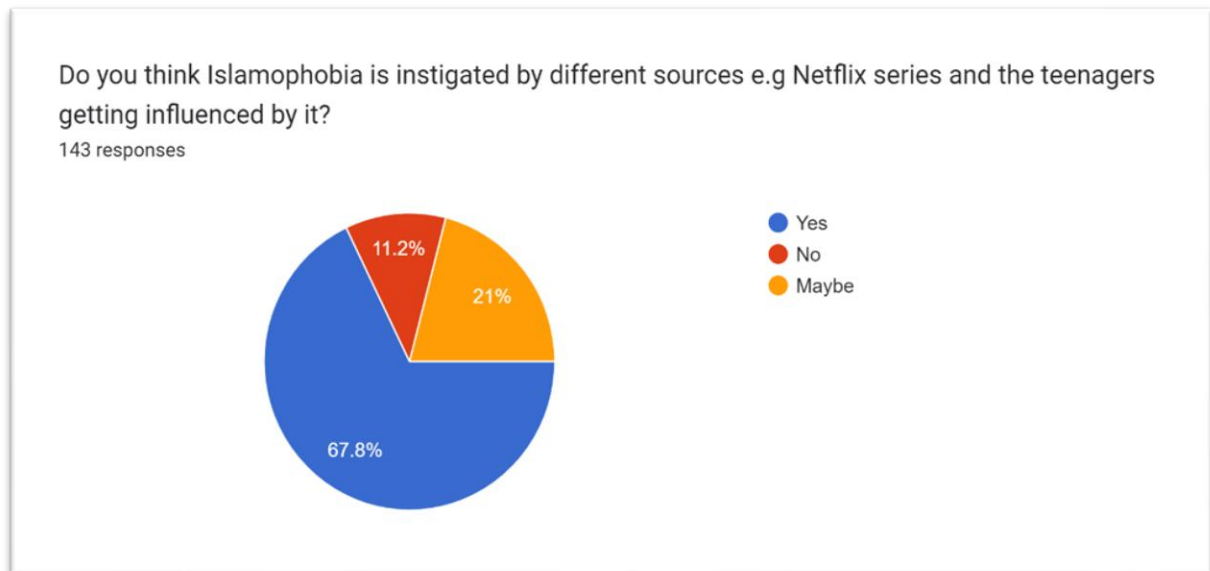


Fig. 6: Perception of Islamophobia Instigated by Various Sources, including Netflix Series

In conclusion, the survey findings reflect various dimensions of teenagers' mental health experiences, including perceptions of counselling efficacy, familial influences, impact of social media, cultural considerations, potential of technology-based interventions, and influence of media on societal attitudes. These insights provide a foundation for targeted interventions and educational initiatives aimed at fostering teenagers' mental wellbeing in diverse cultural and social contexts.

4.4 Ethical Consideration

Ethical considerations will be paramount in protecting the participants' rights and privacy during the survey. Robust measures, including Google Forms security features and HTTPS encryption, assured the confidentiality and anonymity of respondents. Strategic access controls the limited survey link access and maintains privacy. These ethical considerations aimed to create a secure environment and build trust between researchers and participants while upholding confidentiality and privacy principles throughout the research process.

4.5 Proposed Software System (Prototype) for Teenagers

The entire prototype has been created by Figma software. The graphic elements including the feature design has been completed by using Figma and Adobe illustrator. The design creation of the prototype has been created based on the literature reviews on other Muslim mental health apps as well as from the survey answers. The app will start with sign in/sign up, then it will direct the users to the homepage and from there the user can choose their specific choice, for example, looking for counsellor booking sessions or upcoming sessions. However, this app also provides weekly Islamic counselling and teaching on various Islamic topics, such as Ikhtilat, Adab. Dhikr therapy can purify the heart of all negative things (attitudes and emotions), freeing from worldly pressure, anxiety, despair, and depression, can increase

strength and spiritual vitality, and arouse the spirit of life in the heart (Sulistyawati et al., 2019). Figure 7 shows the booking sessions and list of available therapists inside the prototype application.

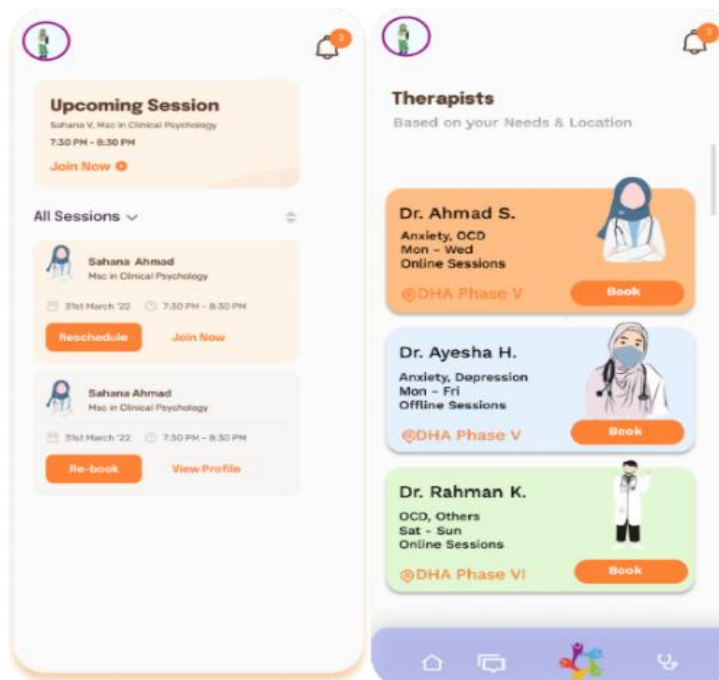


Fig. 7: Booking Sessions and List of Available Therapist

Figure 8 shows the feature menu and the features of the individual pages for the prototype application.

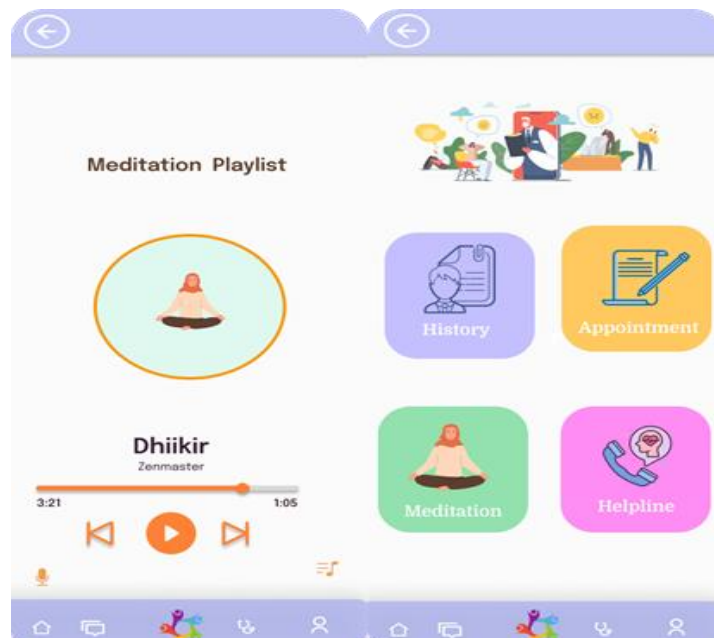


Fig. 8: Features Menu and Individual Page

Figure 9 shows the features of the homepage and the user profile for the prototype application.

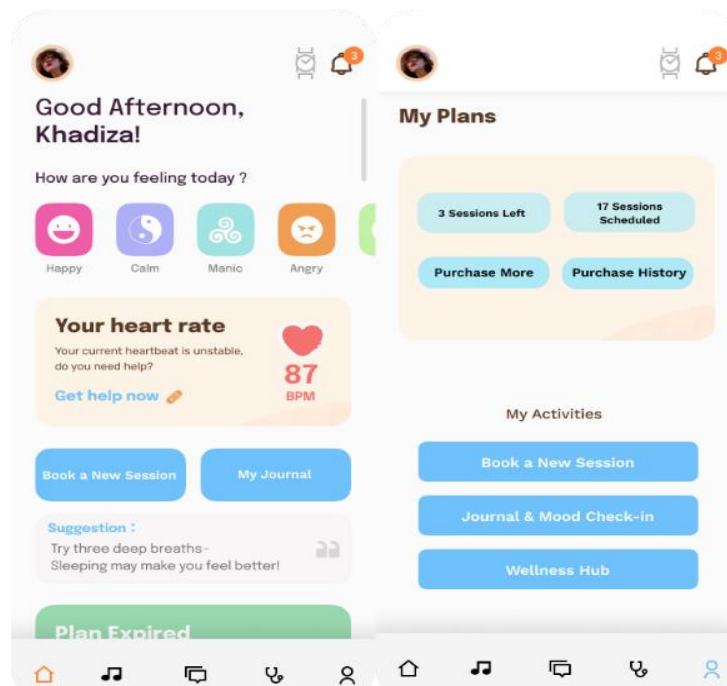


Fig. 9: Homepage and User Profile

4.5.1 Mindful UX Consideration for this Low Fidelity Prototype

Designing a digital therapeutic for a specific user group, like Muslim student teenagers, faces engagement difficulties and usability barriers. Clarifying solutions to usability problems is essential for creating an intuitive user interface. Relevance alone is not enough to attract users, as sustained usage is crucial for optimizing health outcomes. Creating content solely for the digital interface is inadequate; authors should have more control. User feedback in the early stages can guide the use of gamification and reward systems. Usability barriers can be overcome through engagement and sustained usage. Time and motivation are cited as reasons for lack of continued use. Offering quick completion and customized content is suggested. Software can enhance the analysis system for personalized content. Social integration and community building are important in digital therapeutics. Research on social support practices is crucial for implementation strategies. User experience and interface design merit close attention in future research. According to Curtis (2023), designers are in a unique position to affect how users interact with digital products they use on a daily basis. We found that these items had a significant impact on mental health. The authors decided to investigate how UX might support good mental health and lessen stress in people's lives because they have also been in this difficult scenario with their own mental health. Thus, it can be concluded that a user-friendly and intuitive design is crucial to ensure ease of use and encourage consistent engagement, particularly when dealing with adolescents. Research on optimizing an app's interface to be more engaging, interactive, and user friendly will contribute significantly to its success.

In short, the journey to develop teen-centric mental health apps with Islamic elements is just beginning. By conducting longitudinal studies, adapting to diverse cultural contexts, engaging with the user demographic, and refining the user experience, future research can be built upon the initial groundwork to create more effective, accessible, and culturally resonant digital mental health solutions for Muslim teenagers. Table 5 lists the features of the low-fidelity prototype design.

Table 5: Features of the prototype design

Features	Explanation
Content Integration	To ensure the app promotes wellbeing it should incorporate Islamic teachings and practices. These can include Quranic verses, sayings of the Prophet Muhammad (Hadiths) and stories, from history that highlight resilience, patience and self-care. The content should be presented in an engaging manner utilizing multimedia elements like videos, audio and graphics.
Culturally Sensitive Design	In terms of design it's important for the app to reflect aesthetics and symbols to provide an appealing experience that is culturally relevant. This can involve incorporating calligraphy, geometric patterns and colors associated with art. By doing the app will create a sense of familiarity and connection for teenagers boosting their engagement and motivation to use it.
User Feedback and Iteration	During the development and testing phases of the app gathering feedback from teenagers is crucial. This can be done through focus groups, surveys and user testing sessions to gain insights into their needs, preferences and usability experiences. Incorporating this feedback into iterations will help improve the app over time.
Collaboration with Experts	To ensure the accuracy and effectiveness of the apps content, collaboration, with health professionals well as Islamic scholars is essential. Their expertise can offer guidance in integrating principles, with evidence-based therapeutic techniques. This collaboration will enhance the credibility of the app. Ensure that it aligns with both teachings and best practices in mental health.
Ethical considerations	The app should include disclaimers and encourage users to seek help when necessary. While the app can provide guidance and support it cannot replace the knowledge and skills of health professionals. It is crucial to emphasize the importance of seeking care for mental health conditions.

In conclusion, creating a therapeutic app that combines mindfulness practices with principles has the potential to significantly improve the mental well-being of Muslim teenagers. By incorporating Islamic design, content, and values, the app can create a culturally sensitive and engaging experience that addresses the unique challenges faced by this population. Through careful integration of Islamic teachings and collaboration with experts, the app can guide teenagers towards a balanced and self-caring approach to mental health. However, it is important to remember that the app should complement professional mental healthcare rather than replace it.

5. Discussion and Recommendations

Based on the insights and discussions presented in this study, a digital therapeutic app that combines Islamic principles and mindfulness practices can provide a culturally sensitive and effective approach to promoting mental health among Muslim teenagers (Dwidiyanti et al. 2021). To achieve this, involving teenagers in the design and development process is essential, as their input is invaluable for creating an app that resonates both culturally and religiously.

Collaboration with scholars and mental health professionals is crucial to ensure that the app's content remains religiously accurate and psychologically sound. The app should have a user-friendly interface design that is intuitive, engaging, and visually pleasing, while also reflecting the range of cultures and traditions within the community. Regular updates based on user feedback are necessary to ensure that the app remains up-to-date, relevant, and continues to meet user needs.

In summary, the development of teen-centric mental health apps with Islamic elements holds immense potential for supporting the mental Well-being of Muslim adolescents. By prioritizing user engagement, interdisciplinary collaboration, intuitive design, cultural adaptability, and rigorous evaluation, it is possible to create a digital mental health resource that is effective, reliable, and deeply resonant with the values and beliefs of Muslim teenagers.

6. Conclusion

In summary, incorporating principles and mindfulness practices into a digital therapy app has the potential to positively impact teenagers' mental well-being. This study emphasised the importance of an approach to health that considers both traditional and religious practices. By integrating design and content, the app can offer culturally relevant experiences to Muslim youth. It also highlights the significance of addressing the health issues faced by Muslim teenagers, such as identity formation, discrimination, and social isolation. Through the inclusion of mindfulness practices, the app can provide an approach to promote spiritual and emotional growth for better mental well-being. The potential impact extends beyond individuals to benefit the community by reducing the stigma associated with seeking mental health support within Muslim communities and fostering an environment of openness and acceptance.

Given the increasing concerns surrounding health, it is crucial now more than ever to explore innovative approaches that are culturally sensitive. This study urges research and development in this field while encouraging stakeholders to support and advocate the use of mindfulness as an effective strategy to address youth mental health concerns. In summary, integrating Islamic mindfulness techniques into therapeutic applications holds promise in providing an impactful way to enhance the mental well-being of young individuals. By endorsing and facilitating the utilisation of these apps, we can ensure that Muslim youth have the health assistance to flourish.

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