

## **Interventions using the Qur'an to promote mental health: A systematic scoping review**

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## Abstract

**Background:** Accommodating and addressing the beliefs and attitudes of Muslim patients, means designing culturally competent mental health services. Practicing Muslims around the world often use the Qur'an when seeking guidance for health.

**Aims:** The aim of this study was to identify interventions using the Qur'an as a promoting factor for mental health.

**Methods:** The paucity of academic literature in the area meant a systematic scoping review of the evidence was appropriate. Conducting the search for peer-reviewed evidence used six databases, searching for grey literature used Google Scholar, for evidence published up to 29<sup>th</sup> December 2022. Analysis used the Patterns, Advances, Gaps, Evidence for practice and Research recommendations (PAGER) framework for scoping reviews to report the findings clearly and accessibly.

**Results:** Out of 1590 articles from databases and 35 from other sources (n=1625), 79 full-text articles meeting the inclusion criteria were retrieved. Further assessment for eligibility, excluded 35 articles; leaving 44 studies in the final analysis. Interventions identified Salah and supplicant praying, recitation, reading, memorizing and listening to the Qur'an to reduce anxiety, depression and stress and increase quality of life and coping. There was a paucity of evidence from Western countries utilising the Qur'an to support mental health and wellbeing, suggesting a lack of cultural accommodation. Interventions tended to be mostly biomedical i.e. where health and illness are viewed in terms of medically defined pathology and excluded exploration of psychosocial factors such as the effect of social support.

**Conclusions:** Future research could utilise the Qur'an for Muslim patients, integrating it into routine health care interventions and delivery platforms and more closely relating to Islamic lifestyles. This aims to promote mental health and wellbeing, working towards the WHO 2013-2030 MHAP building mental health and psychosocial support capacity and the United Nations Sustainable Development Goal 3, good health and wellbeing, by 2030.

## Keywords

Qur'an; Mental Health; Islam; Muslim, cultural congruence

## **Introduction**

Promotion and prevention are key to the World Health Organization's (WHO) 2013-2030 mental health action plan (MHAP), which recognizes the essential role of mental health for improving health and wellbeing for all people whilst working towards achieving equity in quality of life (World Health Organization., 2021). Mental health is relevant to all the United Nation's (UN) Sustainable Development Goals (SDG), specifically Goal 3, which aims by 2030 to promote health, mental health and wellbeing globally (Ryan et al., 2018). Globally, increasing mental health challenges occur at a more significant pace when compared to mean population growth across industrialized and emerging countries (Mental Health Foundation., 2016; Vos et al., 2015). In predominantly Islamic regions, budgeted funds for mental health treatment and education are below the recommended requirements, reducing capacity to address mental illness (Dardas & Simmons, 2015). Indeed, in low and middle-income countries (LMIC), less than 5% of people with major depressive disorders receive minimally adequate treatment compared to high-income countries (HIC), where the figure reaches 20% (Thornicroft et al., 2017), indicating large inequalities. Within many Islamic countries, there are also high levels of population mobility and migration patterns internally, regionally, and internationally which has increased with war, instability, and declining economic conditions for some Middle Eastern and North African (MENA) countries and Asia. The exposure of many Muslim majority Arab countries (such as the 22 members of the League of Arab States) to conflicts, wars, displacements, and terrorism exerts a negative effect on mental health, with many refugees and migrants arriving in host countries with post-traumatic stress disorder (PTSD) and other forms of mental distress (Okasha et al., 2012; Tribe et al., 2019).

The Qur'an is the quintessential authoritative scripture for practicing Muslims around the world for seeking medical solutions and guidance for health problems (Aboul-Enein, 2016;

Al-Jibaly, 1998; Yousofi, 2011). Research implies that Islamic beliefs and practices are a problem for biomedical (where health and illness are viewed in terms of medically defined pathology) healthcare delivery, reflecting ‘colonialist’ discourses about religious *Others*, because it values some lives more and discriminates against those perceived as different (Laird et al., 2007). This increases when mental health is included and double discrimination occurs (Titchkosky & Aubrecht, 2015). Other research suggests that the influence of Western paradigms and discourses on health care systems, nursing care and management in both non-Islamic and Islamic countries excludes the needs and experiences of Muslims and non-Muslims (Halligan, 2006; Rassool, 2000). Mental health is constructed and defined discursively and this differs between and across cultures and countries, exerting an impact on how it is accommodated (Foucault, 2006). For mental health, this appears to be even more pertinent with a paucity of research around culturally competent services for Muslims (Giger & Davidhizar, 2002; Hodge & Nadir, 2008). With the global growth of Islam, research suggests that there is a need for mental health services that are designed to accommodate and address the beliefs, attitudes and needs of diverse Muslim patients (Sabry & Vohra, 2013).

The primary goal of psychosocial interventions is to facilitate skill development and enable the patient to take control of their mental health recovery (Patel et al., 2018). Enabling patients to take control can involve modifying therapies to incorporate cultural beliefs and practices, by moving away from Western-centric orientations and aiming to increase acceptability and feasibility. This is termed cultural adaptation which is ‘the systematic modification of an evidence-based treatment (EBT) or intervention (EBI) protocol to consider language, culture, and context in such a way that it is compatible with the individual’s cultural patterns, meanings, and values’ (Bernal et al., 2009, pp. 361-362). The early beginnings of cultural accommodation of interventions for mental and physical health

problems is apparent in some studies (Naeem et al., 2011; Rathod et al., 2013). Cultural accommodation may make it possible to provide more flexible and effective interventions for diverse cultural groups (Bernal et al., 2009). There is additional evidence to suggest that developing religious therapies for use in clinical trials may be more effective than conventional therapies in relieving the symptoms of depression and anxiety (H. G. Koenig et al., 2012).

Although Muslim beliefs and ethnic sub-cultures are heterogeneous, the societal perception is that they are a homogenous group, often negatively stereotyped and as a result may experience discrimination within healthcare services (Jamal & Naber, 2008; Jasinskaja-Lahti et al., 2006; Rassool, 2016; Whidden, 2001). In contrast to the Cartesian divide frequently used in Western mental health, for Muslims, religion, physical and mental health are intimately intertwined, with Islam viewed as a protective factor for mental health (Hankir et al., 2015). In contrast, other research suggests that being an observant Muslim poses health risks (Al-Kaabi et al., 2004; Leiper et al., 2003; Phrom-in, 2002). There is some evidence to suggest that religious involvement generally correlates with better mental health for depression, a limited amount of evidence for stress-related disorders, insufficient evidence for bipolar disorder, psychosis and schizophrenia, but nothing specifically for Islam (Bonelli & Koenig, 2013). The contrasting views in the academic literature suggest that this area is under-researched and under-theorised.

The impact of using the Qur'an to support mental health appears diverse requiring an exploration of the evidence to identify whether data reported are sufficient to enable comparison. Therefore, the aim of this study is to identify interventions using the Qur'an to support mental health.

## **Materials and methods**

The paucity of academic literature in the area and the contemporary nature of the aim suggests a systematic scoping review of the literature on interventions using the Qur'an to support mental health would be appropriate. This aims to identify the nature and scope of existing and ongoing research and the types of available evidence. Scoping reviews are employed when an area is complex, has not been previously reviewed comprehensively or the quantity and scope of research conducted on an area is required (Daudt et al., 2013; Grant & Booth, 2009; Levac et al., 2010; Mays et al., 2001). Arksey and O'Malley (2005) linear process has since been modified by the Joanna Briggs Institute [JBI] of evidence synthesis (M. D. Peters et al., 2015; M. D. J. Peters et al., 2015). The current study reports the evidence relevant to interventions using the Qur'an to support mental health, according to the JBI guidance and the reporting guidelines from the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), specifically the extension for scoping reviews (PRISMA-ScR) (Page et al., 2021; Peters et al., 2020; Tricco et al., 2018). PROSPERO does not accept scoping reviews for publication therefore, publication of the protocol for this study occurred on 12<sup>th</sup> July 2022 on the International Platform of Registered Systematic Review and Meta-analysis Protocols (INPLASY): number 202270065.

### ***Eligibility Criteria***

Table 1 illustrates inclusion and exclusion criteria for the study. In terms of age, we chose to include pregnant females  $\geq 14$  years of age compared to adults  $\geq 18$  years in the rest of the sample. Our reasoning considered a variety of factors. Under Islamic law, a girl can marry on reaching puberty. Implementation of a rights-based approach to sexual and reproductive health for Muslim adolescent girls has lagged in many developing countries with marriage

occurring at a very young age (Abdulrahim et al., 2017; El Arab & Sagbakken, 2019; Sahbani et al., 2016). Although it is difficult to provide exact estimates, approximately one in four Muslim girls aged 14 to 19 in the developing world are married for different reasons ranging from poverty, poor educational performance at school, maintenance of cultural traditions, to *sutra* –the provision of security for girls (UNICEF., 2009, 2014). Research suggests that early pregnancy can lead to high levels of “depressive” symptoms (Sezgin & Punamäki, 2020). Marriageable age and pregnancy for Muslim females, alongside research suggesting the probability of higher depressive symptoms and because studies were unlikely to segment them, influenced the inclusion of adolescent married pregnant females ( $\geq 14$  years of age) in the eligibility criteria.

**Table 1.** Inclusion and Exclusion criteria

***Electronic Databases***

The search utilized six databases for relevant peer-reviewed publications published up to 29<sup>th</sup> December 2022. Databases searched included: PubMed/MEDLINE ®; PsycINFO (via OVID); CINAHL Plus (searched via EBSCO); Web of Science; ASSIA (via ProQuest); SCOPUS (via Elsevier). The search strategy was adapted according to the indexing systems of each respective database. Peer reviewed literature awaiting publication, or published outside of academic publishing, were systematically searched using Google and Google Scholar, as well as hand-searching references from emergent evidence and journals not appearing in the academic databases.

***Selected databases and search strings***

Searches of bibliographic databases (Table 2) and forward citation sources from reference lists of identified articles as well as grey literature sources occurred on 10<sup>th</sup>- 11<sup>th</sup> November 2021, updated on 30<sup>th</sup>- 31<sup>st</sup> March 2022 and updated again on 29<sup>th</sup> December 2022.



Techniques for conducting the systematic literature search included (i) the use of free-text words, (ii) truncation (e.g., mental health\* generates the words: mental disorders, mental processes and these map onto other related search terms), (iii) use of Boolean operators (e.g. AND, OR).

**Table 2.** Databases and search strings

*Selection of sources and evidence*

*(i) Data management*

Endnote and EXCEL spreadsheets recorded retrieved evidence after removal of duplicates.

*(ii) Screening*

Screening took place in two stages. For stage 1, the authors (SL, GHR, BAE, JO) independently screened titles and abstracts. Stage 2 screening took place for all full text articles, with researchers recording reasons for exclusion and resolving conflicts through discussion and involvement of a fifth reviewer (JB). The authors independently screened grey literature sources. The PRISMA flowchart summarizes the search results (see Figure 1).

*(iii) Extraction*

The authors extracted information from published literature using a data extraction form (piloted on 10 publications before finalizing). The authors (GHR, SL, BA-E, JO and JB) extracted data from the relevant articles and one author (BA-E) utilized Rayyan QCRI software to set keywords (e.g., Qur'an, mental health) for inclusion, adding notes and reasons for exclusion (Ouzzani et al., 2016).

*(iv) Charting the data*

Data were charted by JO, BA-E, GHR, SL, JB and tabulated with details of the author and publication date, aim, research design, measures used, sample size, percentage female, age range, country, results, and outcomes.

#### *(v) Analysis*

Descriptive statistics (Research design, sample size, measures, and country) described key characteristics of documents containing evidence on the Qur'an and mental health.

A narrative synthesis collected similar information and identified the scope of the evidence garnered from the literature (Pawson, 2002). The analysis used the Patterns, Advances, Gaps, Evidence for practice and Research recommendations (PAGER) framework to report the review findings in a clear and accessible way (Bradbury-Jones et al., 2022).

## **Results**

Out of 1590 articles from databases and 35 from other sources (n=1625), 79 full-text articles meeting the inclusion criteria were retrieved. Further assessment for eligibility, excluded 35 articles; leaving 44 studies in the final analysis (see Figure 1).

### **Figure 1.** PRISMA ScR Flowchart of results

Table 3 displays the characteristics of the 44 studies included in the study. In terms of chronological scope, publication dates ranged from 2007 to 2022, although a significant majority (n= 43) were published in the last decade. Research designs included 10 Cross-sectional studies (n = 1420 participants), 11 Randomized Controlled Trials (n = 1014 participants), 21 Quasi-experimental studies (n = 1373 participants), 1 descriptive qualitative designs (n = 20 participants) and 1 mixed methods study (n = 26 participants). Three thousand, eight hundred and fifty-three (3,853) participants made up the total sample size, which exhibited a high dispersion, ranging from 10 participants in one study (Majeed et al.

2021) to 400 participants in another (Saquib et al., 2017). The sample mean was 87.57, which is not a representative value.

**Table 3.** Characteristics of the 44 studies included in the review

### *Outcome measures employed*

Studies used a range of outcome measures (see Table 3). One descriptive qualitative study did not use any measures, but this would not be expected given the qualitative design (Badri et al., 2013). Nine studies used non-validated ad hoc measures, making outcomes difficult to compare with other similar studies (Alhouseini et al., 2014; Booysen et al., 2016; Darabinia et al., 2017; Ernawati et al., 2020; Ismail, 2019; Mahjoob et al., 2016; Mirghafourvand et al., 2016; Saged et al., 2020; Saquib et al., 2017).

### *Countries*

The studies took place in 12 countries; 19 came from Iran, 5 from Pakistan, 7 from Indonesia, 3 each from Malaysia and Saudi Arabia, and 1 each from Iraq, the Netherlands, Somalia, the Sudan, Tunisia, Yemen, and Zimbabwe (see **Figure 2**). Apart from one study each from the Netherlands and Zimbabwe, no other studies took place in Western countries or the Global South.

**Figure 2.** Number of studies by country

Only one study from the experimental designs found no significance in the results and identified the reason as a failure to control for extraneous variables (Yadak et al., 2019). Eighteen studies suggested that listening to or reciting the Qur'an in Arabic reduced anxiety. One study of 32 first time pregnant females suggested that listening to Quranic recitation significantly reduced anxiety in primigravida females [ $p < 0.01$ ] (Hamidiyanti & Intan, 2019). Another study reported that listening to nature sounds had the same effect as listening to Quranic recitation, but attributed this to the fact that Arabic was not participant's main

language and incomprehensibility may have been a barrier in appreciating the Surah used (Zulkifli et al., 2022). Although studies varied in their reporting of significant associations, sample sizes in 13 studies were below 100, whereas larger sample sizes would give greater levels of precision and power. Out of the studies with samples above 100, one study of 159 adults reported that listening to music exerted the same effect as listening to the Qur'an prior to undergoing chemotherapy and using the STAI as a measure, with a large estimated effect size of 92% (Al-Jubouri et al., 2021). A second study in 112 patients undergoing laparoscopic cholecystectomy reported that post-anaesthesia, anxiety scores were significantly reduced [ $p=.0001$ ] (Maarof et al., 2022). A third study had a sample size of 166 pregnant women and although it did not report significant associations, it suggested that women listening to the Qur'an compared to the control groups experienced lower rates of preterm delivery and elective caesarean sections and lower levels of anxiety (Mirghafourvand et al., 2016). However, comparison with other studies and generalisation could not occur because of the use of non-validated ad hoc measures. A fourth study of 391 participants indicated that reading and reciting the Qur'an significantly reduced anxiety and depression in Persian literature students, compared to students from other disciplines [ $p=0.001$ ] (Pouralkhas et al., 2012).

Strategies for reducing stress, anxiety and depression using the Qur'an appear in all the studies, but 33 out of the 44 studies had small sample sizes and were therefore too small for generalisation, making the evidence weak in terms of effectiveness. The remaining 11 with larger sample sizes (Al Jubouri et al. 2019 –  $n=159$ ; Ijaz et al. 2017 –  $n=174$ ; Jabbari et al. 2020 –  $n=155$ ; Maarof et al. 2022 –  $n=112$ ; Mirghafourvand et al. 2018 –  $n=166$ ; Pashib et al. 2014 –  $n=100$ ; Pieper et al. 2018 –  $n=177$ ; Pouralkhas et al. 2012 –  $n=391$ ; Rana & North 2007 –  $n=175$ ; Saged et al. 2020 –  $n=121$ ; Saquib et al. 2017 –  $n=400$ ), displayed heterogeneity and were therefore unsuitable for further analysis.

### *Producing key themes from the evidence*

Using the work of Bradbury-Jones et al. (2022) as a guide for improving the quality of scoping reviews, we first produced a patterning chart based on inductively analysing the evidence to produce key themes and sub-themes (see Table 4).

#### **Table 4.** Patterning chart

Using reflexive questions around the patterning table, such as what main themes arose from the analysis, what existing patterns and insights arose within the existing evidence, offered future research directions and implications for practice. Table 4 indicates that the majority of the evidence used listening to the Qur'an in Arabic as an intervention (n=30). We divided praying into Salah praying and supplication praying because Salah praying is one of the five pillars of Islam, is obligatory and more formal, occurring five times a day, whereas supplication praying (or Du'a), although it can also occur at the same time, can also occur outside times recognised for Salah praying. Supplication is more intimate and about making a request from Allah. Four interventions used Salah and supplication praying and four focused on supplication praying. Five interventions used a combination of biomedical treatment and the Qur'an. Fourteen interventions focused on reducing anxiety, seven on reducing stress, seven on reducing the impact of depression, one on increasing Quality of Life (QoL) and one on increasing coping. The remainder (n=14) focused on reducing a combination of stress, anxiety and depression. In terms of psychosocial factors, all studies included fixed factors such as gender apart from four (Alhouseini et al., 2014; Babaii et al., 2015; Mahjoob et al., 2016; Yuniarti et al., 2019) and age apart from 1 (Yuniarti et al., 2019), potential modifiable

factors such as social support only appeared in two papers (Pramesona & Taneepanichskul, 2018; Toghyani et al., 2018).

The next stage involved asking what has been done extensively, what areas are left out of research and needed addressing and what avenues are there for further enquiry? Table 5 highlights where there is an abundance of evidence, illustrates gaps, indicates what evidence means for practice and offers recommendations for future research.

**Table 5:** Advances, Patterns, Evidence and Gaps

**Future directions and noteworthy findings**

Evidence does suggest there is a relationship between the Qur'an exerting a positive effect on reducing stress, anxiety, and depression. However, sample sizes were often too small to be generalised and some studies used the term 'mental health' without definition. The lack of studies in the West and Global South using the Qur'an as a part of treatment for stress, anxiety and reactive depression suggests a focus on Western biomedical models of care and a lack of cultural accommodation and competence. Using the biopsychosocial model of health may broaden future studies and identify fixed and modifiable factors that may support mental health and the development of psychosocial resilience in Muslim populations. Furthermore, Islam is about the Ummah or community of all Muslims, however, only two studies chose to mention social support and this could be an area worth pursuing in future research. Gaps appeared in the creativity and applicability of interventions for Muslim lifestyles and this may be one area offering the greatest gains, particularly with recent work on mindfulness and Islamic lifestyle psychosocial interventions, which may better integrate with Muslim lives and practices.

## **Discussion**

The aim of this scoping review was to identify research studies using the Qur'an as an intervention to support mental health. Out of 1625 articles and application of the eligibility criteria, 44 studies were included in the final analysis. Comparing studies was difficult due to heterogeneity, the different conditions and lack of definition about the meaning of mental health; however, the results in this review may be useful for future studies.

Novel interventions exhibiting positive effects included one community led study (Zoellner et al., 2021) one study in Zimbabwe which argued in favour of using a multi-sectoral approach (Booyesen et al., 2016), and one study using group Islamic lifestyle psychoeducational intervention (ILPI), comparing it to existing behavioural activation (BA) group therapy (Toghyani et al., 2018). This study found that the ILPI was effective and a non-pharmacological intervention for managing depression in people with major depressive disorders.

The other interventional studies are individualistic, mostly biomedical and fail to provide ways of scaling up interventions to integrate social care services and community settings. Studies suggested that the Qur'an could reduce stress, anxiety, and depression, simultaneously increasing coping strategies to improve mental health. The range of strategies included Salah praying, supplication praying, memorizing sections of the Qur'an, or listening to readings of the Qur'an. Some studies claimed specific readers were more effective because of the tone and speed of their voice (Alhouseini et al., 2014; Babamohamadi et al., 2017; Frih et al., 2017) whilst others argued that verses from the Surah Al-Rehman were most effective (Rafique et al., 2017; Rana & North, 2007; Saleem & Saleem, 2021) however, evidence for both claims remains inconclusive. Although there appears to be no parallel research from other religions about listening to holy texts, similar to that of the Qur'an, suggestions are that praying exerts a positive effect on reducing depression and anxiety and positive effects can

persist at one year follow-up (Boelens et al., 2012). Furthermore, communal prayer exerts an even greater positive effect (Bartkowski et al., 2017). For public health, religious practices, spirituality and mindfulness, exert a positive effect on mental health and well-being and are a cross cutting approach to enhancing and promoting mental health (Oman, 2018). Koenig's seminal works all attest to the positive effects of religious practices on both mental and physical health (Harold G. Koenig et al., 2012; Koenig et al., 2001).

The Qur'an could enhance other forms of treatment for Muslims with mental health difficulties, or used in isolation for less complex mental health conditions. Muslims all differ in terms of their cultural backgrounds, but because of the Ummah (global Islamic community), the majority share similar Islamic practices, values and norms, frequently ignored by Western biomedicine. This includes the concept of social support, which is an important facet of Muslim life. In the wider evidence base, social support, although it is a multi-dimensional construct, is a protective factor for mental health and religious social support is associated with lower levels of stress, depression and anxiety (Gariépy et al., 2016; Holt et al., 2017; Koenig, 2009). One challenge is that mental illness is broadly defined by Western psychological discourse, seeing it as a feature within individuals and terms like depression do not have an exact equivalent in non-Western cultures where religion, spirituality, physical and mental health are intimately intertwined (Lutz, 1985).

In this scoping review, one study from a Western Country and one from the Global South, attempted to be flexible and adapt treatment of patients in accordance with their culture and religion (Booyesen et al., 2016; Johnsdotter et al., 2011; Pieper et al., 2018). Cultural accommodation is where a healthcare provider observes and explores the cultural beliefs, values, and desired behaviours of the client and often modifies or changes aspects of care to achieve cultural congruence (Stephanie Myers Schim et al., 2007; Stephanie M. Schim et al.,



2007; Schim & Doorenbos, 2010, pp. 7-8). The danger here is for an essentialist perspective about Islam to be applied by constructing stereotypical representations, which fail to take into account differences between Muslim cultural groups (Gray & Thomas, 2006). This risks Western professionals viewing mental health difficulties resulting from cultural behaviours instead of other factors such as socio-economic status, living conditions, or lack of social support and crucially avoids interrogating networks of power that may contribute to negative representations of some groups (Garneau & Pepin, 2014; Garran & Werkmeister Rozas, 2013; Jenks, 2011). However, used critically, cultural accommodation can actually reduce barriers to improving health and is strongly aligned with patient-centred care (Epner & Baile, 2012; Swihart et al., 2022). This may mean that using the Qur'an as an intervention for mental health in Islamic countries becomes more acceptable because of greater understanding of spiritual, religious, and cultural practices. The global growth of Islam population mobility, migration patterns and increasing numbers of refugees fleeing from war or persecution and resettling in Western countries, suggests rethinking interventions based on Western concepts of mental illness, which may not be appropriate for diverse cultures and ethnic groups. For example, in a 2020 report from the Race Equality Foundation, minority ethnic communities were less likely to access mental health support in primary care, be referred to talking therapies and more likely to be given pharmacological treatments for mental health difficulties (Race Equality Foundation., 2020). Furthermore, 'people from racial and ethnic minority groups are less likely to receive what they consider to be appropriate help' for mental health difficulties (Lok, 2022, p. 1). Although Lok fails to clarify what they mean by 'appropriate', the focus in the piece is on ethnicity and culture, we can therefore presume that 'appropriate help' focuses on the consideration of factors that move away from Western biomedicine. This means that working towards culturally competent care in the West may

need a complete cultural shift from the norm to improve mental health and wellbeing in Muslim communities.

### **Strengths and Limitations**

Based on the existing evidence, this review indicates where the bulk of evidence lies, where gaps exist and offers directions for future research. This should be of value to other researchers intending to investigate the effect of the Qur'an on different aspects of mental health. However, there are a few methodological limitations. Firstly, we did not quality appraise the included studies because this is not common practice in scoping reviews (Grant & Booth, 2009). Therefore, we are unable to comment on their robustness and rigor. Our aim was to identify future research and practice directions. Secondly, the decisions we made about how to organise and analyse the papers reflects the research team's collective interpretation of what appeared useful, relevant and important in the reviewed literature. We recognise that this may be a limitation and have attempted to be transparent about our methodological decisions and reasoning. Thirdly, although we ensured the search strategy was as inclusive as possible, to identify evidence fitting the eligibility criteria, possible unintentional exclusion of evidence may have occurred because of indexing or other reasons.

### **Conclusions**

Further high-quality research exhibiting a variety of methods, standardised measures, and some larger sample sizes, which can be generalised, alongside phenomenological and ethnographic studies, need to occur using the Qur'an in a range of mental health interventions. Increasing the evidence-base on using the Qur'an for Muslims and integrating it into routine health care delivery platforms could be a cost-effective approach, particularly

in low resource settings, reducing the treatment gap for common mental disorders globally. This has the potential to be effective at policy, clinical and academic levels, but moreover for individuals, communities, and populations. One aim of healthcare service delivery should be to support the development of culturally congruent healthcare to practicing Muslims globally. This will only occur if there is a shift away from Western-centric biomedical orientations surrounding mental health and movement towards services designed to accommodate and address the beliefs, attitudes and needs of diverse Muslim patients. Ensuring that culturally congruent services become the norm, could assist in fulfilling the UN's Sustainable Development Goal 3 and the WHO 2013-2030 MHAP in building mental health and psychosocial support capacity.

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Table 1. Inclusion and exclusion criteria

	<b>Inclusion</b>	<b>Exclusion</b>
Date Range	Up to December 29th, 2022	
Research Design	Intervention studies; RCTs, quasi-experimental, longitudinal, cross-sectional and qualitative studies.	Commentaries, narratives, editorial communications, opinion pieces, conference papers, government reports, guidance documents, book reviews, theses and dissertations, systematic, scoping, rapid and literature reviews, case studies.
Sources	Peer reviewed evidence	
Languages	English, French, Arabic	Languages other than English, French or Arabic
Geographic location	All countries	
Groups	Adults $\geq 18$ years Pregnant females attaining marriageable age $\geq 14$	Other types of studies focusing on children or adolescents
Focus of study	<ol style="list-style-type: none"> <li>1. Studies focusing on the Qur'an, hadith and/or surah as a primary mental health intervention</li> <li>2. Studies focusing on the Qur'an, hadith and/or surah as an additional form of therapy for mental health interventions</li> </ol>	<ol style="list-style-type: none"> <li>1. Studies excluding interventions using the Qur'an, hadith or surah or failing to differentiate between these areas and other interventions</li> <li>2. Studies mentioning Qur'an, hadith or surah as an afterthought in the discussion</li> </ol>

**Table 2.** Databases and search strings

<b>Selected Database</b>	<b>Interface/ URL</b>	<b>Search String Used</b>
PubMed	MEDLINE	(([Title/Abstract] Holy Quran OR Noble Quran OR Quran OR Koran OR Qur'an OR Islam OR Muslim OR Moslem OR surah AND (mental health* [Title/Abstract] OR mental disorder OR mental illness OR mental wellbeing OR psychosocial OR psychosocial resilience OR psychological distress))
PsycINFO	OvidSP	af(Holy Quran OR Noble Quran OR Quran OR Koran OR Qur'an OR Islam OR Muslim OR Moslem OR surah) AND (mental health* OR mental disorder OR mental illness OR mental wellbeing OR psychosocial OR psychosocial resilience OR psychological distress)
Web of Science	Institute for Scientific Information	AB=(Holy Quran OR Noble Quran OR Quran OR Koran OR Qur'an OR Islam OR Muslim OR Moslem OR surah) AND TS=(mental health* OR mental disorder OR mental illness OR mental wellbeing OR psychosocial OR psychosocial resilience OR psychological distress)
ASSIA	ProQuest	af (Holy Quran OR Noble Quran OR Quran OR Koran OR Qur'an OR Islam OR Muslim OR Moslem OR surah) AND af (mental health* OR mental disorder OR mental illness OR mental wellbeing OR psychosocial OR psychosocial resilience OR psychological distress)
CINAHL Plus	EBSCO	(([Title/Abstract] Holy Quran OR Noble Quran OR Quran OR Koran OR Qur'an OR Islam OR Muslim OR Moslem OR surah AND (mental health* [Title/Abstract] OR mental disorder OR mental illness OR mental wellbeing OR psychosocial OR psychosocial resilience OR psychological distress))
SCOPUS	Elsevier	(([Title/Abstract] Holy Quran OR Noble Quran OR Quran OR Koran OR Qur'an OR Islam OR Muslim OR Moslem OR surah AND (mental health* [Title/Abstract] OR mental disorder OR mental illness OR mental wellbeing OR psychosocial OR psychosocial resilience OR psychological distress))

**Table 3.** Characteristics of the 44 studies ( $N=3853$ ) included in the review

Authors (year)	Aims & Objectives	Research Design	Measures	Sample size (N)	% F	Age/age range	Location/ Country	Results/ Findings	Outcome
Alhouseini et al. (2014)	To identify and select Quranic verses that exert the greatest positive psychological effect	Cross-sectional	Non-validated measure	97	NR	>18	Malaysia	Listening to Al-Baqarah – 255, Al-Inshirah – 8, Al-Fath – 4, An-Nour – 35, Yasin – 12 increased psychological impact.	Listening to five Quranic verses relieved stress and increased levels of calmness and tranquility.
Al Jubouri et al. (2021)	To assess the effectiveness of listening to recitations of the Quran for cancer patients before undergoing chemotherapy	Quasi experimental	STAI	159 3 groups: Control (n=53) Spiritual therapy (n=53) Music (n=53)	46.30	>18	Iraq	There was a significant difference over time in the Quran ( $p = 0,000$ ) and music ( $p = .000$ ) groups. Large estimated effect size ( $\eta^2 = 0.408$ ).	The probability of alteration in anxiety levels was more than 92% in participants listening to either the Quran or music. Listening to the Quran or music can both significantly reduce anxiety levels
Babaii et al. (2015)	Investigate the effect of listening to the Quran on anxiety before cardiac catheterization	RCT	STAI	60 2 groups: Intervention (n=30) Control (n=30)	NR	>18	Iran	The pre and post assessment scores indicates that listening to the Quran is effective in reducing both state and trait anxiety in intervention group as compared to control group ( $p=0.000$ ).	Listening to the Quran can significantly reduce anxiety before cardiac catheterization
Babamohamadi et al. (2015)	Measure effects of Quranic	RCT	STAI	60 2 groups:	42.70	18-65	Iran	Recitation of the Quran is effective	Quranic recitation reduced anxiety

	recitation on anxiety in haemodialysis patients			Control (n=30) Intervention (n=30)				in reducing anxiety in the intervention group ( $p=0.002$ ).	when compared to control group
Babamohamadi et al. (2017)	Examine effects of the Quranic recitation on depressive symptoms for patients undergoing haemodialysis	RCT	BDI	54 2 groups: Intervention (n=27) Control (n=27).	42.60	18-65	Iran	Significant decrease in depression was observed in the experimental group compared to the control group ( $p=0.004$ )	Quranic recitation lowered depressive symptoms when compared to control group
Badri et al. (2013)	To investigate the use of the Quran in developing psychosocial Resilience among female war-affected Sudanese	Descriptive qualitative design and IPA	none	20	100	17-22	Sudan	Three years after relocation, participants exhibit psychological distress. Vividly recalling and retelling their experiences of exposure to war with descriptions of fleeing, loss, and death.	Praying and reading the Quran increased psychosocial resilience.
Booyesen et al. (2016)	To identify the role of the Quran in the treatment of mental illness	Cross-sectional	Non-validated measure	71	27.00	>18	Zimbabwe	66% of the participants reported religious interventions in the form of prayers as effective in reducing mental health difficulties. The use of	Modern medicine and religious methods emerged as important in managing mental health difficulties, suggesting the need for a multi-sectoral approach.



								Quran teachings and recitations was reported by 64% of the participants. 88% felt it was important to refer someone with mental illness to a medical professional	
Darabinia et al. (2017)	To determine the effect of the Quran recitation on the mental health of medical staff	Quasi-experimental	Non-validated measure	80 Intervention (n= 40) Control (n=40)	55.00	>18	Iran	After hearing the verses of the Quran, domains of mental health were higher in the experimental group compared to controls ( $p<.05$ )	Listening to Quranic recitations improves mental health.
Ernawati et al. (2020)	To determine the effectiveness of Quran recitation on reducing stress levels in cancer patients.	Quasi-experimental	Non-validated measure	50	44.00	$\leq 45-70$	Indonesia	Significant differences in the average stress levels reduction was observed in the four groups of measurement time intervals ( $p < 0.0001$ ).	Quran recitation therapy and aromatherapy may be effective in lowering stress levels in patients with cancer.
Frih et al. (2017)	Measure effects of Quranic recitation on physiological and psychological measures	Quasi-experimental	SF-36, HADS	53 Intervention (n=28) Control (n=25)	0	>55	Tunisia	Significant differences were found between experimental group and control group on functional capacity and psychological outcomes ( $p<0.05$ ), except Six Min Walk test	Listening to Quranic recitations improved endurance training, reduced anxiety, and improved quality of life

								and short form health survey ( $p>0.05$ )	
Hamidiyanti & Pratiwi (2019)	Measure effects of listening to Quranic recitation on anxiety levels in pregnant women	Quasi-experimental	HARS	32 intervention (n=16) control (n=16)	100	<20-29	Indonesia	Intervention significantly reduced anxiety in primigravida females. HARS mean post-intervention 12.88 (1.31) in intervention group vs. 15.06 (0.77) in control group ( $p<0.01$ ).	Study suggests listening to Quranic recitation significantly reduces anxiety in primigravida females
Hematti et al (2015)	Observe effects of listening, reading, and watching Quranic recitation for increasing life expectancy in palliative radiotherapy patients	Quasi-experimental	European Organization for Research and Treatment of Cancer Questionnaire	89	57.30	49-71	Iran	Significant positive correlation was found between Quran recitation and subjective well-being ( $r = 0.352, p<0.001$ ) and Quran recitation and increasing life expectancy ( $r = 0.311, p<0.003$ ). Parity between physical and mental health.	Participants self-reports suggest Quranic recitation increases well-being and clinical life expectancy.
Hosseini et al. (2013)	To evaluate the effect of an intervention, congruent with Islamic supplication, on anxiety in Shia Muslims scheduled for	RCT	HARS	66 Intervention (n=33) Control (n=33)	16.98	35-75	Iran	The baseline level of anxiety prior to CABG surgery was raised in both the control and intervention groups. There was a significant difference in	Accommodating and using Islamic supplication prior to coronary artery bypass grafting has the potential to reduce anxiety levels in Muslim patients.

	coronary artery bypass grafting							anxiety for the intervention group (31.93 ± 3.41 vs. 19.48 ± 2.03; $p < .001$ ).	
Hosseini et al. (2016)	Measure changes in gene receptor expressions as a result of spiritual intervention in patients with breast cancer	Quasi experimental	Blood samples taken to measure dopamine levels before and after intervention	57	100	>18	Iran	The blood samples collected from experimental group, and analyzed by Real time-PCR showed significant reduction in dopamine gene receptor expressions in comparison with those of pre-test scores and the control group ( $p < .001$ )	Spiritual intervention based on Islamic principles can reduce stress induced dopamine receptor expressions and epigenetic gene changes.
Ibad & Napik (2021)	The effect of Al-Quran sound therapy on reducing anxiety levels in cancer patients.	Cross-sectional	HARS	24	78.00	34-60	Indonesia	Quran sound therapy has excellent potential in reducing the anxiety level of cancer patients undergoing chemotherapy ( $P=0.00$ )	There is a significant association for Quranic sound therapy reducing anxiety in cancer patients undergoing chemotherapy.
Ijaz et al. (2017)	Mindfulness when offering Salah (prayer) predicts increased mental wellbeing compared to those offering	Cross-sectional	SF-36	174	37.90	Mean 21.57	Pakistan	There was a significant positive correlation between Salah prayer education and religious education ( $p < 0.01$ ), both had a positive	Mindfulness in prayer (Salah) and Salah education play a significant role in mental health.

	Salah without mindfulness							correlation with mindfulness in Salah prayer ( $p < 0.01$ ).	
Ismail (2019)	Religious beliefs and practices develop psychosocial resilience in women with cancer	Cross-sectional	Non-validated measure	20	100	51-60	Malaysia	Quranic spiritual practices (praying, reciting the Quran, self-reflecting, remembering Allah [zikr] and voluntary fasting) develop psychosocial resilience in women with cancer, enabling them to deal with pain	Spiritual practices and following the teachings in the Quran enhance psychosocial resilience and increase psychological stability.
Jabbari et al. (2020)	Quranic listening reduces stress, anxiety, and depression in pregnant women	RCT	EDPS, PSS, STAI	155 Intervention 1 (n=54) Intervention 2 (n=56) Control (n=55)	100	15-45	Iran	Significant decrease in stress, anxiety and depression in pre and post assessment scores in the intervention groups ( $p < .001$ ). No significant decrease was observed in the control group ( $p > .05$ ).	Quranic listening (CDs) in Arabic and translated into mother tongue both reduced stress, anxiety, and depression among pregnant women
Maarof et al. (2022)	To determine if listening to the Quran in the Post Anaesthesia Care Unit (PACU) had an	RCT	HARS	112 Control (n=56) Intervention (n=56)	72.32	18-98	Saudi Arabia	Listening to chosen verses from the Quran in the recovery period post-anaesthesia, anxiety scores	Listening to the Quran had a positive effect on reducing anxiety in patients undergoing laparoscopic cholecystectomy.

	effect on anxiety, opioid use, and length of stay (LOS).							were significantly reduced (p= .0001), opiate use reduced (p= .0081), PACU LOS was reduced (p= .0083).	
Madavifar et al. (2016)	Compare effects of Quranic recitation and interpretation on emotional and sexual relationships among married couples	Quasi-experimental	Marital satisfaction index questionnaire	50 Control (n=25) Intervention (n=25)	100	25-45	Iran	There was a significant difference in the mean marital satisfaction score in the Experimental group before and after intervention (p<.05)	Use of Quranic recitations leads to increased marital satisfaction and mental health among married women
Mahjoob et al (2016)	Determine the effect of Quranic listening without musical tone on mental health personnel	Quasi experimental	Non-validated measure	81	NR	>18	Iran	Significant differences were observed between the test and control groups in their mean mental health scores after Quran listening (p = 0.037)	Quranic listening improves mental health and achieves greater calm.
Majeed et al. (2021)	To explore the effect of Surah Al-Rehman on anxiety and brain function in adults with diabetes	Cross-sectional	Blood pressure readings. Cortisol levels. Electro-cardiogram readings. Alpha, beta, theta and gamma brain wave readings.	10	40.00	>18	Pakistan	Surah Al-Rehman decreased blood pressure readings but this was not statistically significant. No significant decrease in cortisol levels. Significant difference in alpha brain waves (t =	Surah Al-Rehman altered breathing states, similar to those in meditation. This has the potential to exert a positive effect on physical and mental health.

								2.59, <i>df</i> = 6, <i>P</i> < 0.05).	
Mirghafourvand et al. (2018)	To assess the impact of the Quran on delivery outcomes for pregnant women	RCT	Non-validated measure	166 Control (n=56) Quran with translation (n=55) Quran without translation (n=55)	100	15-45	Iran	No statistical significance in delivery outcomes.	Preterm delivery was less frequent in the intervention groups compared to the control group. Elective caesarean was also more frequent in the control group. Quranic recitation recommended to assist with anxiety reduction.
Mohammadpoor et al. (2020)	To compare the effect of listening to instrumental music and listening to Quran recitation on anxiety levels in patients with acute coronary syndrome.	Quasi-experimental study	STAI	96 Control (n=32) Quranic recitation (n=32) Music (n=32)	58.33	18-65	Iran	The mean score of anxiety level showed a significant difference, indicating that listening to Quran recitation had a greater effect than listening to music in reducing patient anxiety ( <i>p</i> = 0.02).	Both listening to Quranic recitation and music can be useful in decreasing the anxiety level of patients with ACS. Listening to the Holy Quran recitation had a greater effect.
Mottaghi et al. (2011)	To investigate the effect of the Holy Quran on reducing competitive anxiety.	Quasi-Experimental	SCAT	80 Control (n=40) Experimental (n=40)	100	>18	Iran	Significant differences were found between the mean anxiety scores of experimental and control groups ( <i>p</i> =0.02)	Reading and listening to the Quran reduces anxiety in athletes before competition.
Nasiri et al. (2017)	Test effect of listening to the Quran on vital	Quasi experimental	Heart rate, respiratory	30	30.00	>18	Iran	Highly significant differences emerged in rate of	Hearing verses of the Quran reduces stress-related vital

	signs and consciousness levels		rate and blood pressure					vital signs and consciousness measured before and after intervention ( $p < .0001$ )	signs (BP, heart rate, respiration) and increases consciousness
Pashib et al. (2014)	Effectiveness of Quranic recitation and teachings on reducing depressive symptoms	Quasi-experimental	BDI	100 Control (n=50) Intervention (n=50)	100	>18	Iran	Depression scores obtained before and after the intervention were lower in the experimental group compared to the control group ( $p < 0.05$ )	Quranic recitation can be used as an effective non-medical approach to reduce depressive symptoms
Pieper et al. (2018)	To explore how Dutch highly educated Muslim women of Moroccan descent use prayer in dealing with problems	Cross-sectional	Brief RCOPE. Researcher questionnaires on Frequency of praying and Variants of praying.	177	100	17-35	Netherlands	Correlations between the frequency of praying and the scales for measuring Religious coping show that praying supplicatory prayers ( $r = 0.39$ ) and praying the <i>salah</i> ( $r = 0.38$ ), more than other forms of praying ( $r = 0.25$ ), are positively connected with forms of positive religious coping.	Quranic praying is relevant in the coping processes of Dutch highly educated Muslim women of Moroccan descent. Islam provides a strong social identity acting as a protective factor for mental health
Pouralkhas et al. (2012)	Examine the rate of Quran recitation by Persian literature	Cross-sectional	DASS	391 Science (n=118) Agriculture (n=106)	0	18-27	Iran	The Persian Literature students recited the Quran more than students from	Quranic recitation acts as a protective factor for mental health.

	students and its effect on reducing depression, anxiety, and stress			Persian Language/ Literature (n=73) Engineering (n=94)				other disciplines and there is a significant difference in lower levels of depression, anxiety and stress.	
Pramesona & Taneepanichskul (2018)	To investigate the use of Quranic listening on depression and Quality of Life in Indonesian nursing home residents	Quasi-experimental	GDS, (WHOQOL)-BREF	60 Control (n=30) Intervention (n=30)	76.70	60-88	Indonesia	In both groups, there were statistically significant reductions in depression scores after the 12-week intervention ( $p < 0.001$ ). There was also a statistically significant improvement in QOL mean scores in both intervention and control groups at the 12-week post-intervention. However, the religious intervention group showed a greater decrease in depressive symptoms and a greater improvement in the QOL mean scores than those	Listening to Quranic recitation relieved depressive symptoms and increased QOL amongst older nursing home residents.



								in the control group.	
Rafique et al. (2017)	Measure efficacy of Surah Al-Rehman (rhythmic verses) for managing depression in Muslim women	Quasi-experimental	BDI	12 Control (n=6) Intervention (n=6)	100	18-30	Pakistan	Significant differences in decrease in level of depression was observed ( $p < .05$ ). Treatment group had significantly greater level of decrease ( $p = 0.04$ )	Listening to Surah Al-Rehman assists in managing symptoms of depression.
Rana & North (2007)	The effect of listening to sung Quranic verses on in-patients with psychosis	RCT	BDI, HADS	175	40.00	22-50	Pakistan	The level of depression significantly decreased among participants listening to the Quranic verses. Patients relapsed after the intervention finished.	Quranic music may reduce depressive symptoms over time.
Saged et al. (2018)	To measure effectiveness and responsiveness of patients receiving Quranic therapy.	Quasi-experimental	Non-validated measure	121	27.27	>18	Yemen	93% believe and are satisfied that the Quran is part of the remedy. 82% believe that Quranic therapy sessions support health needs.	Quranic recitation can assist psychological and spiritual recovery among patients with mental health difficulties. Not all patients make use of Quranic therapy though and some doubt its efficacy because it is not aligned with Western medicine.

Saleem & Saleem (2021)	To study listening to the recitation of Surah Al-Rahman vs Relaxation Music to reduce stress among medical students	Quasi-experimental	DASS, salivary cortisol levels.	60 Control (n=30) Intervention (n=30)	46.66	16-23	Pakistan	Listening to Surah Al-Rahman is statistically more significant in lowering of cortisol levels and scores of stress scale ( $p < 0.001$ ) compared to listening to music alone.	Listening to the Surah Al Rahman may serve as a complementary therapy to reduce stress and anxiety in individuals.
Saquist et al. (2017)	Participants memorizing a larger portion of the Quran are significantly less likely to have hypertension, diabetes, or depression compared to participants memorizing a smaller portion.	Cross-sectional	Non-validated measure	400	0	>55	Saudi Arabia	Those who memorized at least 10 sections of Quran were 64%, 71%, and 81% less likely to have hypertension, diabetes, and depression compared to those who memorized less than 0.5 sections. ( $p < 0.0001$ )	Strong linear association between memorization of the Quran and hypertension, diabetes and depression. This suggests potential physical and mental health benefits of Quranic memorization.
Sooki et al. (2011)	To identify the role of the Quran as a protective factor for mental health in older people resident in care homes.	Cross-sectional	GHQ-28	56	64.28	52-110	Iran	Multivariate analysis showed that reciting the Quran Whilst residing in the nursing home was a protective factor for positive mental health.	Older Muslims living in nursing homes could be offered Quranic recitation alongside other activities to protect their mental health.
Susanti et al. (2018)	To suppress patient anxiety by listening to the chanting of	RCT	HARS	30 Intervention (n=16) Control	56.66	20-55	Indonesia	Significant differences in HARS for Quran chanting group	Murottal Al-Quran therapy decreased anxiety and use of sedation.

	Quran to reduce the use of sedation drugs.			(n=14)					before and after treatment (p <0.05)	
Taghiabad et al. (2015)	Determine psychological health and psychosocial resilience in Quran memorizers	Quasi-experimental	GHQ-28, CISS	80	100	20-40	Iran		Memorization of the Quran is significantly effective in reducing depression, improving physical health and social functioning (p<.001). Memorization increased emotional, problem solving and avoidance coping strategies (p<0.001)	Memorizing Quranic verses can improve sleep, mental and physical health, increase psychosocial resilience and overall wellbeing.
Toghyani et al. (2018)	To evaluate the effectiveness of an educational intervention targeting lifestyle habits based on Islamic teachings (Quran and Hadith) in patients with depression	Quasi-experimental	BDI, BHS, PSWQ, ILQ	24	100	20-50	Iran		The results were not significant but suggested that Islamic lifestyle psychoeducational intervention (ILPI), which discuss the role of religious practices in depression management, can be as effective as using behavioural activation (BA) treatment in relieving depressive symptoms in	There is the potential to use healthy lifestyle interventions such as the ILPI, which incorporates Islamic religious practices, to reduce depressive symptoms.

								patients with a major depressive disorder. ILPI more cost-effective.	
Uyun et al. (2019)	To evaluate the feasibility and effects of teachings in the Quran (tawba and istighfar) on establishing a sense of inner peace and improving mental health	Quasi-experimental	SEHS-HE-36	32	87.50	18-23	Indonesia	Performing tawba and reciting istighfar improved the mental health levels of participants. The paired sample t-test displayed a statistically significant variance ( $t = -2.22$ , $p < .05$ , $r = .37$ ) in Social Emotional Health scores both before ( $M = 3.69$ , $SD = .39$ ) and after ( $M = 3.84$ , $SD = .44$ ).	The use of tawba and istighfar as a spiritual therapy for psychological problems could be integrated into mental health treatment.
Yadak et al. (2017)	The effect of Quranic recitation listening as a non-pharmacological intervention in mechanically ventilated patients.	RCT	HR, BP, R2 R1, ETCO <sub>2</sub> , RSBI, NIF, TV, SpO <sub>2</sub> , FiO <sub>2</sub>	55 Intervention (n=32) Control (n=23)	29.09	18-74	Saudi Arabia	No statistically significant differences observed between listening to a recorded recitation from the Holy Quran (surah Al Baqara) through headphones, or	No negative impact from listening to the Holy Quran whilst weaning off mechanical ventilation.

								wearing headphones without sound while being weaned off mechanical ventilation.	
Yuniarti et al. (2019)	Listening to recitation of "Murottal" Al-Quran reduces anxiety levels of patients	Quasi-experimental	DASS	27	NR	NR	Indonesia	Listening to the Quran as spiritual therapy, can provide peace, reduce fear, anxiety and strengthen spiritual belief ( $p=0.000$ )	Listening to recitation of the Qur'an can be an alternative independent nursing action to reduce anxiety levels in preoperative patients.
Zoellner et al. (2021)	Hypothesis is that Islamic healing reduces Post Traumatic Stress Disorder, depressive, and somatic symptoms while enhancing well-being in war-torn countries.	Mixed methods	PDS-5, PHQ 9, SSS-8, WHO-5	26	53.84	18-47	Somalia	Higher pre-treatment severity was associated with larger changes across outcomes (PDS-5: $r = 0.91$ , $p < 0.001$ ; PHQ-9: $r = 0.95$ , $p < 0.001$ ; SSS-8: $r = 0.81$ , $p < 0.001$ ; WHO-5: $r = 0.93$ , $p < 0.001$ ). Suggesting that Islamic healing offered benefits for more severe symptoms.	Community level and participatory (lay-led), mosque-based model underlying the intervention integrated Islam and evidence-based psychotherapy, making it unique in the field of mental health. The study suggests strong feasibility and preliminary effectiveness of Islamic Trauma Healing.

Zulkifli et al. (2022)	Using Quranic listening will lower anxiety scores for preoperative patients	RCT	STAI	81 Control (n=27) Quranic Intervention (n=27) Nature Sounds (n=27)	51.85	18-35	Malaysia	Among the three groups, the nature sounds group had the most reduction in anxiety scores post-intervention, followed by the Quran recitation group and control group	There was a significant reduction in anxiety levels within the Quranic listening group, but there was a non-significant difference when comparing the anxiety scores between the control group and nature sounds group. One of the main reasons may be that Arabic was not the patients' main language, and incomprehensibility might be a major barrier in appreciating the Surah that has been used.
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**Key:** NR: not recorded; RCT: randomized controlled trial

**Measures:** BDI: Beck Depression Inventory; BHS: Beck Hopelessness Inventory; BMI: Body Mass Index; BP: Blood Pressure; Brief RCOPE: short measure of religious coping; CISS: Coping Inventory for Stressful Situations; DASS: Depression Anxiety and Stress Scale; EPDS: Edinburgh Post-natal Depression Scale; ETCO: End Tidal Carbon Monoxide; FiO<sub>2</sub>: Fraction of Inspired Oxygen; GDS: Geriatric Depression Scale; GHQ-28: General Health Questionnaire, 28-Item; HADS: Hospital Anxiety and Depression Scale; HARS: Hamilton Anxiety Rating Scale; HR: Heart Rate; ILQ: Islamic Lifestyle Questionnaire; NIF: Negative Inspiratory Flow; PDS-5: self-report measure for post-traumatic stress disorder (DSM5); PHQ-9: Patient Health Questionnaire, 9 item; PSS: Perceived Stress Scale; PSWQ: Penn State Worry Questionnaire; R2 R1: Respiratory Rate per minute; RSBI: Rapid Shallow Breathing Index; SCAT: Sport Competition Anxiety Test; SEHS-HE-36: Social Emotional Health Survey Higher Education, 36 item; SF-36: MOS 36-Item Short Form Survey Instrument in Arabic; SpO<sub>2</sub>: Oxygen Saturation; SSS-8: Somatic Symptom Scale, 8 item; STAI: State-Trait Anxiety Inventory; TV: Tidal Volume; (WHOQOL)-BREF: World Health Organisation Quality of Life - Indonesian version; WHO-5: Well-Being Index, 5 item.

**Table 4.** Patterns and themes

Authors (year)	Psychological effect of intervention					Psychosocial and demographic factors					Nature of intervention										
	Reduced stress	Reduced anxiety	Reduced depression	Increased Quality of Life	Increased coping	Social support	Age	Gender	Marital status	Education	Employment status	Biomedical treatment	Salah Praying	Listening to Qur'an in	Memorisation of the Qur'an	Reading/reciting the Qur'an	Mindfulness/self-reflection	Supplication praying	Listening to Qur'an in own language	Fasting	ILPI
Alhouseini et al. (2014)	X									X				X							
AlJubouri et al. (2021)		X					X	X	X	X	X			X							
Babaii et al. (2015)		X					X		X	X	X			X							
Babamohamadi et al. (2015)		X					X	X	X	X	X			X							
Babamohamadi et al. (2016)			X				X	X	X	X	X			X							
Badri et al. (2013)		X	X				X	X		X			X					X			
Booyesen et al. (2016)	X						X	X		X	X	X	X	X							
Darabinia et al. (2017)	X						X	X	X	X	X			X							
Ernawati et al. (2020)	X	X		X			X	X						X							
Frih et al. (2017)		X	X				X	X						X							
Hamidiyanti & Pratiwi (2019)		X					X	X		X				X							
Hematti et al (2015)				X			X	X		X				X		X					
Hosseini et al. (2013)		X					X	X	X	X	X			X							
Hosseini et al. (2016)	X						X	X					X					X			
Ibad & Napik (2021)		X					X	X						X							
Ijaz et al. (2017)		X	X				X	X					X				X				

Ismail (2019)					X	X	X			X	X			X	X		X
Jabbari et al. (2020)	X	X	X		X	X	X	X				X					X
Maarof et al. (2022)		X			X	X						X					
Madavifar et al. (2016)		X			X	X	X			X							
Mahjob et al (2014)	X				X							X					
Majeed et al. (2021)	X				X	X	X		X			X					
Mirghafourvand et al. (2018)	X	X	X		X	X	X	X				X					X
Mohammadpoor et al. (2020)	X	X			X	X	X	X	X			X					
Mottaghi et al. (2011)		X			X	X	X					X		X			
Nasiri et al. (2017)	X	X			X	X	X					X					
Pashib et al. (2014)			X		X	X		X				X					
Pieper et al. (2018)				X	X	X	X	X		X					X		
Pouralkhas et al. (2012)	X	X	X		X	X	X	X		X				X			
Pramesona & Taneepanichskul (2018)			X	X	X	X	X	X				X					
Rafique et al. (2017)			X		X	X	X	X	X								X
Rana & North (2007)			X		X	X						X					
Saged et al. (2018)		X			X	X	X	X	X			X			X		
Saleem & Saleem (2021)	X				X	X		X				X					
Saqib et al. (2017)			X		X	X	X		X					X			
Sooki et al. (2011)					X	X	X	X		X							
Susanti et al. (2018)		X			X	X		X				X					
Taghiabad et al. (2015)		X	X	X	X	X	X	X						X			
Toghyani et al. (2018)			X		X	X	X	X	X								X



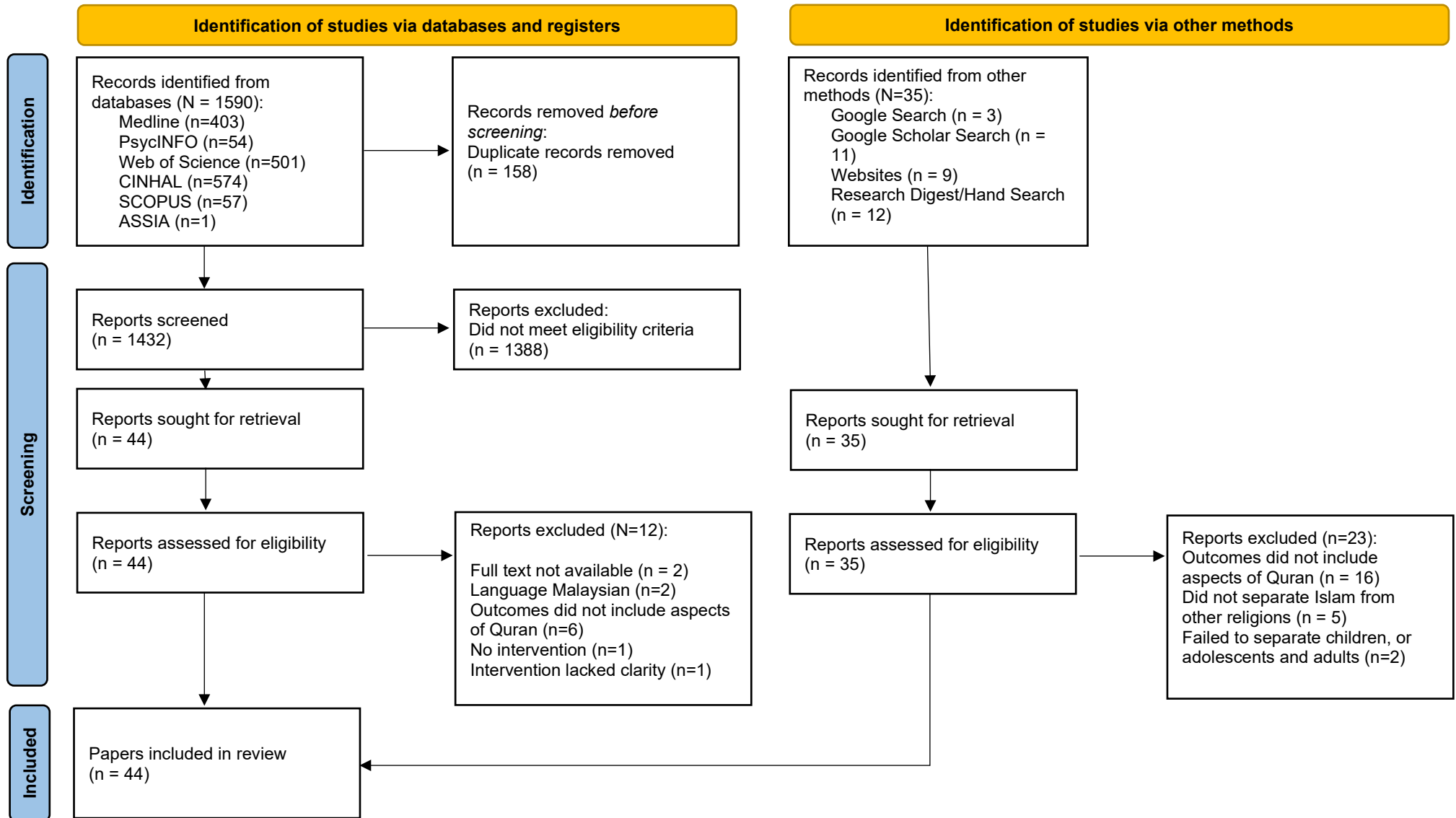


**Table 5.** Patterns, Advances, Gaps, Evidence and Recommendations

Pattern	Advances	Gaps	Evidence for practice	Recommendations for future research
<p>1. The relationship between the Qur'an, stress, anxiety and depression</p>	<p>Evidence suggests that there is a relationship between the Qur'an exerting a positive effect on reducing stress, anxiety and depression.</p>	<p>There is a need for ongoing research, which more closely identifies the type of mental health difficulty, uses larger samples and recognised measures at baseline and outcome, to exhibit greater reliability in measuring the effect of the intervention. There is a further need for interventions exhibiting cultural competence and including the beliefs and practices of Muslim populations.</p>	<p>Whilst there is a growing body of evidence that the Qur'an can assist in reducing stress, anxiety and depression, it is incomplete. Some interventions fails to define between clinical and reactive depression, or lack definition of the term mental health and specification of what they are measuring. Sample sizes for some interventions are too small to generalise. There is little evidence in Western countries for the use of the Qur'an for stress, anxiety and depression for Muslim populations suggesting a lack of cultural competence.</p>	<p>Future research needs to define type of mental health difficulty and not merely use the term 'mental health'. Sample sizes need to be larger to generalise to populations. There is potential to utilise the Qur'an for defined mental health difficulties, particularly in low-middle income countries. Western countries could demonstrate cultural competence and employ the Qur'an for the reduction of stress, anxiety and reactive depression in Muslim populations.</p>
<p>2. Developing psychosocial resilience</p>	<p>The evidence uses a biomedical model of mental health and concentrates on psychological distress.</p>	<p>There is a lack of evidence using the biopsychosocial approach to mental health for Muslim populations. There is a paucity of evidence around how the</p>	<p>Whilst the majority of the evidence presents a wholly biomedical approach to mental distress it presents a one sided picture. There is a gap in the research</p>	<p>Future research needs to utilise the biopsychosocial model of health to develop a balanced evidence base around the factors creating psychological distress,</p>

		Qur'an develops psychosocial resilience and improves Health related Quality of Life.	around how the Qur'an develops psychosocial resilience and Health related Quality of Life compared to other interventions.	and utilising the Qur'an to improve psychosocial resilience and Health related Quality if Life.
3. Psychosocial factors	The evidence concentrates on fixed factors such as gender, age and marital status.	There is a lack of evidence around social support as an important factor in reducing stress, anxiety and depression.	Concentrating on fixed factors ignores other social determinants of health such as social support. Community and support are integral parts of Islam and Muslim life. This extends through Islamic practices provided by the Qur'an. The concept to the Ummah relates all Muslims spiritually to one another.	Future research could utilise the Islamic community to explore social support and ways the Qur'an and Islamic practices can reduce anxiety, stress and depression.
4. Types of intervention	There is ample evidence to suggest that listening to recitation of the Qur'an is a factor in reducing stress, anxiety and depression.	There is a lack of evidence around mindfulness and Islamic lifestyle psychoeducational interventions to reduce anxiety, stress and depression.	Mainly concentrating on one type of intervention prevents development of other more creative interventions using the Qur'an, which may fit Islamic lifestyles more effectively.	Future research could creatively utilise the Qur'an in mindfulness and Islamic lifestyle psychosocial interventions to better integrate with Muslim lifestyles.

**Figure 1.** PRISMA ScR flow diagram of results for mental health and the Qur'an



**Figure 2.** Number of studies by country

