

The Nature and Availability of Mental Health Services in Arab Gulf Countries: A Scoping Review

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Keywords

Adult population · Arab Gulf region · Gulf Cooperation Council · Mental health service · Scoping review

Abstract

Introduction: Given that mental health services are developing across Gulf Cooperation Council (GCC) or Arab Gulf countries, there is a need to examine the nature of these services to explore how they are developing, expanding, or evolving. This study aimed to explore what is known about the scope and nature of available mental health services for adult populations in Arab Gulf countries. **Methods:** This scoping review was informed by the 2005 methodological framework of Arksey and O'Malley. The databases MEDLINE, PsycINFO, CINAHL, ProQuest Central, EMBASE, Web of Science/Scopus, DOAJ, and Saudi Digital Library were searched for studies published between 2011 and 2021. Studies were included if they focused on reported scope and nature of available mental health services for adult populations in Arab Gulf countries, excluding those related to drug and alcohol, intellectual disability, and behavioural problems. **Results:** The search identified 8,884 articles, from which a total of 28 were included in the final review. The majority of studies were from the Kingdom of Saudi Arabia, with fewer studies from other Arab Gulf countries, and only one conducted in Bahrain. Mental health services

described were primarily referral services, psychotherapy and cognitive behavioural therapy, telepsychiatry and mobile health services, screening, early detection and management of depression and anxiety, and other mental health services. **Conclusion:** This review revealed that the most available and utilised mental health services in Arab Gulf countries for treating adult mental disorders are psychotherapy and cognitive behavioural therapy, telepsychiatry and mobile health services, especially during the COVID-19 pandemic.

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Published by S. Karger AG, Basel

Introduction

The Arab Gulf region, also known as the Arab States of the Gulf Cooperation Council (GCC), comprises the countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates [1, 2]. It is estimated that the population of these countries will increase from 53 million in 2016 to 60 million in 2022 [2, 3]. These countries have recently experienced increased demand for healthcare services because of fast-growing populations, rising life expectancy and increasing incidence of non-communicable diseases [4]. In addition, the countries in the Arab Gulf region are facing a quadruple

disease burden including accidental injuries, communicable diseases, non-communicable diseases, and mental health issues [5], and just recently have created newer training programmes for next generation mental health professionals to address mental health care issues in these countries of the region [6].

The majority of related research literature in Arab Gulf countries has addressed the interface of Islamic faith and mental health, indicating that faith beliefs among Muslims lead to negative attitudes towards formal help-seeking [7]. For instance, a study among Saudi Arabian adult patients revealed that high proportions had diagnosable mental illnesses (e.g., anxiety, bipolar, depressive, and psychotic disorders) and sought treatment from faith healers believing that their disorders were attributed to faith-based reasons, such as evil eye and magic [8]. Culture in Arab Gulf countries is characterised by traditional values and beliefs where Islam guides nearly every aspect of life for the majority Muslim population [9].

With development and globalisation, the Arab Gulf countries attract the largest number of expatriate workers globally, comprising about half (48%) of the population, where mental health morbidity of these workers is reported to be higher than among nationals [10]. Meanwhile, acceptance of mental health disorders in the Arab Gulf region is increasing due to awareness campaigns and public health education, but it is still highly influenced by sociocultural challenges including financial barriers, shame, and stigma [11]. Traditionally, stigma towards mental health in the Gulf region has impacted the ability for individuals with mental illness to seek appropriate care and participate in society, and there remains some reluctance to seek such care [12]. Although people with mental illness in Arab Gulf countries still seek help from traditional healers [9], substantial improvements in the healthcare systems have ensured availability of mental health services in hospitals provided by healthcare professionals (e.g., psychiatrists, psychologists, psychotherapist, general practitioners[GPs]) which many are availing nowadays. These healthcare improvements are evident in countries across the Arab Gulf region during the past 30 years.

For instance, the Kingdom of Saudi Arabia has developed an extensive hospital-based mental health system culminating in the passing of a mental health law in 2014. The Saudi Ministry of Health is the main provider of mental health services, with other government agencies providing psychiatric treatment for state employees [13]. The Saudi government has established the Vision 2030 with the Health Sector Transformation Program that aims to improve quality and facilitate access to healthcare services equally across the country by providing e-health services and digital solutions to

healthcare problems of its citizens and residents [14]. In Oman, mental health services in general have slowly developed and according to the Omani Ministry of Health [15], there were only 57 psychiatrists and 432 nurses working in, or for, mental health facilities before 2014. In Bahrain, citizens and expatriate patients requiring psychiatric consultation are referred to the Psychiatric Hospital under the jurisdiction of the Ministry of Health's free-of-charge service [16, 17]. In Qatar, mental health services are being redefined and expanded, and this was realised with the launch of an ambitious National Mental Health Strategy in 2013. Traditionally, mental healthcare services in Qatar have been the remit of psychiatrists within secondary care, where a new strategy is supporting transition towards community-based care [18]. In Kuwait, a review of mental health counselling and therapy revealed that it was still in a developmental stage [19].

Overall, it is evident that Arab Gulf countries have encountered various challenges appropriately serving their populations' mental health needs. Given that mental health services are developing across Gulf countries, this scoping review sought to examine research on the nature of mental health services across these countries to explore how these are developing.

Methods

The methodological framework used in this study was scoping review informed by Arksey and O'Malley [20]. Their framework is composed of five stages including, stage 1: identifying the research question; stage 2: identifying relevant studies; stage 3: study selection; stage 4: charting the data; and stage 5: collating, summarising, and reporting the results [20]. A scoping review is defined as a preliminary assessment of the potential size and scope of available research literature, to identify the nature and extent of research evidence [20]. As a means of synthesising broad ranging, available literature, scoping review methodology is continuing to evolve and reviews are becoming increasingly rigorous [21]. This methodology was chosen because it facilitated an efficient and focused review of the scope and nature of available mental health services for adult population in Arab Gulf countries. This scoping review was guided by the "Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews" (PRISMA-ScR) [22]. Prior to commencement, the review was registered in the Open Science Framework online public database (doi: 10.17605/OSF.IO/SUQVT).

Definition of Search Terms

Types of Participants

For this review, we included studies that focused on adult mental health services in Arab Gulf countries and where participants included mental health or psychiatric physicians, nurses, and adult patients/populations.

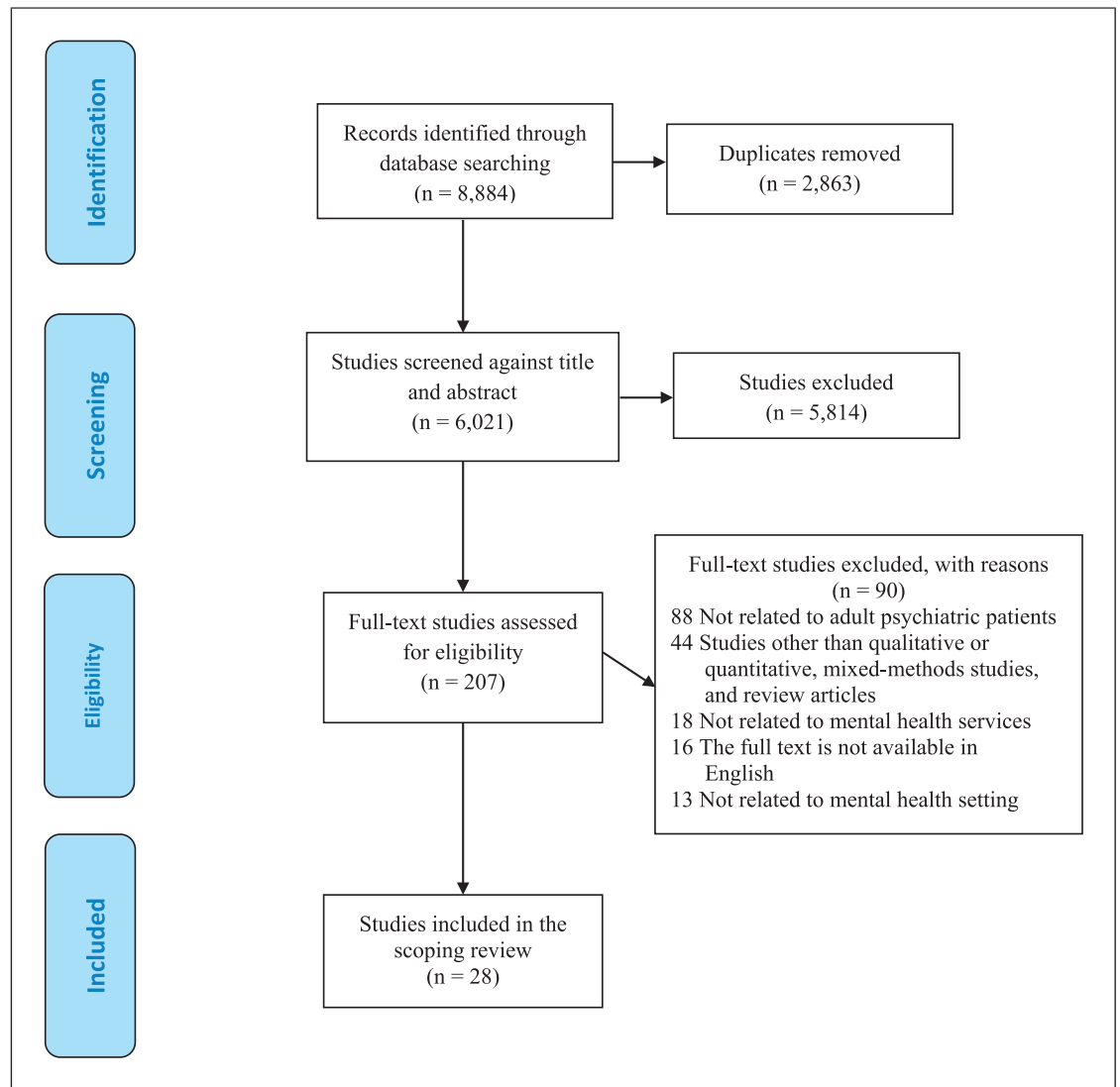


Fig. 1. PRISMA flowchart of the scoping review.

Concept

The core concept underpinning the review was the description or evaluation of general mental health service or intervention for adult population.

Context

The context for the review was that of the nature and availability of mental health services for adult patients.

Types of Sources

The review included primary research studies including randomised controlled trials, case or observational studies, feasibility study, policy documents or white papers, and in English language only. Studies not reported in English language, opinion articles, editorials, commentaries, dissertations, reviews, prevalence

studies, those that involved children or adolescents, and mental health services related to drug and alcohol, intellectual disability, and behavioural problems were excluded.

Information Sources and Search Strategy

An initial search to identify key search terms was developed by all authors in consultation with an expert librarian. The databases searched were MEDLINE (Ovid), PsycINFO (Ovid), CINAHL (EBSCO), ProQuest Central, EMBASE (Ovid), Web of Science/Scopus, DOAJ, and Saudi Digital Library between the years 2011 and year 2021. This review emphasised the inclusion of research published since 2011 to highlight evidence on current mental health services in the Arab Gulf countries.

The search used the following Boolean keywords and medical subject headings search terms: “mental health” OR “mental illness” OR “thought disorder” OR “stress” OR “distress” OR “depressi*”

Table 1. General study characteristics

Author, year, country of origin	Study aim	Study design	Participants, <i>n</i>	Key findings	Limitations	JBI score
Al-Ghareeb et al. [25], 2019, Kuwait	To determine the prevalence of depression and its association with socio-demographic characteristics among patients attending mental and Primary Healthcare clinics in Kuwait	Quantitative, cross-sectional study design	800 patients	262 (32.7%) patients who had no depression, 171 (21.4%) suffered from mild depression, 105 (13.1%) suffered from moderate depression, 58 (7.2%) suffered from moderate to severe depression, and 33 (4.1%) suffered from severe depression. The prevalence rate of moderate to severe depression among PHC consumers in Kuwait was relatively high (24.4%) and its occurrence was more in Kuwaiti's older than 35 years, married, females, working participants, low-educated individuals and having low monthly income	Not specified and will provide based on the study	7/8
Alhumoud et al. [26], 2018, Kuwait	To shed light on forensic psychiatry services running in Kuwait and describe patients attending the only available forensic psychiatry unit	Retrospective chart review of all cases referred for criminal forensic psychiatric assessments from 1 Jan 2016 to 31 May 2017	95 patients	Almost all (97%) referrals required ascertainment of "responsibility" for the alleged offence. 86% (<i>n</i> = 81) were referred from police or public prosecutor's office. 83% (<i>n</i> = 79) were found to have mental disorders while 55% (<i>n</i> = 52) were found to be criminally responsible. Males (57%) outnumbered the females (33%) as criminally responsible	Relatively small sample size	9/10
Al-alawi et al. [27], 2021, Oman	To comparatively assess efficacy of therapist-guided online therapy with that of self-help, internet-based therapy focussing on COVID-19-induced symptoms of anxiety and depression among individuals living in Oman during the COVID-19 pandemic	6-week-long pragmatic randomised controlled trial with intervention group of 22 participants who received therapist-guided online therapy and control group of 24 participants	46 adult Omanis and non-Omanis	There was no statistical difference in baseline characteristics between both groups. Analysis of covariance indicated significant reduction in the GAD-7 scores ($F(1, 43) = 7.307; p = 0.01$) between the two groups after adjusting for baseline scores. GAD-7 scores of participants in the intervention group were considerably more reduced than those of participants in the control group ($\beta = -3.27; p = 0.01$). Moreover, a greater reduction in mean PHQ-9 scores was observed among participants in the intervention group ($F(1, 43) = 8.298; p = 0.006$) than in the control group ($\beta = -4.311; p = 0.006$). Although levels of anxiety and depression reduced in both groups, the reduction was higher in the intervention group ($p = 0.049$) than the control group ($p = 0.02$)	Participants were relatively well-educated and could be classified as "younger adults," limiting conclusions with respect to feasibility. In addition, although participation only required basic email skills, not all households in Oman had broadband internet connections, making the sample less generalisable. The study design did not allow for participant follow-up, and it is, therefore, unknown whether treatment effects would be maintained in the long term. Further, compliance with self-help therapy could not be ascertained, and this may limit interpretation of the findings	13/13

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, n	Key findings	Limitations	JBI score
Alkaabi et al. [28], 2019, Oman	To measure levels of service-related satisfaction and functioning among a systemic random sample of psychiatric outpatients and to investigate socio-demographic and clinical determinants of satisfaction across various indices at Sultan Qaboos University Hospital	Quantitative, cross-sectional correlative study conducted over a 3-month period	128 patients	Participants ranked "financial aspect" as providing the highest level of satisfaction, followed by "interpersonal aspect," while "technical quality" and "accessibility and convenience" were endorsed the least. Using linear regression analysis, it was found that diagnosis (schizophrenia), education, and Global Assessment of Functioning (GAF) were the main predictors of various satisfaction/dissatisfaction domains	In Oman, many people with mental disorders tend to seek treatment or help from traditional healers. It is also possible this was a self-selective group having less refractory psychiatric disorders. This study dichotomised GAF with a cutoff of 60 and this cutoff had not been validated previously in the population. Lastly, being cross-sectional, this study was not capable of identifying cause and effect	8/8
Al-Sharbaty et al. [29], 2012, Oman	To investigate sociodemographic and clinical characteristics of attendees at a psychotherapy clinic at Sultan Qaboos University tertiary care hospital (SQUH)	Review of referral process of psychotherapy service using patient progress notes kept in the SQUH electronic system were reviewed to obtain the socio-demographic and clinical information	133 patients	A total of 43% were treated for anxiety disorders (including obsessive compulsive disorder), while 22% were treated for depression. A total of 65% were prescribed psychotropic medications. Utilisation of the Psychotherapy Service and its user characteristics are described within the context of a culturally diverse Omani community with unique personal belief systems such as supernatural powers (Jinn), contemptuous envy (Hassad), evil eye (Ain) and sorcery (Sihr) which are often used to explain the aetiology of mental illness and influence personal decisions on utilising medical and psychological treatments	Referrals were mainly made by hospital psychiatrists after seeking patients' consent to be referred for psychotherapy. The study population may have had more severe psychiatric problems compared to people seen within the primary care healthcare sector (e.g., private health clinics), or in provincial hospitals. However, patients may also have been more stable than treatment-resistant cases treated within specialist mental health services. Generalisability to a wider Omani population from more rural geographic locations may be limited as patients were from the capital city or nearby towns. Finally, patients who were self-selecting and motivated to prioritise psychotherapeutic treatments over medication usage were more common in the population which may be significant for the type of psychiatric problems identified within the service	9/10

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, n	Key findings	Limitations	JBI score
Ghannam et al. [30], 2020, Qatar	To assess effect of a stress management intervention on residents' burnout and stress management behaviours and outcomes	Pre-post single-arm educational intervention evaluated using the Maslach Burnout Inventory	256 residents from 19 residency training programs at Hamad Medical Corporation in Doha	Overall, 92% reported at least one piece of knowledge or skill that residents could put into practice. At 1-month post-course, 83.6% listed at least one piece of knowledge or skill that they had put into practice since the course. Using the abbreviated version of the Maslach Burnout Inventory, residents improved in three of the four burnout constructs: emotional exhaustion, depersonalisation, and satisfaction with the practice of medicine	One limitation is the lack of a booster (follow-up) course. The intervention did not include any organisational change. Other limitations included small sample size of comparison data due to residents for whom the authors were unable to get matched data, the self-report nature of the study, and absence of psychometric evaluation of the scale	8/9
Zada and Anwarulhaq [31], 2020, Qatar	To evaluate the calibre of psychiatric referrals in the seven Western region primary health centres in Qatar at the primary care level	Descriptive study design using survey method of checklist items that included: (1) history of present illness (HPI); (2) mental status examination (MSE); (3) risk assessment; (4) past medical history; (5) use of psychiatric assessment tools; (6) treatment given in the primary care setting and (7) reason for referral	228 valid patient referrals	Psychiatrists rated all checklist items as important, with "reason for referral" and history of present illness (HPI) rated most important. Out of 228 valid referrals, 79.8% were accepted. 31% of all referrals contained an HPI; 18.85% contained an MSE; 11.4% included a suicide risk assessment; 16.2% included a past medical history; 35.5% used a psychiatric assessment tool; 18.6% described treatment given in primary care; 46.5% included the reason for referral. No single checklist item was included in at least half the referrals	Use of subjective survey data to assess face validity of checklist items and lack of psychometric evaluation of checklists	9/10
Al-Thani and Moore [32], 2012, Qatar	To study effects of introducing a form of nondirective counselling with a selection of depressed clients at the Hamad Medical Corporation (HMC) in the Islamic State of Qatar	Two-phased research project (pilot study and follow-up study) on counselling sessions	9 cases	Of the 9 cases, a fuller discussion was made of one case example, Fatimah, a devout Muslim woman, who responded particularly well to nondirective counselling. A shared Islamic framework was considered critical to success of the counselling and nondirective counselling could work in Islamic culture when introduced with "insider" sensitivity	The study had no robust discussion of the two phases of the research project	8/10
Alghamdi et al. [33], 2015, Saudi Arabia	To examine effectiveness of narrative exposure therapy (NET) as a short-term treatment for reducing PTSD symptoms among Saudi firefighters	Randomised waiting-list control (WLC) study	34 traumatised firefighters	Participants in both groups were assessed at baseline, immediately post-intervention and at 3- and 6-month follow-ups. NET led to significant reductions in PTSD symptoms, anxiety and depression compared with WLC. After the WLC group received treatment, it showed the same improvements as the NET group. This occurred	Sample size was small; all participants were male, and there was attrition and dropout of participants. Another limitation which could be highlighted is the significant difference between groups in years of service which may indicate those with	13/13

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, <i>n</i>	Key findings	Limitations	JBI score
AlHadi, Alammari, et al. [34], 2021, Saudi Arabia	To measure knowledge of computerised cognitive behavioural therapy (cCBT) among mental healthcare professionals in Saudi Arabia, and to evaluate their attitudes and preferences toward cCBT	Quantitative observational cross-sectional study	121 mental healthcare professionals	Most participants expressed uncertainty and demonstrated lack of knowledge regarding cCBT. However, the majority indicated positive attitudes toward using computers in therapy. Participants agreed with principles of cCBT, believed in its efficacy, and were generally confident in using computers. Among the notable results, participants having a clinical license and with cCBT experience had more knowledge of cCBT. The overall attitude toward cCBT was not affected by demographic or work-related factors	The authors used an electronic questionnaire to reach participants in Riyadh through data collectors and did not receive a sufficient number of responses because of limited mental healthcare professionals in the city, and therefore reached out to different cities in Saudi Arabia by sending an invitation through WhatsApp groups and emails	7/8
AlHadi, AlGhofli, et al. [34], 2021 Saudi Arabia	To determine perceptions of general practitioners (GPs) and family medicine physicians (FMPs) on use of cognitive-behavioural therapy (CBT) for depression in Saudi Arabia, and barriers against implementation of CBT in such settings	Quantitative method, cross-sectional study design	469 FMPs and GPs	More than half of FMPs and GPs (53%) were positive about use of CBT in primary healthcare settings. Most (91.9%) were willing to use CBT if they had adequate education and training. More than half (59.5%) thought it was time-consuming, while 39% thought that CBT training was a very time-intensive process	Firstly, many FMPs from all over the country were included, but few GPs, the majority of whom were from Riyadh. Therefore, comparison between the two groups is difficult. Secondly, inclusion of the region/city in the study might have improved outcomes with a comparison of rural and urban differences	8/8
Althubaiti and Ghamri [35], 2019, Saudi Arabia	To determine the proportion of family physicians referring patients to psychiatrists and conducting psychotherapy or mental health consultations themselves	Cross-sectional observational study, using online surveys previously developed	175 family physicians	Physicians who received inter-professional training in a clinical training program were more likely to agree that their education prepared them well for collaboration with psychiatrists, compared to those who did not receive such an education ($p < 0.001$). Almost 90% of physicians agreed that collaboration with psychiatrists was necessary for care of their patients, and only a third responded that psychiatrists were accessible if and when they wanted to consult with them	The family physicians were from only one city (Jeddah). Therefore, results could be subjected to selection bias. In addition, data collection involved a self-administered questionnaire, with no direct observation of practice, which is also susceptible to bias	7/8

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, <i>n</i>	Key findings	Limitations	JBI score
Atallah et al. [36], 2018, Saudi Arabia	To explore the prevalence of mobile health application use for mental health patients in Saudi Arabia	Quantitative cross-sectional descriptive design	376 patients	Approximately, 46% of participants reported running one or two healthcare-related applications on their mobile phones. In all age groups, 64% of participants used their mobile phones to access information related to their own health. Also, 64% of participants expressed interest in using their own mobile phones to track and follow the progression of their depression and/or anxiety	There is possible selection bias due to convenience sample. Since data were self-reported, reporting bias and recall bias cannot be avoided. Generalisability may be affected due such biases	7/8
Ahmad [37], 2013, Saudi Arabia	To assess barriers facing primary healthcare physicians in diagnosing and managing depressed patients in primary healthcare centers	Quantitative method, cross-sectional study	75 primary healthcare physicians	About 78% agreed that diagnosis of depression was their responsibility and only 4% disagreed. More than two-thirds (69.3%) agreed and 9.3% disagreed that treatment of depression was their responsibility. More than half (57.3%) agreed that lack of knowledge of diagnostic criteria of depression was a limiting factor while 73.3% agreed that lack of knowledge of treatment of depression was another limiting factor. About 90% or more agreed that appointment times were too short for taking adequate histories, providing counselling/education; mental health professionals were not available within the PHC setting; patients or their families were reluctant to accept diagnoses of depression and patients were reluctant to take antidepressants	The study did not include primary care physicians in the Ministry of Health and the private sector which affects generalisability of the findings	7/8
Al Mousa et al. [38], 2021, Saudi Arabia	To generate a theoretical understanding of issues pertinent to the quality of mental healthcare in the KSA from the perspective of those using services	Qualitative inquiry using semi-structured interviews, but part of a larger mixed-methods design	30 service user patients admitted in psychiatric wards of a mental health hospital	Five themes emerged: (1) The hospital as a prison: a custody versus care dilemma, (2) quality of interactions between staff and service users, (3) quality of services, (4) staff qualities, and (5) suggestions for achieving quality of care. Structural aspects of care included staff experience and qualifications and key enablers around social and financial support, service users' health needs and status and the physical infrastructure and ward rules. Quality of mental healthcare in KSA was manifested by a	The sample was recruited from only one psychiatric hospital. Findings may be less transferable to healthcare facilities in other regions or facilities of varying size, although hospital capacity might not affect service users' level of comfort	9/10

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, <i>n</i>	Key findings	Limitations	JBI score
Bahattab and AlHadi [39], 2021, Saudi Arabia	To examine potential acceptance, feasibility, and clinical impact of acceptance and commitment therapy (ACT) in a group format for Saudi women who struggle with depression and anxiety disorders	Qualitative method	8 women with depression and anxiety	<p>therapeutic ethos with a high degree of interaction between professional carers and service users, with the former being highly educated, competent, compassionate, with a high degree of self-awareness, and specialised in mental health</p> <p>The following themes emerged: (1) participants' perceptions of ACT intervention; (2) ACT in Saudi culture and Islamic society; and (3) benefits of ACT in general as well as in terms of its specific components: acceptance, cognitive defusion, being present, observing self, values, committed actions, practising mindfulness, and the behavioral effect</p> <p>Results showed preliminary support that ACT could be an effective, well-received therapeutic approach for Muslim Saudi women as far as decreasing symptoms of depression and anxiety and making an overall positive change in their attitudes and behaviour, as well as increasing self-confidence</p>	The findings could not be generalised to the whole country	9/10
Alatiq and Al Modayfer [40], 2019, Saudi Arabia	To assess feasibility and potential benefits of using transdiagnostic cognitive-behavioural therapy (T-CBT) in Saudi Arabia to treat adult emotional disorders in a naturalistic open trial, and to measure the effect of this approach when delivered by junior psychologists as a low-intensity intervention	The effect of T-CBT was examined using data from naturalistic clinical settings with limited or no control over the process of matching research criteria or protocols evaluated based on the clinical judgement of the therapists Part of service development and quality assurance measures but does not follow strict randomised controlled trial protocols	198 patients (160 in the low-intensity group)	<p>Only 33 (16.7%) patients completed the treatment plan, 55 (27.3%) were still in active treatment, and 109 (55%) had disengaged from treatment. Pre- and post-assessments for clients who completed the treatment showed a significant decrease in all outcome measures. This result held true for the whole sample and the low-intensity group. This study provides initial evidence that T-CBT is suitable for clients with emotional disorders in Saudi Arabia. The study also provides support for the effect of T-CBT as a low-intensity intervention delivered by junior psychologists</p>	One limitation was the sample size for the group who completed the treatment and was properly discharged from service. Other limitations include lack of information about patient feedback on therapy and the reasons why some patients chose to disengage from treatment	11/13

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, n	Key findings	Limitations	JBI score
Alzahrani et al. [41], 2017, Saudi Arabia	To improve the referral process by increasing cases referred to the Psychological Support Unit (PSU) in Saudi Red Crescent Authority (SRCA) in Riyadh Region by 75% over 2 months	Quality improvement project using three sequential Plan-Do-Study-Act cycles 1 week for each change	Multidisciplinary team with a team leader, psychiatrist, psychologist, station manager, information technologist, general director of the emergency medical services (EMS) department and an emergency medical technician	Several improvement interventions tested sequentially in three consecutive Plan-Do-Study-Act cycles on a weekly basis. The project findings demonstrated that the first change idea was successful but not reaching the target while the second change had led to huge impact exceeding the target but with short effect. On the other hand, although the third change idea of re-engineering the PSU referral process led to negative result initially, over the following weeks of measurement results turned to be positive and meeting expectations	The project results represent only one PSU in the Riyadh Region, which might affect generalisability to other PSUs in SRCA in different regions. However, change ideas and results appear promising and worth replicating. Another limitation is that no balancing measure was used to assess impact of change ideas on other parts of the system	8/9
Alatiq 2021 [42], Saudi Arabia	To replicate findings of a previous feasibility trial and compare transdiagnostic cognitive-behavioural therapy (T-CBT) results with results for counselling sessions	Feasibility trial, comparative study	276 patients: 175 in the T-CBT group and 101 in the counselling group	Pre- and post-assessments of clients who completed treatment showed large effect sizes for almost all outcome measures for both the T-CBT and counselling groups. For patients who decided to disengage from therapy, T-CBT had medium effect sizes for all three measures (depression, anxiety and function), while counselling sessions had medium effect size for the anxiety measure only	CBT as a model of treatment was not suitable for certain groups of patients, mainly those who did not accept it as appropriate for their main difficulties and for patients whose main concern could not be explained by a cognitive and behavioural model. For these groups, counselling sessions were offered	8/9
Al-Habeeb et al. [43], 2020, Saudi Arabia	To estimate treatment rates of 12-month mental disorders in the Saudi National Mental Health Survey (SNMHS)	Face-to-face community epidemiological survey using the SNMHS	4,004 citizens	About one-eighth (13.7%) of respondents with a 12-month DSM-IV/CIDI disorder received 12-month treatment. The highest proportion of treatment occurred in the general medical sector (53.0%). Close to half (45.2%) of patients received treatment rated at least minimally adequate using standard treatment guidelines. Although serious disorders were significantly more likely to be treated (20.2%) than mild or moderate disorders (8.5–10.7%), no association was found between disorder severity and probability of receiving adequate treatment. Sociodemographic correlates were for the most part nonsignificant	Not specified and will be provided based on the study	8/10

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, <i>n</i>	Key findings	Limitations	JBI score
Algahtani et al. [44], 2017, Saudi Arabia	To shed light on historical development and current challenges of psychiatric and psychological services and availability of psychotherapy in Saudi Arabia	Descriptive, historical study	Experiential and anecdotal account	Providing psychotherapy in KSA was not unlike providing psychotherapy for any ethnic or culturally distinct population in any other country. The main psychotherapy approaches were used with various degrees of training	Only a brief excerpt from a therapy session was included	9/10
Khan et al. [45], 2016, Saudi Arabia	To study emergence of psychopathology and its determinants, in the adverse environment in mass gathering situation, in Indian pilgrims on Hajj 2016	Descriptive study analysing mental morbidity in 1.36 lakh Indian pilgrims during Hajj 2016 in Saudi Arabia	182 patients	Of the 182 patients who reported psychological problems, 22 patients (1.2%) required admission. Twelve (6.8%) pilgrims reported past history of a mental illness. 165 (93.2%) patients had no mental symptoms earlier in life. Most common illnesses seen were stress related (45.7%), followed by psychosis (9.8%), insomnia (7.3%), and mood disorders (5.6%). The most common symptoms recorded were apprehension (45%), sleep (55%), anxiety (41%), and fear of being lost (27%). Psychotropics were prescribed for 46% of pilgrims. All patients completed their Hajj successfully and returned to India	The findings could not be generalised to the whole country	9/10
Alatiq [46], 2014, Saudi Arabia	To examine feasibility and potential benefit of transdiagnostic cognitive behavioural therapy (T-CBT) for Saudi patients	Case study design	4 female patients	Results support positive effect of the treatment method on depression, anxiety symptoms, and general functioning. Patient feedback and observable improvements also supported these outcomes. The results support the positive effect of this treatment on depression, anxiety symptoms, and general functioning. Patient feedback and observable improvements also supported these outcomes	Firstly, the study used a simple design and small sample size. Secondly, although the outcome was based on subjective evaluations, the treatment lacked independent measure of reliability. Supervision, as an important monitoring process, is limited in Saudi Arabia	9/10
Thomas et al. 2015 [47], United Arab Emirates	To explore traditional healers' conceptualisations of mental health problems, and discuss their perspectives on phenomenology, aetiology, intervention and outcome	Qualitative study through telephone interviews	10 traditional healers	There was consensus amongst the healers that four key metaphysical factors could occasionally explain presence of abnormal emotional or behavioural states in certain individuals. These were: <i>hasad</i> (envy), <i>'ayn</i> (evil eye), <i>sih</i> r (sorcery) and <i>jinn</i> (unseen beings). Traditional healers distinguished between biomedical	A relatively small number of traditional healers were consulted so thematic saturation may not have been achieved. Use of telephone interviews could be an additional limitation, as establishing rapport and responding to	9/10

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, n	Key findings	Limitations	JBI score
Mufaddel et al. 2014 [48], United Arab Emirates	To evaluate a model of community mental health service (CMHS) in Al Ain Hospital	Descriptive study employing review of hospital records, total number of patient admissions and duration of in-patient care before and after enrolment in the CMHS	123 patients	The total number of admissions and number of days that patients spent in hospital per year were significantly reduced by the CMHS.	body language are more difficult. The authors were not able to interview any female healers, and this perspective might provide additional insights Findings cannot be generalised to the whole country	7/8
ElHayek et al. [49], 2020, Arab Gulf countries	To describe prior state and changes that the COVID-19 outbreak brought to telepsychiatry in a selected group of Arab countries of the Middle East and North Africa (MENA) region	Qualitative using semi-structured interviews	12 early career psychiatrists from different Arab nations that specified Saudi Arabia and UAE before the COVID-19 pandemic, and Qatar, Oman, Saudi Arabia and UAE during the pandemic	Before the pandemic, digital mental health services were provided in several Arab countries, mainly through hotlines and messaging services. The COVID-19 pandemic marked a major shift in digital psychiatric services in the Arab MENA world, through the transformation of many clinics and some hospitals into digital mental health systems. Many non-government organisations also started remote initiatives for psychological support and psychiatric counselling. Three main barriers: patient-related, healthcare-related, and system-related hurdles of using telepsychiatry emanated from the analysis	Some nations were not represented in the analysis. However, heterogeneity between the countries from which the Arab early career psychiatrists came strengthened the value of collected information and allow its applicability to the MENA region. Alternatively, cultural barriers of telepsychiatry that might include gender sensitivity, religion, and other societal norms of the Arab society were not fully assessed	9/10
Algahtani et al. [50], 2019, Arab Gulf countries, particularly Bahrain and Saudi Arabia	To understand views of patients with depression and anxiety, caregivers and mental health professionals about CBT to develop guidelines for culturally adapting CBT for depression and anxiety	Qualitative study design using one-to-one semi-structured interviews	42 patients, 11 caregivers, and 16 psychiatrists and psychologists	Results highlighted barriers of access to, and strengths, of CBT while working with these patient groups. Patients and their caregivers in both countries used a bio-psycho-spiritual-social model of illness and sought help from multiple sources. Therapists emphasised the need for using local idioms, culturally appropriate translation, and minor adjustments in therapy. There were no thematic differences between the two countries	Although Saudi Arabia and Bahrain are similar in culture, there might be subtle differences that this research failed to capture. The mental health professionals interviewed were practising in large teaching hospitals of big cities and patients, and their carers were also mostly city dwellers. This limits generalisability of findings, although including three different participant groups would have addressed this issue at least partially. Another limitation may exist with the	10/10

Table 1 (continued)

Author, year, country of origin	Study aim	Study design	Participants, n	Key findings	Limitations	JBI score
Okasha et al. [51], 2012, Arab Gulf countries	To summarise the current situation of mental health services in the Arab world	Policy documents obtained through ministries of health, the Eastern Mediterranean Region (EMRO) office of the WHO, national psychiatric societies and national psychiatric leaders	20 countries including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates	Kuwait and Bahrain had in 2007 more than 30 psychiatric beds per 100,000 population. The highest number of psychiatrists is found in Qatar, Bahrain, and Kuwait for every 100,000 population. Some improvement has occurred in the last decade, but the mental health human resources and the attention devoted to mental health issues are still insufficient	actual impact of adapting CBT without changes to the systems of care within which it was delivered The study did not report specific mental health services specific to each Arab Gulf country	7/8

OR “burnout” OR “anxiety” OR “fear” OR “helplessness” OR “worr*” OR “sadness” OR “panic” OR “phobia” OR “emotion” OR “schizophreni*” OR “suicide” OR “conversion” OR obsessive compulsive disorder” OR “drug abuse” OR “drug misuse” OR “psycho*” AND “counselling” OR “service” OR “therapy” OR “treatment” OR “mental health therapy” OR “hospital” AND “Arab countries” OR Arabian Gulf countries” OR “Bahrain” OR “Kuwait” OR “Oman” OR “Qatar” OR “Saudi Arabia” OR “United Arab Emirates.” The search engine Google Scholar and reference lists from included studies were also searched for additional sources.

Selection of Studies

Two authors independently assessed studies at each point, namely titles and abstracts and full-text screening, using Covidence Systematic Review Software [23], and conflicts were resolved by the third author. The PRISMA flow diagram shows the process of searching, screening, and selecting the studies (see Fig. 1). There were 8,884 titles and abstracts imported for screening from the databases into Covidence. After 2,863 duplicates were removed, 6,021 records were screened. Titles and abstracts were reviewed for relevance, with 207 full-text studies subjected to further review. Out of the 207 full-text studies, 179 were excluded with reasons (see Fig. 1). In total, 28 studies were included in the final review.

Data Extraction

Data extraction was divided into two parts. The first part was about the general study characteristics including author, year, country of origin, aim, design, key results, limitations, and Joanna Briggs Institute [24] appraisal score (Table 1). The second part comprised of specific characteristics, including year published, country, kind of mental health service, patient satisfaction, and reported service outcomes (Table 2).

Data Appraisal

A total of 28 studies were ultimately included after adhering to the Joanna Briggs Institute guidelines in assessing the quality of full-text studies [24]. All included studies were independently critically appraised by the two authors with no studies removed based on quality appraisal scores. The appraisal scores of included studies were calculated based on the critical appraisal tools with the following highest appraisal scores for case series/studies (10/10), experimental/interventional (9/9), qualitative (10/10), quantitative/cross-sectional (8/8), and randomised controlled trial (13/13).

Data Synthesis

The included study findings were synthesised narratively with consideration of descriptive statistics (i.e., frequency, percentage, mean, standard deviation, or *p* values) used to analyse the data of included quantitative studies. For qualitative studies included in the review, the findings were synthesised based on key themes related to the nature and availability of mental health services in the Arab Gulf countries.

The general characteristics of studies included in the final review are presented according to the country of origin and the levels of evidence in research which guided the structure of the succeeding sections in this scoping review. The specific characteristics of included studies were categorised according to the kind of mental health services provided in the Arab Gulf countries which guided the structure of the succeeding sections in this scoping review.

Table 2. Specific characteristics

Author, year	Country	Kind of mental health service	Patient satisfaction	Reported service outcomes
Al-Ghareeb et al. [25], 2019	Kuwait	Mental and primary healthcare for depression screening	Not reported	The prevalence rate of depression among primary care attendees in Kuwait was relatively high. The study recommended that screening and early detection of mental health problems, in general, and depression in particular, should be implemented by PHC physicians during their routine daily activity
Alhumoud et al. [26], 2018	Kuwait	Criminal forensic psychiatric assessments	Not reported	In Kuwait, the number of mentally ill offenders referred for criminal responsibility and fitness to stand trial was very small compared to western countries. Majority of female offenders had been charged with crimes against person
Al-alawi et al. [27], 2021	Oman	6-week-long therapist-guided online therapy with that of self-help, internet-based therapy focussing on COVID-19-induced symptoms of anxiety and depression among individuals	Not reported	Levels of anxiety and depression reduced in both study groups, but the reduction was higher in the intervention group than in the control group. This study provides preliminary evidence to support the efficacy of online therapy for improving symptoms of anxiety and depression during the COVID-19 crisis in Oman. Therapist-guided online therapy was found to be superior to self-help, internet-based therapy; however, both therapies could be considered as viable options
Alkaabi et al. [28], 2019	Oman	Psychiatric out-patient services	The study suggests that Omani patients seeking consultation in a tertiary care centre appeared not to be satisfied with diagnosis and technical ability of the doctor treating them. They were also not satisfied with the convenience and accessibility of services	Mental health services have remained largely rudimental. As a result, mental health is often left in the hands of traditional healers. As mental illnesses are increasingly being recognised in Oman, concerted efforts are needed to address some of the factors that contribute to decreasing dissatisfaction with services
Al-Sharbati et al. [29], 2012	Oman	Psychotherapy service	Not reported	Despite low numbers of referrals to the Psychotherapy Service, there is reason to believe that psychotherapy would be an effective tool to manage the increasing number of mental disorders in Oman
Ghannam et al. [30], 2020	Qatar	1-day workshop to help residents identify stressors, identify early warning signs of stress, and practice intervention techniques	Resident physicians found the workshop satisfactory and reported reduction of levels of burnout	An effective stress management intervention implemented in an international context resulted in residents applying the skills that they learned and a reduction of levels of burnout

Table 2 (continued)

Author, year	Country	Kind of mental health service	Patient satisfaction	Reported service outcomes
Zada and Anwarulhaq [31], 2020	Qatar	Mental health referrals at the primary care level using checklist items including: (1) history of present illness (HPI); (2) mental status examination (MSE); (3) risk assessment; (4) past medical history; (5) use of psychiatric assessment tools; (6) treatment given in the primary care setting and (7) reason for referral	Not reported	Mental health referrals from primary care physicians in Qatar suffer from a profound lack of basic data; reasons for this may include gaps in primary care physicians' knowledge and self-efficacy about mental healthcare
Al-Thani and Moore [32], 2012	Qatar	Introducing a form of nondirective counselling sessions clients with depression in Islamic culture through the work of one Muslim person-centred counsellor	Clients had been in a state of depression before beginning counselling. Yet therapeutic effect began to occur fairly rapidly, initially simply as a result of their feeling heard. The nondirective listening of the counsellor in the longer term enabled clients to learn to listen with greater acceptance to themselves. In so doing they began to find their own sense of direction within both the constraints and support of the Islamic culture in which they lived	The study made a small but significant contribution in terms of demonstrating that nondirective counselling can succeed for some clients in Islamic culture
Alghamdi et al. [33], 2015	Saudi Arabia	Narrative Exposure Therapy (NET) with traumatised firefighters	NET led to significant reductions in post-traumatic stress disorder symptoms, anxiety and depression compared with Waiting-list Control (WLC). After the WLC group received treatment, it showed the same improvements as the NET group. This occurred immediately post-treatment in both groups but was not sustained at 3- and 6-month follow-ups	Coping strategies and social support led to significant changes only in follow-up times. NET was effective in reducing PTSD symptoms in traumatised Saudi firefighters
AlHadi, Alamari, et al. [52], 2021	Saudi Arabia	Computerised cognitive behavioural therapy (cCBT)	Not reported	Mental healthcare professionals in Saudi Arabia need more education and training regarding cCBT; however, their attitudes toward its use and their comfort in using computers in general showed promise
AlHadi, AlGhofil, et al. [34], 2021	Saudi Arabia	Cognitive-behavioral therapy (CBT) in treatment of depression in primary healthcare centres and family medicine clinics	Most participants (91.9%) were willing to use CBT if they had adequate education and training. More than half (59.5%) thought it was time-consuming, while 39% thought that CBT training was a very time-intensive process	More than half of the physicians had good perceptions of the effectiveness of CBT administration in primary healthcare settings. Younger physicians were more perceptive. The most agreed-upon barrier to CBT implementation was lack of training and education

Table 2 (continued)

Author, year	Country	Kind of mental health service	Patient satisfaction	Reported service outcomes
Althubaiti and Ghamri [35], 2019	Saudi Arabia	Patient referral to psychiatrists and conducting psychotherapy or mental health consultations	Almost 90% of physicians agreed that collaboration with psychiatrists was necessary for care of patients, and only a third responded that psychiatrists were accessible if and when they wanted to consult with them	Family and primary care physicians must collaborate with psychiatric professionals in order to provide effective services. Moreover, family physicians should receive more education about mental health, and effective communication should be encouraged in order to deliver better care to psychiatric patients in primary healthcare settings
Atallah et al. [36], 2018	Saudi Arabia	Usage of mobile health applications for mental health patients	64% of participants expressed interest in using their own mobile phones to track and follow progression of their depression and/or anxiety	Developing mobile health applications for Saudi mental health patients was needed since it could offer opportunities for patients, researchers, caregivers, and legislators to work together to improve the state of mental healthcare in Saudi Arabia
Ahmad [37], 2013	Saudi Arabia	Diagnosing and managing depressed patients in primary healthcare centres	Not reported	Continuous medical education on depression was required for healthcare providers and needed to be instituted and adequate resources for counselling services and antidepressant medications at primary care level needed to be made available. There was also a need to improve quality and integrate services with mental health referral services
Al Mousa et al. [38], 2021	Saudi Arabia	Mental healthcare services	The findings suggest the majority of participants were dissatisfied with their stay in hospital, expressing generally negative perceptions of care services (understood here as hospital services, as opposed to personal care received from specific healthcare personnel), with many describing it quite openly as a prison	Quality of mental healthcare in KSA is manifested by a therapeutic ethos with a high degree of interaction between professional carers and service users, with the former being highly educated, competent, compassionate, with a high degree of self-awareness, and specialised in mental health
Bahattab and AlHadi [39], 2021	Saudi Arabia	Acceptance and commitment therapy (ACT) in a group format for Saudi women who struggle with depression and anxiety disorders	ACT group therapy was well appreciated and viewed as being culturally and religiously acceptable by the Saudi Muslim female participants	The results supported the notion that ACT was well appreciated as a potential means of reducing depression and anxiety and could help enhance positive emotions and increase psychological well-being of Saudi women
Alatiq and Al Modayfer [40], 2019	Saudi Arabia	Feasibility and potential benefits of using transdiagnostic cognitive behavioural therapy (T-CBT) to treat adult emotional disorders	Not reported	This study provides initial evidence that T-CBT is suitable for clients with emotional disorders in Saudi Arabia. The study also provides support for the effect of T-CBT as a low-intensity intervention delivered by junior psychologists

Table 2 (continued)

Author, year	Country	Kind of mental health service	Patient satisfaction	Reported service outcomes
Alzahrani et al. [41], 2017	Saudi Arabia	Referral process for psychological consultations	Not reported	Re-engineering referral process had the most effective impact among other change ideas in terms of magnitude and sustainability of the effect on increasing the number of referral cases to the PSU in SRCA in Riyadh
Alatiq [42], 2021	Saudi Arabia	Transdiagnostic cognitive behavioural therapy (T-CBT) and counselling sessions	Not reported	The study provided initial yet important evidence for the applicability of T-CBT in Saudi Arabia, especially when delivered by junior psychologists as low-density interventions
Al-Habeeb et al. [43], 2020	Saudi Arabia	12-month treatment of mental disorders in the Saudi National Mental Health Survey (SNMHS)	Not reported	A high level of unmet need for treatment of mental disorders existed in KSA. Further analyses of the SNMHS data might provide insights into modifiable barriers to treatment and policy options to address the problem of unmet need for treatment
Algahtani et al. [44], 2017	Saudi Arabia	Psychiatric and psychological services and availability of psychotherapy	Not reported	Saudis were experiencing a substantial gap between their perceived need for psychotherapy and available therapeutic services
Khan et al. [45], 2016	Saudi Arabia	Psychoopathology in mass gathering situation for Indian pilgrims on Hajj 2016	Not reported	All patients completed their Hajj successfully and returned to India. Cumulative stress caused full spectrum of mental decompensation, and prompt healing was aided by simple nonpharmacological measures including social support and counselling in compatible sociolinguistic setting
Alatiq [46], 2014	Saudi Arabia	Transdiagnostic cognitive behavioural therapy (CBT)	Not reported	Case reports describe outcomes of transdiagnostic CBT for 4 female patients who presented a wide range of symptoms and conditions without conducting any specific diagnostic assessments. The results support positive effect of this treatment method on depression, anxiety symptoms, and general functioning. Patient feedback and observable improvements also supported these outcomes
Thomas et al. [47], 2015	United Arab Emirates	Traditional healers' conceptualisations of mental health problems, discussing their perspectives on phenomenology, aetiology, intervention and outcome	All healers were positive about the idea of integrated services and saw themselves as making a valuable contribution to the UAE health care sector	Healers viewed mental health problems as having diverse aetiologies, including psychological, social, physical and metaphysical causes. The traditional healers of the UAE (Mutawa) held a broad view concerning aetiological factors implicated in what might be

Table 2 (continued)

Author, year	Country	Kind of mental health service	Patient satisfaction	Reported service outcomes
Mufaddel et al. [48], 2014	United Arab Emirates (UAE)	Community mental health service	Patients had high satisfaction rates with the information and advice they received, with their relationships with CMHS workers, with their access to mental health services and with their drug treatment	termed mental health problems or psychological complaints. Consequently, they saw the value of biomedical, psychosocial and traditional religious approaches to healing
El Hayek et al. [49], 2020	Arab Gulf countries: United Arab Emirates, Oman, Qatar and Saudi Arabia	Telepsychiatry	Not reported	The use of digital mental health services varied between different Arab countries. Even though some nations had laws that regulated provision of such services, most struggled with multifactorial barriers including patient-, healthcare-, and system-related
Algahtani et al. [50], 2019	Arab Gulf countries: Bahrain and Saudi Arabia	Cognitive behavioural therapy (CBT) for patients with depression and anxiety	Not reported	Patients and their caregivers in both countries used a bio-psycho-spiritual-social model of illness and sought help from multiple sources. Therapists emphasised the need for using local idioms, culturally appropriate translations and minor adjustments in therapy. There were no thematic differences between the two sites. Findings were being used to adapt a culturally appropriate CBT manual, to be tested in a randomised controlled trial
Okasha et al. [51], 2012	Arab Gulf countries	Summary the current situation of mental health services in the Arab World	Not reported	Some improvement has occurred in the last decade, but mental health human resources and the attention devoted to mental health issues are still insufficient

Results

General Characteristics of Included Studies

Studies Conducted in Kuwait

Two studies were conducted in Kuwait including a cross-sectional study on mental and primary healthcare service for depression screening [25] and a retrospective chart review of all cases referred for criminal forensic psychiatric assessments from January 1, 2016, to May 31, 2017 [26].

Studies Conducted in Oman

Three studies were conducted in Oman consisting of one 6-week-long pragmatic randomised controlled trial on therapist-guided online therapy with self-help, internet-based therapy focussing on COVID-19-induced symptoms of anxiety and depression among individuals [27], one cross-sectional correlative study conducted over a 3-month period on outpatient psychiatric services [28], and one review of referral process of a psychotherapy service [29].

Studies Conducted in Qatar

Three studies were conducted in Qatar involving one pre-post single-arm educational intervention on the effect of a stress management intervention on resident physicians' burnout and stress management behaviours and outcome [30], one descriptive study design on the evaluation of the calibre of psychiatric referrals at seven Western region primary health centres [31], and one two-phased research project (pilot study and follow-up study) on counselling sessions for depressed patients [32].

Studies Conducted in Saudi Arabia

Fifteen studies were conducted in Saudi Arabia. Of these, one randomised waiting-list control (WLC) study was conducted on effectiveness of narrative exposure therapy (NET) as a short-term treatment for reducing post-traumatic stress disorder (PTSD) symptoms among Saudi firefighters [33]. Five quantitative studies were conducted on knowledge of computerised cognitive behavioural therapy (cCBT) among mental healthcare professionals and their attitudes and preferences towards cCBT [52], perceptions of GPs and family medicine physicians on the use of cognitive behavioural therapy (CBT) for depression [34], the proportion of family physicians referring patients to psychiatrists and conducting psychotherapy or mental health consultations themselves [35], use of mobile health applications for mental health patients [36],

and barriers facing primary healthcare physicians in diagnosing and managing depressed patients in primary healthcare centres [37].

Two qualitative studies were conducted on theoretical understanding of issues pertinent to the quality of mental healthcare in the country from the perspectives of those using services [38], and potential acceptance, feasibility, and clinical impact of acceptance and commitment therapy (ACT) in a group format for Saudi women who struggled with depression and anxiety disorders [39]. There were two quality improvement and assurance studies on feasibility and potential benefits of using transdiagnostic CBT (T-CBT) to treat adult emotional disorders in a naturalistic open trial [40], and the process of referring cases to the Psychological Support Unit (PSU) in Saudi Red Crescent Authority (SRCA) in Riyadh Region by 75% over 2 months [41].

Other included studies were one feasibility trial using a comparative study comparing T-CBT results with results for counselling sessions [42], one face-to-face community epidemiological survey using the Saudi National Mental Health Survey (SNMHS) on treatment rates of 12-month mental disorders [43], one descriptive, historical study on historical development and current challenges of psychiatric and psychological services and availability of psychotherapy [44], one descriptive study analysing mental morbidity in 1.36 lakh Indian pilgrims during Hajj 2016 [45], and a case study for feasibility and potential benefit of T-CBT for Saudi patients [46].

Studies Conducted in United Arab Emirates

The remaining two studies were conducted in the United Arab Emirates (UAE) consisting of one qualitative study using telephone interviews to explore traditional healers' conceptualisations of mental health problems (i.e., psychological complaints), and discuss their perspectives on the mental health problem, its diverse causes and diagnosis, interventions for healing, and outcomes [47], and one descriptive study that employed review of hospital records, total numbers of patient admissions and duration of inpatient care before and after enrolment in the community mental health service [48].

Studies Conducted in Arab Gulf Countries

Of the 28 included studies, three reported on mental health services, particularly CBT and telepsychiatry provided in Arab Gulf countries, including two qualitative studies [49, 50], and a mental health policy paper on services obtained through ministries of health, the Eastern Mediterranean Region (EMRO) office of the World Health Organization (WHO), national psychiatric societies and national psychiatric leaders [51].

Specific Characteristics of Included Studies

Mental Health Services and Referrals

Mental health services are generally available in the Arab Gulf countries [51], especially reported in the hospital setting in Saudi Arabia by Al Moussa et al. [38], and as a community mental health service in Al Ain Hospital, UAE [48]. Mental health referrals are reported at the primary healthcare level in Qatar [31], and with referrals for patients of family and primary care physicians in collaboration with psychiatric professionals in Saudi Arabia [35]. Alzahrani et al. [41] also reported the re-engineering of referral process for psychological consultations in Saudi Arabia.

Psychotherapy and CBT

The availability of psychotherapy services has been reported, particularly using a review of service referral process through electronic patient progress notes in Sultan Qaboos University Hospital in Oman [29]. In Saudi Arabia, the availability of psychotherapy was also reported in managing the increasing number of psychiatric disorders in the country [35, 44]. In particular, CBT, which represents a major milestone in the progress of psychotherapy, is available in Bahrain and Saudi Arabia for treating patients with anxiety and depression [50]. In addition, other studies that reported CBT services are predominantly in Saudi Arabia such as reports on attitudes, knowledge and preferences of mental healthcare professionals in providing cCBT [52], and CBT to treat depression in family medicine clinics and primary healthcare centres [34], and T-CBT to treat emotional disorders [40, 42, 44].

Telepsychiatry and Mobile Health Services

Digital mental health services or telepsychiatry services are reportedly available to varying extent in the following Arab Gulf countries before and during the COVID-19 pandemic, including Qatar, Oman, Saudi Arabia and UAE [49], and particularly, using mobile health applications for mental health patients in Saudi Arabia [36]. Al-Alawi et al. [27] also reported a 6-week-long therapist-guided online therapy with superior efficacy for improving COVID-19 anxiety and depression-related symptoms compared to self-help, internet-based therapy in Oman.

Mental Health Services for Depression and Anxiety

Screening and early detection of depression were reportedly implemented in mental and primary healthcare facilities in Kuwait [25]. A nondirective counselling service is also available for clients with depression in Islamic culture through the work of one Muslim

person-centred counsellor in Qatar [32]. In Saudi Arabia, the diagnosis and management of depressed patients in primary healthcare centres were reported by Ahmad [37], as well as ACT in a group format for Saudi women who struggled with depression and anxiety disorders by Bahattab and AlHadi [39].

Other Mental Health Services

Other mental health services reported in Arab Gulf countries include criminal forensic psychiatry assessment in Kuwait [26], psychiatric outpatient services in Oman [28], a 1-day workshop on a stress management intervention to reduce levels of burnout in Qatar [30], and mental health services provided by traditional healers in UAE [47]. In Saudi Arabia, other mental health services have also been reported including NET to reduce PTSD symptoms of traumatised firefighters [33], social support and counselling provided to Indian pilgrims who suffered stress during the Hajj gathering in 2016 [45], and 12-month treatment of mental disorders reported in the Saudi National Mental Health Survey (SNMHS) [43].

Discussion

This review examined the nature and availability of reported general mental health services for adult patients in Arab Gulf or GCC countries. It found that mental health services generally are available in these countries, and include NET, referral services, psychotherapy and CBT (e.g., cCBT and T-CBT), telepsychiatry and mobile health service, screening, early detection and management for depression and anxiety, and other mental health services such as criminal forensic psychiatry assessment, consultation with traditional healers, social support and counselling during Hajj pilgrimage, and 12-month treatment of mental health disorders.

In particular, the review findings revealed that the highest number of psychiatrists were present in Bahrain, Kuwait and Qatar [51]. However, these countries still have reported shortages of psychiatrists [51], with fewer studies reporting mental health services compared to other Arab Gulf countries, particularly Saudi Arabia. In comparison, the USA has also experienced having insufficient psychiatrists, even before the emergence of increased rates of COVID-19 related anxiety and depression, where more than half of its states reportedly lacked a single psychiatrist [53]. In addition, this review found that mental health services were generally reported to be available, but perceived as negative and dissatisfying by service user patients in one mental health hospital in Saudi Arabia [38]. Similar findings have been

reported in USA indicating that negative online evaluations of mental healthcare facilities which explicitly mentioned rudeness among ancillary staff [54].

Meanwhile, community mental health services are also available and reported as effective in minimising the need for hospitalisation, according to high satisfaction ratings of 123 patients at one hospital in the UAE [48]. Such high satisfaction ratings are consistent with other studies that have reported positive hospitalisation experiences such as “feeling cared for” and “positive qualities of staff” in the United Kingdom (UK) [55], and positive ratings of mental healthcare facilities such as “relationship with primary provider” and “caring staff” in USA [55]. Likewise, mental health referrals were also reported at the primary healthcare level in Qatar [31], referrals for patients of family and primary care physicians in collaboration with psychiatric professionals [35], and re-engineering of referral processes for psychological consultations in Saudi Arabia [41]. These reports revealed that mental health referrals of patients suffered from profound lack of basic data [33], while it turned out to be positive and effective in increasing the number of referral cases reported by family physicians [35], and multidisciplinary teams [41].

We also found that the highest number of studies reported availability of psychotherapy and CBT (e.g., cCBT and T-CBT), predominantly in Saudi Arabia [34, 35, 40, 42, 44, 46, 52], with two reporting these therapies in Bahrain [50] and Oman [29]. Use of T-CBT to treat anxiety and emotional disorders has also been reported in previous work in Saudi Arabia [40, 42, 46]. Overall, only three of the six Arab Gulf countries, Bahrain, Oman, and Saudi Arabia, have published nine studies on psychotherapy and CBT services [30, 34, 35, 40, 42, 44, 46, 50, 52]. These services are culturally accepted by patients and generally considered helpful in treating anxiety, depression, and phobia, which are commonly referred to patients by psychiatrists in hospitals, rather than GPs in primary healthcare centres. The findings are consistent with a study in England where CBT was identified as the primary treatment of choice for anxiety and depression [56] and in China where augmented mindfulness-based cognitive therapy (MBCT) was a reported cost-effective psychosocial program for preventing relapse in major depression [57].

On the other hand, telepsychiatry and mobile health services were only reported to be available in Saudi Arabia and UAE before the COVID-19 pandemic [30], and particularly through mobile health applications for mental health patients in Saudi Arabia [36]. During the pandemic, aside from Saudi Arabia and UAE, an

additional two other Arab Gulf countries, Qatar and Oman, were reported using telepsychiatry through phone-line calls, messaging services, government hotline, and video-conferencing with social media as a tool in disseminating information [49]. In Oman, Al-Alawi et al. [27] reported a 6-week-long therapist-guided online therapy for COVID-19-induced anxiety and depression-related symptoms of patients with self-help, internet-based therapy. However, El Hayek et al. [49] indicated that there were no telepsychiatric guidelines available and that there were cultural barriers in implementing telepsychiatry in Arab Gulf countries including religion, gender sensitivity, and other societal norms. These reports are different from those reported in other countries, including Singapore, UK, and USA where guidelines on using telepsychiatry during the pandemic were available to both clinicians and patients [58]. These guidelines differ significantly across countries with more expansive and detailed guidelines in USA, while conservative and focused guidelines in practical implementation in UK [58]. As a whole, published studies on telepsychiatry and mobile health services were reported in four of the six Arab Gulf countries (i.e., Qatar, Oman, Saudi Arabia, and UAE), which are generally effective before and during the pandemic. However, these findings must be considered with caution because it may be that Bahrain and Kuwait do utilise telepsychiatry and mobile health services, even before the pandemic, but these were not reported in published studies.

For mental health services specific to the treatment or management of depressive disorders, they are available in Kuwait, Qatar, and Saudi Arabia. For example, screening and early detection services for depression were performed among 800 patients in mental and primary healthcare facilities in Kuwait [25]. Nondirective counselling service was also found therapeutically effective for nine clients in treating their depression through the work of one Muslim person-centred counsellor in Qatar [32]. In Saudi Arabia, diagnosis and management of depressed patients were performed by 75 primary healthcare physicians [37], and there is evidence supporting the effectiveness of using the ACT in decreasing depressive and anxiety symptoms of eight Saudi women [39]. In comparison, a meta-analysis revealed robust evidence that collaborative care is effective to improve the management of depression, including adherence and response to treatment, recovery from and remission of symptoms, functional status and/or quality of life, and satisfaction with care provided to the patients [59]. In addition, augmented MBCT as treatment for depression was reported in China and found that MBCT combined with pharmacotherapy was effective in improving patient compliance and psychological state, while preventing the recurrence of major depression [57].

Other mental health services were found to also be available in Arab Gulf countries except for Bahrain. For instance, mental health services provided by traditional healers are reportedly available in the Arab Gulf countries [47]. Traditional healing has been widely used for mental disorders worldwide, not only in Islamic cultures but also including those in Africa, China, India, and South America [60]. While criminal forensic psychiatry services were available in Kuwait [26], psychiatric outpatient services in a tertiary care centre in Oman [35], and 1-day stress management intervention workshop in Qatar [30]. Forensic psychiatry services are important because people with mental disorders commit conflicts against the law of their country and these people require mental health services [61]. However, evidence shows that more studies are needed regarding differences in legal tradition of each country and forensic mental health treatment standards on an international level [62]. Psychiatric outpatient services are also vital to be available because they provide appropriate setting for assessment, brief psychological interventions, initial monitoring of the effectiveness of prescribed medications, and referral to more appropriate mental health facilities [63], particularly beneficial to expatriate workers in the Arab Gulf region who comprise almost half (48%) of the population and have greater risk for mental health morbidity than the nationals or citizens in the region [10]. While in comparison, stress management has drawn the attention of the World Health Organisation [64] and created a new course or workshop (i.e., Self-Help Plus stress management course) to help those stressed people who are living through adversities in life due to armed conflicts, disease, poverty and violence, such as refugees from different countries in European countries, South Sudan female refugees in Uganda, and refugees from Syria who are living in Turkey.

Lastly, a variety of other mental health services were reportedly available in Saudi Arabia, including NET, social support and counselling as effective nonpharmacological measures in treating pilgrims who suffered stress during Hajj gathering [45], and the 12-month treatment of mental disorders reported in the Saudi National Mental Health Survey (SNMHS) to have shown a high level of unmet need of treating mental disorders in the country [43]. NET is both appealing and supportive for patients and previous study reported that it widely used across various countries in Africa, Asia, and Europe [65]. In comparison to the social support and counselling provided to Hajj pilgrims [45], a meta-analysis reported that there is a high effect size between social support and mental health where higher social support is needed for the mental health of elderly people, patients, workers, and

women [66]. For the 12-month treatment of mental disorders, this treatment modality has been also reported to be effective in treating mental disorders and suicidal thoughts and behaviours among college students in eight countries including Australia, Belgium, Germany, Mexico, Northern Ireland, South Africa, Spain, and USA [67].

Strengths and Limitations of the Study

It is recognised that this scoping review has strengths and limitations that need to be considered. As a strength, a systematic and robust search strategy based on the review objective was utilised, and the findings present a summary of scope and availability of mental health services in Arab Gulf countries. Overall, the findings of this review can assist inform development of evidence-based guidelines for implementation and utilisation of mental health services in Arab Gulf countries. However, there are also acknowledged limitations. The review included studies published in English language only and may have missed reports published in Arabic and other Gulf languages. Furthermore, a majority of the included studies were concentrated in Saudi Arabia, with many less from other Gulf countries. As we examined academic literature, it is likely that only those services that have been formally evaluated resulted in publication, so many others may actually be available. While this review provided some insights into available services, the impact of traditional stigma around mental illness on service utilisation remains unclear. In addition, it is unclear who utilises these services, that is, national citizens or expatriates.

Conclusions

This review revealed that the most available and utilised mental health services in treating adult mental disorders in the Arab Gulf countries were psychotherapy and CBT services followed by telepsychiatry and mobile health services, especially during the COVID-19 pandemic. Mental health services in the Arab Gulf countries are reportedly becoming widely implemented in treating anxiety and depressive disorders with few for PTSD symptoms and general mental functioning of psychiatric patients. While these mental health services could be available and administered to treat other mental disorders (e.g., schizophrenia, bipolar disorder, personality disorders, eating disorders, substance use disorders, disruptive behaviour disorders, etc.), only one study in Saudi Arabia reported on this aspect in the Arab Gulf countries which necessitates further research. More research is needed to explore utilisation patterns of available mental health services and other sources by which people seek assistance.

Recommendations for Policy, Practice, and Future Research

Studies on other mental health services remain limited in the Arab Gulf countries; however, there is evidence that this area is evolving, and there is movement in overcoming stigma towards mental illness and its management. There remains a need for further studies to bridge current knowledge gaps and provide evidence-based practice guidelines for implementation of mental health services in the Arab Gulf countries. Access to appropriate health services is vital for effective medical and nursing management of mental illnesses. While stigma and misinformation have historically impacted on mental health service provision and access in the Arab Gulf countries, it is evident that this is changing. There is a need for continuing development of mental health services and education of health professionals including psychiatric nurses to facilitate this. Health professionals, including psychiatric nurses, have a responsibility to provide education for the general public around mental health and its appropriate medical and nursing management. Further evaluation of mental health service provision and utilisation is needed to ensure suitability for local populations.

References

- 1 Ismail D, Tounsi K, Zolezzi M, Eltorki Y. A qualitative exploration of clozapine prescribing and monitoring practices in the Arabian Gulf countries. *Asian J Psychiatr.* 2019;39:93–7.
- 2 Reference Bureau Population. World population data sheet. 2016. Available from: <http://www.prb.org/pdf16/prb-wpds2016-web-2016.pdf> (accessed April 21, 2022).
- 3 World Population Review. GCC countries 2022. <https://worldpopulationreview.com/country-rankings/gcc-countries> (accessed 21 April 2022).
- 4 Ram P. Management of healthcare in the Gulf Cooperation Council (GCC) countries with special reference to Saudi Arabia. *Int J Acad Res Bus Soc Sci.* 2014;4(12):24–41.
- 5 Khoja T, Rawaf S, Qidwai W, Rawaf D, Nanji K, Hamad A. Health care in Gulf cooperation Council countries: a review of challenges and opportunities. *Cureus.* 2017;9(8):e1586.
- 6 El-Khoury J, Barkil-Oteo A, Adam L. Addressing psychiatric care in conflict zones: recommendations for the Arab region. *BJPsych Int.* 2021;18(1):2–4.
- 7 Al-Dousari M, Prior S. Islamic faith as a facilitator for accessing counselling: the experience of three Kuwaiti clients. *Br J Guid Couns.* 2020;48(6):757–67.
- 8 Alosaimi FD, Alshehri Y, Alfraih I, Alghamdi A, Aldahash S, Alkhuzayem H, et al. The prevalence of psychiatric disorders among visitors to faith healers in Saudi Arabia. *Pak J Med Sci.* 2014;30(5):1077–82.
- 9 Hickey JE, Prymachuk S, Waterman H. Exploring personal recovery in mental illness through an Arabic sociocultural lens. *J Psychiatr Ment Health Nurs.* 2017;24(2–3):163–70.
- 10 Zahid MA, Alsuwaidan M. The mental health needs of immigrant workers in Gulf countries. *Int Psychiatry.* 2014;11(4):79–81.
- 11 Al Yousef MJ. Mental health in the Gulf: reforms and challenges. Washington, USA: The Arab Gulf States Institute; 2020. <https://agsiw.org/mental-health-in-the-gulf-reforms-and-challenges/> (accessed January 5, 2023).
- 12 Merhej R. Stigma on mental illness in the Arab world: beyond the socio-cultural barriers. *Int J Hum Rights Healthc.* 2019;12(4):285–98.
- 13 Carlisle J. Mental health law in Saudi Arabia. *BJPsych Int.* 2018;15(1):17–9.
- 14 Saudi Vis 2030. Health Sector Transformation Program - Vision 2030. Available from: <https://www.vision2030.gov.sa/v2030/vrps/hstp/> (accessed May 10, 2023).
- 15 Ministry of Health in Oman. Available from: <https://www.moh.gov.om/documents/16506/117700/CH01Y13/5ddabfab-f9b3-44eb-b89b-6d1d6b7c9bac> (accessed November 10, 2021).
- 16 Khaja KAJA, Al-Haddad M, Sequeira R, Al-Offi A. Antipsychotic and anticholinergic drug prescribing pattern in psychiatry: extent of evidence-based practice in Bahrain. *Pharmacol Pharm.* 2012;03(04):409–16.
- 17 Grey I, Al-Saihati BA, Al-Haddad M, McClean B. Reasons for referral, intervention approaches and demographic characteristics of clients with intellectual disability attending adult psychiatric outpatient services in the Kingdom of Bahrain. *J Intellect Disabil Res.* 2015;59(2):186–92.
- 18 Wadoo O, Ahmed M, Reagu S, Al Abdulla SA, Al Abdulla MAYA. Primary care mental health services in Qatar. *BJPsych Int.* 2021;18(1):15–8.
- 19 Al-Qimlass A. The counseling profession in Kuwait: its journey and future. *Intl J Adv Couns.* 2015;37(4):355–66.

Statement of Ethics

An ethics statement is not applicable because this study is based exclusively on published literature.

Conflict of Interest Statement

The authors declare that they have no conflict of interest relevant to this article.

Funding Sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Author Contributions

T.N.M.A., L.M., and M.B. contributed to literature search and content drafting. All authors critically revised the content of this review and approved the final version of the manuscript. Author 1, author 2, and author 3 contributed to literature search and content drafting. All authors critically revised the content of this review and approved the final version of the manuscript.

Data Availability Statement

All data generated or analysed during this study are included in this article. Further enquiries can be directed to the corresponding author.

- 20 Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Methodol.* 2005;8(1):19–32.
- 21 Cooper S, Cant R, Kelly M, Levett-Jones T, McKenna L, Seaton P, et al. An evidence-based checklist for improving scoping review quality. *Clin Nurs Res.* 2021;30(3):230–40.
- 22 Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med.* 2018;169(7):467–73.
- 23 Covidence Systematic Review Software. Better systematic review management. Melbourne, AU: veritas health innovation. 2021. Available from: www.covidence.org (accessed December 20, 2021).
- 24 Joanna Briggs Institute. Critical appraisal tools. 2021. Available from: <https://joannabriggs.org/critical-appraisal-tools> (accessed December 15, 2021).
- 25 Al-Ghareeb HY, Al-Wotayan R, Al-busairi HF. Prevalence of depression among patients attending the primary health care clinics in Kuwait. *World Fam Med.* 2019;17(11):4–15.
- 26 Alhumoud A, Zahid M, Ibrahim S, Syed T, Naguy A. Forensic psychiatry in Kuwait - characterization of forensic psychiatry patients evaluated over year duration in the only available forensic psychiatry unit. *Int J Law Psychiatr.* 2018;60:12–6.
- 27 Al-Alawi M, McCall RK, Sultan A, Al Balushi N, Al-Mahrouqi T, Al Ghailani A, et al. Efficacy of a six-week-long therapist-guided online therapy versus self-help Internet-based therapy for COVID-19-induced anxiety and depression: open-label, pragmatic, randomized controlled trial. *JMIR Ment Health.* 2021;8(2):e26683.
- 28 Alkaabi S, Al-Balushi N, Al-Alawi M, Mirza H, Al-Huseini S, Al-Balushi M, et al. Level and determinants of patient satisfaction with psychiatric out-patient services, Muscat, Oman. *Int J Ment Health.* 2019;48(2):80–94.
- 29 Al-Sharbaty Z, Hallas C, Al-Zadjali H, Al-Sharbaty M. Sociodemographic and clinical characteristics of patients attending psychotherapy in a tertiary care hospital in Oman. *Sultan Qaboos Univ Med J.* 2012;12(1):25–32.
- 30 Ghannam J, Afana A, Ho EY, Al-Khal A, Bylund C. The impact of a stress management intervention on medical residents' stress and burnout. *Int J Stress Manag.* 2020;27(1):65–73.
- 31 Zada K, Anwarulhaq M. Evaluation of the quality of mental health referrals from primary care physicians in Qatar. *World Fam Med.* 2020;18(3):5–11.
- 32 Al-Thani A, Moore J. Nondirective counseling in Islamic culture in the Middle East explored through the work of one Muslim person-centered counselor in the State of Qatar. *Pers-Centered Exp Psychother.* 2012;11(3):190–204.
- 33 Alghamdi M, Hunt N, Thomas S. The effectiveness of Narrative Exposure Therapy with traumatised firefighters in Saudi Arabia: a randomized controlled study. *Behav Res Ther.* 2015;66:64–71.
- 34 AlHadi AN, AlGhofili HH, Almujaivel NA, Alswirky HM, Albeshr MF, Almogbel GT. Perception and barriers to the use of cognitive-behavioral therapy in the treatment of depression in primary healthcare centers and family medicine clinics in Saudi Arabia. *J Fam Community Med.* 2021;28(2):77–84.
- 35 Althubaiti N, Ghamri R. Family physicians' approaches to mental health care and collaboration with psychiatrists. *Cureus.* 2019;11(5):e4755.
- 36 Atallah N, Khalifa M, El Metwally A, Househ M. The prevalence and usage of mobile health applications among mental health patients in Saudi Arabia. *Comput Methods Programs Biomed.* 2018;156:163–8.
- 37 Ahmad HH. Obstacles facing primary health care physicians in diagnosing and managing depressed patients in the Tabuk area of Saudi Arabia. *Middle East J Fam Med.* 2013;11(2):4–9.
- 38 Al Mousa Y, Callaghan P, Michail M, Caswell G. Saudi service users' perceptions and experiences of the quality of their mental health care provision in the Kingdom of Saudi Arabia (KSA): a qualitative inquiry. *Int J Ment Health Nurs.* 2021;30(1):300–16.
- 39 Bahattab M, Alhadi A. Acceptance and commitment group therapy among Saudi Muslim females with mental health disorders. *J Contextual Behav Sci.* 2021;19:86–91.
- 40 Alatiq Y, Al Modayfer O. Transdiagnostic CBT for adult emotional disorders: a feasibility open trial from Saudi Arabia. *tCBT.* 2019;12:e30.
- 41 Alzahrani AY, Mahmod S, Bakhamis TM, Al-Surimi K. Improving referral to psychological support unit at Saudi red crescent authority in Riyadh region. *BMJ Open Qual.* 2017;6(2):e000089.
- 42 Alatiq Y. Transdiagnostic CBT versus counselling sessions: a naturalistic trial from Saudi Arabia. *tCBT.* 2021;14:e4.
- 43 Al-Habeeb A, Altwajiri YA, Al-Subaie AS, Bilal L, Almeharish A, Sampson NA, et al. Twelve-month treatment of mental disorders in the Saudi national mental health survey. *Int J Methods Psychiatr Res.* 2020;29(3):e1832.
- 44 Algahtani H, Buraik Y, Ad-Dab'bagh Y. Psychotherapy in Saudi Arabia: its history and cultural context. *J Contem Psychother.* 2017;47(2):105–17.
- 45 Khan SA, Chauhan VS, Timothy A, Kalpana S, Khanam S. Mental health in mass gatherings. *Ind Psychiatr J.* 2016;25(2):216–21.
- 46 Alatiq Y. Transdiagnostic Cognitive Behavioural Therapy (CBT): case reports from Saudi Arabia. *Cogn Behav Ther.* 2014;7:e2.
- 47 Thomas J, Al-Qarni N, Furber SW. Conceptualising mental health in the United Arab Emirates: the perspective of traditional healers. *Ment Health Relig Cult.* 2015;18(2):134–45.
- 48 Mufaddel A, Al Sabousi M, Takriti Y, Dawoud B, Corozo N, Belhaj H, et al. Community mental health services in Al Ain Hospital, United Arab Emirates. *Int Psychiatr.* 2014;11(1):18–20.
- 49 El Hayek S, Nofal M, Abdelrahman D, Adra A, Al Harthi M, Al Shamli S, et al. Telepsychiatry in the Arab world: a viewpoint before and during COVID-19. *Neuropsychiatr Dis Treat.* 2020;16:2805–15.
- 50 Algahtani HMS, Almulhim A, AlNajjar FA, Khalil Ali M, Irfan M, Ayub M, et al. Cultural adaptation of Cognitive Behavioural Therapy (CBT) for patients with depression and anxiety in Saudi Arabia and Bahrain: a qualitative study exploring views of patients, carers, and mental health professionals. *tCBT.* 2019;12:E44.
- 51 Okasha A, Karam E, Okasha T. Mental health services in the Arab world. *World Psychiatr.* 2012;11(1):52–4.
- 52 AlHadi AN, Alammari KA, Alsawat LJ, Alhaidri NE, Alabdulkarim NH, Altwajiri NA, et al. Perception of mental health care professionals in Saudi Arabia on computerized cognitive behavioral therapy: observational cross-sectional study. *JMIR Form Res.* 2021;5(5):e26294.
- 53 American Association of Medical Colleges. A growing psychiatrist shortage and an enormous demand for mental health services; 2023. <https://www.aamc.org/news/growing-psychiatrist-shortage-enormous-demand-mental-health-services> (accessed May 5, 2023).
- 54 Stokes DC, Kishton R, McCalpin HJ, Pelullo AP, Meisel ZF, Beidas RS, et al. Online reviews of mental health treatment facilities: narrative themes associated with positive and negative ratings. *Psychiatr Serv.* 2021;72(7):776–83.
- 55 Chevalier A, Ntala E, Fung C, Priebe S, Bird VJ. Exploring the initial experience of hospitalisation to an acute psychiatric ward. *PLoS One.* 2018;13(9):e0203457.
- 56 Williams CH. Improving Access to Psychological Therapies (IAPT) and treatment outcomes: epistemological assumptions and controversies. *J Psychiatr Ment Health Nurs.* 2015;22(5):344–51.
- 57 Guo H, Ren Y, Huang B, Wang J, Yang X, Wang Y. Psychological status, compliance, serum brain-derived neurotrophic factor, and nerve growth factor levels of patients with depression after augmented mindfulness-based cognitive therapy. *Genet Res.* 2022;2022:1097982.
- 58 Smith K, Ostinelli E, Macdonald O, Cipriani A. COVID-19 and telepsychiatry: development of evidence-based guidance for clinicians. *JMIR Ment Health.* 2020;7(8):e21108. Published 2020 Aug 28.
- 59 Thota AB, Sipe TA, Byard GJ, Zometa CS, Hahn RA, McKnight-Eily LR, et al. Collaborative care to improve the management of depressive disorders: a community guide systematic review and meta-analysis. *Am J Prev Med.* 2012;42(5):525–38.

- 60 Dein S. Traditional healers and global mental health. In: Okpaku SO, editor. *Innovations in global mental health*. Cham: Springer; 2020.
- 61 Sukeri K, Betancourt OA, Emsley R, Nagdee M, Erlacher H. Forensic mental health services: current service provision and planning for a prison mental health service in the Eastern Cape. *S Afr J Psychiatr*. 2016; 22(1):787.
- 62 Beis P, Graf M, Hachtel H. Impact of legal traditions on forensic mental health treatment worldwide. *Front Psychiatry*. 2022;13: 876619.
- 63 Killaspy H. Psychiatric out-patient services. Origins and future. *Adv Psychiatr Treat*. 2006;12(5):309–19.
- 64 World Health Organisation. New stress management course for people living with adversity; 2021. <https://www.who.int/news/item/11-10-2021-new-stress-management-course-for-people-living-with-adversity> (accessed May 11, 2023).
- 65 Jongedijk RA. Narrative exposure therapy: an evidence-based treatment for multiple and complex trauma. *Eur J Psychotraumatol*. 2014;5:26522. Published 2014 Dec 9.
- 66 Harandi TF, Taghinasab MM, Nayeri TD. The correlation of social support with mental health: a meta-analysis. *Electron Physician*. 2017;9(9):5212–22.
- 67 Bruffaerts R, Mortier P, Auerbach RP, Alonso J, Hermsillo De la Torre AE, Cuijpers P, et al. Lifetime and 12-month treatment for mental disorders and suicidal thoughts and behaviors among first year college students. *Int J Methods Psychiatr Res*. 2019;28(2): e1764.