RESEARCH ARTICLE

Prevalence of mental disorders among Iraqi visitors to primary health care centres: a cross sectional study from ten Iraqi Health Directorates.

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ABSTRACT

Introduction: Mental disorders (MD) affect a significant proportion of adult patients in Iraqi primary health care (PHC) facilities, with accessibility making PHCs ideal for early detection and management.

Objective: This study aimed to investigate the prevalence of MD and barriers to seeking help in PHCs.

Methods: A cross-sectional design was employed, and the participants were selected randomly by multiple stages from 10 Iraqi health directorates out of the 18. A total of 50 PHCs and 1220 participants (aged 15+) were included, ensuring equal gender representation. Self-assessment questionnaires were utilized to assess the prevalence of MD.

Results: The study revealed a wide range of MDs, with anxiety disorders being the most prevalent (36%), followed by depression (27%), epilepsy (6.7%), suicidal thoughts (5%), and previous suicide attempts (3.3%), highlighting alarming findings. Additionally, 33% reported nicotine addiction, 3.5% alcohol dependence, and 0.7% struggled with other substances. However, nearly half (49%) were unaware of the mental health services offered in PHC. Moreover, more than two-thirds (67%) of those with suspected MD did not seek help.

Conclusion: Mental disorders are highly prevalent among patients visiting Iraqi PHC settings. Anxiety and depression are the most common of them. Most of them are not aware of the presence of mental health services in PHCC, and about two-thirds do not seek any help due to social stigma or financial difficulties.

Key words: Prevalence, Mental disorders, PHC, Iraq.

INTRODUCTION

Mental health disorders (MDs) are a significant global burden that affects millions of people around the world. Conflict zones present a particularly worrying landscape where the cumulative effects of war, violence, displacement, and social disruption contribute greatly to the prevalence of MDs.[1] This is particularly troubling, as access to specialized mental health services is often limited in such settings. Primary health care (PHC), the cornerstone of health care delivery, offers essential services accessible to most of the population. This accessibility makes PHC an ideal platform for the early detection, management, and treatment of MDs.[2] In Iraq, where decades of conflict have strained the health system, strengthening the capacity of PHC to address mental health concerns becomes even more critical.

Several studies have documented a worryingly high prevalence of MD in the Iraqi population. According to a 2007 World Health Organization (WHO) study, MD was identified as the fourth leading cause of illness in Iraqis over five years old.[3] A more recent

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national survey conducted in collaboration with WHO found that an estimated 18.8% of the Iraqi population experiences some form of mental disorder during their lifetime, with anxiety disorders (13.8%) and major depressive disorder (7.2%) being the most common.[4]

Research suggests a strong correlation between exposure to war and violence and the development of MD, including post-traumatic stress disorder (PTSD), anxiety, and depression.[5] Further, the social and economic disturbances caused by conflict can exacerbate mental health challenges.[6] Prevalence figures may even be underestimated due to factors such as stigma associated with mental illness and limited access to mental health services.[7] Despite the growing recognition of the mental health crisis in Iraq, access to specialized mental health services remains limited. Traditionally, mental health care has been centralized in urban areas and hospital-based settings,[8] creating geographical barriers for those living in rural areas and contributing to a shortage of qualified mental health professionals.[9] A 2021 study reported a ratio of only four psychiatrists per million people in Iraq, highlighting the significant gap in service provision.[10] Furthermore, the stigma surrounding mental illness can be a significant deterrent to help-seeking behaviour.[11] Studies have shown that fear of judgment, discrimination, and social isolation often prevent people from seeking professional help for their mental health concerns.[12] This stigma can further complicate access to care and perpetuate the cycle of untreated mental illness.

The limitations of the current mental health service landscape in Iraq underscore the need for innovative solutions. Primary health care (PHC) offers a promising avenue to address the mental health needs of the population. Its accessibility, existing infrastructure and established patient trust make it well-placed to play a central role in delivering mental health services.[13] The concept of primary mental health care (PMHC) emphasizes the integration of mental health services into routine PHC practices. This approach equips primary healthcare providers with the skills and knowledge necessary to detect common MDs and provide basic interventions and referrals for more complex cases.[13]

Several studies have shown the effectiveness of PMHC interventions in various settings. Research has shown that training primary healthcare providers in screening and management can improve the identification and treatment of MDs. [14] Additionally, PMHC programs are cost-effective and can contribute to better overall patient health outcomes.[15] However, implementing PMHC effectively requires addressing certain challenges. Training primary healthcare providers in mental health skills requires sustained investment in capacity-building programs. Additionally, establishing clear referral pathways and guaranteeing access to specialized mental health services for complex cases are crucial to a comprehensive PHC-based approach.[16] This study aimed to investigate the prevalence of MD among Iraqi PHC attendees and explore factors that influence help-seeking behaviour. The findings of this study can inform the development of evidence-based strategies for integrating PMHC services into Iraqi PHC systems.

METHODS

Setting and study design: A cross-sectional study was conducted on PHCCs from 10 Iraqi provinces to measure the prevalence of MDs from April to August 2021.

Ethical Considerations: The research ethical committee of the Directorate of Public Health in the Ministry of Health in Iraq approved the protocol of this study. A written informed consent was obtained from all participants before the start of the study. The anonymity and confidentiality of the data was maintained throughout the study.

Study population: We enrolled individuals aged 15 years and above who attended the selected PHC centres during the study period. Those who had a cognitive impairment that interfered with the diagnosis of a mental disorder using the

designated tool, could not consent or refused to participate in this study were excluded.

Sampling and sample size: This study employed a multi-stage sampling approach to select the participants.

Stage 1: Stratified Random Sampling by Governorate: Ten governorates (Kirkuk, Diyala, Salahuddin, Baghdad/Karkh, Babil, Karbala, Najaf, Diwaniyah, Muthanna, and Dhi Qar) were conveniently selected from the total of 18 governorates in Iraq conveniently, geographical distribution were considered.

Stage 2: Simple Random Sampling of PHCs within Selected Governorates: Five PHCs were selected by simple random sampling from a comprehensive list of PHCs within each chosen governorate. This process resulted in a sample of 50 PHCs across the ten selected governorates.

Stage 3: Systematic Sampling with Gender Matching within PHCs: A systematic sampling approach was employed within each PHC to select participants. This technique involved identifying a random starting point from the list of eligible individuals (aged 15 and above) attending the PHC. Subsequently, every fourth individual on the list was chosen, ensuring a pre-determined sampling interval. A gender-matched selection procedure was implemented during this stage to address potential gender imbalances. The targeted sample size was 1500 participants, 30 individuals from each primary health care.

Data Collection: Data were collected using a self-assessment questionnaire designed by the authors based on similar published studies. Experts in community medicine and psychiatry revised the questionnaire. Trained administrators from the psychosocial units within the PHCs assisted the participants in completing the questionnaire. The questionnaire consisted of the following sections:

- Sociodemographic characteristics: including age, sex, residence (urban/rural), marital status, educational level, current occupation, and income level.
- Health Behaviors and Risk Factors: The questions assessed repeated falls, tobacco use (smoking), alcohol use, and substance abuse in the past year. Additionally, participants reported previous exposure to violence and other potentially traumatizing events.
- Mental health screening: Standardized and validated instruments were used to detect common MDs. These tools included:
  - o Kessler psychosocial stress scale (K10):[17] Evaluated general psychological distress.
  - o Patient Health Questionnaire (PHQ-9):[18] Assessed depression symptoms.
  - o Generalized Anxiety Disorder Scale (GAD):[19] Screened for anxiety disorders.
  - o Breslau Scale (Short Screening Scale for PTSD):[20] Identified potential cases of post-traumatic stress disorder (PTSD).
  - o Direct questions: Epilepsy and suicidal thoughts/attempts were directly assessed using clear and concise questions.

Pilot Study: To assess the clarity and applicability of our research instrument, a pilot study was conducted at two PHCs in Baghdad, within the Baghdad/ Al-Karkh DoH. Ten participants were recruited from each PHC to participate in the pilot. This pilot aimed to determine the average time required to complete the questionnaire and identify any difficulties participants encountered while answering the questions. It is important to note that data collected during the pilot study were not included in the main research analysis.

Data Management and Analysis: The data collected through questionnaires was entered and analyzed by the Mental Health Section of the Department of Noncommunicable Diseases (NCD) within the Iraqi Ministry of Health (MoH). The Statistical Package for Social Sciences (SPSS) version 26 was utilized for data analysis. Descriptive statistics were used to summarize the data, including frequencies and percentages for categorical variables.

Table 1 | Basic characteristics of the studied sample

Variable	Category	No. (1220)	%
Age (years)	Mean± SD	27.67 ±10.13	
	15-24	210	17.2
	25- 44	749	61.4
	45- 64	254	20.8
	+ 64	7	0.6
Sex	Male	596	48.9
	Female	624	51.1
Residence	City	951	78.0
	Village	269	22.0
Education	None or primary school	477	39.1
	Intermediate or 2nd school	448	36.7
	College or postgraduate	295	24.2
Marital state	Unmarried	222	18.2
	Married	878	72.0
	Others *	120	9.8
Occupation	Government employee	431	35.3
	Self-employed	300	24.5
	None or unable to work	82	6.7
	Student	69	5.7
	Housewife	306	25.2
	Retired	32	2.6
Income (in ID)	< 500.000	559	45.8
	500.000- < 1000.000	449	36.8
	1000.000- < 1500.000	166	13.6
	>1500.000	46	3.8

*Others include divorce, separated and widowed, ID: Iraqi Dinar.

RESULTS

A total of 1220 participants (response rate was 81.3%) were included in the final analysis after excluding 280 questionnaires due to incomplete data. The gender distribution was nearly equal, with 596 (48.9%) being men and 624 (51.1%) women. Most of the participants, 749 (61.4%), were in the age group 25-44 years, followed by the 45-64 year age group 254(20.8%) and the 15-24 year age group 210(17.2%). The mean age of the sample was 27.67±10.13 years, and 951(78%) of the participants resided in urban areas. Educational attainment demonstrated a mix, with 295(24.2%) having a college or postgraduate degree. The remaining participants were equally divided between those without education/ primary school education 477 (39.1%) and those with intermediate/secondary school education 448(36.7%). Marital status analysis revealed that 878 (72%) participants were married. The most common occupations were government employment and housewife. Most participants reported a monthly income that did not exceed one million Iraqi dinars. (Table 1)

Regarding exposure to violence, less than one-quarter of the study sample, 280 (23%) reported exposure to violence in the past year. This violence occurred more frequently at home 174(62%), compared to outside 106(38%). The breakdown of types of violence revealed physical violence 92(33%), psychological violence 185(66%), and a minimal presence of sexual violence 3 (1%). Furthermore, 94 (33.4%) participants reported experiencing a traumatic event. Fifty-two of the screen participants (18.5%) were positive for post-traumatic stress disorder (PTSD), possibly related to their experiences with violence and trauma.(Figure 1)

Prevalence of mental disorders: The study used standardized tools to detect common MD among participants. The prevalence of MDs was as follows: anxiety disorders 439(36%), depression 329 (27%), epilepsy 82 (6.7%), suicidal thoughts 61(5%), previous suicide attempts 40 (3.3%), nicotine addiction (definition?) 402(33%), alcohol dependence 43 (3.5%), and other substance abuse 8 (0.7%). (Figure 2)

The study participants reported that the reasons for not seeking help for mental health concerns are social stigma in 342(28%), financial difficulties in 220 (18%), hopelessness about mental illness in 171 (14%), mistrust in treatment focused solely on medication in 146(12%), fear of drug addiction in 122(10%), mistrust in the healthcare system in 85 (7%), preference for treatment outside healthcare institutions in 73 (6%), and belief in supernatural causes of mental illness 61 (5%). (Figure 3)

DISCUSSION

The findings of this study paint a worrying picture of the mental health landscape in Iraq.

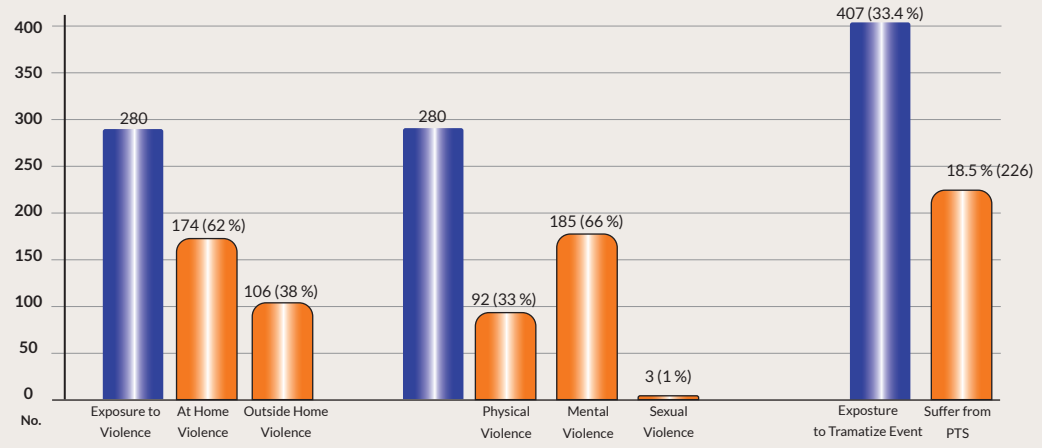

Figure 1 | Proportion of people exposed to violence, traumatizing events, and post-traumatic stress disorder.

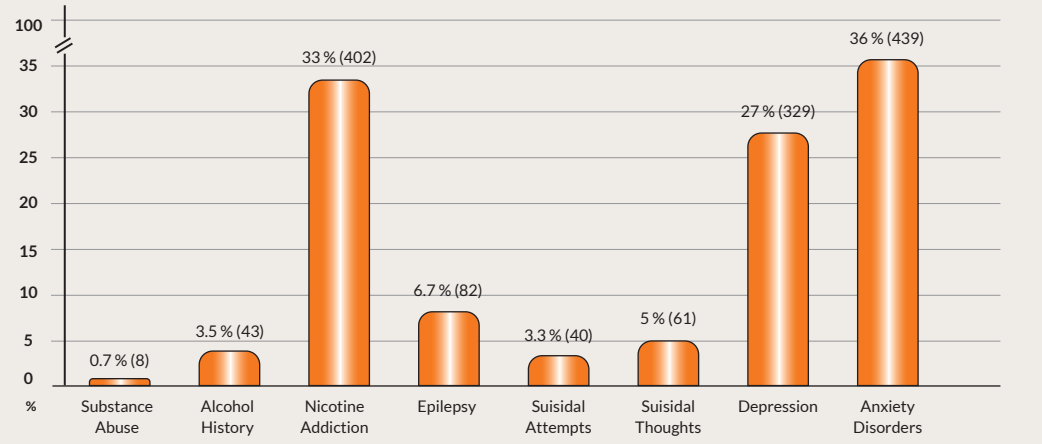

Figure 2 | Prevalence of mental disorders. (More than one mental disorder can be seen in one patient)

The high prevalence of MDs among people attending PHCs underscores the significant burden facing the Iraqi population. This discussion delves deeper into the implications of these results and proposes a two-pronged approach to address this pressing issue. The study identified a worrying prevalence of various MDs, with anxiety disorders (36%) and depression (27%) being the most prevalent. This is consistent with previous research and systematic reviews from Iraq that highlight the substantial mental health burden in the community.[21,22] Socioeconomic situations and associated stressors, including exposure to violence and trauma, probably contribute significantly to these high rates. [23] In particular, the prevalence of PTSD (18.5%) further emphasizes the mental health consequences of violence in this population. [24]

Despite the clear need for mental health services, the study revealed a significant gap in help-seeking behaviour. Almost two-thirds (67%) of those with suspected MDs did not seek professional help. This highlights the presence of substantial barriers that hinder access to care. Social stigma (28%) emerged as a major deterrent, reflecting the negative societal attitudes often associated with mental illness. Financial difficulties (18%), mistrust in the healthcare system (7%), and concerns about treatment approaches (medication dependence) further compounded the

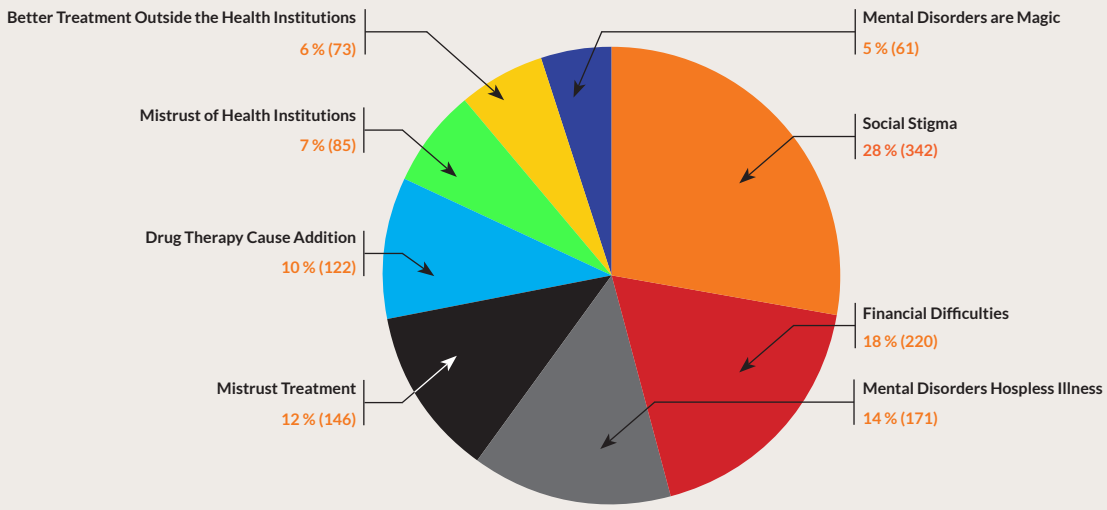

Figure 3 | Main reasons (barriers) for not seeking medical help for mental health.

problem. These findings are consistent with previous studies in Iraq and other regions affected by conflict, highlighting the need for multifaceted interventions.[8,25,26] Public awareness campaigns are crucial to combating stigma, promoting help-seeking behaviour, and educating the population about the available mental health services within the PHC.

The accessibility and existing infrastructure of PHCs make them well-placed to play a central role in addressing the mental health needs of the Iraqi population. The concept of Potential of Primary Mental Health Care (PMHC) offers a promising solution by integrating mental health services into routine PHC practices. Equipping primary healthcare providers with the skills and knowledge necessary to detect common MDs, provide basic interventions, and make appropriate referrals for complex cases is essential. Research has shown the effectiveness of PMHC interventions in various contexts.[27] Training programs for primary care providers can improve the identification and treatment of MDs, leading to better patient health outcomes.[28] Furthermore, PMHC programs are cost-effective and offer a sustainable solution in resource-limited settings.[29]

The successful implementation of PMHC in Iraq requires addressing several challenges. Sustained investment in capacity-building programs is crucial to ensure that primary healthcare providers are adequately trained in mental health screening, intervention, and referral practices. Developing clear referral pathways and establishing strong connections with specialized mental health services are also essential to managing complex cases. Additionally, it is critical to address the stigma associated with mental illness through public awareness campaigns and educational efforts aimed at both healthcare providers and the general population. Collaboration with community leaders and religious figures can be instrumental in promoting positive attitudes toward mental health and encouraging help-seeking behaviour.

CONCLUSION

This study reveals a high prevalence of MDs among primary healthcare patients, alongside a critical lack of public awareness and help-seeking behaviour. Social stigma, financial difficulties, and hopelessness about mental illness were the most common reasons for not seeking help behaviour. To address this, the study proposes a two-pronged approach: public education campaigns to combat stigma and encourage help-seeking, alongside strengthening primary healthcare systems by training staff, building partnerships with mental

health specialists, addressing financial barriers, and fostering community involvement through collaboration with leaders and religious figures. This comprehensive approach, with investment in both public awareness and healthcare infrastructure, aims to improve access to mental health services and ensure the wellbeing of Iraqi citizens.

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Abbreviations list: Mental health disorders (MDs), Ministry of Health (MoH), Noncommunicable Diseases (NCD), Post-traumatic stress disorder (PTSD), Primary health care (PHC), Primary mental health care (PMHC), The Statistical Package for Social Sciences (SPSS), World Health Organization (WHO).

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