RESEARCH ARTICLE

Psychosocial presentation of Iraqi adolescents attending mental health unit

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ABSTRACT

Introduction: The mental health care system in Iraq is not fully developed due to the severe shortage of psychiatrists and well-qualified psychologists. Adolescent depression, suicidal ideation, anxiety, mood disorders, and disruptive behavioural disorders are common issues.

Objective: To record the types of mental health problems in Iraqi adolescents who attended mental health sections at primary healthcare centres in 16 Health Directorates and the treatment used and study thier association with some demographic features.

Methods: A descriptive cross-sectional study was conducted using data records from mental health forums collected from attendees aged 10 to 19 years who visited mental health units in 15 out of 19 Iraqi health directorates, excluding health directorates in Kudistan region and Medical City Directorate. The data collection was carried out during the period extended from January 2022 to January 2024.

Results: Out of 5718 included attendees, 3900 (68.2%) were females, and 3022 (52.9%) were students with an average age of 16.9 ± 2.4 years. The most prevalent disorder was anxiety among 3788 (66.2%), followed by psychosomatic disorder among 734 (12.8%), while depression appeared in 586 (10.2%). The highest number of disorders was reported in Ninawa in 1676 and in Karbala in 931. Psychoeducation, stress relief and cognitive behavioural therapy were the most administered psychosocial services for this sample.

Conclusion: The primary healthcare system could be a powerful tool to assign and start the management of psychological problems among adolescents, and anxiety is the major psychological problem to be addressed among this age group as it exceeds six times the other problems.

Key words: Psychosocial disorders, Mental Health, Adolescents, Students, Iraq.

INTRODUCTION

Adolescence is a transitional stage between childhood and adulthood, marked by a shift from immaturity to maturity, and it is a challenging developmental period with numerous difficulties.[1]

Teenagers' capacities to adjust to the rapid pace of change vary, and changes occur in every aspect of biological, physical, psychological, and cognitive development.[2]

Mental Health is an essential component of general health. The World Health Organisation (WHO) defines it as the state of "well-being where an individual realises his or her abilities, can cope with the normal stresses of life, can work productively, and can make a contribution to his or her community".[3]

Mental health disorders are estimated to affect one in seven (14%) of children aged 10 to 19 worldwide; however, they are frequently ignored and untreated.[4] Mental health issues rank as the fourth most common cause of

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illness among Iraqis aged five years and above. [5]

Some relationship occurs between the demographics of teenagers with psychosocial issues and their parents.[6] Adolescents are more independent and mobile, often out of adult control. Severe misbehaviour should prompt evaluation for psychosocial disorders like depression, anxiety, eating disorders, suicidal ideation, mood disorders, and disruptive behavioural disorders.[7] Parents should not determine the severity on their own. Thought disorders, such as schizophrenia and schizoaffective disorder, often begin during adolescence or early adulthood. These episodes, known as psychotic breaks, can be related to drug use, which can lead to chronic psychotic disorders. Eating disorders, particularly in girls, can be life-threatening. Adolescents may hide symptoms, such as food intake reductions or laxative use. Doctors can identify these issues and offer treatment.[7] Emotional difficulties such as symptoms of depression and anxiety in adolescents could be alleviated by increasing their physical activity levels.[8]

School belongingness-based preventions and interventions are crucial for promoting mental health and well-being in school settings, as loneliness is a significant mechanism that may explain the impact of school belongingness on adolescent well-being and mental health.[9]

The mental health care system in Iraq is underdeveloped. Just a few small, underutilised clinics offering psychiatric consultation services over a few days a week in the tertiary medical centres of the central provinces, despite the fact that Iraq passed a mental health law in 2005.[10] Iraq does not have enough consultant psychiatrists and nurses compared to the high number of people who seek mental health care. [11]

Iraq's growing prevalence of chronic diseases, such as diabetes, hypertension, and cancer, may be impacted by mental stress. Iraq has had numerous wars, invasions, conflicts, and civilian concerns, and its citizens have suffered from problems. It is crucial to identify mental health issues early and to act quickly to treat them. Effective strategies include incorporating mental health into school curricula and establishing postgraduate nursing programs in family medicine and mental health. [10]

Despite the high prevalence of mental, neurological, and substance use disorders (MNS), there is a huge disparity between the need for services and their availability globally. WHO launched the Mental Health Gap Action Programme (mhGAP) in 2008 and the Intervention Guide (mhGAP-IG) in 2010 to close this gap. The mhGAP-IG offers evidence-based guidelines and tools for assessing and integrating the management of priority MNS disorders in low and middle-income countries (LMICs), using clear protocols for clinical decision-making. [12]

In 2006, researchers who evaluated children and adolescents in Baghdad, Mosul, and Dohuk observed that 14% to 36%, depending on location, had symptoms of post-traumatic stress disorder (PTSD). In Mosul, where rates of PSTD were at their highest, less than 10% of the children with the illness had received any care or treatment.[13] These findings continue to demonstrate the high prevalence of mental health issues in the Iraqi population.[13-15]

In Iraq, limited studies have discussed the variety of mental health problems. To the best of our knowledge, there is no previous study that has addressed these health problems in the adolescent age group in Iraq. This gap in research highlights the need for comprehensive studies that can identify the specific mental health challenges faced by adolescents in Iraq, as well as the underlying social, economic, and cultural factors contributing to these issues. Addressing this lack of data is crucial for developing effective interventions and support systems tailored to the needs of young people in the region.

The objectives of this study was to record the types of mental health problems in Iraqi adolescents who attended mental health sections at primary healthcare centres in 16 Health Directorates and the treatment used and study thier association with some

demographic features.

METHODS

Study design and setting: A descriptive cross-sectional study was conducted using data records from the mental health forums collected from 15 out of 19 health directorates in Iraq, excluding health directorates in Kudistan region and Medical City Directorate. The data collection was conducted from January 2022 to January 2024.

Ethical consideration: The relevant research ethics committee at the Ministry of Health approved the research protocol. Agreement to implement the study was obtained from the Technical Deputy Minister of Health. The data was collected anonymously, taking into consideration privacy and confidentiality.

Inclusion and exclusion: All adolescents aged 10-19 years attending mental health units in 16 out of 19 health directorates, regardless of sex, were included in this study. The records from the selected PHCCs in each health directorate were collected and filtered to exclude all records from age groups other than the study subject, as they were deemed irrelevant.

Outcomes and variables: The psychosocial disorders of the attendants were distributed according to their age, gender, whether they were students or not currently attending school, their grade level, and their governorates.

Procedures: Daily, mental health units in the PHCCs receive patients from all age groups of both genders with varieties of presentations. Their data was registered using paper forms. In the context of data digitalisation, an electronic form using the KOBOTOOLBOX questionnaire was designed at the Department of Non-Communicable Diseases and piloted during November and December 2021 at one Primary Health Care Centre (PHCC) in each health directorate. The data collection was then expanded to include six PHCCs in each health directorate, selected based on their score in implementing the mental health program. The data for this study were collected by healthcare workers who had trained on the mhGAP Intervention Guide - Version 2.0 for mental, neurological, and substance use disorders in non-specialised health settings (12). Then, after the end of January 2024, data were retrieved and filtered from the total records, including only attendees aged 10 to 19 years.

Statistical analyses: The data in the current study were collected in a KOBOTOOLBOX form and then imported into the Statistical Package for the Social Sciences (SPSS, ver. 26) program for further analysis. The average and

Table 1 | Sociodemographic features of the included adolescents with mental health problems, according to Health directorates.

Health directorates	Total	Female	Student	Grade for students				Age by years
				Primary	Intermedi-ate	Secondary	College	
	Count	Count (%)	Count (%)	Count (%)	Count (%)	Count (%)	Count (%)	Mean ± SD
Nineveh	1387	770 (55.5)	1160 (83.6)	17 (1.5)	34 (2.9)	71 (6.1)	1038 (89.5)	18.3 ± 1.8
Karbala	783	706 (90.2)	256 (32.7)	74 (28.9)	68 (26.6)	111 (43.4)	3 (1.2)	16.5 ± 2.6
Karkh	753	503 (66.8)	390 (51.8)	32 (8.2)	81 (20.8)	267 (68.5)	10 (2.6)	16.7 ± 2
Rusafa	618	357 (57.8)	481 (77.8)	32 (6.7)	183 (38)	259 (53.8)	7 (1.5)	15.9 ± 2.2
Diwaniya	526	329 (62.5)	251 (47.7)	55 (21.9)	68 (27.1)	126 (50.2)	2 (0.8)	16.3 ± 2.4
Kirkuk	347	332 (95.7)	39 (11.2)	4 (10.3)	13 (33.3)	21 (53.8)	1 (2.6)	17.8 ± 1.4
Wasit	286	196 (68.5)	38 (13.3)	9 (23.7)	14 (36.8)	14 (36.8)	1 (2.6)	16.5 ± 2.4
Najaf	230	142 (61.7)	28 (12.2)	11 (39.3)	11 (39.3)	4 (14.3)	2 (7.1)	16.6 ± 2.6
Saladdin	208	125 (60.1)	166 (79.8)	33 (19.9)	75 (45.2)	53 (31.9)	5 (3.0)	15.7 ± 2.7
Babylon	174	127 (73.0)	100 (57.5)	16 (16.0)	11 (11)	56 (56.0)	17 (17.0)	16.4 ± 2.6
Muthanna	131	107 (81.7)	29 (22.1)	5 (17.2)	8 (27.6)	12 (41.4)	4 (13.8)	17 ± 2.2
ThiQar	111	74 (66.7)	18 (16.2)	0 (0.0)	8 (44.4)	10 (55.6)	0 (0.0)	15.2 ± 2.5
Diyala	82	64 (78.0)	35 (42.7)	7 (20.0)	10 (28.6)	17 (48.6)	1 (2.9)	16.1 ± 2.5
Anbar	47	41 (87.2)	27 (57.4)	4 (14.8)	17 (63.0)	6 (22.2)	0 (0.0)	16.1 ± 2.1
Basrah	35	28 (80)	4 (11.4)	2 (50)	0 (0.0)	2 (50.0)	0 (0.0)	15.3 ± 3
Total	**5718**	**3900 (68.2)**	**3022 (52.9)**	**301 (10.0)**	**601 (19.9)**	**1029 (34.1)**	**1091 (36.1)**	**16.9 ± 2.4**

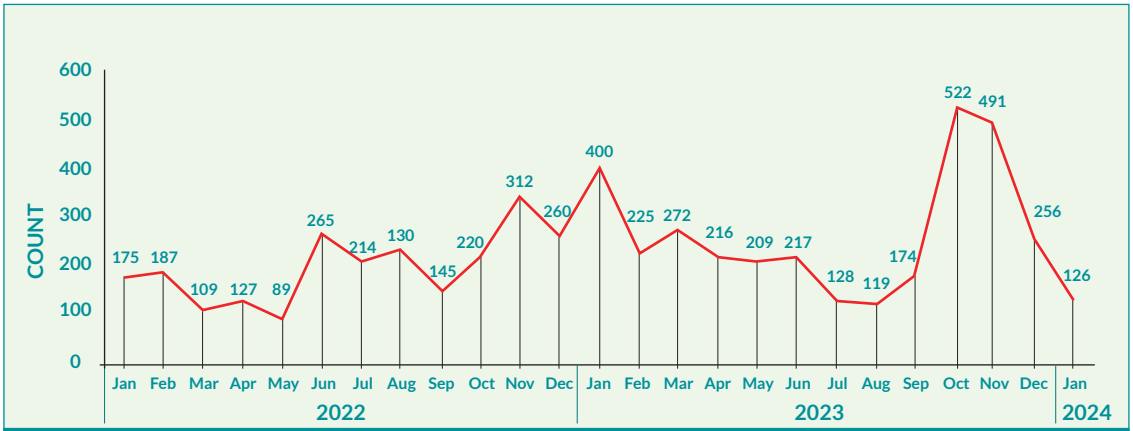

Figure 1 | Monthly number of mental health units' records for the included adolescent sample.

standard deviation of the age were calculated. Frequencies and percentages presented the categorical data, while mean and standard deviations presented the numerical variables. The P-value is considered significant when the alpha level is below 0.05.

RESULTS

The study included 5718 adolescents attending the mental health units at the primary health care centres in the 16 health directorates complaining of mental health problems and recorded in the program. Their mean age was 16.9 ± 2.4 years. Out of them, 3900 (68.2%) were females, and 3022 (52.9%) were students. Table 1 shows some demographic features of the participants distributed according to health directorates. Figure 1 shows the distribution of the cases on months during the studied period.

The most common mental health issue complained about by the attendees was anxiety, reported in 3788 (66.2 %), followed by psychosomatic disorders in 734 (12.8 %) and depression in 586 (10.2%). At the same time, the least was substance abuse, reported only in 13 (0.2%). For details, see table 2. Anxiety prevalence was particularly high among females and students, especially those in college. Psychosomatic disorders were more frequent in males, while depression was slightly more common in females and non-students. In general, gender, students, and grade school were associated significantly with the type of mental health problem with some exceptions, as shown in Table 2.

The distribution of mental health problems varied significantly among Health Directorates, see Table 3. For example, anxiety was highly reported in Nineveh and Karbala, while PTSD

Table 2 | Mental health problems recorded for the included adolescents, according to their sociodemographic features.

Psychological disorders	Sex			Student			Grade at school					Total (%) †
	Female	Male	P value	Yes	No	P value	Primary	Intermediate	Secondary	College	P value	
	Count (%)	Count (%)		Count (%)	Count (%)		Count (%)	Count (%)	Count (%)	Count (%)		
Anxiety	2606 (66.8)	1182 (65.1)	0.179	2253 (74.6)	1535 (56.9)	<0.001*	128 (42.5)	397 (66.1)	791 (76.9)	937 (85.9)	<0.001*	3788 (66.2)
Psychosomatic disorders	486 (12.5)	248 (13.6)	0.214	345 (11.4)	389 (14.4)	0.001*	77 (25.6)	125 (20.8)	136 (13.2)	7 (0.6)	<0.001*	734 (12.8)
Depression	428 (11.0)	158 (8.7)	0.008*	233 (7.7)	353 (13.1)	<0.001*	4 (1.3)	32 (5.3)	70 (6.8)	127 (11.6)	<0.001*	586 (10.2)
Violence	217 (5.6)	146 (8)	<0.001*	229 (7.6)	134 (5.0)	<0.001*	25 (8.3)	26 (4.3)	38 (3.7)	140 (12.8)	<0.001*	363 (6.3)
Behavioural disorder	101 (16.5)	129 (31.1)	<0.001*	102 (19.3)	128 (25.7)	0.008*	74 (25.1)	27 (12.1)	1 (12.5)	0 (0.0)	-	230 (4)
PTSD	130 (3.3)	14 (0.8)	<0.001*	30 (1.0)	114 (4.2)	<0.001*	0 (0.0)	1 (0.2)	12 (1.2)	17 (1.6)	-	144 (2.5)
Epilepsy	55 (1.4)	49 (2.7)	0.001*	35 (1.2)	69 (2.6)	<0.001*	11 (3.7)	13 (2.2)	11 (1.1)	0 (0.0)	-	104 (1.8)
Mania	53 (1.4)	4 (0.2)	<0.001*	6 (0.2)	51 (1.9)	<0.001*	0 (0.0)	3 (0.5)	2 (0.2)	1 (0.1)	-	57 (1)
Substance abuse	2 (0.1)	11 (0.6)	<0.001*	4 (0.1)	9 (0.3)	0.11	0 (0.0)	2 (0.3)	0 (0.0)	2 (0.2)	-	13 (0.2)

*: Significant at 0.05 alpha level by Chi-square test of independence. Some participants may have more than one psychological disorder, with a total number of 6019.
†:The percentages of the total were calculated as the percentage of mental health problems per number of the participants, which is 8718, so the percentages in this column may exceed 100%.

Table 3 | Mental health problems of the included adolescents, according to Health directorates.

Psychological disorders	Nineveh	Karbala	Karkh	Rusafa	Diwaniya	Kirkuk	Wasit	Najaf	Saladin	Babylon	Muthanna	ThiQar	Diyala	Anbar	Basra	Total
Anxiety	1099	659	559	393	202	129	250	51	190	100	10	20	70	45	11	3788
Psychosomatic disorders	3	21	181	128	116	150	8	63	0	1	15	47	0	0	1	734
Depression	196	61	5	36	184	11	18	30	6	21	8	3	1	0	6	586
Violence	152	79	3	17	2	20	4	21	11	26	12	9	5	0	2	363
Behavioural disorder	41	16	7	38	16	2	4	20	3	23	11	29	5	0	15	230
PTSD	19	0	1	2	5	36	4	2	0	0	69	2	2	1	1	144
Epilepsy	8	12	4	9	5	1	2	45	1	0	9	5	2	1	0	104
Mania	3	0	0	3	0	45	0	2	0	1	0	3	0	0	0	57
Substance abuse	1	0	3	1	0	0	0	1	0	2	5	0	0	0	0	13
Total	**1522**	**848**	**763**	**627**	**530**	**394**	**290**	**235**	**211**	**174**	**139**	118	85	47	36	6019

Table 4 | Management of mental health disorders among the included adolescents, according to Health directorates.

Health directorates	Psychoeducation	Stress relief	CBT	PM+	Psychosocial support	Drug	Referral
Nineveh	1380	1214	1127	1049	184	15	12
Rusafa	515	519	418	81	33	1	5
Karbala	780	449	76	31	59	18	22
Karkh	750	564	8	3	6	3	6
Diwaniya	470	109	173	87	22	17	3
Najaf	227	200	126	80	198	1	0
Babylon	169	99	109	141	132	15	1
Wasit	278	89	22	12	206	0	0
Saladin	197	116	85	1	4	0	1
Kirkuk	343	45	0	0	11	1	3
ThiQar	105	93	99	4	89	0	0
Muthanna	111	33	15	7	32	0	0
Diyala	80	6	0	0	13	21	2
Anbar	47	1	0	0	47	0	0
Basra	35	12	3	1	10	0	0

cases were concentrated in Muthanna and Kirkuk.

Psychoeducation and stress relief techniques were the most frequently employed management strategies overall as shown in Table 4. Management approaches differed based on the specific mental health problem; for instance, psychoeducation and stress relief were common for anxiety, while CBT was also used for anxiety, depression, and violence. Drug therapy and referrals were used less frequently, for details see Table 5.

DISCUSSION

In the Arab world, mental health illnesses account for the majority of the disease burden, due to the stigma in the area.[11] Adolescents suffering from mental health disorders are especially susceptible to social distancing, prejudice, stigma (which might influence their willingness to ask for assistance), challenges in the classroom, reckless behaviour, physical illness, and abuses of human rights. The formative years of adolescence are crucial for developing the social and emotional skills essential for maintaining mental health. Developing good sleep habits, exercising regularly, learning how to manage emotions, and enhancing coping and problem-solving skills are a few of them. It's critical to create safe and encouraging conditions in the home, school, and larger community.

The current study revealed that psychosocial problems are more common in females than in males, a finding also reported by Latiffah et al. in their 2017 study in Malaysia.[6] Mojtabai

Table 5 | Management of mental health disorders among the included adolescents, according to its type.

Psychological disorders	Psychoeducation	Stress relief	CBT	PM+	Psychosocial support	Drug	Referral
	Count	Count	Count	Count	Count	Count	Count
Anxiety	3653	2655	1461	1143	542	46	25
Psychosomatic disorders	717	282	186	46	132	6	5
Depression	542	321	358	192	102	10	2
Violence	355	285	225	206	96	5	7
Behavioural	221	131	123	24	118	17	13
PTSD	140	32	24	20	9	1	1
Epilepsy	96	70	29	25	63	11	6
Mania	56	8	5	2	2	0	0
Substance abuse	11	4	4	3	5	0	0

et al. study[16] and Sara Arau´ jo Silva et al. study[17] showed similar findings. Moreover, psychosocial illnesses are significantly more common in students because the majority of adolescents in the selected age group are students, and due to the active mental health services in school health programs in Iraq,

In the present study, psychological problems were found to be more prevalent in secondary school students than in other levels of education, which may be attributed to the critical age range of students in secondary schools. In a study conducted in 2016, Patton et al. showed that most mental illnesses start before the age of 25 years and most frequently between the ages of 11 and 18, in other words, at secondary school age.[18] We also found that the highest prevalence of anxiety problems occurs in this age group; the result is consistent with findings from the Latiffah et al. study 2017.[6,19]

Approximately 4% of teenagers in our sample have behavioural issues; however, a 2021 study by Yonghua Cui et al. stated that 17% of the kids and teenagers had emotional and behavioural issues.[20] Similarly, Gupta et al. 2017 study found that 22.7% of kids had behavioural, cognitive, or emotional issues.[21] This controversy among the studies may be due to differences in the sample size and sampling techniques adopted by various studies.

Moreover, we found that approximately 13% of them experienced somatic problems. Levy S et al. research 2020, found that teenagers with anxiety or mood disorders may also have physical symptoms such as headaches, lightheadedness, tiredness, or pain in the chest or belly.[22]

Approximately 10% of the participants in this study had depression, which is distinct from the majority of studies that reported different findings and demonstrated that eating disorders, anxiety, and sadness are common in adolescence.[6,23]

The most prevalent violence type in the current study was psychological violence, and the least was the sexual type. At the same time, an estimate from school populations revealed significant rates of sexual violence, with 79% of the females reporting any type of sexual assault in a UK research released in 2021.[24] that is clarified by the majority of victims of sexual assault never disclose their cases for a variety of reasons, including shame, fear of being held accountable, a lack of proof, lack of family support, and intimidation by the offenders.[25,26]

PTSD presented in 2.5 % of the Iraqi adolescents in the current study, while a study in Ukraine shows significantly increased risks for PTSD (odds ratio (OR) 4.11, 95% CI 2.37-7.13). The study reveals a significant link between psychological suffering and stress among adolescents in war-torn Ukraine, suggesting that understanding and managing the long-term effects of the ongoing conflict on their mental health and social functioning is crucial.[27]

Among them, substance abuse was the least problematic issue. (0.4%) Of them, opium was the least utilised substance and tranquilisers the most common. According to a comparable study conducted by Joel D. Hudgins et al. in

2019, adolescents most commonly use opioids, alcohol, and tobacco.[28]

The current study revealed that mental health issues were more prevalent in Nineveh based on the Health Directorates' recordings. The observed rise in some mental health issues among young people may be due to a greater awareness of mental health issues rather than a true rise in adolescent mental health issues, especially after governmental and nongovernmental psychological campaigns and psychosocial support to the internally displaced people.

According to this study, the most popular management approach for all mental health issues across all governorates was psychoeducation, which was followed by stress relief management and psychosocial support, which was the least popular.

The limitation of this study is that not all the serious mental health conditions were covered due to the social stigma of these disturbances and lack of knowledge of the availability of mental services in the Primary healthcare centres (PHCCs), resulting in low utilisation of the services.

CONCLUSION

Mental health problems are not uncommon in adolescents attending primary healthcare centres in Iraq. The highest reported cases of mental problems were reported in October and November 2024. Anxiety is the major psychological problem to be addressed among this age group as it exceeds six times the other problems. Gender, being student and the school grade were the variable showed statistically significant association with the types of the mental problems.

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Abbreviations list: Confidence interval (CI), Low and middle-income countries (LMICs), Mental Health Gap Action Programme (mhGAP), Mental Health Gap Action Programme-Intervention Guide (mhGAP-IG), Post-traumatic stress disorder (PTSD), Primary Health Care Centre (PHCC), Statistical Package for Social Sciences (SPSS), substance use disorders (MNS), World Health Organisation (WHO).

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