



Prevalence of mental health problems in medical students at Nineveh College of medicine in Mosul, Iraq

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Introduction

- ▶ According to the World Health Organization definition, “mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community”.
- ▶ WHO estimates that nearly half the world's population is affected by mental illness.

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Aims

- ▶ The present work aims to examine the mental health status in medical students and recognize its affecting factors.

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Materials and methods

- ▶ Study design

A **cross-sectional study** was used in this study.

- ▶ Survey site

The survey took place in **Nineveh College of medicine**, Mosul city, Iraq, in **March** and April 2018.



Study population and sampling

- ▶ A total of **320** questionnaires were distributed to the students and all of them were collected and analysed.
- ▶ Data collection tools consisted of two self-report questionnaires, one of which contains **demographic data** (gender, stage, residence and questions about 2014-2017 period) and the other one was the **General Health Questionnaire** (GHQ-28). This questionnaire was designed by Goldberg and Hillier to explore and identify mental disorders.



GHQ-28

- ▶ The GHQ-28 consists of four subscales: **somatic symptoms, anxiety and insomnia, social dysfunction**, and **severe depression**, each consisting of seven items; it was designed for detection and assessment of people with an increased likelihood of current psychiatric disorders.
- ▶ The questionnaire consisted of 28 multiple choice questions that for each item four answer possibilities are available:
 - 1 – much less than ever; 2 – less than ever; 3 – as always; and 4 – more than ever.



Data processing and analysis

- ▶ The minimum and maximum score that can be obtained for each item is 0 and 21. The total scale score ranges from 0 to 84. The higher the score is, the poorer the psychological well-being is of the student. The analyses were performed by using Microsoft Excel 2013.
- ▶ Testing mean differences of a continuous variable between groups (categorical variable) and identifying relationships between variables were done by Chi-square, one-way ANOVA test and Pearson correlation tests. A 95% confidence level was considered for the results.



Results

Socio-demographic characteristics

- Overall, 315 students filled out completely the questionnaires and 5 forms were left out of the total 320 (a response rate of 98.4%).
- Among the 315 students, 128 (40.6%) were **males** and 187 (59.4%) were **females**.
- 193 (61.2%) were residents in the **left** side of Mosul city; 31 (9.8%) were residents in the **right** side of Mosul city, 14 (4.4%) were residents **outside Mosul city** and within Nineveh provenance; 77 (24.4%) were residents **outside Nineveh provenance**.

Socio-demographic characteristics

- The stages of students in college are shown in the table below.

Stage frequency of students		
Stage	Frequency	Percentage (%)
1	122	38.7
2	23	7.3
3	43	13.7
4	55	17.5
5	50	15.9
6	22	7
Total	315	100

Socio-demographic characteristics

- More than half of the students 171 (54.3%) were **outside Mosul** during 2014-2017 and 144 (54.7%) were **inside**;
- Number of student that during 2014-2017 period had **negative effect** on their families were 266 (**84.4%**) and 49 (15.6%) hadn't;
- Most of the student 260 (**82.5%**) didn't had any family member to be injured during the war, 25 (7.9%) had an injured family member and 30 (9.5%) had a family member to be killed;
- **Homes** of more than half of the students 164 (**52%**) were damaged of which 130 (42.3%) was partial damage and 34 (10.8%) was total destruction while homes of 151 (48%) students weren't damaged;
- Majority of students 266 (**84.4%**) stated that period of 2014-2017 affected the **educational career** and 49 (15.6%) stated that 2014-2017 period had no effect on their educational career;
- 198 (62.9%) were **enthused** to complete their education and 117 (37.1%) were not.



Mental health status

- ▶ Mean GHQ score was 30.2 ± 14.7 and average scores of four subscales: somatic symptoms, anxiety, social dysfunction and depression were 6.9 ± 4.4 , 8.1 ± 4.7 , 9.9 ± 4.2 and 5.2 ± 4.8 , respectively.
- ▶ This study's findings showed that the percent of students suffering from somatic symptoms, social dysfunction, anxiety, and depression were 6.7%, 10.8%, 14%, and 5.4%, respectively.
- ▶ Evaluating general health showed that 127 students (40.3%) were healthy and 188 (59.7%) were at a low-level of mental illness.
- ▶ **Anxiety and social dysfunction** were more common in students than other types of mental health problems.

Mental health status

- Frequency of scores of four subscales in three categories: Healthy, Suspected and Impaired are presented in the table below.

Score frequency of four subscales

Status	Mental health			
	Physical health (somatic symptoms %)	Anxiety (%)	Social health (Social dysfunction %)	Depression (%)
Healthy (subscale = 0-6)	161 (51.1)	128 (40.6)	65 (20.6)	209 (66.3)
Suspected (subscale = 7-13)	133 (42.2)	153 (48.6)	206 (65.4)	89 (28.3)
Impaired (subscale = 14-21)	21 (6.7)	34 (10.8)	44 (14)	17 (5.4)



Mental health status

- ▶ **Stage** ($p = 0.15$), **residence** ($p = 0.18$), **gender** ($p = 0.08$), **being in Mosul city during 2014-2017 or outside** ($p = 0.42$) were not statistically significantly related to the total GHQ-28 scores.
- ▶ But there was a statistically significant relationship between mental health status and **effect of 2014-2017 period on student career** ($p = 0.014$), **family member hurt during the war** ($p = 0.00073$).



Conclusion



- ▶ Studies conducted in other parts of the world provided evidence of **lower** rates on the prevalence of psychological stress among students.
- ▶ Today, the students face different conditions leading to **stress** than that experienced in the last two or three decades.



Conclusion

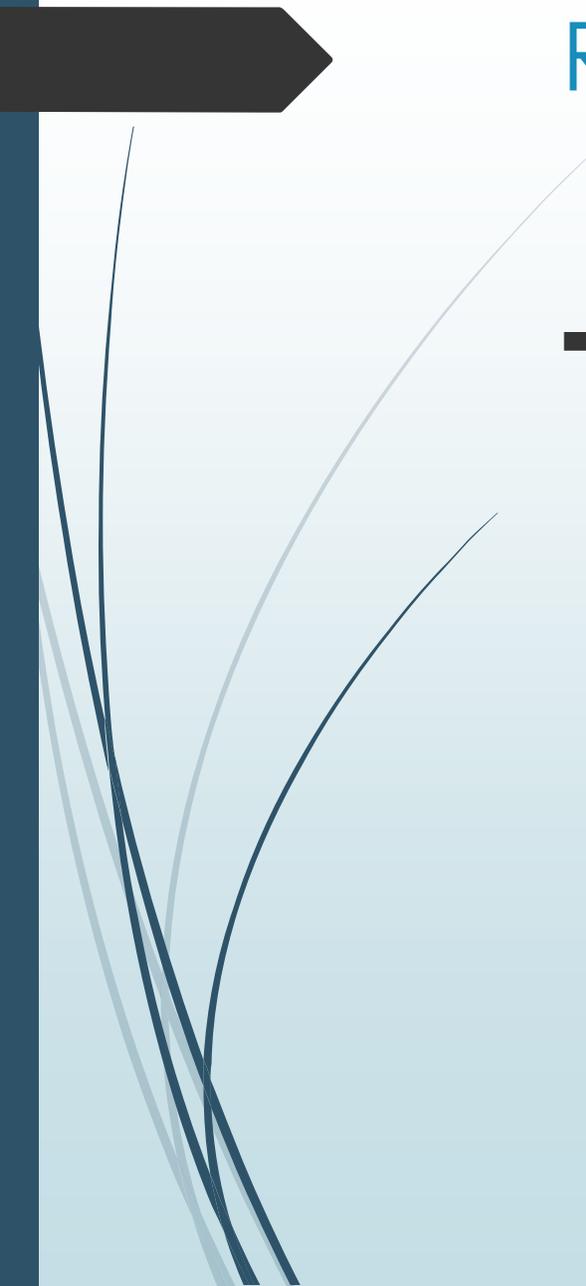
- ▶ The results of the present study indicated that the most common mental disorders among students were **anxiety and social dysfunction**, which differ from other studies among students.
- ▶ Psychiatric morbidity research in the **UK** shows that psychological diseases within student populations are as high as 40%, with most students suffering from **depression or anxiety**, or both.
- ▶ A study on psychological stress among undergraduate medical students in **Malaysia** found a high prevalence 41.9%, and there was also a significant association between **psychological stress and depression** among medical students.



Conclusion

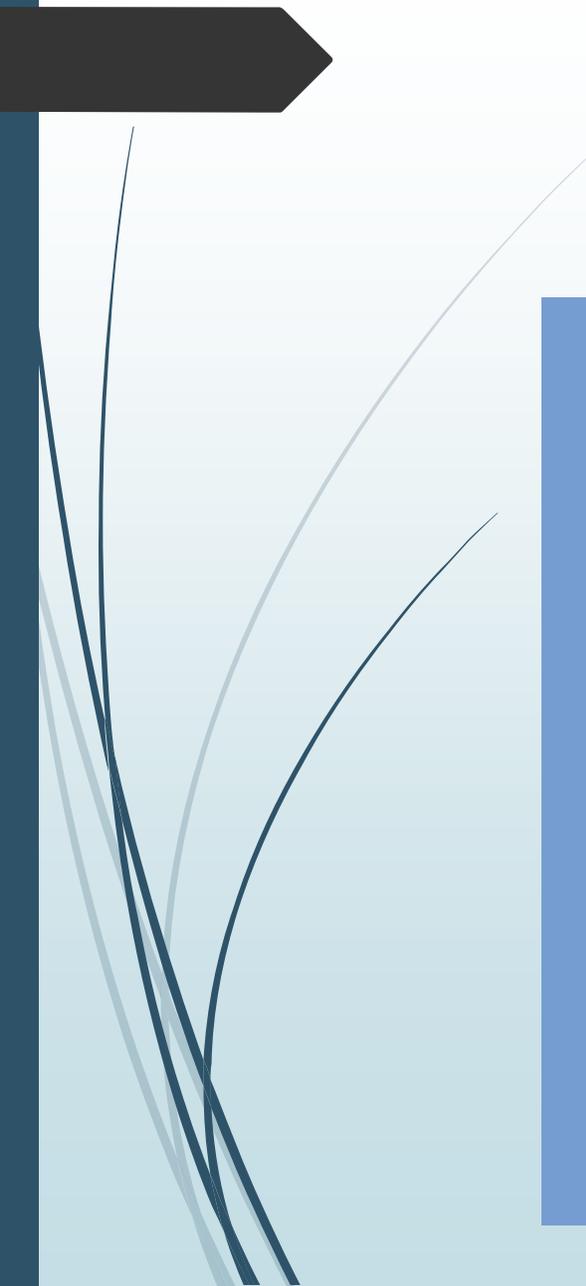


- ▶ The most important risk factor for mental disease among the students was having a family member **injured or killed**.
- ▶ **Economic conditions and war in Iraq** has a big impact on the general health of the population and it's the main cause that the **prevalence** of mental health problems has a **significant increase** from rates in other countries.

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Recommendations

- ▶ Operating the **mental health monitoring programs** at universities can be helpful in identifying its initial symptoms and can decrease the prevalence of mental health problems among students.

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Thank you.

