



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

Mohammed Thanoon, Mohammed Ragheed, Noor Measer, Aziza Younis,  
Dhafar Mumtaz

Supervised by Elham Al-Jammas



# 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.



# Aims



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

A decorative graphic on the left side of the slide. It features a dark grey arrow pointing right at the top, with several thin, curved lines in shades of blue and grey extending downwards and to the right from its base.

# 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
<b>Total</b>	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  $30.2 \pm 14.7$  and average scores of four subscales: somatic symptoms, anxiety, social dysfunction and depression were  $6.9 \pm 4.4$ ,  $8.1 \pm 4.7$ ,  $9.9 \pm 4.2$  and  $5.2 \pm 4.8$ , 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** ( $p = 0.00073$ ).

A dark blue arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.

# 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.



A dark grey arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.

# 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.

A black arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the page.

Thank you.

