

RESEARCH ARTICLE

## Evaluation of High School Females Students' Knowledge about Coronavirus Disease in Al-Diwanyia City

Sarra M. Agmouh <sup>1</sup>, and Aysin K. Noori <sup>2</sup> \*

1. Clinical Nurse Specialist, Ministry of Health and Environment, City of Baghdad, Iraq;
2. Department of Community Nursing, College of Nursing, University of Baghdad, City of Baghdad, Iraq.

Corresponding author: Sarra M. Agmouh

Email:

### ABSTRACT

*Objective(s): A descriptive design, using the evaluation approach, is employed to evaluate high school female students' knowledge about coronavirus disease in Al-Diwanyia City from October 10th 2021 to April 2nd 2022.*

*Methodology: A non-probability, purposive sample of (30) high school female student, is selected for the purpose of the study. All subjects have signed consent form to present their agreement for participation in the study. The confidentiality of the data is also safeguard and they will be securely maintained during and after conducting the study. A self-report questionnaire is constructed for the purpose of the study through review of related literature. The questionnaire is consisted of (2) main parts; the high school female students' demographic characteristics and high school female students' knowledge about coronavirus disease questionnaire. Content validity is determined for the study instrument through panel of experts and test-retest reliability is obtained for the study instrument in a pilot study. Data are gathered through the use of the study instrument as mean of data collection and analyzed through the application of descriptive statistical data analysis and inferential statistical data analysis approaches.*

*Results: The study results depict that all of the high school female students experience deficiencies relative to all aspects of their knowledge about coronavirus disease.*

*Conclusion: The study concludes that all high school female students have experienced lack of understanding and knowledge-oriented limitations about coronavirus disease.*

*Recommendations: The study recommends that an education program can be utilized as an educational mean for enhancing the high school female students' knowledge about coronavirus disease and Further and a nation-wide research can be conducted with large sample size and wide-range scale of variables.*

*Keywords: Evaluation, Knowledge, High school female students, Coronavirus, Disease*



This work is licensed under a Creative Commons Attribution Non-Commercial 4.0 International License.

Received: 30 March 2022, Accepted: 05 May 2022, Available online: 21 July 2022

## INTRODUCTION

Coronavirus disease 2019 (COVID-19) is described as illness caused by a novel coronavirus named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; originally dubbed 2019-nCoV), which was initially found amid an outbreak of respiratory diseases and illnesses in Wuhan City, Hubei Province, China. It is originally reported to the World Health Organization (WHO) on December 31, 2019. On January 30, 2020, the WHO declares the COVID-19 outbreak a worldwide health emergency. The contemporary designation for the coronavirus is acute respiratory syndrome (sars syndrome coronavirus2 (SARS-CoV-2) (World Health Organization[WHO],2022).

Knowledge can attenuate the detrimental impacts of pessimistic disease expectations on preventive activities and promotes protective behaviors by buffering the negative consequences of pessimistic sickness expectations. Knowledge is significant predictor of actions that effect on the transmission of the disease ( Miller et2021). ( Miller et.,2021). Studies in the United States and the United Kingdom have showed strong awareness of COVID-19 in general but some misperceptions about reducing disease transmission. However, the Chinese population has moderate understanding but a favourable attitude toward COVID-19 (Fang et al.,2021,Geldsetzer,2020) (Fang et al.,2021,Geldsetzer,2020). Few research have been done to analyze the knowledge, attitude, and habits of the Saudi people on COVID-19 and have produced diverse results. These research have revealed that the Saudi community has strong understanding and a positive attitude toward COVID-19 during the pandemic, especially women and higher socioeconomic levels

(Alshammary et al.,2021,Al-Hanawi et al2020). (Alshammary et al.,2021,Al-Hanawi et al.,2020).

## METHOD

Between October 10th and April 2nd 2022, a descriptive design with an assessment technique is used to assess high school female students' knowledge of coronavirus disease in Al-Diwanyia City.

The study used a non-probability, purposive sample of thirty (30) female high school students. Each individual has signed a consent form indicating their willingness to participate in the study. The security of the data is likewise protected, and it will be securely stored throughout and after the study is completed.

Through a review of pertinent literature, a self-report questionnaire is developed for the objective of the study. The questionnaire is divided into two sections: the demographic characteristics of high school female students and the knowledge of high school female students on coronavirus disease. The study instrument's content validity is established by a panel of (10) experts, and its test-retest reliability is determined to be  $r = 0.87$  in a pilot study.

The data are acquired using the research instrument and evaluated using descriptive statistical data analysis techniques such as frequency, percent, mean of scores, total scores, and ranges, as well as inferential statistical data analysis techniques.

RESULTS

Table 1: Overall Evaluation of the High School Female Students' Knowledge about Coronavirus Disease

Poor	Fair	Good
(33-43)	(44-54)	(55-66)
30 (100.0%)	0 (0.0%)	0 (0.0%)

Results, out of this table, reveal that the overall evaluation of high school female students' knowledge about coronavirus disease is poor (100.0%).

Table 2: Mean of Scores on Items of High School Female Students' Knowledge about the Coronavirus Disease

List	Items	Correct	Incorrect	Mean	
				of Scores	Evaluation
1	Coronavirus disease has another name:	0	30	1	Low
2	What does the number (19) in COVID-19 mean?	0	30	1	Low
3	The word "Corona" in the corona virus means:	0	30	1	Low
4	Corona is a word which is derived from:	0	30	1	Low
5	Coronavirus disease is:	0	30	1	Low
6	The first case is identified in China in the City of:	0	30	1	Low
7	Where did the name Corona come from?	0	30	1	Low
8	Who are the most population at risk when they are infected with corona virus?	0	30	1	Low
9	Coronavirus disease targets one of the following organs:	0	30	1	Low
10	How long the virus stays in the air?	0	30	1	Low
11	Complications of infection with the Corona virus include:	0	30	1	Low

Low= Mean of Scores < 1.5

Results, out of this table, present that the mean of scores is low on all items of high school female students' knowledge about coronavirus disease.

Table 3: Mean of Scores on Items of School Female Students' Knowledge about the Signs and Symptoms and Diagnosis of Infection with Corona Virus

List	Items	Mean			Evaluation
		Correct	Incorrect	of Scores	
1	Which of these symptoms is not common for corona virus disease?	0	30	1	Low
2	The incubation period for the virus ranges from:	0	30	1	Low
3	Signs and symptoms of corona virus infection are:	0	30	1	Low
4	Which of the following laboratory tests can be performed to detect infection with the corona virus?	0	30	1	Low
5	In the first three days of infection with the corona virus, mild symptoms similar to infection with anyone begin with the following diseases:	0	30	1	Low
6	When being infected with corona virus, the body temperature rises to:	0	30	1	Low

Low= Mean of Scores < 1.5

Results, out of this table, show that the mean of scores is low on all items of high school female students' knowledge about the signs and symptoms and diagnosis of the infection of corona virus.

Table 4: Mean of Scores on Items of High School Female Students' Knowledge about the Treatment of Coronavirus Disease

List	Items	Mean			Evaluation
		Correct	Incorrect	of Scores	
1	Among the treatments used in Coronavirus disease are:	0	30	1	Low
2	Oxygen is given to a person infected with coronavirus when the oxygen level reaches:	0	30	1	Low
3	According to the World Health Organization, people with coronavirus recover without the need for hospital treatment by:	0	30	1	Low
4	Among the antiviral drugs for the treatment of people with coronavirus disease are:	0	30	1	Low
5	One of the anticoagulants is:	0	30	1	Low

Low= Mean of Scores < 1.5

Results, out of this table, present that the mean of scores is low on all items of high school female students' knowledge about the treatment of coronavirus disease.

Table 5: Mean of Scores on Items of High School Female Students' Knowledge about the Prevention of the Infection with Corona Virus

List	Items	Correct	Incorrect	Mean of Scores	Evaluation
1	Social distancing means staying:	0	30	1	Low
2	Washing hands with soap and water for:	0	30	1	Low
3	The percentage of alcohol to kill viruses and other germs is:	0	30	1	Low
4	One of the vaccines for coronavirus disease is:	0	30	1	Low
5	Healthy food and clean drinking water can:	0	30	1	Low
6	The term quarantine is used when:	0	30	1	Low
7	The Pfizer-Biontech vaccine is a vaccine:	0	30	1	Low
8	Primary prevention means:	0	30	1	Low
9	Sinopharma and sinovac vaccine are manufactured in:	0	30	1	Low
10	Home isolation is the stay of a person suspected of having any symptoms of coronavirus disease in an isolated room for a period of:	0	30	1	Low
11	Complications that occur after receiving the Pfizer-Biotech vaccine include:	0	30	1	Low

Low= Mean of Scores < 1.5

Results, out of this table, present that the mean of scores is low on all items of high school female students' knowledge about the prevention of infection with corona virus.

**DISCUSSION**

Throughout the course of data analysis, these female students have experienced poor level of knowledge about coronavirus disease. Such finding provides an indication that these students are not well-oriented and not well-aware of the disease and this level of knowledge is obvious in the low mean of scores on items of the aspects of such knowledge; knowledge about coronavirus disease, knowledge about signs and symptoms and diagnosis of the infection with corona virus, knowledge about the treatment of the disease and knowledge about the prevention of the disease. Such findings reveal that these female students

have experienced lack in their capacity of such knowledge.

From October to December 2020, an institution-based cross-sectional study will be conducted in Gondar City, Northwest Ethiopia. There are a total of (370) secondary school students. According to the report, a sizable proportion of pupils lack adequate knowledge of COVID-19 ( Handebo et al.,2021).

It was found that there is an immediate need to research high school students' awareness about coronavirus sickness in order to avert the disease's catastrophic impact on their life ( Hatami et al.,2021).

A cross-sectional study was undertaken in Italy on high school students aged (14-19). The data

indicate that the student population lacked enough understanding about COVID-19 during the pandemic. As a result, greater attention should be placed on educating student participants about the biological significance of this infection and potential preventive or future measures ( Souli & Dilucca, 2020).

### CONCLUSIONS

According to the findings of the study, all female high school students have experienced a lack of comprehension and knowledge-oriented constraints about coronavirus sickness.

### ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

This study was completed following obtaining consent from the University of Baghdad.

### FUNDING

It should be noted that this research did not receive any support from funding agencies in the public, private, or nonprofit sectors.

### AUTHOR'S CONTRIBUTIONS

Study concept, Writing, Reviewing the final edition by all authors.

### DISCLOSURE STATEMENT:

The authors report no conflict of interest.

### ACKNOWLEDGEMENTS

We thank the anonymous referees for their useful suggestions.

### REFERENCES

World Health Organization (WHO). (2022). Coronavirus Disease (COVID-19) Advice for the Public: Myth Busters. Retrieved from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters?gclid=Cj0KCQiAi9mPBhCJARIsAHchl1z18-gmQYn6fTHx39NcuKNYG3LEU-gPZZg0jzohQQT9-8p0o8WQK-saAq>

Miller, L. M. S., Gee, P. M., & Katz, R. A. (2021). The importance of understanding COVID-19: the role of knowledge in promoting adherence to protective behaviors. *Frontiers in public health*, 9, 303.

Fang, Y., Liu, P., & Gao, Q. (2021). Assessment of knowledge, attitude, and practice toward COVID-19 in China: an online cross-sectional survey. *The American journal of tropical medicine and hygiene*, 104(4), 1461.

Geldsetzer, P. (2020). Use of rapid online surveys to assess people's perceptions during infectious disease outbreaks: a cross-sectional survey on COVID-19. *Journal of medical Internet research*, 22(4), e18790.

Alshammary, F., Siddiqui, A. A., Amin, J., Ilyas, M., Rathore, H. A., Hassan, I., ... & Kamal, M. A. (2021). Prevention knowledge and its practice towards COVID-19 among general population of Saudi Arabia: a gender-based perspective. *Current pharmaceutical design*, 27(13), 1642-1648.

Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A., Helmy, H. Z., Abudawood, Y., ... & Alsharqi, O. (2020). Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: a cross-sectional study. *Frontiers in public health*, 8, 217.

Handebo, S., Adugna, A., Kassie, A. & Shitu, K. (2021). Determinants of COVID-19-related Knowledge and Preventive Behaviors among Students in Reopened Secondary Schools: Cross-sectional Study. *BMJ Open Access*: 1-10. Retrieved from: <https://bmjopen.bmj.com/content/bmjopen/11/4/e050189.full.pdf>

Hatami, H., Abbasi-Kangevari, M., Malekpour, M. R., & Kolahi, A. A. (2021). Knowledge, attitudes, and safety practices about COVID-19 among high school students in Iran during the first wave of the pandemic. *Frontiers in Public Health*, 9.

Souli, D. & Dilucca, M. (2020). Knowledge, Attitude and Practice of Secondary School Students toward COVID-19 Epidemic in Italy: a Cross-sectional Study. *Scientific Communication and Education*. Retrieved from: <https://www.biorxiv.org/content/10.1101/2020.05.08.084236v1>.