

2023

Perceptions of Nursing Students about COVID-19 Transmission: A Multi University Study

Adraa H. Shawq

Assistant prof., college of nursing, university of Baghdad, adraa.hussein@conursing.uobaghdad.edu.iq

Aqdas D Salman

Instructor., college of nursing, university of Baghdad

Sadeq AH Al-fayyadh

Assistant prof., college of nursing, university of Baghdad, s.al-fayyadh@conursing.uobaghdad.edu.iq

Eqbal G. Ali

Professor., college of nursing, university of Baghdad

Follow this and additional works at: <https://ajmrhs.alameed.edu.iq/journal>

Recommended Citation

Shawq, Adraa H.; Salman, Aqdas D; Al-fayyadh, Sadeq AH; and Ali, Eqbal G. (2023) "Perceptions of Nursing Students about COVID-19 Transmission: A Multi University Study," *Al-Ameed Journal for Medical Research and Health Sciences*: Vol. 1 : Iss. 1 , Article 5.

Available at: <https://doi.org/10.61631/3005-3188.1004>

This Original Article is brought to you for free and open access by Al-Ameed Journal for Medical Research and Health Sciences. It has been accepted for inclusion in Al-Ameed Journal for Medical Research and Health Sciences by an authorized editor of Al-Ameed Journal for Medical Research and Health Sciences. For more information, please contact hughanimi@alameed.edu.iq.

Perceptions of Nursing Students about COVID-19 Transmission: A Multi University Study

Adraa H. Shawq ^{a,*}, Aqdas D. Salman ^b, Sadeq AL-Fayyadh ^c, Eqbal G. Ali ^d

^a Pediatric Nursing, University of Baghdad, Iraq

^b Maternal and Newborn Health Nursing, University of Baghdad, Iraq

^c Adult Nursing, University of Baghdad, Iraq

^d Community Health Nursing, University of Baghdad, Iraq

Abstract

Knowledge is the base for adequate practice, especially for students nursing. Preparing qualified nurses required merge theoretical and clinical parts to provide a competent care. Nursing schools and institutes are challenged health care systems, shortage in nursing staff, diverse population, and limited sources. This study aimed to assess nursing students knowledge about preventive measures of COVID 19 transmission in order to evaluate their readiness to work in hospitals. Descriptive cross section study, conducted in Iraq region during the period of COVID 19 epidemic. A purposive sample of (900) nursing student, from different nursing institutes were participated during April 2020. The current result documented, more than of participants were studying at college of nursing, and updating their knowledge about COVID 19 mainly through scientific website, the finding revealed most of nursing student knowledge was good. In addition, a significant association among student level, institute type, and source of updating with students' knowledge about methods of prevention to transmit COVID 19. In the summery of the study, nursing students were qualified with adequate knowledge that required to take care of patients in hospitals.

Keywords: Nursing students, Perception, Measures of prevention, COVID19

Highlighted

This paper answer the question about qualification of nursing students especially whom prepared to work at hospitals in spite of e-learning as new experience in Iraq during epidemic COVID19.

Introduction

Coronavirus disease (COVID-19) outbreak is a major global crisis with highly contagious (Abhinav & Subrahmanyam, 2020; Eynde, 2020). Health care workers including nurses need to be knowledgeable about important practices in preventing infections and protect themselves from infection transmission (Berman et al., 2016).

A plethora of studies have confirmed that, evidence base knowledge is the cornerstone of

adequate nursing care (Connor, 2019; Ortiz, 2018). Nursing is a profession that combines the artistic approach and scientific knowledge to provide care for individuals in health and sickness (Nero, 2017). Preparing qualified nurses with adequate knowledge to provide a competent care is the main goal of nursing schools (Salem et al., 2018). Nursing schools are challenged to achieve this goal through health care systems, shortage of nursing staff, advance nurse educators, diverse population, burden of financial, and epidemic of communicable diseases (Alghamdi et al., 2019; Lai et al., 2020).

Therefore, this research was designed principally to answer the following question. Are currently enrolled nursing students equipped with the basic knowledge, which can enable them to be competent in managing their clients in the future? Particularly those who are actually or potentially affected by the COVID 19 epidemic. Answering such an important question is of a great and direct value for nursing

Received 8 April 2023; revised 17 June 2023; accepted 17 June 2023.
Available online 28 July 2023

* Corresponding author.

E-mail address: adraa.hussein@conursing.uobaghdad.edu.iq (A.H. Shawq).

<https://doi.org/10.61631/3005-3188.1004>

3005-3188/© 2023 University of Al-Ameed. This is an open access article under the CC-BY-NC license (<https://creativecommons.org/licenses/by-nc/4.0/>).

educators and administrators. Whereas, such a research-based answer would reflect the quality of the currently used nursing curricula in the targeted countries.

Iraq is one of the middle-eastern countries, that has been crushed under the enormous pressure of wars, economic sanction, and the recent chapter of terrorism fighting. All these variables have affected all facets of the countries life, including however not limited to health care, industrial, agricultural, social, and financial sectors (Mobarki et al., 2020). Education in general and nursing education was not an exception. However, during the past ten years, nursing education in Iraq has been trying to renovate this sector by employing competency-based curricula (El-Hneiti et al., 2020). Therefore, the following paragraphs are created to discuss the findings of the aforementioned study in light of recently published literature.

Material and methods

A descriptive cross section study, carried out in Iraq region during the period of COVID 19 outbreak at time of outbreak. A purposive sample of (900) nursing students, from different nursing colleges to investigate their acquired knowledge about COVID 19. Their participation were voluntary through a web link that prepared for this purpose. The data were collected during the period April 2020.

The data were collected by direct administrative method from the participants. The questionnaire format that developed by Tork and Mersal (2018) in the Middle East, to evaluate knowledge of student regarding Coronavirus (Tork & Mersal, 2018), the permission was obtain from the researchers before data collection proceed. The guideline of WHO (2020) was adopted to update the data that related to prevention and control measures COVID 19 transmission during provide care at health care setting (World Health Organization WHO, 2020). The validity and reliability were investigated before used ($r = 0.76$). The questionnaire included participants' sociodemographic data, and the preventive measures of COVID 19 transmission scale that include (30) items. Their answers were evaluated through 3 points of Likert scale (1 = agree, 2 = uncertain, 3 = not agree).

The protocol of the research was approved by the

Council of Nursing College \ University of Baghdad. Five nursing colleges and three health institute for nursing, from five different universities in Iraq were invited to participated in the current study. The electronic questionnaire format was prepared and sent to nursing students by their teachers through electronic classes. Their consent of agreement was attached before take part in the study, to evaluate their knowledge about preventing measures of COVID 19 transmission.

The data was analyses by SPSS version 20, to describe data frequency, percentage, and means were used. Also correlation coefficient (r) was used for variables relationships at P value 0.05.

Participants consent form was a part of questionnaire format, their participant was voluntary with no identification (purpose and the aims of the questionnaire was involved). In addition the Ethical Consideration of Nursing College was approved the format.

Result

Characteristics of participants

The result concluded that, more than half of the participants were female (64.1%), the average age them was ($22.03 \pm .480$) years, and majority of them were at age group (18-28) years (96%) of them. Concerning participants' educational stage, one third of them were at second level of nursing stage (33.7%), and most of the participant were from University of Mayssan (30.8%), more than half of them were studying at college of nursing (65.4%). For the depending source for updating participants' knowledge of COVID 19, the result showed most of the participants depend on scientific web (83.4%), as well majority of them have no experience of any infected person with COVID 19 at time of data collection (98.1%).

Preventive measures of COVID 19

The result of the study revealed satisfied result, it was showed that majority of the participants (90%) were scored at good level of knowledge for prevention transmission of COVID 19 (Fig. 1).

As all the participants responses were good regarding preventive measures of COVID 19 transmission, except high percentage of them (Table 2) disagreed about the asymptomatic person with fever was not transmitted the infection, and high percentage of the uncertain about the using of water and soap during hand washing with can prevent infection transmission, and more than one third of them did not certain about components of PPE.

Likert scale	Interval	differences	description
1	1–1.66	.66	Good
2	1.67–2.33	.66	Accepted
3	2.34–3	.66	Poor

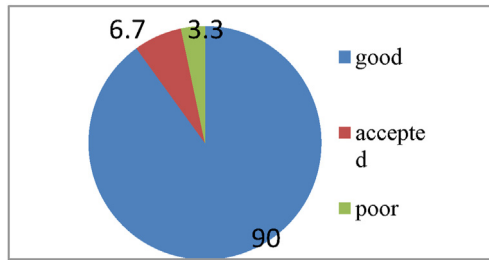


Fig. 1. Nursing students knowledge level. This figure showed, (90%) of nursing students were scored at a good level of knowledge about preventive measures of COVID 19 transmission, while (3.3%) scored at poor level of knowledge.

Correlation between participants' knowledge and their sociodemographic data

The result of the study concluded that, participants' academic level at nursing, college type, and the reliable source for updating their information

Table 1. Participants' sociodemographic data.

Variables	Frequency	%
1. Gender		
Female	577	64.1%
Male	323	35.9%
2. Age Group (mean = 22.03 ± .480)		
18–28 years	864	96%
29–39 years	28	3.1%
40–50 years	8	0.9%
3. Student Educational Level		
First level	219	24.3%
Second level	303	33.7%
Third level	206	22.9%
Fourth level	172	19.1%
4. University		
Baghdad	191	21.2%
Karbala	88	9.8%
Mayssan	277	30.8%
Mosel	81	9%
Thi-qar	216	24%
National college for science and technology	47	5.2%
5. Student Qualification		
BNS Level	589	65.4%
Nursing Institute Level	311	34.6%
6. Source of updating		
Books & magazines	15	1.7%
Internet	751	83.4%
TV\ radio	95	10.6%
Friends and relatives	39	4.3%
7. Any Relative Infected with COVID 19		
Yes	17	1.9%
No	883	98.1%

The statistics revealed (64.1%) of students were female, (96%) of them were at age group (18–28) years, and (22.03 ± 0.480) was the students mean of age. Concerning their educational stage, (33.7%) of them were at second level of nursing stage, (30.8%) were from University of Mayssan, and (65.4%) of students were studying at college of nursing. As well (83.4%) of the students were update their knowledge about COVID 19 upon scientific web as a source of knowledge, and (98.1%) of them not experience any infected relative with COVID 19 at time of data collection.

about COVID 19 was scientific website were correlated positively with their overall knowledge about COVID 19 transmission and prevention measures at p value 0.05.

Discussion

The findings from Table 1 have presented basic information of the study targeted population. Starting with the gender dominance, female recorded the highest percentage. Whereas a significant percentage of nursing school students were female (Al-Musawi et al., 2020; Barrett-Landau & Henle, 2014). This finding might not be surprising in many countries around the world, especially females were usually prone to give care. However, in the middle eastern countries like Iraq, whereas the dominant cultural norms might inhabit women's desire to pursue a degree in nursing is unexpected. Such a cultural shift might be explained by the valuable role that female nurses are playing in enhancing Iraqi population health.

Highlighting the academic qualifications of the study sample is essential to the reader too. Whereas the more than half of the target population were students in the BSN program. Such finding reflects the positive impact of the global trend in nursing education which supports expanding the admitted numbers of students in BSN programs (Graf, 2006; Jeffreys, 2020; Scanlon et al., 2019).

Focusing on the main research question which was: are currently enrolled nursing students are equipped with the basic knowledge, which can enable them to be competent in managing their clients in the future? Particularly those who are actually or potentially affected by the COVID 19 epidemic. Table 2 and Fig. 1 both answered the aforementioned question in the numbers language. Whereas, the vast majority of the targeted nurse-student's population were knowledgeable about the basic aspects of COVID 19 epidemic management. This finding is satisfactory somewhat at time of data collection, especially most healthcare workers were occupied by disease transmission at time of outbreak. Such finding reflects the quality of the currently used nursing curricula in the targeted Iraqi nursing schools (Hassanian et al., 2018). Acquisition of knowledge in nursing education is confirm and essential during academic qualification particularly for students whom prepared for the task of nursing care post graduation. (Kitson & Harvey, 2016). Emphasized that knowledge is backbone for succeeds during academic achievement, especially in nursing profession, the researcher focus on translation of scientific Knowledge that impact

Table 2. Items of preventive measures scale for COVID 19.

No.	Items		Agree	Uncertain	Disagree	Mean	S.D	descrip
1.	COVID 19 infected respiratory tract system	N 872	22	6	1.04	.223	good	
		% 96.9%	2.4%	7%				
2.	COVID 19 is contagious disease	N 862	27	11	1.05	.276	good	
		% 95.8%	3%	1.2%				
3.	clinical signs of COVID 19 are dry cough, fever, malaise	N 817	62	21	1.12	.386	good	
		% 90.8%	6.9%	2.3%				
4.	people with chronic diseases, elderly, and immunity disorders at risk for COVID 19	N 883	9	8	1.02	.156	good	
		% 98.1%	1%	0.9%				
5.	no curative treatment for COVID 19. early diagnosis result early recovery	N 835	56	9	1.08	.309	good	
		% 92.8%	6.2%	1%				
6.	asymptomatic person with fever can not transmitted COVID 19	N 57	275	568	2.57	.610	poor	
		% 6.3%	30.6%	63.1%				
7.	COVID 19 transmitted by respiratory droplets	N 766	97	37	1.19	.486	good	
		% 85.1%	10.8%	4.1%				
8.	contact person with COVID 19 should be isolated	N 896	3	1	1.01	.088	good	
		% 99.6%	0.3%	0.1%				
9.	people should avoid crowded area like malls to prevent COVID 19 transmission	N 896	3	2	1.01	.110	good	
		% 99.4%	0.3%	0.2%				
10.	hand washing with water and soap regularly can prevent infection	N 528	81	291	1.74	.917	accept	
		% 58.7%	9%	32.3%				
11.	hand washing with water and soap for 10 s can prevent infection transmission	N 632	107	161	1.48	.780	good	
		% 70.2%	11.9%	17.9%				
12.	avoiding touch your face, eyes, mouth, and nose can prevent infection transmission	N 881	15	4	1.03	.184	good	
		% 97.9%	1.7%	0.4%				
13.	using tissue for sneezing and coughing or clothes can prevent infection	N 852	41	34	1.12	.427	good	
		% 91.7%	4.6%	3.8%				
14.	avoid eating not cocked meat or drink not boiling milk can prevent infection	N 733	115	52	1.24	.548	good	
		% 81.4%	12.8%	5.8%				
15.	using DETOL (disinfected) to prevent infection transmission is effective	N 800	57	43	1.16	.479	good	
		% 88.9%	6.3%	4.8%				
16.	nurses should use PPE with COVID 19 to prevent transmission	N 870	23	7	1.04	.235	good	
		% 96.7%	2.6%	0.8%				
17.	PPE is wearing mask, gloves, and gown just	N 375	121	404	2.03	.930	accept	
		% 41.7%	13.4%	44.9%				
18.	some medical procedure like (endotracheal intubation, cardiopulmonary resuscitation) increase transmission of COVID 19	N 480	338	82	1.56	.655	good	
		% 53.3%	37.6%	9.1%				
19.	droplet precaution still used with asymptomatic COVID 19 person	N 728	141	31	1.23	.494	good	
		% 80.9%	15.7%	3.4%				
20.	nursing priority is care of symptomatic person with respiratory infection or isolated in special room	N 885	13	2	1.02	.152	good	
		% 98.3%	1.4%	0.2%				
21.	nurses can educated individuals and their families about basic prevention and signs of COVID 19 and appropriate resources to follow up	N 887	7	6	1.02	.184	good	
		% 98.6%	0.8%	0.7%				
22.	keeping distance no less 1 m between patients and air ventilation can prevent infection	N 786	65	49	1.18	.507	good	
		% 87.3%	7.2%	5.4%				
23.	educate HCWs about prevention methods of COVID 19 and monitor their compliance with standard precaution can prevent transmission	N 877	18	5	1.03	.203	good	
		% 97.4%	2%	0.6%				
24.	survey of HCWs for acute respiratory infection and isolate them can prevent infection transmission	N 852	42	6	1.06	.264	good	
		% 94.7%	4.7%	0.7%				
25.	avoid crowed area can prevent infection transmission	N 889	6	5	1.02	.169	good	
		% 98.8%	0.7%	0.6%				
26.	limited contact of HCWs and visitors for infected person with COVID 19 can prevent infection	N 852	28	20	1.08	.338	good	
		% 94.7%	3.1%	2.2%				
27.	during specimen collection from COVID 19 person, HCWs should wear PPE	N 874	24	2	1.03	.186	good	
		% 97.1%	2.7%	0.2%				
28.	wearing mask and gloves outside can prevent COVID 19 transmission	N 831	49	20	1.10	.366	good	
		% 92.3%	5.4%	2.2%				
29.	incubation period of COVID 19 vary, in average 14 days	N 858	38	4	1.05	.240	good	
		% 95.3%	4.2%	0.4%				

(continued on next page)

Table 2. (continued)

No.	Items		Agree	Uncertain	Disagree	Mean	S.D	descrip
30.	cleaning environmental surface with sodium hydrochloride and water to prevent infection transmission	N	805	67	28	1.14	.425	good
	Weighted mean = 1.296 (good) S.D = .1246	%	89.4%	7.4%	3.1%			

This table showed that in general nursing students have good knowledge, unfortunately they have poor knowledge item (6) that asymptomatic person with fever can not transmitted COVID 19.

Table 3. Correlation between student knowledge and their sociodemographic data.

Sociodemographic data	R	significant
Gender	-.037-	.263
Age	-.044-	.184
Student level	.028	.406
College	.021	.536
Information	.043	.196
Know infected person	-.009-	.778

The statistics revealed no significant association among nursing students knowledge about preventive measures of COVID 19 transmission and their sociodemographic data.

positively on nursing practice and outcome of patient care. Therefore, maintaining accepted level of academic achievement in nursing program is very vital in order to guarantee graduate adequate nurses (Lippe & Carter, 2018). The result showed no association between nursing students' sociodemographic data and their knowledge about COVID 19 transmission. This result can be attributed to adequate level of education which related with academic curriculum in their affiliation that focus on communicable diseases. Prevention methods for contagious disease is very important to quipped students nursing before engaging in hospital and provide care for patients. As well, most of the people were looking for scientific data about COVID 19 and its update mostly upon reliable web site at time of data collection (see Table 3).

In spite of, the small percentage (3.3%) of the nursing students in the study that showed poor knowledge about transmission of COVID 19, such finding need to be not ignore. Preventive measures for communicable diseases, especially with highly contiguously is consider as one important key to control and prevention infection transmission in hospitals (Mondal et al., 2020; Tork & Mersal, 2018). For nursing profession, making a critical decision during provide care for many patients, which make them to take a chance of incompetent decisions.

Conclusions

Iraqi undergraduate nursing students knowledge was adequate about preventive measures of COVID19 transmission due to continues updating.

Conflicts of interest

There is no conflict of interest.

Acknowledgements

The study was supported by College of Nursing, University of Baghdad.

References

- Abhinav, G. V., & Subrahmanyam, N. (2020). Brief review on corona virus. *Journal of Medical and Pharmaceutical Sciences*, 1. Available at www.jmps.online.
- Al-Musawi, K. M., Shawq, A. H., Majeed, Z., Zaid, S., & Ibraheem, H. (2020). Risk factors for congenital anomalies in neonatal intensive care unit in Baghdad city. *Medico-legal update* (Vol. 20, p. 1102). <https://www.i-scholar.in/index.php/mlu/article/view/194460>.
- Alghamdi, R., Albloushi, M., Alzahrani, E., Aldawsari, A., & Alyousef, S. (2019). Nursing education challenges from Saudi nurse educators' and leaders' perspectives: A qualitative descriptive study. *International Journal of Nursing Education Scholarship*, 16.
- Barrett-Landau, S., & Henle, S. (2014). Men in nursing: Their influence in a female dominated career. *Journal for Leadership and Instruction*, 13, 10–13.
- Berman, A., Snyder, C. S., & Frandsen, G. (2016). *Kozier & Erb's fundamentals of nursing: Concepts, process, and practice* (10th ed., pp. 1103–1112). USA: Pearson.
- Connor, K. (2019). Student perceptions of knowledge development and consolidation in a clinical community of practice. *Nurse Education in Practice*, 39, 90–95.
- El-Hneiti, M., Shaheen, A., Salameh, A. B., Al-dweeri, R. M., Al-Hussami, M., & Ahmad, M. (2020). *An explorative study of workplace violence against nurses who care for older people* (Vol. 7, p. 286). Nursing Open. Available on.
- Eynde, J. J. (2020). COVID-19: A brief overview of the discovery clinical trial. *Pharmaceutical Journal*, 13, 65. <https://doi.org/10.3390/ph13040065>. available at: <https://www.researchgate.net/publication/340604013>.
- Graf, C. M. (2006). ADN to BSN: Lessons from human capital theory. *Nursing Economics*, 24, 135.
- Hassanian, Z. M., Ahanchian, M. R., & Karimi-Moonaghi, H. (2018). The process of knowledge acquiring in nursing education: Grounded theory. *Research and Development in Medical Education*, 7, 68.
- Jeffreys, M. R. (2020). ADN-to-BSN articulation, academic progression, and transition: A proactive, holistic approach. *Nurse Educator*, 45, 155–159.
- Kitson, A. L., & Harvey, G. (2016). Methods to succeed in effective knowledge translation in clinical practice. *Journal of Nursing Scholarship*, 48, 294–302.
- Lai, C. C., Shih, T. P., Ko, W. C., Tang, H. J., & Hsueh, P. R. (2020). Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and corona virus disease-2019 (COVID-19): The epidemic and the challenges. *International Journal of Antimicrobial Agents*, 105924.

- Lippe, M., & Carter, P. (2018). Using the CIPP model to assess nursing education program quality and merit. *Teaching and Learning in Nursing*, 13, 9–13.
- Mobarki, A., Aladah, R., Rehaf Alahmadi, R., & Sharif, L. (2020). Prevalence of workplace violence against nurses working in hospitals: A literature review. *American Journal of Nursing Science*, 9, 85. <https://doi.org/10.11648/j.ajns.20200902.19>
- Mondal, P., Gonsalves, T. A., & Chakraborty, A. (2020). On the possible methods of controlling corona virus transmission. <https://www.researchgate.net/publication/340250047>.
- Nero, F. D. L. (2017). The concept of nursing in the Philippines from the perspective of nurses in region I. In , Vol. 1. *Proceeding surabaya international health conference*.
- Ortiz, M. R. (2018). Patient-centered care: Nursing knowledge and policy. *Nursing Science Quarterly*, 3, 293. <https://doi: 10.1177/0894318418774906>.
- Salem, O. A., Aboshaiqah, A. E., Mubarak, M. A., & Pandaan, I. N. (2018). Competency based nursing curriculum: Establishing the standards for nursing competencies in higher education. *Open Access Library Journal*, 5, 1–8.
- Scanlon, A., Kelly, S., Reinisch, C., & Smolowitz, J. (2019). RN-to-BSN education. Global and population health project: Think Global, act local. *Teaching and Learning in Nursing*, 14, 54–57.
- Tork, H. M., & Mersal, F. A. (2018). Middle East respiratory syndrome-corona virus: Knowledge and attitude of qassim university students. *KSA Journal of Global, Advanced Medical and Dental Sciences Research*, 7, 90–97. Available online <http://garj.org/garjmms> <https://www.researchgate.net/publication/325049190>.
- World Health Organization WHO. (2021). *Infection prevention and control during health care when COVID-19 is suspected: Interim guidance*. (accessed 19 March 2020) <https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2021.1>.