

Suspected and Confirm Novel Coronavirus Disease: Nursing Staff Knowledge Uses in Iraq

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Abstract:

Background: Nurses must have current and exact knowledge of the new coronavirus illness in order to evaluate, receive, and offer appropriate treatment and education to patients infected or suspected to infect with the a new coronavirus disease. They also should understand how to safeguard their health and safety in order to prevent infection (Saadeh et al., 2020).

Objectives: to investigate nursing skills about suspected and confirm novel Corona-virus disease, also to find out the relationship between nurses knowledge and demographical characteristics.

Material and Methods: A descriptive cross-sectional quantitative design is done in the current work. The study has been carried out between the 1st of November 2022. The current study has been conducted in hospitals in Al Karbala city in Iraq. A non-probability sampling technique is conducted on a (convenience- sample) of (200) nurses. With the Karbala health directorate approval to conducting the research, which depends on the nurses. **Ethical consideration:** The faculty of nursing's / university of AL-Ameed and Karbala Health Director ethical review Committee granted permission for the research to collect data and sample was obtained from the AL-Hussain Teaching Hospital.

Results:

The research sample includes 200 nurses, whose demographical data are shown in table (4.1), demonstrates that the bulk of the sample of study is male (54 percent), with ages between 24 to 28 years (41 percent). Furthermore, the statistics in the preceding table reveal that the almost of nurses reside in urban area (94 percent), and their academic qualification is a bachelor's degree (39.5 percent). The research findings indicated that evaluation of nurse's knowledge regarding the new coronavirus illness is (moderate) with [mean score 1.44], and assessment of nurse's knowledge concerning with coronavirus disease signs and symptoms was (poor) with [mean score 1.33].

Conclusion and Recommendation: this study conclude that, the nurses' understanding of identifying between patients who infected or suspected with a new coronavirus illness is poor. Nurses with advanced degrees are the ones who are best knowledgeable about the new

coronavirus illness. The research proposed that the Ministry of Health, in collaboration with the “Ministry of Higher Education and Scientific Research”, offer training courses and seminars for nurses to familiarize them to the new coronavirus illness. The “Iraqi Ministry of Health's and World Health Organization's” websites should be kept up to date on the new coronavirus illness.

Key word: suspected, confirm, corona virus (COVID 19), Nursing staff knowledge

Introduction:

Coronavirus disease 2019, abbreviated COVID-19, is a quickly expanding pandemic caused by a new human coronavirus; “severe acute respiratory syndrome-corona virus (SARS-COV-2)”, formerly known as nCov-2019, is a fast spreading pandemic caused by a novel human coronavirus (Abdel Wahed et al., 2020).

The new coronavirus illness is conveyed from person to person by infected objects or surfaces contaminated with droplets and nasopharyngeal secretions (Annamma et al., 2020). Nurses caring for patients with novel coronavirus disease should always wear appropriate personal protective equipment and follow infection prevention and control guidelines (Saadeh et al., 2020).

Nurses' knowledge supports all we do; it differentiates us from related professional such as doctors and physiotherapists, as well as lay carers and caregiver support workers. Due to the fact that possessing a "unique body of information" is one of the criteria used to identify a profession in society, knowledge is basically what defines us as a profession (Hall, 2011).

The Nurses must have exact and current knowledge about the new coronavirus illness in order to receiving, evaluating, and providing appropriate treatment and education for patients who infect or suspect to infect with a novel corona-virus disease. Also, they should understand how to safeguard their health and safety in order to prevent infection (Saadeh et al., 2020)

After years of training and practice, nurses have developed certain clinical skills and knowledge of infection prevention. Nurses, on the other hand, have a higher risk of infection while caring for the novel coronavirus disease patients during the epidemic due to inadequate knowledge of the novel coronavirus disease, a completely new virus to humans, as well as limited clinical skills and experience. Nurses caring for patients with infected or suspected novel coronavirus disease can experience anxiety, depression, and fear as a result of their lack of knowledge about infection (Chen, 2020)

A person who is suspected of having the novel coronavirus disease who have clinical and epidemiological criteria, or an asymptomatic person who does not have epidemiologic criteria but has a positive the novel coronavirus disease antigen rapid diagnostic test Antigen-RDT.

An infected person of the novel coronavirus disease is described as a person who has a positive Nucleic Acid Amplification Test (NAAT) or a positive the novel coronavirus disease Antigen-RDT and meets suspect criteria or an asymptomatic person who is a contact of a confirmed case and has a positive the novel coronavirus disease Antigen-RDT (SCDPC, 2020).

Increased awareness and, as a result, proper preparation of nurses working with patients who are suspected or infected with a novel coronavirus will help to avoid disease development and spread to other patients and staff. As a result, hospitals that treat patients with suspected or

confirmed novel coronavirus disease should improve their nurses' expertise and provide them with advanced training (Maleki et al., 2020).

Study Material and Methods:

A descriptive cross-sectional quantitative design is done in the current work. The study has been carried out between the 1st of November 2022. The current study has been conducted in hospitals in Al Karbala city in Iraq. A non-probability sampling technique is conducted on a (convenience sample) of two-hundred nurses. With the Karbala health directorate approval to conducting the research, which depends on the nurses

After reviewing the necessary literature, the researcher developed the study's instrument, which is written in Arabic. The questionnaire is subsequently sent to specialists for review by the researcher. The questionnaires are divided into sections. The first section includes eleven items: gender, age, environment, workplace, education level, experience years, marital status, department, shift of working, and Knowledge source of the new coronavirus illness and the last question, did you get continuing nursing education courses to deal with the novel coronavirus disease, and the second half consists of two domains are used to distinguish between infected and suspected individuals with the new coronavirus illness. the first domain consists of seven questions concerning signs and symptoms of the new coronavirus illness, and the second domain consists of twelve questions about laboratory testing of the novel coronavirus illness. The current questionnaire's reliability is determined through the completion of a pilot study using Cronbach's Alpha coefficient test.

Data analysis: It has already been noted that no data is missing, and the data is then translated into calculated data and organized in the Office 2016 Excel 2016 software before being sent to the statistical analysis programmer "Statistical Package for Social Sciences (SPSS)" version 26.

Results of the study:

Table (one) The nurse's demographic data (Frequency and percentage).

Item	Sub-groups	F/ N=200	Percent %
Gender	Male	105	52.5
	Female	95	47.5
Age / years	19-23	42	21
	24 – 28	80	40
	29 – 33	30	15
	34 – 38	21	10.5
	≥ 39	27	13.5
Residence	Urban	180	90
	Rural	20	10
Level of education	Secondary school of nursing	50	25
	Diploma	70	35
	Bachelor	80	40
	1-4	60	30

Years of experience	5 – 7	66	33
	8 – 10	20	10
	11 – 13	18	9
	≥ 14	36	18
Nursing Education Courses	Yes	60	30
	No	140	70

The research included 200 nurses; their demographical data are shown in table (4.1) demonstrates that the bulk of the sample of study is male (54 percent), with ages between 24 to 28 years (41 percent). Additionally, the statistics in the Table above indicate that the majority of nurses reside in urban areas (94 percent). Their educational attainment is confined to a bachelor's degree (39.5 percent). In terms of years of experience, (32 percent) of nurses have between 5-7 years. Finally, Table (4.1) indicates that 67.5 percent of nurses do not participate in continuing nursing education courses to cope with new coronavirus diseases.

Figure (1) The Overall Assessment of Nurses' Knowledge Regarding covid 19

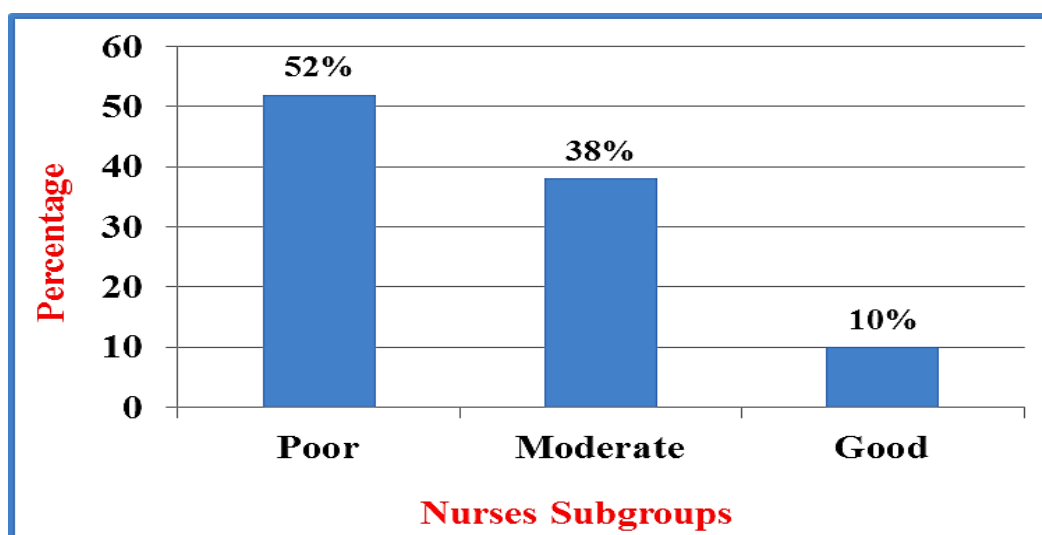


Figure (4.3) display the percentage of nurses' subgroups according to their overall knowledge about coronavirus, the results reveal that around ten percent of nurses have a good knowledge, thirty-eight percent have moderate knowledge, and fifty-two percent have poorly knowledge.

Table (2) Overall Assessment of nursing skills among suspected and confirm Regarding COVID19

Main Studied Domains	Levels	Frequency	Percent	Overall Mean	Overall Assessment
Overall assessment	In adequate Knowledge	102	51.0	1.30	Poor Knowledge
	Moderate Knowledge	98	49.0		

	Adequate Knowledge	0.0	0.0		
	Total	200	100.0		

This table show that the study results to indict the knowledge for study sample are poor Knowledge. (mean 1.30).

Table (3) Overall knowledge of nurses about coronavirus disease and their demographical characteristic

Demographic data	Sub-groups	MS	SD	F	P value
Gender	Male	1.37	0.25	1.13	0.17
	Female	1.34	0.26		
Age / years	19-23	1.36	0.15	0.16	0.86
	24 – 28	1.36	0.28		
	29 – 33	1.37	0.26		
	34 – 38	1.34	0.33		
	≥ 39	1.36	0.22		
Residence	Urban	1.34	0.18	0.36	0.56
	Rural	1.37	0.33		
Level of education	Secondary school of nursing	1.2	0.12	28.21	0.000
	Diploma	1.25	0.23		
	Bachelor	1.63	0.41		
Years of experience	1-4	1.2	0.32	5.23	0.05
	5 – 7	1.35	0.23		
	8 – 10	1.37	0.36		
	11 – 13	1.34	0.26		
	≥ 14	1.38	0.25		
Marital status	Married	1.36	0.35	1.12	0.25
	Single	1.35	0.28		
	Widowed	1.37	0.46		
	Divorced	1.34	0.26		
Nursing Education Courses	Yes	1.43	0.25	13.56	0.02
	No	1.29	0.36		

The correlation between the overall evaluation of nurses' knowledge of the new coronavirus illness and their demographic data is explained in table (4.9). Nurses at Al-Amal Hospital have the greatest level of knowledge (MS = 1.62) according to this table. Nurses with a Bachelor's degree (MS = 1.63) have the greatest knowledge compared to other subgroups; those with more than thirteen years of experience have the highest mean of scores (1.38); and nurses who participate in nursing education courses have the strongest knowledge (MS = 13.56).

Discussion:

According to this research, when it comes to gender, there is a majority of men in the present sample, with males accounting for more than half of the population (54 percent), the number of females has reduced, probably owing to the fear of being infected by the new coronavirus illness themselves or their family.

This result is congruent with the findings of a study conducted in Pakistan by Alwani saqlian et al. (2020) in Pakistan who reveals that, the more than half (51.28 percent) of the participants were males. Furthermore, the findings of this research contradict the results of a research conducted in Greece by Papagiannis et al. (2020), who discovered that the most of nurses who participated in the survey were females (74 percent)

According to the results of our survey, a large proportion (41%) of the sample are within the age groups (25-29) years old. This observation is consistent with that of Marwa et al., (2020). Concerning with residence, most of them (nearly three-quarters) come from urban areas (94 percent). This vision of Iraqi society may be more believable as a consequence of the high population density in urban regions and the movement of people from rural areas to city. The present study's results are supported by Goda Elbqry (2020) assessment of Nurses' Knowledge.

In terms of the present study's participants' education level, the qualification level of respondents' was Bachelor (39.5 percent). The present results are consistent with those of Al-Dossary et al. (2020) cross-sectional .s descriptive research (2020). Furthermore, in terms of years of experience, the bulk of participants (63 percent) had fewer than 6 years. This finding corresponds to a research conducted by Nemati et al. (2020).

The knowledge of the nurses regarding differentiating between infect and suspect patients with the new coronavirus illness regarding signs and symptoms in the table (4.5) revealed the almost of the nurses have poor knowledge to distinguish between patients who infect or suspect to infect with the novel coronavirus disease. Also, the finding of this study is supported by a cross-sectional study carried out by Bhagavathula et al. (2020) in the United Arab Emirates, who found in their study sample that (63.6%) of participants had poor knowledge concerning with signs and symptoms of the novel corona-virus illness.

In other descriptive research conducted by Nemati et al. (2020) in Iran who mention that less than half(47%) of the study sample had moderate knowledge about signs and symptoms of the novel coronavirus disease this result, not in line with the finding of the present study.

The correlation between nurses' knowledge and (level of education and years of experience) is highly significant, and it agrees with research conducted by AbdHasan (2021) in Saudi Arabia. "In a study conducted by Alwani et al. (2020), they discovered that there was no statistically

significant relationship between nurses' knowledge of the new coronavirus illness and years of experience.

The present research's findings are consistent with a descriptive study approach used by Semerci et al. (2020) to assess Turkish oncology nurses' knowledge of the new coronavirus (COVID-19) during Turkey's most recent pandemic. They discovered a very statistically significant (p-value 0.001) relationship between nurses' awareness of the new coronavirus illness and receiving nursing education courses.

Our findings are consistent with those of Sahar et al. (2020) who conducted a study of (cross-sectional) to investigate the relationship between socio-demographic characteristics and knowledge, attitude, and practices about COVID-19 amongst public health Indonesian nurses, and to clarify barriers to infection control as perceived by nurses of public health. (2020), they discovered no statistically significant relationship between nurses' awareness of the new coronavirus illness and the source of information.

Conclusion and Recommendation:

1. The nurses' knowledge about suspected and infected patients with a new coronavirus disease was poor
2. Nurses with advanced degrees are the ones who are best knowledgeable about the new Covid-19 disease.
3. The nurses with the longest years of experience had the most understanding of the new coronavirus condition.
4. Nurses in isolation hospitals are the best knowledgeable about the new coronavirus disease.

Recommendation:

1. Nursing training courses and seminars should be held by the Ministry of Health to familiarize nurses with the new coronavirus illness, in collaboration with the ministry of higher education and scientific research,
2. The ministry of health in Iraq and the WHO websites should be kept up to date on the new coronavirus illness.
3. The continuing nursing education unit of hospital's management shall put in place an educational programmed for nurses to increase their understanding of the unique coronavirus illness.

References:

- Abdel Wahed, W. Y. et al. (2020) 'Assessment of Knowledge, Attitudes, and Perception of Health Care Workers Regarding COVID-19, A Cross-Sectional Study from Egypt', *Journal of Community Health*. Springer US.
- Wen, X. et al. (2021) 'Study on the Knowledge, Attitude, and Practice (KAP) of Nursing Staff and Influencing Factors on COVID-19', *Frontiers in Public Health*, 8(January), pp.

- 1–6. doi: 10.3389/fpubh.2020.560606.
- SCDPC (2020) ‘Coronavirus-Disease-2019-Guidelines-v1.2’, 19(March), pp. 1–47.
 - Saqlain, Muhammad et al. (2020) ‘Is Pakistan prepared to tackle the coronavirus epidemic?’, *Drugs and Therapy Perspectives*. Springer International Publishing, 36(5), pp. 213–214. doi: 10.1007/s40267-020-00721-1.
 - Sahar, J. et al. (2020) ‘Coronavirus disease-19: Public health nurses’ knowledge, attitude, practices, and perceived barriers in Indonesia’, *Open Access Macedonian Journal of Medical Sciences*, 8(T1), pp. 422–428. doi: 10.3889/oamjms.2020.5446.
 - Saadeh, D. et al. (2020) ‘Knowledge, attitudes, and practices toward the coronavirus disease 2019 (COVID-19) among nurses in Lebanon’, *Perspectives in Psychiatric Care*, (September). doi: 10.1111/ppc.12676.
 - Saadeh, D. et al. (2020) ‘Knowledge, attitudes, and practices toward the coronavirus disease 2019 (COVID-19) among nurses in Lebanon’, *Perspectives in Psychiatric Care*, (September). doi: 10.1111/ppc.12676.
 - Papagiannis, D. et al. (2020) ‘Assessment of knowledge, attitudes, and practices towards new coronavirus (SARS-CoV-2) of health care professionals in greece before the outbreak period’, *International Journal of Environmental Research and Public Health*, 17(14), pp. 1–14. doi: 10.3390/ijerph17144925.
 - Sahar, J. et al. (2020) ‘Coronavirus disease-19: Public health nurses’ knowledge, attitude, practices, and perceived barriers in Indonesia’, *Open Access Macedonian Journal of Medical Sciences*, 8(T1), pp. 422–428. doi: 10.3889/oamjms.2020.5446.
 - Nemati, M., Ebrahimi, B. and Nemati, F. (2020) ‘Assessment of iranian nurses’ knowledge and anxiety toward covid-19 during the current outbreak in iran’, *Archives of Clinical Infectious Diseases*, 15(COVID-19). doi: 10.5812/archcid.102848.
 - Marwa, M., Ali, A. and Fadl, E. (2020) ‘Nurses’ knowledge and Attitude about Covid-19 among elderly patients at Intensive Care Units: suggested education’, *International Journal of Advance Research in Nursing*, 3(2), pp. 14–21.
 - Maleki, S. et al. (2020) ‘Knowledge, Attitude and Behavior of Health Care Workers in the Prevention of COVID-19’, pp. 1–17. doi: 10.21203/rs.3.rs-23113/v1.
 - Hall, A. (2011) Defining nursing knowledge., *Nursing times*. Available at: <https://www.nursingtimes.net/roles/nurse-educators/defining-nursing-knowledge/>.
 - Goda Elbqry, M. (2020) ‘Nurses’ Knowledge, Practice, Attitude and Psychological Stressors Regarding COVID-19 at Quarantine Hospital’, *Port Said Scientific Journal of Nursing*, 7(3), pp. 66–80.
 - Chen, S.-C., LAI, Y.-H. and TSAY, S.-L. (2020) ‘Nursing Perspectives on the Impacts of COVID-19’, *The Journal of Nursing Research*, 28(3), pp. 1–5.
 - Bhagavathula, A. et al. (2020) ‘Novel Coronavirus (COVID-19) Knowledge and Perceptions: A Survey of Healthcare Workers.’, *JMIR public health and surveillance*. doi: 10.2196/19160.
 - Alwani, S. et al. (2020) ‘Evaluation of Knowledge, Practices, Attitude and Anxiety of Pakistan’s Nurses towards COVID-19 during the Current Outbreak in Pakistan.’, 9(3), pp. 27–34.
 - Al-Dossary, R. et al. (2020) ‘Awareness, attitudes, prevention, and perceptions of covid-

19 outbreak among nurses in saudi arabia’, *International Journal of Environmental Research and Public Health*, 17(21), pp. 1–17. doi: 10.3390/ijerph17218269.

- AbdHasan (2021) ‘Knowledge, Attitudes and Practices of AbdHasan * towards Novel Corona Virus (COVID 19) Abstract Design and setting’, *iMedPub Journals*, pp. 1–5.
- Semerci, R., Kudubes, A. A. and Eşref, F. Ç. (2020) ‘Assessment of Turkish oncology nurses’ knowledge regarding COVID-19 during the current outbreak in Turkey’, *Supportive Care in Cancer*, pp. 76–82. doi: 10.1007/s00520-020-05700-w.