

# Assessment of the Nursing Educator's Role during (Covid-19) Outbreak in Sudan

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**Abstract:- Background:** The novel coronavirus disease 2019 (COVID-19) was first identified in Wuhan, China on December 2019 in patients brought as atypical pneumonia. The World Health Organization (WHO) consider the coronavirus epidemic a pandemic. Nurses teachers have a vital role in guarantee that the next generation of nurses is processed to catered the growing demand for healthcare services. **Aim:** study objective to assess the nursing educator's role during Coronavirus (Covid-19) pandemic in Sudan 2020.

**Methods:** cross-sectional descriptive community based study conducted among nursing educators at Sudan from April to July 2020. The researchers used an electronic questionnaire created by Google Forms was used of total of 67 participants from various nursing colleges in Sudan there was 33 governmental university distribution at the country . SPSS version 25 was used to analyze the data, and the results were presented as frequency and percentages as well as chi square tests. The level of statistical significance was set at  $p = 0.001$ .

**Results:** regarding the types of communication of the participants with their students the majority of the participants (87.2%) were communicated indirect (online), while (35.8%) stated that the lack of resources is limited their role .Also the study showed that the majority of the participants (67.2%) their university located in state of Khartoum. Some of the participants (36.3%) reported fairly satisfied regarding their role were played.

**Conclusions:** The study conclude that the role of Sudanese educators is inadequate and severely poor in all areas .**Recommendations:** The nursing curriculum need to include more regarding who to compact with the crises situations. Educators and students have important role regarding the community.

**Keyword:-** COVID-19, Corona Viruses, Educators, Pandemic.

## I. INTRODUCTION

The novel coronavirus disease 2019 (COVID-19), originated in Wuhan city of China, has spread rapidly around the world, sending billions of people into lockdown. The World Health Organization (WHO) consider the coronavirus epidemic a pandemic (1). (COVID-19) was first identified in Wuhan, China on December 2019 in patients brought as atypical pneumonia. Although 'city-lockdown' policy reduced the spatial spreading of the COVID-19, the city-level outbreaks within each city remain a major concern to be addressed. The local or regional level disease control mainly depends on individuals self-administered infection prevention actions (2).The world is coping big challenges in the face of a global pandemic. Coronavirus disease 2019 (COVID-19) has, to date (3).Worldwide 15,519,095 Deaths: 632,928 Recovered: 9,441,940(worldometers.info 2020). The 1st case was reported in Sudan on the 13<sup>th</sup> of March 2020 and a partial curfew was announced on March 31st. and 11,302 cases, Deaths: 715 Recovered: 5,855 (4).

E-learning has consider as solution to complete the curriculum; however, it does not address the clinical practicum component. Virtual simulations and high-fidelity simulation equipment are not ubiquitous in developing countries as there are challenges related to access and cost (5.) Nurse Educators play an important role in ensuring that the next generation of nurses is ready to meet the growing demand for healthcare services. Nurse teachers are also have a role in shaping the future of the nursing profession, wooing a focus on holistic patient care and disease prevention, as well as promoting community health. Right now there is a strong need for

educators (6). According to one of the nation's foremost nurse educators, are leaders, educators, change agents, and visionaries. They research, publish, advocate, mentor, and govern. As you beginning your career as a nurse teachers, you'll most likely begin start by teaching in an academic situations setting. There are 68,060\_nurse teachers do in the U.S. and 44,340 of them do at four-year colleges, universities and professional schools (7). COVID-19 is a public health pandemic and a global conjunctures that impact all aspect of life, with current devastating social, economic and political implications. The pandemic has affected all sectors, including nursing education. As the crises escalated, many governments switched schools, colleges and universities to ensure the safety of students, teachers and nations. With the start of the pandemic, globally, face-to-face classes, clinical skills laboratories and the clinical placement of students were either restricted or more particular in countries that were critically done by the pandemic in aimed to conserve and safeguard the health of students and university as a whole. The irresolute time deploys of the COVID-19 pandemic and delay of clinical teaching and experiences in the healthcare facilities have affected students' readiness for the licensure examination. Final-year students face uncertainties regarding completion of the programmer and timelines for sitting their licensure examinations (8). Online learning is currently adopted by educational institutions worldwide to provide students with ongoing education during the COVID-19 pandemic. Even though E-learning research has been a deep in uncovering student experiences in many settings. Students from lack of digital-readiness countries could experience extra technology-related problems. Supporting evidence is emerging in current studies conducted the COVID-19 pandemic (9).Distance learning has been available for grater than a century through printed manuals, and subsequently, at the beginning of the 20<sup>th</sup> century, thru radio, audio, and video tapes. However, just at the finish of the 20<sup>th</sup> century did the teaching modality pervasion with the advent of the World Wide Web. Most models of E-Learning educational vims are on hand, with varied objectives: massive open online courses (MOOCs) filing classes, online live interact tutorials, short communications, and conferences. However, a few students and educators still withstood adopting online learning modalities as a daily activity. The COVID-19 pandemic has had a catalytic effect on the changes in educational processes worldwide, it caused an abrupt shift from face-to-face to online classes without enough time to plan and prepare virtual educational programs, and Teachers restructured their educational plans and developed skills for teaching in a virtual environment while providing emotional support for their students (10) .the number of children, youth and adults not attending schools or universities because of COVID-19 is soaring. Governments all around the world have closed educational institutions in an attempt to contain the global pandemic (11). In Sudan, due to lack of preparedness and weak infrastructure, online learning during COVID-19 has become a stumbling block for both students and educators. It is anticipated that the continued spread of the pandemic, strict isolation measures and delays in starting schools, colleges and

universities across the nation would affect the psychological and social status of university students. Students studying in health professions education, which is composed of different specialties, may be more affected by university closures because their specialties rely mainly on clinical training in health facilities and in labs, which is difficult to conduct during this pandemic. However, no detailed study on the impact of the university closure on the academic, psychological and social status of university students facing the pandemic, to the best of our knowledge, has been conducted in Sudan (12).).The clinical learning is the core component of the nursing curriculum, the appalling pandemic brought unexpected to clinical teaching, weighing the soundness of patients, students, and faculty, which needed necessary modification in clinical teaching and resulted in challenges in relation to effective response to clinical teaching requisites (13)). Clinical education is the heart of professional education in nursing. The perspective of nursing students and clinical nursing teaching as the main owners of learning process are of determinants affecting clinical education process (14).Globally, the majority of health care is provided by nurses. Qualified nurses and professionals are required in the nursing field. Clinical nursing education (CNE) is a professional expert whose primary duty is to afford education to undergraduate, graduate, and postgraduate nursing student's .Basis on hospitals' situation of different working environments that caused the nurse educator's roles and authority remain inexplicit. They might have dual-task in the academic and clinical settings. This condition happened in the United Kingdom (UK) and the USA, whereas nurse educators initially work in Australia's hospital setting. In Indonesia, this role was minimally organized (15).

## II. METHODS

### ➤ *Study Design:*

A descriptive cross-sectional study. *Setting:* was conducted at Sudan, all Sudanese university at nursing college .*Population:* nursing educators from all university total were 67participants from 33 university distribution at all of Sudan City. *Duration:* The current study was carried out from April to July of the 2020 academic year. *Sampling:* The inclusion criteria for people who will participate in the study include all nursing educators from all Governmental university in Sudan, and agreed to participate in this study. While the exclusion criteria included all nursing educators not willing to take part and whom didn't had internet access. *Sample size* was 67.

### ➤ *Data Collection Tool:*

The sample size was determined using software by taking into account the total population of educators during the study period. The confidence interval was set at 95%, and the margin of error was set at 5%. The study sample was chosen by convenience sampling among Sudanese educators in nursing colleges who agreed to participate in the study and had internet access. The calculations produced a total of 67 educators from various universities around Sudan. All subjects gave their informed consent after the Faculty Research and Ethics

Committee approved the study. The information was gathered using a Google Forms document created by the researchers that included demographic information about the participants age, experience and specialty as well as closed-ended questions about their role in the pandemic during the university's closure due to the COVID 19 crisis in terms of their role, types of communication with their students, purpose of their communication and causes which limited their role. A statistical test was employed for closed questions after the data were processed using SPSS, and the results were presented in frequency and percentage for demographic factors. Chi-square

and a P-value of 0.05 were used to determine the level of statistical significance.

➤ *Data Collection Technique:*

Data collected electronically by online distribution of the questionnaire. Individuals of the research sample were invited to participate using social media like WhatsApp, where a message for acceptance or rejection will be send to participants to answer the questionnaire, all respondents were providing Informed consent. Collected questionnaires are then available in the computer memory for its statistical analysis.

**III. RESULTS**

**Table1:** Distribution of the participants according to their demographic characteristics (n= 67)

Personal data		Frequency	Percentage
Age	25-35 years	25	37.3
	36 - 45years	23	34.3
	46 - 55 years	17	25.4
	56 and above	2	3.0
experience	1-5	25	37.3
	6-10	22	32.8
	11-15	10	14.9
	16 & above	10	14.9
university located	Within the state of Khartoum	45	67.2
	Outside the state of Khartoum	22	32.8

Table (1) A total of 67 responses were received were meet our eligibility criteria that were containing in the study. it is reflected that near half of the participants aged in years is between (25-35 years) (37.3), while near half have 1-5 years of experience in teaching in nursing, this finding is corresponding with the normal distribution of study because the teaching by the nurses take place recently and the most of the nurses get high certificates at last years. On other hand the majority of participant's teaching at university's which were located at state of Khartoum (67.2), this finding is corresponding with the normal distribution of study because most of university in Sudan located in state of Khartoum.

**Table-2:** Distribution of the participants according to their specialty and their communication with their students (n= 67)

Items	Frequency	Percent	
specialty	Medical and surgical nursing	30	44.8
	Community health Nursing	16	23.9
	Obstetrics and gynecology nursing	7	10.4
	Pediatric nursing	4	6.0
	Mental health nursing	1	1.5
	General nursing	6	9.0
	Last select	3	4.5
Types of communication	Direct	5	7.5
	Indirect (online)	34	50.7
	Not communicated	28	41.8
purpose of communication	Share the latest information about the pandemic	12	30.8
	Helping students to prepare reliable scientific material that contributes to community health education	14	35.9
	Supporting graduate students to volunteer to work in health facilities in agreement with the nursing departments	13	33.3

Table (2) showed that less than one half of educators (44.8) had specialty in medical and surgical department ,while (23.9%) of them of Community health Nursing ,on other hand

few of them (10.4%) in Obstetrics and gynecology nursing, also few of them (6.0%) in Pediatric nursing and one of them in Mental health nursing because this specialty it is very rare in

Sudan among the nursing educators (1.5%).Also the table showed that the majority of participants had communicated with their students through indirect (online)(50.7%) only (7.5%) of them communicated direct with their students but near to one half of them had no communication because the network in Sudan it is very weak and fear of disease regarding lack of safety. Also the table showed the (30.8%) of educators

who communicated of their students said the purpose of the their communication is to share the latest information about the pandemic, while the (35.9) supporting graduate students to volunteer to work in health facilities in agreement with the nursing departments and (33.3) were helping students to prepare reliable scientific material which helping in providing safety of community.

**Table (3)** distribution of the contribution of participants during the emerging corona virus (Covid-19) pandemi

<b>Educators role during pandemic (more than one answer can be chosen)</b>	<b>Frequency</b>	<b>Percent</b>
Continuing health education for the community and spreading awareness,	29	43.3
publishing pandemic research,	3	4.5
Contribute to the manufacture and distribution of sterilizers and disinfectants,	2	3.0
providing care to patients in treatment facilities,	2	3.0
Others specify.	5	7.5
Continuing health education for the community and spreading awareness, and publishing pandemic research,	6	9.0
Continuing health education for the community and spreading awareness, and Contribute to the manufacture and distribution of sterilizers and disinfectants,	6	9.0
Continuing health education for the community, spreading awareness, and others specify.	2	3.0
Contribute to the training of nursing staff in various treatment facilities, Continuing health education for the community, spreading awareness, and others specify.	1	1.5
Develop plans and policies for nursing work in cooperation with the nursing departments, Continuing health education for the community and spreading awareness, and Participate in providing care to patients in treatment facilities,	1	1.5
Develop plans and policies for nursing work in cooperation with the nursing departments, publishing pandemic research, and others specify.	1	1.5
Continuing health education for the community, spreading awareness, publishing pandemic research, Contribute to the manufacture and distribution of sterilizers and disinfectants,	3	4.5
Contribute to the training of nursing staff in various treatment facilities, Develop plans and policies for nursing work in cooperation with the nursing departments, Continuing health education for the community, spreading awareness, and others specify.	1	1.5
Contribute to the training of nursing staff in various treatment facilities, Continuing health education for the community and spreading awareness, Contribute to the manufacture distribution of sterilizers , disinfectants, Participate in providing care to patients in treatment facilities,	1	1.5
Continuing health education for the community and spreading awareness, publishing pandemic research, Contribute to the manufacture and distribution of sterilizers and disinfectants, and others specify.	1	1.5
Contribute to the training of nursing staff in various treatment facilities, Develop plans and policies for nursing work in cooperation with the nursing departments, Continuing health education for the community and spreading awareness, publishing pandemic research, Contribute to the manufacture and distribution of sterilizers and disinfectants,	1	1.5
Contribute to the training of nursing staff in various treatment facilities, Develop plans and policies for nursing work in cooperation with the nursing departments, Continuing health education for the community and spreading awareness, Contribute to the manufacture and distribution of sterilizers and disinfectants, and Participate in providing care to patients in treatment facilities,	2	3.0
<b>Total</b>	<b>67</b>	<b>100</b>

Table (3) showed the contribution of educators during the emerging corona virus (Covid-19) pandemic concentrated on continuing health education for the community and spreading awareness (43.3) , others educators have a role beside the above like some of them published papers regarding this issues

(9.0%) ,little numbers of educators played others roles but the majority focused on educated the community and spreading awareness .this normal distributions in this study because no facility's to do more and best due to closure of university's and all are worried regarding this crises worldwide.

Items		Frequency	Percent
the reason witch is leading to lack of contribution	There is no funding from the Ministry of Higher Education for universities	13	19.4
	Ignore the university’s role towards society	8	11.9
	Lack of resources	24	35.8
	Others specify	22	32.8
Educators satisfaction regarding their role	Very satisfied	15	22.4
	Fairly satisfied	31	46.3
	Not satisfied	18	26.9
	Not completely satisfied	3	4.5

**Table (4):** Distribution of the participants according to their information’s characteristics (n= 67)

Table (4) showed the reason which let to lack of the educators contribution to the their students and community in light of this pandemic, some of participant said the Lack of resources (35.8), while the few of educators said ignore the university’s role towards the society (11.9) ,on other hand some of them said There is no funding from the Ministry of Higher Education for universities to fight the pandemic (19.4) Others specify(32.8).but this table showed that some of participant were very satisfied (22.4) regarding their role which played in confronting the Pandemic ,while the(46.3)were fairly satisfied , (26.9) of them not satisfied and (4.5) of them are completely not satisfied.

**Table (5)** relationship between experience and had training on how to combat the emerging corona virus (Covid-19), and experience and communication with the students.

Parameters	Training on How to Combat the Emerging Corona Virus (Covid-19)		P value	Communication		P value
	Yes	No		Yes	No	
1 – 5	12 (48.0%)	13 (52.0%)	0.551	12(48.0%)	13(52.0%)	0.385
6 – 10	14 (63.6%)	8 (36.4%)		13(59.0%)	9(40.9%)	
15 – 11	7 (70.0%)	3 (30.0%)		6(60.0%)	4(40.0%)	
16 and above	5 (50.0%)	5 (50.0%)		8(80.0%)	2(20.0%)	
Total	38 (56.7%)	29 (43.3%)		39(	27(	

Table (5) shows there is no relationship between educators experience and the training regarding how to combat the emergency corona virus Covid-19 p value 0,551 insignificant, also the table was showed there is no relationship between educators experience and communication between them and their students p value 0.385 insignificant, perhaps this finding due to all population around the world were not ready to face this crises and the nursing educators including.

**IV. DISCUSSION**

This descriptive cross sectional study aimed to assess the contribution of nursing educators during pandemic COVID-19, Participants were taken from all governmental universities in Sudan, which it is 33 university .nursing educators like all population around the world were effective negatively by the university closures during the outbreak of COVID-19 in their academic part and communication with their students learning. Most of participants in present study their specialty in nursing

it is medical and surgical nursing science (44.8%), while the educators experience in teaching in nursing (37.3),and majority (67.2%) of them from university which located in Khartoum, which it is a capital of the Sudan. On other hand current study revealed that the direct communication between educators and their students is very poor (12.8%) this result is likely due to the University’s plans to switch from face-to-face classes to online classes, so many teachers and students were excited about the switch to online practice mode. Majority of educators communicated with their students with indirect (87.2%), but this communication was done in improper way, perhaps because the Network in Sudan weak and not meet the required of online learning ,this finding similar to study done by (Amal et al, they said the education in Sudan facing many problems such as Weak network(12) .Also another study supported the same finding which was done by (Patricia Zen et al) ,which concluded that the e-learning shift is feasible, the pandemic situation requires a well-integrated trained team to detect students and teachers' needs(5) ,also another study done by (Al-



Rawajfah et al) expressed the same finding(13). Also This study showed that the participants (24%) said the lack of resources in several universities assist in limiting their role ,but the educators were made possible attempting to continuing health education for the community and spreading awareness (43%) through the Television, Radio and social Media .Numbers of educators had supporting graduate students to volunteer to work in health facilities (33.3%) in agreement with the nursing departments and provided nursing care to their patients during this crises, this finding it is similar to study done by (Al-Rawajfah) and (Saba Farci, et al) were revealed that the clinical strategies, including employing experienced clinical educators, attempting to enhance the learning environment, developing the relationship between faculty and practice (16+15). This study also showed that there is no relationship between educators experience and how to combat the emerging corona virus (Covid-19) p value 0.551 (insignificant ,also there no relationship between experience in teaching and communication between educators and students during the pandemic p value 0.385 (insignificant because the developing countries have lack of facility to face this new situation, this similar to many study done in many developing countries one of it done in Egypt and Indonesia showed that just about 13.9% of the students experienced issues regarding network connection. Whereas more than two-thirds of the students in rural reported issues of unstable internet, insufficient internet data, and incompatible learning device (9). Finally near half of educators were satisfied regarding their roles during the pandemic. (46.8%) because they groundlessly this first time faced like this situation and were faced many challenges which made difficult situation of several ways of life worldwide.

## V. CONCLUSION

University closure during the outbreak of COVID-19 has had negative impacts on the academic and psychological status of health profession educators. The study concluded that the role of Sudanese educators is not adequate during pandemic and very lacking in all areas and need intensive work.

### • Study based on the finding recommended

- ✓ The Funding of the university needs increase to meet the demand of training.
- ✓ The nursing curriculum need to including more regarding who to compact with the crises situations.
- ✓ Educators and students have important role regarding the community.

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### • Conflicts of interest:

The authors declare that there are no conflicts of interests.

## REFERENCES

- [1]. G.Dewart, L. Corcoran, L. Thirsk, et al., Nursing education in a pandemic: Academic challenges in response to COVID-19. *Nurse Education Today*. (2020), <https://doi.org/10.1016/j.nedt.2020.104471>.
- [2]. Shi Zhao <sup>1 2</sup>, Lewi Stone <sup>3 4</sup>, Daozhou Gao <sup>5</sup>, Salihu S Musa <sup>6</sup>, Marc K C Chong <sup>1 2</sup>, Daihai He <sup>6</sup>, Maggie H Wang <sup>1 2</sup>. Imitation dynamics in the mitigation of the novel coronavirus disease (COVID-19) outbreak in Wuhan, China from 2019 to 2020 .*PMC article*.2020Apr;8(7):448.DOI: <https://www.worldometers.info/coronaviruson> 22/7/2020 9 pm.
- [3]. [https://en.wikipedia.org/wiki/Impact\\_of\\_the\\_2019-20\\_coronavirus](https://en.wikipedia.org/wiki/Impact_of_the_2019-20_coronavirus) on 25/7/2020 9am.
- [4]. Patricia Zen Tempski,<sup>II</sup> Fabio Freitas Busnardo,<sup>III</sup> Milton de Arruda Martins,<sup>II</sup> and Rolf Gemperli<sup>III</sup>. Online learning and COVID-19: a meta-synthesis analysis *Clinics* (Sao Paulo).2020; 75: e2286. 2. doi: 10.6061/clinics/2020/e2286 PMID: PMC7605278.
- [5]. Nurse Educators' Vital Role in the Future of Nursing Jun 30, 2017 | Blog, News, Sponsored Post.
- [6]. According U.S Bureau of Labor Statistics (BLS), Beverly Malone, PhD, RN, FAAN, president and CEO of the National League for Nursing (NLN), <https://www.allnursingschools.com/nurse-educator/job-description>.
- [7]. Chinwendu F. Agu, <sup>1</sup>Nadine McFarlane-,<sup>2</sup>and Tania Rae, .COVID-19 pandemic effects on nursing education: looking through the lens of a developing country *Int Nurs Rev*. 2021. Jun; 68(2): 153–158. . doi: 10.1111/inr.12663.
- [8]. Lixiang Yan, <sup>1</sup> Alexander Whitelock-Wainwright, <sup>1 · 2</sup> Quanlong Guan, <sup>3</sup> Gangxin Wen, <sup>4</sup> Dragan Gašević, <sup>1</sup> and Guanliang Chen <sup>1</sup> Students' experience of online learning during the COVID-19 pandemic: A province-wide survey study. *Br J Educ Technol*.2021Sep;52(5): 2038–20 doi: 10.1111/bjet.13102 .
- [9]. Cristina Pires Camargo,<sup>1\*</sup> Patricia Zen Tempski,<sup>II</sup> Fabio Freitas Busnardo,<sup>III</sup> Milton de Arruda Martins,<sup>II</sup> and Rolf Gemperli<sup>III</sup> .Online learning and COVID-19: a meta-synthesis analysis *Clinics*. 2020; 75: e2286. 2. doi: [10.6061/clinics/2020/e2286](https://doi.org/10.6061/clinics/2020/e2286).
- [10]. UNESCO. COVID-19 .Educational disruption and response. (2020). Accessed: July 2 7, 2020.<https://en.unesco.org/themes/educationemergencies/coronavirus-school-closures>.
- [11]. Amal Mohammed Hamid1\*, Amel Ahmed Hassan2, Nadia Ahmed Mohamed3, Muneera Mohamed Hamad4, Tayseer Ahmed Hassan5. EAS Journal of Nursing and Midwifery. Academic, Psychological and Social effects of University Closure among Health Profession Students during an Outbreak of COVID-19 at Alzaeim Alazhari

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10.36349/easjnm.2021.v03i02.001.

- [13]. Al-Rawajfah, O. M., Al Hadid, L., Madhavanprabhakaran, G. K., Francis, F., & Khalaf, A. (2022). Predictors of effective clinical teaching – nursing educators’ perspective.. *BMC Nursing*, *21*(1), [55]. pp. 1 – 9 <https://doi.org/10.1186/s12912-022-00836>.
- [14]. Siluh Nyoman Alit Nuryani<sup>1</sup>, 2\*, Ida Bagus Putu Arnyana<sup>1</sup>, Ni Nyoman Parwati<sup>1</sup>, Gede Rasben .Dantes<sup>1</sup> Benefits and Challenges of Clinical Nurse Educator Roles .Open Access Macedonian Journal of Medical Sciences. 2022 Jan 12; 10(G):38-44.<https://doi.org/10.3889/oamjms.2022.7706> eISSN: 1857-9655.
- [15]. Saba Farzi, Mohsen Shahriari, <sup>1</sup> and Sedigheh Farzi<sup>2</sup>. Exploring the challenges of clinical education in nursing and strategies to improve it: .J Educ Health Promot. 2018; 7: 115. Published online 2018 Sep 14. doi: 10.4103/jehp.jehp\_169\_17.
- [16]. Al-Rawajfah, O. M., Al Hadid, L., Madhavanprabhakaran, G. K., Francis, F., & Khalaf, A. Nurse. Educators as Agents of Change in the SARS-CoV-2 Pandemic .Nurs Womens Health. 2020. 24(4):253-255. doi: 10.1016/j.nwh.2020.05.010.