Effectiveness of Nurse Managers' Political Skills on Preparedness and Response Activities during Coronavirus Disease 2019 Outbreak

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Abstract

Background: The pandemic of coronavirus disease 2019 placed multifaceted challenges for nurse managers' achievement of their roles' activities efficiently. Political skills are the essential tool for communicating successfully, influencing nursing staff's work, and responding to emergency events and obstacles during crises. **Aim**: This study aimed to determine the effectiveness of nurse managers' political skills on preparedness and response activities during coronavirus disease 2019 outbreak. **Design**: It was utilized a comparative, correlational design. **Setting**: It was conducted at El Mahalla El-Kobra General Hospital in Intensive Care Units, operation, isolation, and inpatient wards. **Subjects**: It involved all nurse managers (51) and 203 nursing staff. **Tools**: The study's questionnaire consisted of three parts; involving demographic data, assessment of preparedness and response activities of COVID-19, and political skills inventory. **Results**: The majority of NMs had high levels of political skills and were satisfied with their activities during the preparedness and response of Covid-19. Furthermore, the nursing staff was satisfied with nurse managers' activities of communication & information sharing and education, ethical and legal practice, incident management, and intervention, but not with the activities of preparation and planning, safety & security, and psychological support. **Conclusion**: Nurse Managers need to possess strong political skills to have the social power of attaining their roles' activities during the COVID-19 crisis. **Recommendations**: Developing a periodic in-service training program on political skills, as well preparedness, responses, recovery, and evaluation of disasters.

Keywords: COVID-19 outbreak, Nurse Managers, Preparedness and response activities, Political skills.

Introduction

Internationally, the coronavirus disease 2019 (COVID-19) pandemic has far-reaching implications for nursing around the world **(White 2021)**. Recent studies reported that the COVID-19 pandemic is the worst global health crisis since World War II and instances are increasing every day. Many countries are attempting to halt the spread of the disease by diagnosing patients, tracing contacts, restricting travel, quarantining residents, and canceling large gatherings as athletic events, schools, universities, or concerts **(Choi et al. 2020; UNDP 2021; WHO 2021).** During the COVID-19 outbreak, the healthcare personnel has become overburdened and experienced critical shortages of personal protective equipment, intensive care beds, and appropriately trained staff to care for the enormous numbers of critically ill patients **(Hoffman et al. 2020)**.

During the COVID-19 outbreak, nurse Managers (NMs) are responsible for supervising nursing staff (NS) in a hospital or clinical setting, as well as assisting NS in performing their duties at the highest possible level in the fight against this pandemic **(Turkmen et al. 2020)**. The NMs' roles involve oversee patient care, make management and budgetary decisions, set work schedules, coordinate meetings, and make decisions about personnel. The NMs had a great responsibility in preparation and response to an outbreak, as early recognition; managing staffing challenges is of utmost importance **(De Rooij et al. 2020)**.

The complex work environment of COVID-19 pandemic necessitates that NMs stay up to date with the latest scientific information, handle emerging difficulties effectively, overcome challenges, manage their team efficiently, and deliver the promising outcome

(Monica et al. 2020; Moore 2020; Gab Allah 2021). Several studies showed that NMs had gaps in preparedness and response to function effectively in disasters and emergencies **(Hussein and Mahmoud 2016; Tzeng et al. 2016; Martono et al. 2019)**.

Recent studies of **De Rooij et al. (2020); Jankelová et al. (2021)** reported that the emergency preparedness phase (PP) and response phase (RP) of COVID-19 are the key to any health crisis, which refers to the knowledge and capacity to effectively anticipate, respond to, and recover from the impacts of a likely or current crisis. At the PP, the NMs have various roles incorporating; participate with other disciplines in putting emergency plan, develop policies to deal with this crisis, communicate the plan and maintain ethical & legal practice. NMs' responsible for sharing accurate information, keeping all team members' knowledge up to date, deciding the ongoing priorities of providing high quality, and ensuring reliable and safe delivery of care **(Aquilia et al. 2020; Buheji and Buhaid 2020; Mao et al. 2021)**. The NMs are also devoted to creating supportive environments, adapting infection prevention guidance, and developing training programs **(Aquilia et al. 2020)**.

While during the RP of the COVID-19, many NS suffer from emotional strain and physical exhaustion when caring for exaggerated numbers of acutely ill COVID-19 patients of all ages who have the potential to deteriorate rapidly. Therefore, the main role of NMs have to actively assess, support the staff's psychological, and safety needs, let them express their opinions freely, avoid restrictions, and revise infection control practices. Additionally, NMs' accountable for providing adequate resources, evaluating the nursing care interventions, and developing the organizational incident plan **(Aquilia et al. 2020; Maben et al. 2020; Millar 2020)**. Concisely, NMs are in charge of making decisions about both staff and patients during the pandemic of COVID-19, organizing nursing care and overseeing front-line healthcare providers **(White 2021)**.

Political skills (PSs) are critical competencies for NMs to effectively understand others in today's organizational complexity **(El-Demerdash et al. 2018; Summers et al. 2020)**. NMs engage in political behaviors to achieve their own personal and/or organizational objectives by controlling, managing, and influencing others **(Montalvo 2015; Chena et al. 2021)**. The concept of PSs has four dimensions: interpersonal influence, networking ability, social astuteness, and apparent sincerity or genuineness **(Ferris et al. 2005)**. The interpersonal influence dimension of NMs' PSs permits them to select the most situationally appropriate behaviors to elicit the desired responses. In this skill, the NMs able to put their NS at ease, get their likes, establish a good relationship, and communicate with them in positive ways **(Cairns 2017)**.

Likewise, **Braddy and Campbell (2014)** defined networking ability as an information and control asset that stems from establishing and maintaining social networks. The networking ability enables the NMs to be experts in forging friendships, building coalitions, developing relationships, gaining resources to foster their initiatives **(Sen et al. 2021)**. NMs with Social astuteness pay close attention to their NS' feelings and behaviors who are keen to observe others, take part in different social occasions, and know what to say and what to do, as well leave positive impressions on others. Finally, the NMs' apparent sincerity or genuineness is more likely to be forthright, open, honest, supportive, authentic, and genuine with their NS **(Montalvo 2015; Gooch and Herrell 2018; Feitosa et al. 2021)**.

Significance of the study:

During the COVID-19 pandemic, the NS expect their leaders to effectively master the crisis, easily overcome difficult obstacles, build a supportive workplace environment, spread feelings of trust, empathy, and encouragement, as well as create a sense of control and stability. Actually, the worldwide healthcare crisis has made NMs' roles overwhelmed, complicated, and challengeable. Consequently, the NMs find themselves in the vacuum of unfamiliar territory, requiring special skills to assist in achieving the management crisis's target goals and ensuring NS' work satisfaction.

In Egypt, the NMs countered numerous challenges during the COVID-19 outbreak, including fear of biological infection, stigmatization of disease, separation from their families, social marginalization, miscellaneous misinformation, understaffing, uncertainty, scarcity of hospitals' beds, and insufficient personal protective equipment. The health care sectors need new approaches and technologies with low cost to maintain their staff's satisfaction and overcome the unexpected crisis. The NMs' PSs have a technique to get out of this crisis, which helps to regulate behaviors of NS in stressful work environments. Therefore, this study aimed to determine the effectiveness of NMs' PSs on preparedness and response activities during the COVID-19 outbreak.

Operational definition:

In this study, NMs are operationally defined as head nurses who are in charge of managing the work of units and the performance of their NS.

Aim of the study:

The major aim of this study was to determine the effectiveness of NMs' political skills on preparedness and response activities during the coronavirus disease 2019 outbreak. The more specific objectives aimed to assess the levels of NMs' political skills as perceived by themselves and their NS, state the levels of NMs' preparedness and response activities during the COVID-19 pandemic as experienced by themselves and their NS, as well as find out the relationship between two variables.

Research's questions:

Q1: What are the levels of NMs' political skills as perceived by themselves and their NS?

Q2: What are the levels of NMs' preparedness and response during COVID-19 activities as experienced by themselves and their NS?

Q3: Is there an association between the NMs' political skills and their achievement of preparedness and response activities of COVID-19?

Methods:

Research design: This study utilized a comparative, correctional design to describe the mutually causal relationship between an independent variable (political skills) and a dependent variable (preparedness and response activities of COVID-19) among the study's groups.

Research setting: This study was conducted at El Mahalla El Kobra General Hospital in Intensive Care Units (cardiac, pediatric, neonatal, kidney, medical), operations, isolation, and inpatient wards (medical & surgical) for males and females.

Subjects: This research involved all (51) NMs, as well as a convenience sample of 203 NS who are working in the previously mentioned settings and accepting to participate in this research.

Instruments: The study's questionnaire has three sections; the first section was developed by the researchers. It involved the sociodemographic data of NMs and NS as age, marital status, children number, department, qualification, years of experience, type of contract, number of working hours/week, average patient census/day, type of COVID cases, average number of NS/shift and method of delivering care.

The second section entitled ***Assessment* Preparedness *and Response Activities of COVID-19*** that was developed by the researchers based on **ICN (2020); Mao et al. (2021); Gab Allah (2021); Jankelová et al. (2021), and Monica et al. (2020)**. It was aimed to assess the NMs' preparedness and response activities of COVID-19 from the perspectives of NMs and NS, which was established according to participants' groups. It was consisted of (39 items) dividing into two parts involving; preparedness (19 items) and response (20 items) phases.

The ***preparedness phase*** included four activities; preparation and planning (4 items), communication and information sharing (5 items), ethical & legal practice (6 items), and education (4 items).

The ***response phase*** incorporated four activities; safety and security (7 items), psychological care (5 items), incident management (3 items), and intervention (5 items).

The rating scale for this tool was (2) entirely done, (1) not done, and (0) not applicable. If the NMs or NS selected not applicable, the score was taken into account without being calculated. The total score of preparedness phase ranged between 19 and 38. While, the total score of response phase ranged between 20 and 40. The total overall score of COVID-19 activities ranged between 39 and 78. If the score less than 75%, it is considered unsatisfactory and if the score is equal to or greater than 75%, it is considered satisfactory.

The third section named ***Political Skills Inventory (PSI)*** that was developed by **Ferris et al. (2005)**, and was adapted by the researchers. It was utilized to assess the NMs' PSs from the viewpoints of themselves and NS, which was structured to be appropriate for both participants' groups. The original form consisted of 18 items, while the adapted version contained 21 items under four skills; social astuteness (5 items), interpersonal influence (5 items), and managing social networks (5 items), and genuineness or sincerity (6 items).

This tool used the Likert scale that ranged between 1 to 5; 5 = strongly agree to 1= strongly disagree. Adding the scores of statements in each subscale and then dividing by 5 in the social astuteness, interpersonal influence, and managing social networks skills. While dividing the sum by 6 regarding the genuineness or sincerity skill. All the scores will be ranged between 1 and 5; the higher score has more skill. The overall PSs' score is restricted between a minimum of 21 and a maximum of 105. Add the numbers selected for each statement and then divide by 21 for each participant. An average score between 1 and 5.

- A score less than 2 is considered low;
- A score between 2.1 and 4 is considered average;
- 4 or above is considered high.

Procedure of data collection:

Before the research's execution, permission was undertaken to conduct the study from the Chief Executive Officer of El Mahalla El Kobra General Hospital. According to the emerging crisis circumstances, data were collected via online Google forms, in which the questionnaire being available in both Arabic and English to ensure that all participants could understand it. A link was sent out to the NMs (51) and NS nurses (523) through WhatsApp, in which all nursing staff phone numbers were collected from the heads' department. This study relies on data collection from NMs and NS' members who are conveniently available to participate in the study during the period of data collection. For each participant, the average time spent filling out the questionnaire was approximately extended from 7 to 10 minutes. From the beginning of December 2020 until the middle of March 2021, a 14-week period was necessary for data collecting.

Ethical Considerations:

Before the data collection procedure, the participants were informed about the study's aim and confidentiality concerns. Additionally, the participants' consents were acquired, and participation was voluntary. The participants were assured that withdrawal or non-participation would not result in any disciplinary action.

Validity and reliability:

The panel of five experts from different nursing specialty areas (administration and emergency & critical care) was asked to assess the importance and relevance of each item on a 4-point rating scale; ranged from 4= strongly relevant to 1= not relevant. Experts were also invited to reword any unclear items, and minor changes were done based on their recommendations. The value of item Content Validity Index (I-CVI) was 0.79 for the COVID-19 activities tool and 0.92 for PSI.

Following the development of a questionnaire, a pilot study was conducted twice with two weeks of space on 30 nurses who were excluded from the sampling size to test the questionnaire's accuracy and applicability.

Kendall's tau and Spearman's rho tests were used to assessing the questionnaires' test-retest reliability, with the lowest value for each tool in all categories being 0.721. Cronbach's Coefficient Alpha was 0.85, indicating good internal consistency reliability.

Statistical analysis:

Data were fed to the computer and analyzed using IBM Statistical Package for Social Sciences (SPSS) software version 20.0. (Armonk, NY: IBM Corp). The qualitative data were described using numbers and percents. While the quantitative data were described using range (minimum and maximum), mean, standard deviation and chi-square. The Student t-test was used for normally distributed quantitative variables, to compare between two studied groups. While the one-way analysis of variance (ANOVA) was used to determine whether there were any statistically significant differences between the means of three or more groups. The significance of the results was judged at the 5% level. For detecting test-retest reliability of ordinal data, Kendall's tau and Spearman's rho were utilized, as well as Cronbach's coefficient alpha.

Results:

Table 1 presents the frequency and distribution of socio-demographic data of the studied groups. According to NMs data, 51% of them worked in ICUs, 54.9% of them were in the age group between 40-<50 with a mean score of 39.25 ± 6.23, 90.2% of them were married, and 58.8% of them had three or more children with a mean score of 2.45 ± 1.39. Furthermore, 82.4% of them had Bachelor Science in Nursing, and 41.2% of them had in the years of experience group 15 - <20 with a mean score 16.75 ± 5.61, and 76.5% of them worked 36 or more hours/week with a mean score of 34.16 ± 17.62. The majority (90.2%) of NMs had an average salary 2000 to 4000 with a mean score of 3132.35 ± 771.35, 92.2 % of them had ≤8 patient census/day with a mean score of 6.71 ± 2.98, 76.5% of them had suspected patients, and 60.8% of their patients were moderate cases. Around one third (35.3%) of them had less than five nursing staff per shift with a mean score11.61 ± 11.67 , as well as one hundred percent of them worked full time and used case method for delivering care.

On the other hand, 52.2% of NS worked in Intensive Care Units (ICUs), 66% of them were in the age group less than 30 years old with a mean score of 28.47 ± 4.85, and 80.3% of them were single. More than half of NS (55%) had one or two children with a mean score of 1.42 ± 1.12 & 51%, 36.5% of them had Bachelor Science in Nursing, 62.1% of them worked full time and 44.3% of them had in the years of experience group 5 - <10 with a mean score of 8.05 ± 5.22. Moreover, 62.1% of NS worked ≥36 with a mean score of 30.57 ± 10.74, 69.5% of them had an average salary 2000 to 4000 with a mean score of 2646.80 ± 898.10, 64.5% of them had ≤8 patient census/day with a mean score of 9.55 ± 9.55, 59.6% of them received suspected patients, and 46.3% of their patients were moderate cases. Further, 46.3% of them worked with 15 - <20 members/shift with a mean score of 13.67 ± 5.64 and 58.1% of them used the case method for delivering care.

Figure 1 illustrates the ranking of nurse managers' political skills dimensions as perceived by themselves and their nursing staff. The majorities (83.42%, 81.67%, 76.57% & 73.33%) of NMs ranked their PSs as genuineness or sincerity, followed by interpersonal influence, then social astuteness, and finally managing social networks. While the high percent (54.94%, 54.55%, 46.35, & 34.41%) of NS reported that, social networking was the most frequent nurse managers' skill, followed by interpersonal influence, genuineness, and astuteness respectively.

Figure 2 declares the levels of nurse managers' political skills dimensions as perceived by themselves and their nursing staff. The majority (88.2%, 86.3%, 80.4% & 76.5%) of NMs perceived themselves high in all PSs' dimensions, including; genuineness or sincerity, interpersonal influence, managing social networks, and social astuteness respectively. Otherwise, the high percents (64.9%, 54.2%, & 50.4%) of NS rated the NMs PSs high in social managing network, interpersonal influence and sincerity respectively, while the majority of them (74.4%) perceived their NMs as low level in social astuteness skill. Generally, 86.3%of

NMs and slightly more than half (51.3%) of NS assigned a high level regarding the overall score of NMs' PSs.

Figure 3 shows the ranking of nurse managers' preparedness and response activities of COVID-19 as experienced by themselves and their nursing staff. The ranking of NMs' self-assessment of Covid-19 activities was ethical & legal practices (95.59%), followed by education (95.1%), then communication & information sharing (91.37%), and preparation & planning (87.99%) during the PP. While the ranking of RP activities was incident management (93.79%), followed by the intervention (93.92%), safety and security (92.81%), and finally psychological care (92.65%) from the NMs' perspective. Otherwise, the NS ranked the NMs' activities of COVID-19 during the PP as communication & information sharing (73.94%), education (67.65%), preparation & planning phase (65.76%), and lastly ethical & legal practices (62.19). Moreover, the NS ranked the NMs' activities during the RP as incident management (69.93%), intervention (66.35%), safety & security (60.88%), and psychological care (58.66%.

Figure 4 describes the levels of nurse managers' preparedness and response activities of COVID-19 as experienced by themselves and their nursing staff. It was noted that the majority of NMs with maximum percent (94.1%) and lowest percent (84.3%) were satisfied with their activities of PP & RP during the COVID-19 pandemic. During PP, the highest percents (65.9%, 50.3%, & 50.2%) of NS were satisfied with communication & information sharing, ethical and legal practice, and education respectively, while 63.5% of them were unsatisfied with preparation & planning. On the other scene, 61.4% & 60.6% of NS were satisfied with incident management and intervention activities respectively, while 65.3% & 68% of them were unsatisfied with the activities of safety & security and psychological care respectively during RP of COVID-19. The majority (92.2%) of NMs and 54.8% of NS were satisfied with the overall score of NMs activities.

Table 2 represents the correlation between political skills dimensions and COVID-19 activities of preparedness and response phases among nurse managers. There were statistically significant differences between PSs' dimensions and COVID-19 activities; except for managing social networks skill with the educational activity (r=0.268 & p=0.058) during the PP, as well as with the activities of safety & security (r=0.229 & p=0.106), psychological care (r=0.245 & p=0.083), and incident management (r=0.215 & p=0.129) during the RP. Additionally, there were statistically significant differences between the overall score of COVID-19 activities with the overall perception of PSs and their dimensions.

Table 3 shows the correlation between political skills dimensions and COVID-19 activities of preparedness and response phases among nurse managers. There were statistically significant differences between all PSs dimensions and all COVID-19 activities. Furthermore, there were statistically significant differences between overall score of COVID-19 activities and overall PSs' dimensions.

Table 4 describes the relations between the overall scores of nurse managers and nursing staff's political skills dimensions and their demographic data. There were statistical significant differences between the overall score of PSs and NMs' number of children (f=3.255, p=0.030), years of experiences (f=4.008, p=0.013). Furthermore, there were statistical significant differences between the overall score of PSs and NS' marital status (f=2.407, p=0.020), qualifications (f=3.377, p=0.019), types of contract (t=4.361, p=0.001), experiences (f=5.201, p=0.001), working hours/week (t=4.082, 0.001), salary/month (t=6.403, p=0.002), as well as with patient census/day (t=2.692, p=0.008), number of nursing staff/shift (f=36.042, p=0.001) and methods of delivering care (f=6.086, 0.001).

Table 5 describes the relations between the overall scores of nurse managers' preparedness and response of COVID-19 activities among studied groups and their demographic data. There were statistically significant differences between the overall score of COVID-19 activities and NMs' years of experiences (f=6.897, p=0.001), working hours/ week (t=2.839, t=0.014) and method of delivering care (f=7.398, 0.002). Moreover, there were

statistical significant differences between the overall score of COVID-19 activities and NS' qualifications (f=5.430, p=0.001), types of contract (t=4.440, p=0.002), experiences (t=4.440, p=0.002), working hours/week (t=3.507, p=0.001), average salary/month (3.431, p=0.034), as well as with patient census/day (t=4.590, p=<0.001), number of nursing staff/shift (f=24.374, <0.001) and methods of delivering care (f=2.702, p=0.047).

Table (1): Frequency and distribution of socio-demographic data of studied groups

Demographic data		Head nurses (n = 51)		Nurses (n = 203)	
		No.	%	No.	%
Department	Intensive Care Units (ICUs)	26	51.0	107	52.7
	Isolation Units	7	13.7	33	16.3
	Inpatient Wards	18	35.4	40	19.8
	Outpatient Clinics	0	0.0	23	11.3
Age (years)	<30	4	7.8	134	66.0
	30-<40	19	37.3	61	30.0
	40-<50	28	54.9	8	3.9
	Mean ± SD.	**39.25 ± 6.23**		**28.47 ± 4.85**	
Marital status	Single	5	9.8	163	80.3
	Married	46	90.2	40	19.7
Number of children	0	7	15.2	11	27.5
	1 – 2	12	26.0	22	55.0
	3+	27	58.8	7	17.5
	Mean ± SD.	**2.45 ± 1.39**		**1.42 ± 1.12**	
Nursing qualification	5 years Nursing Secondary Diploma	0	0.0	53	26.1
	2-year Technical Nursing Institute	0	0.0	52	25.6
	4 years Bachelor Science in Nursing	42	82.4	74	36.5
	Master Science in Nursing	8	17.6	24	11.8
Type of contract	Full time	51	100.0	126	62.1
	Part time	0	0.0	77	37.9
Years of experience	<5	4	7.8	50	24.6
	5 - <10	0	0.0	90	44.3
	10 - <15	8	15.7	36	17.7
	15 - <20	21	41.2	17	8.4
	≥20	18	35.3	10	4.9
	Mean ± SD.	**16.75 ± 5.61**		**8.05 ± 5.22**	
No. of working hours/week	<36	12	23.5	77	37.9
	≥36	39	76.5	126	62.1
	Mean ± SD	**34.16 ± 17.62**		**30.57 ± 10.74**	
Average of salary/month	<2000	0	0.0	33	16.3
	2000 – 4000	46	90.2	141	69.5
	≥4000	5	9.8	29	14.3
	Mean ± SD	**3132.35 ± 771.35**		**2646.80 ± 898.10**	
Average of patient census/day	≤8	47	92.2	131	64.5
	>8	4	7.8	72	35.5
	Mean ± SD	**6.71 ± 2.98**		**9.55 ± 9.55**	
Type of cases	Suspected	39	76.5	121	59.6
	Confirmed	12	23.5	82	40.4
If confirmed, level of severity	Mild	5	9.8	36	17.7
	Moderate	31	60.8	94	46.3
	Severe	15	29.4	73	36.0
Average number of nursing staff/shift	<5	18	35.3	22	10.8
	5 - <10	11	21.6	19	9.4
	10 - <15	7	13.7	55	27.1
	15 - <20	6	11.8	94	46.3
	≥20	9	17.6	13	6.4
	Mean ± SD.	**11.61 ± 11.67**		**13.67 ± 5.64**	
Method of delivering care:	Case	51	100	118	58.1
	Functional	0	00	85	41.9

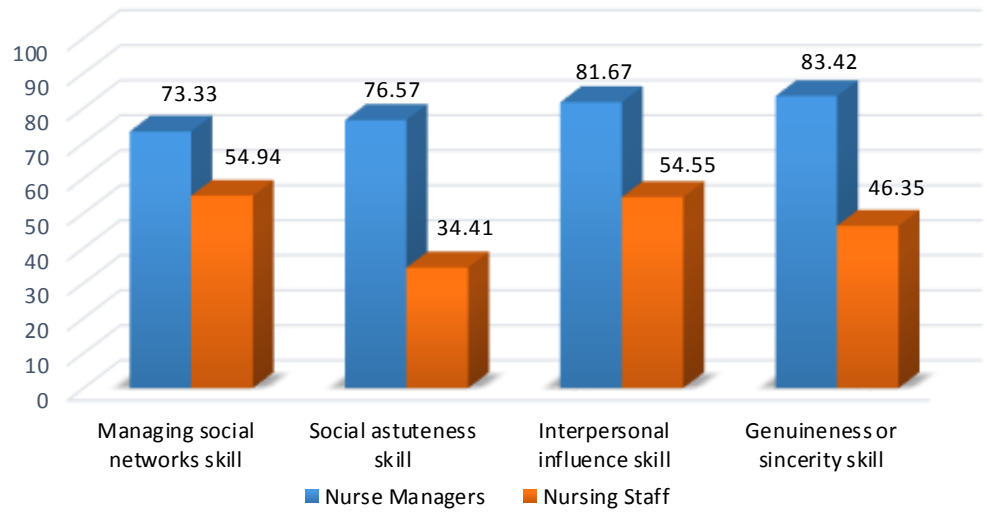

Figure (1): Ranking the nurse managers' political skills dimensions as percieved by themselves and their nursing staff

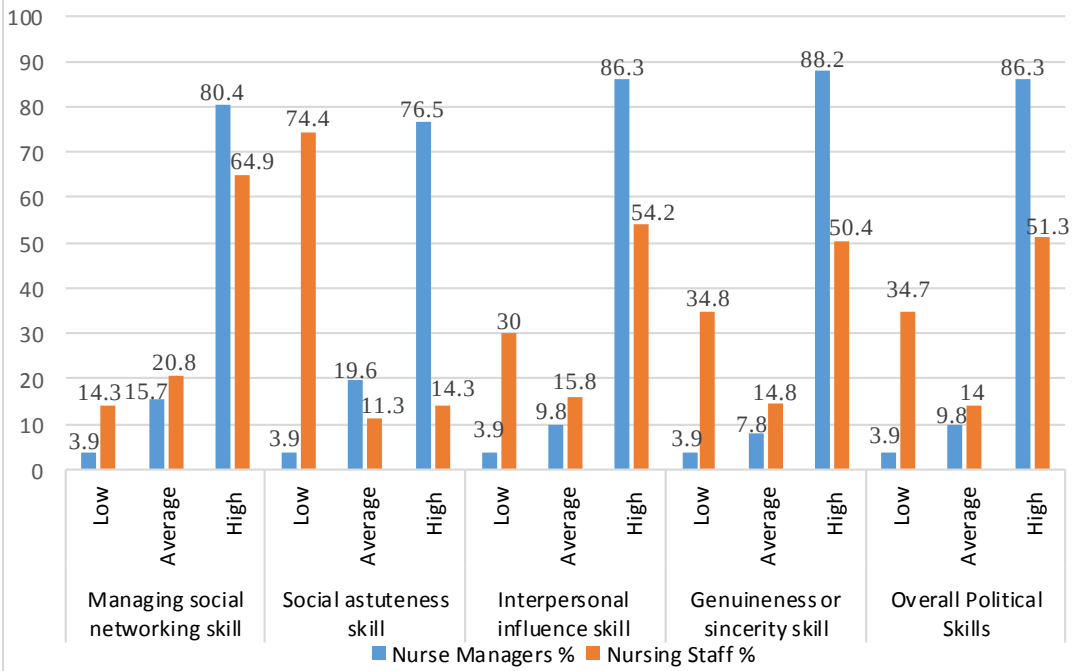

Figure (2): Levels of nurse managers' political skills dimensions as perceived by themselves and their nursing staff

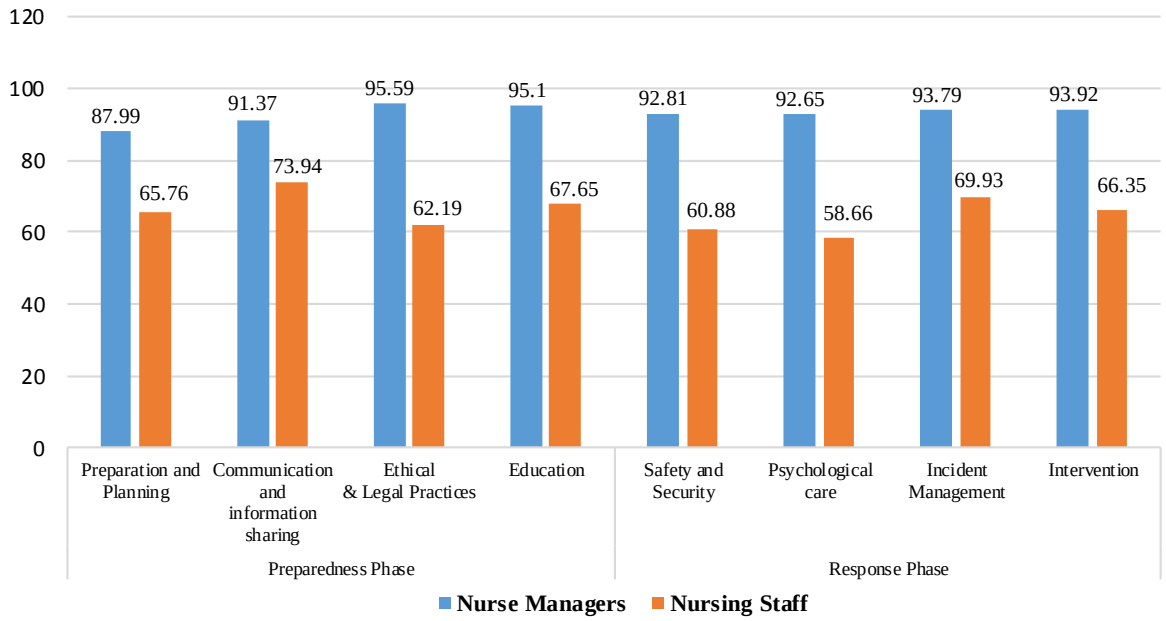

Figure (3): Ranking of nurse managers' preparedness and response activities of COVID-19 as experienced by themselves and their nursing staff

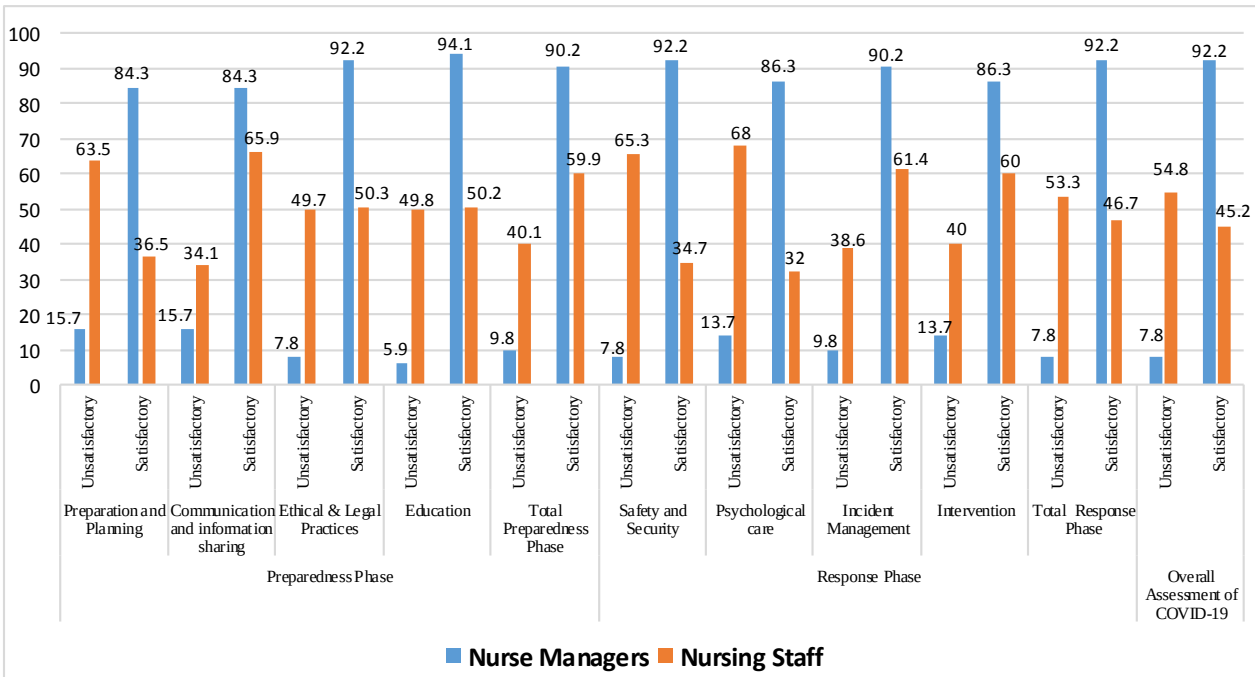

Figure (4): Levels of nurse managers' prepardness and response activities of COVID-19 as experienced by themselves and their nursing staff

Table (2): Correlation between political skills dimensions and COVID-19 activities of preparedness and response phases among nurse managers (n = 51)

Subscales of COVID-19 Activities		Test	Political Skills' Subscales				
			Managing networks	Social astuteness	Interpersonal influence	Genuineness or sincerity	Overall political skills
Preparedness Phase	Preparation & Planning	r	0.403*	0.318*	0.396*	0.437*	0.429*
		p	0.003*	0.023*	0.004*	0.001*	0.002*
	Communication & information sharing	r	0.348*	0.399*	0.474*	0.511*	0.477*
		p	0.012*	0.004*	<0.001*	<0.001*	<0.001*
	Ethical & Legal Practices	r	0.428*	0.463*	0.603*	0.550*	0.561*
		p	0.002*	0.001*	<0.001*	<0.001*	<0.001*
	Education	r	0.268	0.359	0.509*	0.465*	0.413*
		p	0.058	0.032*	<0.001*	0.001*	0.003*
Response Phase	Safety & Security	r	0.229	0.287*	0.538*	0.471*	0.419*
		p	0.106	0.041*	<0.001*	<0.001*	0.002*
	Psychological care	r	0.245	0.365*	0.446*	0.422*	0.405*
		p	0.083	0.008*	0.001*	0.002*	0.003*
	Incident Management	r	0.215	0.299	0.551*	0.501*	0.419*
		p	0.129	0.041*	<0.001*	<0.001*	0.002*
	Intervention	r	0.285*	0.408*	0.605*	0.531*	0.501*
		p	0.043*	0.003*	<0.001*	<0.001*	<0.001*
Overall Assessment of COVID-19		r	0.403*	0.461*	0.682*	0.644*	0.602*
		p	0.003*	0.001*	<0.001*	<0.001*	<0.001*

r: Pearson coefficient, *: Statistically significant at $p \leq 0.05$

Table (3): Correlation between political skills dimensions and COVID-19 activities of preparedness and response phases among nursing staff (n = 203)

COVID-19 Activities		Test	Political Skills' Factors				
			Managing networks	Social astuteness	Interpersonal influence	Genuineness or sincerity	Overall political skills
Preparedness Phase	Preparation & Planning	r	0.557*	0.604*	0.561*	0.614*	0.627*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
	Communication & information sharing	r	0.637*	0.733*	0.694*	0.711*	0.744*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
	Ethical & Legal Practices	r	0.266*	0.307*	0.273*	0.331*	0.318*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
	Education	r	0.203*	0.182*	0.199	0.162*	0.181*
		p	0.004*	0.009*	0.041*	0.021*	0.010*
Response Phase	Safety & Security	r	0.224*	0.257*	0.206*	0.264*	0.256*
		p	0.001*	<0.001*	0.003*	<0.001*	<0.001*
	Psychological care	r	0.372*	0.479*	0.435*	0.443*	0.464*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
	Incident Management	r	0.537*	0.605*	0.565*	0.618*	0.624*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
	Intervention	r	0.489*	0.580*	0.596*	0.633*	0.620*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*
Overall Assessment of COVID-19		r	0.549*	0.629*	0.583*	0.634*	0.643*
		p	<0.001*	<0.001*	<0.001*	<0.001*	<0.001*

r: Pearson coefficient, *: Statistically significant at $p \leq 0.05$

Table (4): Relation between the overall score of nurse managers and nursing staff's political skills dimensions and their demographic data

Demographic data	Test	Overall score of political skills factors	
		Nurse Managers (n = 51)	Nursing Staff (n = 203)
Age (years)	F(p)	1.192 (0.323)	0.336 (0.715)
Marital status	t(p)	1.744 (0.087)	2.407*(0.020*)
Number of children	F(p)	3.255*(0.030*)	0.608 (0.610)
Highest nursing qualification	F(p)	1.131(0.331)	3.377*(0.019*)
Type of contract	t(p)	–	4.361*(<0.001*)
Years of experience	F(p)	4.008*(0.013*)	5.201*(0.001*)
No. of working hours/week	t(p)	2.020 (0.064)	4.082*(<0.001*)
Average salary/month	t(p)	0.265 (0.792)	6.403*(0.002*)
Average of patient census/day	t(p)	0.497 (0.621)	2.692*(0.008*)
Type of cases	t(p)	0.236(0.814)	1.021 (0.308)
If confirmed, level of severity	F(p)	1.032(0.364)	0.984 (0.375)
Average of nursing staff/shift	F(p)	0.798 (0.533)	36.042*(<0.001*)
Method of delivering care	F(p)	1.511(0.231)	6.086*(0.001*)

F: F for ANOVA test, t: Student t-test, *: Statistically significant at p ≤ 0.05

Table (5): Relations between the overall score of nurse managers' preparedness and response of COVID-19 activities among studied groups and their demographic data

Demographic data	Test	Overall score of COVID-19 Activities	
		Nurse Managers (n = 51)	Nursing staff (n = 203)
Age (years)	F(p)	0.412 (0.745)	0.555 (0.575)
Marital status	t(p)	1.091 (0.281)	1.260 (0.209)
Number of children	F(p)	2.217 (0.098)	0.246 (0.864)
Nursing qualification	F(p)	0.164 (0.850)	5.430*(0.001*)
Type of contract	t(p)	–	3.723*(<0.001*)
Years of experience	F(p)	6.897*(0.001*)	4.440*(0.002*)
No. of working hours/week	t(p)	2.839*(0.014*)	3.507*(0.001*)
Average salary/month	t(p)	1.611(0.114)	3.431*(0.034*)
Average of patient census/day	t(p)	0.759 (0.451)	4.590*(<0.001*)
Type of cases	t(p)	1.142 (0.259)	0.761 (0.448)
If confirmed, level of severity	F(p)	0.399 (0.673)	2.260 (0.107)
Average number of nursing staff/shift	F(p)	1.152 (0.344)	24.374*(<0.001*)
Methods of delivering care	F(p)	7.398*(0.002*)	2.702* (0.047*)

F: F for ANOVA test, t: Student t-test, *: Statistically significant at p ≤ 0.05

Discussion:

Indeed, the hospitals are struggling to maintain a balance between normal routine activities and control of COVID-19 outbreak especially in developing countries like Egypt. NS is the most significant asset in fighting against this pandemic, having cared for more seriously ill and dying patients than ever imagined in their professional lives. NMs serve as the clinical backbone in their departments; ensuring that their nursing team is well balanced, motivated, supported, visionary, as well as maintaining patient advocacy.

In today's nursing environment of the COVID-19 outbreak, the PSs of NMs play a crucial role than ever before to be demonstrated success within their job performance. Therefore, the NMs must have sufficient PSs to guarantee tremendous practices during the outbreak and achieve remarkable outcomes. Thus, this research aimed to determine the effectiveness of NMs' PSs on the achievement of preparedness and response activities during coronavirus disease 2019 outbreak.

The current study illustrated that the NMs rated the genuineness or sincerity dimension as the most important PS, followed by interpersonal influence, social astuteness, and finally managing social networks. Whereas, the NS reported that social networking was the most frequent NMs' skill, followed by interpersonal influence, genuineness, and astuteness respectively. These results could be explained due to NMs' viewpoints that genuineness or sincerity is the most accepted, or easiest practice to be used while managing social networking is the most challenging performance to be applied because of time limits, the hospital`s workload, or personal traits.

The NMs' perspective was congruent with **Braddy and Campbell (2014)** findings who assessed the four PSs' practices of leadership roles and found the same result. Furthermore, **Sen, et al. (2021)** findings showed that the Turkish nurses' self-assessment of PSs was genuineness, interpersonal influence, astuteness, and social networks. On the other hand, the study of **El-khateeb (2020)** stated that the head nurses' interpersonal influence is the most important PS, followed by social astuteness, managing social networks, and sincerity in which enable them to analyze hospitals' circumstances and maintain a shared reality with their NS.

The present findings declared that the majority of NMs assessed their practices of PSs as high in all areas' dimensions. Nevertheless, the high percentage of NS rated the NMs' PSs as high in a social network, interpersonal influence, and astuteness, while the majority of them perceived their NMs as a low level in genuineness or sincerity. These results are not surprising, the NMs have overestimated their skills more than NS did, in which they consumed more time and effort for solving problems, persuading others, building networks, and developing relationships or connections, as well as went in many negotiations and communications with others especially during stressful circumstances of Covid-19.

In this aspect, the Egyptian study's finding of **El-khateeb (2020)** stated that around half of head nurses rated their PSs' practice as a moderate level in interpersonal influence, social astuteness, and networking ability, as well as a high level in apparent sincerity dimension. On another scene, the study of **Sen et al. (2021)** displayed an average level of PSs' perception among nurses.

Additionally, **Montalvo (2015)** and **Feitosa et al. (2021)** studies reported that the nurse supervisors with a low level of PSs engaged in more offensive behaviors and a sense of psychological entitlement, especially in stressful work settings. In contrast, nurse supervisors with a high level of PSs utilized it as a self-control mechanism to change negative or bad behaviors to attain their goals, as well as have an extraordinary level of understanding and influence their NS to support organizational performance. The findings of **McAllister et al. (2018)** study described the highly politically skilled personnel as having more opportunities to interact, communicate, and collaborate with others, which improves the scope and the success rate of influence.

In other words, **Ali and Johl (2020)** findings discovered that the nurse supervisors' lack of managerial support and shared feelings could affect NS' abilities in caring for their

patients. When the NS experience ignorance and work alienation from their supervisors in their workplace, it develops a sense of social pain, which consequently leads to undesirable outcomes. The nurse supervisors with a high level of political skills have a better understanding of their social environment during times of hardship and detect the type of resources that help them in achieving their targets. Furthermore, **Wang and McChamp (2019)** stated the importance of the PSs congruence between leaders and their followers that enhance subordinates' performance, create a good organizational climate, and generate competitive environments.

On the contrary, the study's findings of **Movahedi et al. (2020)** determined that the nurses who perceive the political work environment will have higher levels of stress, turnover intention, and burnout, and lower levels of job satisfaction. Therefore, NMs should use compassionate behaviors and nonpolitical workplace practices to improve their work-related outcomes. According to **Feitosa et al. (2021)** findings, the causes of difference in PSs' perceptions among healthcare professionals are not diametrically opposed, but some of these PSs' dimensions have a dispositional component that encourages people to acquire them.

In the current study, NMs reported that ethical & legal activities were the most common practices followed by education, communication & information sharing, and finally preparation & planning during the PP. Otherwise, the NS sequenced the NMs' activities during the PP as communication & information sharing, ethical & legal practices, and education, lastly preparation & planning. While NMs and NS ordered the activities of RP as incident management, intervention, safety and security, and lastly psychological care respectively.

It was observed that NMs' roles during COVID-19 were rated as high mean score in stringent activities related to organizational policies, which required a high level of commitment and obligation as the implementation of ethical and legal rules, educational training programs, and information sharing while giving the least mean score for preparation and planning activities of the disaster. Likewise, NMs focused on operational activities related to managing incidents' events and patient care execution over using protective measures or psychological care of their NS.

In this regard, **Mao et al. (2021)** study assessed the core competencies of nursing disaster among the Chinese NMs and advanced practice nurses, the study stated that the activities encompass the domains of communication, incident management, safety and security, assessment and intervention, respectively. Additionally, the NMs demonstrated competence in other domains as preparation and planning, recovery, and laws and ethics, respectively. While, **Labrague et al. (2018)** conducted a systematic review of scientific nursing literature from 2006 to 2016 on the preparedness of NS of disaster response, which revealed insufficient preparation and lack of confidence of effectively managing the crisis.

The majority of NMs were satisfied with their activities during COVID-19's PP and RP. At the same time, NS were satisfied with NMs' activities of communication & information sharing, ethical & legal practice, education, incident management, and intervention. While the majority of NS were unsatisfied with preparation & planning, safety & security and psychological care activities. In generals, both NMs and NS were satisfied with the overall score of NMs activities during Covid-19 outbreak.

Possible explanations of these findings are that NMs and NS have unfamiliar with crisis-planning skills, resulting in a lack of experience and opportunities to grow their expertise. The disparity of perceptions could be explained by the fact that most NMs had more years of experience, were older and had least qualifications of BNS, which allowing them to think out of the box and utilize nontraditional solutions to keep workflow running smoothly.

These findings corresponded with the Ghanaian study of **Afulani et al. (2021)**, which revealed that the healthcare personnel including nursing leaders had low perceived COVID-19 preparation associated with elevated levels of stress and burnout, that mediated by fear of infection. Moreover, the European study of **Karnjuš et al. (2021)** showed the NMs'

perceived the core disaster nursing competencies' responsibilities as most important and greatly recommended during the unexpected events of crisis management incorporating the skills preparation and planning, communication, management of incident, safety and security, intervention, and law and ethics.

In this context, the study conducted by **Edmonson et al. (2016)** identified that the essential competencies for nurse leaders during management crisis are innovative critical thinking and communication skills expressed in the form of compassion, courage, assurance, perseverance, and influence. Furthermore, the findings of **Jankelová et al. (2021)** and **Karnjuš et al. (2021)** found that NMs should focus especially on the trustworthiness, transparent, and fast sharing of information in a timely manner, as well as psychological care which maintenances the performance of the healthcare teams during the acute stage of a crisis.

The common finding among the reviewed literature is that nurses are not ready to deal with COVID-19 disaster preparation and response according to **Labrague et al. (2018), ICN (2020), Monica et al. (2020), Afulani et al. (2021)**. The Saudi study of Baalharith and Pappiya (2021) exhibited that nurses have a high level of awareness and knowledge towards the COVID-19 PP and RP. While the Egyptian study of **Khalil et al. (2019)** revealed an unsatisfactory level of both knowledge and practice pertaining to the preparedness of disaster management. In addition, **Sultan et al. (2020)** study showed good preparedness of nurses in all theoretical aspects of disaster management, but weakness in their skills and practical performance.

This study's analysis highlighted the statistically significant differences between the overall score of PSs and NMs' number of children and years of experience. Moreover, statistically significant differences were found between the overall score of PSs and NS' marital status, qualifications, types of contract, years of experience, number of working hours/week, an average salary/month, as well as with average number of patient census/day, an average number of nursing staff/shift, and methods of delivering care. These findings can be justified that the NMs who had less than five years of experience or had three (more) children tended to utilize their PSs to gain power, and influence others, as well as manage the perplexing situation and accomplish their objectives.

On the other side, NS who were married, had less education or experience, worked full time or more than 36 hours/day tended to rely on their political skills to access information, resources, and obtain their personal needs, as did nurses who earned a salary less than 2000 / month, had less than 5 nursing staff/shift and used case method. In this aspect, **El-khateeb (2020)** concluded her study with the presence of extreme relations between head nurses' demographic characteristics of age, gender, qualification, department, and years of experience and their total political skills.

Sen et al. (2021) claimed no statistically significant difference was found between nurses' PSs dimensions and their gender, and occupational experiences except for social networks skill. Additionally, this study recorded that nurses with management responsibilities scored significantly higher in the sub-dimension of PSs than those without, whereas nurses who worked in inpatient units scored significantly lower in this sub-dimension than nurses worked in other units. Furthermore, **Montalvo (2015)** declared that females have a stronger association with leaders' PSs than men.

In this scene, the results of Montalvo and **Byrne (2016)** discovered that high-level PSs are required to improve nurses' networking ability, interpersonal influence, and socialization processes to attain organizational and personal career goals. Additionally, the findings of **Clarke et al. (2021)** demonstrated that healthcare leaders practice PSs in the implementation of organizational change based on five themes: personal performance, contextual awareness, inter-personal influence, stakeholder engagement, networks, and alliances, and influence on policy processes.

From NMs' perspective, the study's analysis also displayed positive significant relation between the overall score of COVID-19 activities and their years of experiences, the number of working hours/ week, and the method of delivering care. From NS' perspective, there

was a positive significant relationship between overall score of COVID-19 activities and NS' qualifications, types of contract, years of experiences, the number of working hours/week, the average salary/month, the average number of patient census/days, the average number of nursing staff/shift, and methods of delivering care. These findings may be related to that the NMs who had more experience, worked for long hours, and used different methods of delivering care were more active in performing their activities.

In this regard, **Gab Allah (2021)** study highlighted a significant relationship between future challenges of Covid-19 faced by NMs and their age, level of education, and governmental place of working. Furthermore, the Sweden study of **Murphy et al. (2021)** identifies a positive association between disaster preparedness and self-assessment competencies of registered nurses who worked in emergency departments with their experience years and education.

It is worth noting that the current study's dominant finding indicated overestimation of NMs' self-assessment than NS rated them in both political skills dimensions, as well as preparedness and response activities of Covid-19. This finding can be explained by the fact that NMs perceived themselves with more subjectivity. In agreement, the result of **Murphy et al. (2021)** study suggested significantly overvalue the registered nurses' disaster competency than actual performance.

Notably, the present findings shed light on positive relations between all PSs' dimensions and factors of COVID-19 activities except between managing networking with the activities of education, safety and security, psychological care, and incident management. This means that NMs' PSs enhance the achievement of their roles' activities during the COVID-19 outbreak. This finding is compatible with **Cairns (2017)**, **García-Chas et al. (2019)**, **Wang and McChamp (2019)** results, which stated the PSs as a positive tool that enhance subordinates' performance, create a good organizational climate, and generate competitive environments. **Chena et al. (2021)** results confirmed that PSs have the strongest promoting effect on their staff's sense of achievement in subjective career success and have the weakest promoting effect on economic returns in objective career success.

Limitations of the study:

This study had some limitations, including the use of an online survey with a convenience sample, which limits the generalizability of findings to all NMs and NS in Egypt, as well as bias. This technique was used to be appropriate due to the wide spread of the COVID19 pandemic. Furthermore, the participants were allocated via WhatsApp to the participants' groups that may experience internet issues, resulting in time constraints for all participants.

Conclusion:

The study concluded that the NMs had high levels of PSs, which reflected a leadership tool for using social power to attain their roles' activities during the COVID-19 crisis. The study's findings contributed to the increasing body of knowledge about NMs roles during the COVID-19 outbreak. The main result indicated overestimation of NMs' self-assessment than NS perceived them in both political skills, and Covid-19 activities. The majority of NMs were satisfied with their roles during PP and RP of Covid-19. Furthermore, NS was satisfied with NMs' activities of communication & information sharing, ethical and legal practice, education, incident management and intervention, but not satisfied with the activities of preparation and planning, safety & security and psychological support. There was a positive statistical significance difference between the overall score of two variables; PSs and NMs' roles during preparedness and responses of COVID-19 activities.

Recommendations:

Based upon the aforementioned findings, the study suggested the following recommendations.

- Provide continuous assessments of all NS categories on preparedness, responses, recovery, and evaluation of disasters.
- Develop a periodic in-service training program for NMs and NS about PSs and their

significance on their organizational climate to achieve personal and units' goals.
- Evolve training programs of COVID-19 issues due to the increasing frequency of virus mutation worldwide.
- Create practical procedures and protocols for dealing with crises, using illustrations to help them in understanding their roles.
- Set clear and reliable policies encouraging collaborative work between NMs and their NS within an organization, especially during a stressful environment and enhance critical thinking.
- Support both NS and NMs from organizational leadership, as well as allow their voices and pain to be treated transparently.
- Reconsider the content of nursing curricula related to teaching of disaster management and political skills application.
- Conduct longitudinal studies to identify the effectiveness of the PSs' privileges among NMs in achieving NS roles during the COVID-19 pandemic.

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