

Nursing Staff Perception Regarding Crises Management during Pandemics

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Abstract

Background: A crisis as pandemics has a tremendously harmful impact on organization and its ability to implement an original plan. Management is a crucial issue that affects the success or failure of any organization especially during crisis. **Aim:** To assess the nursing staff's perception regarding crises management during pandemics. **Research design:** A descriptive design was utilized. **Setting:** The study was conducted in all departments and ICU at Tanta Chest and Tanta Fever Hospitals which affiliated to Ministry of Health and Population. **Subjects:** all available nursing staff (340) of Tanta Chest hospital (n= 113) and Tanta Fever Hospital (n=227). **Tool:** Nursing Staff Perception about Crises Management Questionnaire was used. **Results:** 100% of nursing staff at Tanta chest and Tanta Fever hospital had a high perception level about crises management as well as about crises leadership. **Conclusion:** The nursing staff had a high perception level regarding crises management. **Recommendation:** Providing continuous assessment of all nursing staff on preparedness, response, recovery and evaluation of crisis management

Keywords: Crises management, Nursing staff, Pandemics.

Introduction

Crises or pandemics have a profound and detrimental impact on a global scale. They significantly disrupt healthcare organizations and their ability to execute their original plans. The pandemic presents unparalleled challenges, affecting the image, performance, and reputation of organizations, while also posing risks to our physical and mental health, safety, environment, and overall well-being. Therefore, it is essential to manage these challenges in an appropriate, effective, and timely manner (Bhattacharjee et al., 2020). Crisis management is the process of planning, coordinating, and executing strategies and actions to effectively handle and mitigate the impact of a crisis. It involves the identification, assessment, and response to an event or situation that poses a significant threat to an organization, community, or

society as a whole. The goal of crisis management is to minimize harm, protect lives and assets, maintain public trust and confidence, and facilitate the recovery and restoration of normalcy. This process typically includes activities such as establishing clear lines of communication, activating emergency response protocols, mobilizing resources and personnel, making critical decisions under pressure, and collaborating with relevant stakeholders (Riedel, P. L., Kreh, A., Kulcar, V., Lieber, A., & Juen, B. 2022).

Crisis management typically involves four stages: mitigation, preparedness, response, and recovery. The mitigation stage focuses on identifying and reducing potential risks and vulnerabilities before a crisis occurs (O'Neal et al., 2021). The preparedness stage involves planning and preparing for a crisis (Zürcher

et al., 2020). The response stage occurs when a crisis unfolds. The focus is on immediate response, containment, and minimizing further damage (Al Thobaity & Alshammari, 2020). The recovery stage begins once the crisis is under control. It involves efforts to restore normalcy, rebuild systems and infrastructure, address any long-term effects, and support affected individuals or communities (Paterson, C., Gobel, B., Gosselin, T., Haylock, P. J., Papadopoulou, C., Slusser, K., & Pituskin, E., 2020).

Crisis leadership plays a pivotal role in guiding organizations through tumultuous times, making it a critical aspect of effective crisis management. The importance of crisis leadership lies in their ability to provide direction, inspire confidence, and make decisive decisions during high-pressure situations.

A skilled crisis leader possesses the capability to remain calm, think strategically, and effectively communicate with stakeholders. Their ability to assess the situation, evaluate risks, and mobilize resources is vital in managing and resolving crises. Crisis leadership also involves the ability to adapt to rapidly changing circumstances, demonstrating agility and resilience (Goni-Fuste, B., Wennberg, L., Martin-Delgado, L., Alfonso-Arias, C., Martin-Ferreres, M. L., & Monforte-Royo, C. 2021).

Crisis leadership encompasses various dimensions that contribute to its effectiveness in navigating through crises. One important dimension is leadership traits which involve situational awareness, understanding the context, assessing the severity of the crisis, and anticipating potential challenges (Goni-Fuste et al., 2021).

Another dimension is decision-making, where crisis leaders are required to make tough choices promptly and confidently, taking into account the best interests of the organization

and its stakeholders (Raso R, Fitzpatrick JJ, Masick K, Giordano-Mulligan M, Sweeney CD ,2021). Effective communication is also a crucial dimension of crisis leadership, as leaders must communicate clearly, honestly, and transparently both internally and externally (Rubio, O., Estella, A., Cabre, L., Saralegui-Reta, I., Martin, M. C., Zapata, L., ... & Amblas, J, 2020).

Significance of the study

The study on nursing staff's perception regarding crisis management during pandemics is of significant importance as it provides valuable insights into the experiences and perspectives of frontline healthcare providers. Understanding their perceptions can help identify areas for improvement in crisis management strategies, enhance preparedness for future pandemics, and support the well-being of nursing staff that play a critical role in managing crises and providing quality patient care (Hahang, E., Bayraktar, S., & Jiménez, A, 2022).

Aim of the study

The present study aims to

Assess the nursing staff's perception regarding crises management during pandemics.

Research question

What are the levels of nursing staff perception regarding crises management during pandemics?

Study design

Descriptive design was used in present study.

Setting

The present study was conducted in all departments and intensive care units at Tanta Chest and Tanta Fever Hospitals which affiliated to Ministry of Health and Population.

Subjects

The study subjects were consisted of all available nursing staff (340) of Tanta Chest hospital (n= 113) and Tanta Fever Hospital

(n=227) and available at the time of data collection.

Tool of data collection

- The data of the study was collected using the following tool.

Nursing Staff ' Perception about Crises Management Questioners; This tool was developed by **Sekaran (2013)** and modified by the investigator based on related literature.

Samba C, Van K D, Miller C C, (2018),Hughes D J, Lee A, Tian A W, Newman A, Legood A, (2018). It aimed to assess nursing staff' perception of crises management. It consisted of three parts;

Part one: Personal characteristics of nursing staff include hospital name, age, gender, marital status, educational level, years of experience, position, department, and attendance of training about crises management.

Part two: Nursing Staff' Perception about Crises Management: It contained five stages of crises management as follows; -Discover alarm signals included 4 items, The preparedness and prevention included 11 items, containing the damage included 4 items, restoration of activity included 4 items and learning included 6 items.

Scoring system

Nursing staff' responses were measured on a five points Likert Scale which consisted of (1-5) degrees where (5) strongly agree, (4) agree, (3) neutral, (2) disagree, and (1) strongly disagree. The total score calculated by cut off points and summing scores of all categories. The total scores represent varying levels as follows:

- High perception level of crises management >75%
- Moderate perception level of crises management 60% - 75%
- Low perception level of crises management < 60%.

Part three; Nursing Staff Perception of Crises Leadership Questionnaire. This part

was developed by the investigator guided by **Sweetman & Oxfam, (2010)** and related. **Hughes & Al-Zahrani. (2018), Samuel et al., (2015).** It aimed to assess nursing staff perception about crises leadership. It covered three dimensions as follows: - Traits of crises leadership included 18 items, decision-making during a crisis included 11 items, and communications included 6 items.

Scoring system

Nursing staff responses were measured on a five points Likert Scale which consisted of (1-5) degrees where (5) strongly agree, (4) agree, (3) neutral, (2) disagree, and (1) strongly disagree. The total score calculated by cut off points and summing scores of all categories. The total scores represent varying levels as follows:

- High perception level of crises leadership >75%
- Moderate perception level of crises leadership 60% - 75%
- Low perception level of crises leadership < 60%.

Methods

1. An official permission was obtained from the Dean of Faculty of Nursing and the authoritative personnel of all departments of Tanta Chest and Tanta Fever Hospitals and submitted to the previously mentioned settings

2. Ethical considerations

- a) Approval from Scientific Research Ethics Committee of the faculty of nursing was taken with code (79)6-2022.
- b) Nature of the study didn't cause any harm or pain to the nursing staff.
- c) Nursing staff consent to participate in the study was obtained after explanation about the privacy and the confidentiality of information obtained from them, nature of the study and their right to withdraw from the study at any time.

d) Confidentiality and privacy was taken into consideration regarding data collection. A code number used instead of names.

3. Tool was translated into Arabic and presented to a jury of five experts in the area of specialty to check their content validity and clarity of questionnaire. Necessary modifications were done including; clarification, omission of certain items and adding others and simplifying work related words.

5. A pilot study was carried out on a sample (10%) of nurses (n= 38) nurses, and they excluded from the main study sample during the actual collection of data. A pilot study was carried out after the experts' opinion and before starting the actual data collection. The pilot study was done to test clarity, sequence of items, applicability, and relevance of the questions and to determine the needed time to complete the questionnaire. According to feedback from pilot study, the tool was modified by the researcher.

6. Reliability of tool was tested using Cronbach Alpha Coefficient test. Reliability of tool, part (II) nursing staff's perception of crises management = 0.726 and reliability of part (III) nursing staff' perception of crises leadership =0.871

7. Data collection phase: the data were collected from nursing staff by the investigator. The investigator met the respondents' nursing staff in different areas under study during working hours to distribute the questionnaire. The subjects recorded the answer in the presence of the investigator to ascertain that all questions were answered. The data was collected over period of four months started from 1/5/2023 until 1/9/2023.

8. The estimated time needed to complete the questionnaire items from nursing staff was (20 -30) minutes

Statistical Analysis

Data were fed to the computer and analyzed using IBM SPSS software package version

20.0. (Armonk, NY: IBM Corp) Qualitative data were described using number and percent. The Kolmogorov-Smirnov test was used to verify the normality of distribution Quantitative data were described using range (minimum and maximum), mean, standard deviation, median. Significance of the obtained results was judged at the 5% level.

➤ The used tests were

1 - Student t-test

For normally distributed quantitative variables, to compare between two studied groups.

2 - F-test (ANOVA)

For normally distributed quantitative variables, to compare between more than two groups.

3 - Pearson coefficient

To correlate between two normally distributed quantitative variables.

Results

Table (1): illustrates the nursing staff personal characteristics. As noticed in this table, 66.8% of nursing staff from Tanta Fever Hospital and 33.2 from Tanta chest hospital. The age of nursing staff ranged from 22.0 – 49.0 years and more than half (51.2%) less than 30 years with mean age 30.95 ± 5.31 . More than two third (62.9 %) of nursing staff were females, and more than three quarters (75.9%) of them were married. More than two third (65.9%) of nursing staff had bachelor's degree of science in nursing. Regarding years of experience, more than half (52.4%) of nursing staff were less than 5 years and the minority (5%) greater than 20 years with a mean value (\pm SD) of 6.94 ± 6.02 years. As regards to position, most (90.3%) of nursing staff were nursing and 5.6 % of them were head nurse, 3.5% were nursing supervisor and 6% were nursing director. Above forty (45.0 %) of nursing staff worked inpatient and majority (88.5%) of them attended training about crises management with a mean value (\pm SD) of 5.95 ± 4.90 .

Table (2) shows levels of nursing staff perception about crises management. The table illustrated that all nursing staff had a high perception level of crises management. Regarding crises management dimensions, majority (99.7, 94.7, 93.5, 91.8, 90%) of the nursing staff had a high perception level of preparedness and prevention, learning, containing damage, discover alarm signals, and restoration of activity dimensions of crises management, respectively.

Table (3) discloses levels of nursing staff perception of crises leadership. The table illustrates that all nursing staff had a high perception level about crises leadership. Regarding crises leadership dimensions, 100, 99.1, 98.5% of the nursing staff had a high perception level about traits of crises leadership, decision-making during a crisis and communications dimensions of crises leadership, respectively.

Table (4) displays correlation between nursing staff perception about crises management and crises leadership. As noticed from this table there was a highly statistically positive correlation between all dimensions of nursing staff perception of crises management and all dimensions of nursing staff perception of crises leadership $p=0.001$ except between nursing staff perception of discover alarm signals & nursing staff perception of traits of crises leadership & decision-making during a crisis. As well as, there was no correlation between containing damage & traits of crises leadership and communication. As well as, there was no correlation between nursing staff perception of restoration activity & nursing staff perception of traits of crises leadership. Also, the table a shows a highly statistically significant positive correlation was found between overall nursing staff perception about crises management and crises leadership $p \leq 0.001$.

Table (5) shows relation between % score for nursing staff perception about crises

management and personal characteristics. This table shows that there was no relation between all dimensions of nursing staff's perception about crises management and their hospital name, age, sex, marital status, level of education, years of experience, position, department and attending training about crises management, except between preparedness and prevention dimension and sex and learning dimension and years of experience there was a statistically significant relation $p \leq 0.05$.

Table (1): Nursing staff' personal characteristics (n = 340)

Personal characteristics	No.	%
Hospital Name		
Tanta Chest hospital	113	33.2
Tanta Fever Hospital	227	66.8
Age		
<30	174	51.2
30-<40	137	40.3
≥ 40	29	8.5
Min. – Max.		22.0 – 49.0
Mean ± SD.		30.95 ± 5.31
Median		29.0
Gender		
Male	126	37.1
Female	214	62.9
Marital Status		
Married	258	75.9
not married	82	24.1
Level of Education		
Bachelor of Science in nursing	224	65.9
Technical Nursing Institute	81	23.8
Nursing secondary School Diploma	35	10.3
Post-graduate studies	0	0.0
Years of Experience		
<5	178	52.4
5 - <10	80	23.5
10-<15	26	7.6
15-<20	39	11.5
≥20	17	5.0
Min. – Max.		0.0 – 26.0
Mean ± SD.		6.94 ± 6.02
Median		4.0
Position		
Nursing director	2	0.6
Nursing supervisor	12	3.5
Head nurses	19	5.6
Nurse	307	90.3
Department		
Chest hospital		(n = 113)
Intensive care unit	32	28.3
Inpatient	55	48.7
Emergency unit	17	15.0
Nursing administration	9	8.0
Tanta Fever hospital		(n = 227)
Intensive care unit	48	21.1
Inpatient	98	43.2
Emergency unit	35	15.4
Hemodialysis unit	20	8.8
Nursing administration	12	5.3
Neonatal Intensive care unit	14	6.2

Personal characteristics	No.	%
Are you attending training about crises management?		
Yes	301	88.5
No	39	11.5
If yes; how many courses did you attend? (n = 301)		
Min. – Max.		1.0 – 21.0
Mean ± SD.		5.95 ± 4.90
Median		4.0

SD: Standard deviation

Table (2): Levels of nursing staff' perception about crises management (n = 340).

Crises management dimensions	Low		Moderate		High	
	No.	%	No.	%	No.	%
1. Discover alarm signals	0	0.0	28	8.2	312	91.8
2. Preparedness and prevention	0	0.0	1	0.3	339	99.7
3. Containing the damage	0	0.0	22	6.5	318	93.5
4. Restoration of activity	0	0.0	34	10.0	306	90.0
5. Learning	1	0.3	17	5.0	322	94.7
Overall	0	0.0	0	0.0	340	100.0

Table (3): Levels of nursing staff' perception of crises leadership (n = 340)

Crises leadership dimensions	Low		Moderate		High	
	No.	%	No.	%	No.	%
- Traits of crises leadership	0	0.0	0	0.0	340	100.0
- Decision-making during a crisis	0	0.0	3	0.9	337	99.1
- Communications	0	0.0	5	1.5	335	98.5
Overall	0	0.0	0	0.0	340	100.0

Table (4): Correlation between Nursing staff' perception about crises management and crises leadership.

Crises management dimensions		Crises leadership dimensions			
		Traits of crises leadership	Decision-making during a crisis	Communications	Overall
- Discover alarm signals	r	0.053	-0.036	0.128*	0.059
	p	0.331	0.510	0.018*	0.282
- Preparedness and prevention	r	0.117*	0.380*	0.356*	0.338*
	p	0.032*	<0.001*	<0.001*	<0.001*
- Containing the damage	r	0.024	0.186*	0.000	0.093
	p	0.656	0.001*	0.998	0.087
- Restoration of activity	r	0.024	0.222*	0.121*	0.142*
	p	0.653	<0.001*	0.026*	0.009*
- Learning	r	0.182*	0.165*	0.125*	0.230*
	p	0.001*	0.002*	0.022*	<0.001*
- Overall	r	0.175*	0.395*	0.330*	0.378*
	P	0.001*	<0.001*	<0.001*	<0.001*

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

Table (5): Relation between % score for nursing staff' perception about crises management and personal characteristics

Demographic Data	N	Nursing staff perception about crises management					
		Hospital management	Preparedness and prevention	Containing the damage	Restoration of activity	Learning	Overall
		Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Hospital Name							
Tanta Chest hospital	113	87.94 ± 7.64	88.44 ± 3.78	89.33 ± 5.64	87.06 ± 8.59	88.24 ± 5.57	88.26 ± 2.78
Tanta Fever Hospital	227	88.90 ± 7.15	89.88 ± 4.52	88.13 ± 6.94	87.0 ± 6.79	87.0 ± 6.80	88.51 ± 3.18
t (p)		1.142 (0.254)	3.103*(0.002*)	1.583 (0.114)	0.062 (0.951)	1.668 (0.096)	0.720 (0.472)
Age							
<30	174	88.29 ± 7.26	89.58 ± 4.16	88.29 ± 6.91	87.72 ± 7.57	87.60 ± 6.03	88.56 ± 3.0
30-<40	137	88.69 ± 7.56	89.17 ± 4.56	88.87 ± 6.05	85.86 ± 7.51	87.20 ± 7.07	88.20 ± 3.28
≥ 40	29	89.87 ± 6.56	89.42 ± 4.39	88.36 ± 6.83	88.36 ± 5.21	87.36 ± 5.84	88.76 ± 2.05
F (p)		0.600 (0.549)	0.341 (0.711)	0.308 (0.735)	2.952 (0.054)	0.149 (0.862)	0.725 (0.485)
Sex							
Male	126	88.44 ± 7.38	89.05 ± 3.92	87.45 ± 7.22	87.50 ± 7.83	88.29 ± 6.03	88.38 ± 3.03
Female	214	88.67 ± 7.30	89.60 ± 4.56	89.16 ± 6.05	86.74 ± 7.18	86.90 ± 6.63	88.46 ± 3.07
t (p)		0.274 (0.784)	1.133 (0.258)	2.345*(0.020*)	0.911 (0.363)	1.941 (0.053)	0.242 (0.809)
Marital Status							
Married	258	88.83 ± 7.18	89.65 ± 4.42	88.20 ± 6.73	87.26 ± 7.10	87.26 ± 6.60	88.51 ± 3.07
Unmarried	82	87.80 ± 7.73	88.61 ± 3.97	89.56 ± 5.90	86.28 ± 8.36	87.91 ± 5.91	88.16 ± 2.98
t (p)		1.108 (0.269)	1.901 (0.058)	1.635 (0.103)	1.039 (0.300)	0.795 (0.427)	0.906 (0.366)
Level of Education							
Bachelor of Science in nursing	224	88.53 ± 7.01	89.44 ± 4.32	88.09 ± 6.99	87.0 ± 7.56	87.41 ± 6.81	88.37 ± 3.20
Technical Nursing Institute	81	88.97 ± 7.92	89.28 ± 4.38	89.66 ± 5.52	87.27 ± 6.28	87.86 ± 5.48	88.72 ± 2.71
Nursing secondary School Diploma	35	88.04 ± 7.93	89.42 ± 4.48	88.75 ± 5.63	86.61 ± 8.99	86.43 ± 6.09	88.13 ± 2.78
Post-graduate studies	0	–	–	–	–	–	–
F (p)		0.213 (0.808)	0.039 (0.962)	1.747 (0.176)	0.100 (0.905)	0.604 (0.547)	0.577 (0.562)
Years of Experience							

<5	178	88.73 ± 7.06	89.66 ± 4.18	88.10 ± 6.96	87.57 ± 7.75	87.41 ± 6.06	88.56 ± 2.96
5 - <10	80	88.13 ± 7.68	89.35 ± 3.90	89.69 ± 5.97	86.41 ± 7.56	88.70 ± 6.47	88.69 ± 3.19
10-<15	26	87.50 ± 6.61	89.25 ± 5.62	87.26 ± 6.96	84.86 ± 6.42	86.54 ± 8.02	87.57 ± 3.84
15-<20	39	89.58 ± 8.40	88.23 ± 5.00	88.30 ± 5.77	86.70 ± 7.05	84.83 ± 6.72	87.51 ± 2.84
≥20	17	88.60 ± 7.07	89.84 ± 4.03	90.07 ± 5.44	88.24 ± 4.88	88.73 ± 5.47	89.25 ± 1.70
F (p)		0.418 (0.796)	0.923 (0.451)	1.315 (0.264)	1.067 (0.373)	2.720*(0.03 0*)	1.959 (0.100)
Position							
Nursing director	2	84.38 ± 4.42	89.77 ± 4.82	81.25 ± 8.84	93.75 ± 8.84	93.75 ± 2.95	89.22 ± 1.83
Nursing supervisor	12	86.98 ± 6.77	87.31 ± 2.65	88.02 ± 4.96	91.67 ± 6.15	92.36 ± 5.57	89.01 ± 1.73
Head nurses	19	87.50 ± 5.89	88.04 ± 3.54	88.82 ± 7.09	86.18 ± 9.45	88.38 ± 6.15	87.89 ± 3.05
Nurse	307	88.74 ± 7.43	89.56 ± 4.41	88.58 ± 6.57	86.85 ± 7.28	87.12 ± 6.42	88.43 ± 3.10
F (p)		0.597 (0.617)	1.712 (0.164)	0.863 (0.460)	2.277 (0.080)	3.437* (0.017*)	0.389 (0.761)
Department							
Intensive care unit	80	88.13 ± 8.24	88.92 ± 4.45	89.14 ± 6.73	87.50 ± 8.26	88.18 ± 5.91	88.49 ± 3.07
Inpatient	153	88.73 ± 7.17	89.53 ± 4.11	88.48 ± 6.46	87.09 ± 6.98	87.12 ± 6.59	88.44 ± 3.08
Emergency unit	52	87.50 ± 7.11	89.55 ± 4.18	88.34 ± 6.55	85.94 ± 9.0	87.66 ± 5.83	88.21 ± 3.13
Hemodialysis unit	20	88.75 ± 7.48	90.11 ± 5.07	87.81 ± 5.54	86.25 ± 5.95	85.62 ± 8.39	88.15 ± 3.31
Nursing administration	21	90.18 ± 5.44	89.07 ± 4.58	88.99 ± 7.10	87.20 ± 4.18	88.10 ± 6.63	88.75 ± 2.38
Neonatal intensive care unit	14	91.07 ± 6.35	89.61 ± 5.62	86.61 ± 7.70	88.39 ± 6.87	86.90 ± 6.71	88.67 ± 3.22
F (p)		0.825 (0.532)	0.371 (0.868)	0.455 (0.810)	0.429 (0.829)	0.675 (0.643)	0.156 (0.978)
Are you attending training about crises management?							
Yes	301	88.35 ± 7.41	89.51 ± 4.34	88.46 ± 6.66	87.13 ± 7.40	87.32 ± 6.47	88.42 ± 3.14
No	39	90.38 ± 6.39	88.52 ± 4.23	89.10 ± 5.68	86.22 ± 7.61	88.14 ± 6.23	88.46 ± 2.26
t (p)		1.637 (0.103)	1.347 (0.179)	0.580 (0.562)	0.719 (0.473)	0.749 (0.454)	0.094 (0.926)

t: Student t-test

F: F for One-way ANOVA test

SD: Standard deviation

*: Statistically significant at $p \leq 0.05$.

Discussion

The COVID-19 pandemic has created unique demands and new concerns for crisis management and crisis communication in the health care sector **Coombs, (2020)**. Crisis management is a process of dealing with a threat to a disorganization's efficiency, the lives of their staffs and the image of the organization among their various stakeholders **Buama, (2019)**. A complex crisis such as the current pandemic poses new demands for leadership and makes crisis management one of the most important tasks of organization **Heide & Simonsson, (2021)**: **Nursing staff' perception about crises management:**

The results of the current study revealed that all of the nursing staff had high perception crisis management. As well, majority of them had high perception level of preparedness and prevention, learning, discover alarm signals, containing damage and restoration of activity dimensions of crises management. This due to the heightened awareness and training provided to nursing staff in response to the pandemic as majority of nursing staff attended training program about crisis management as evidenced in table 1.

These results supported by a study conducted by **Winarti & Gracya, (2023)** whose study indicated that more than half of nurses perceived their disaster competencies as high. Likewise, **Chegini Z, Arab-Zozani M, Kakemam E, Lotfi M, Nobakht A, Aziz Karkan H, (2022)** who declared that most of studied nurses had good perception regarding disaster management and core competencies. Also, these results agreed with a study conducted by **Mohamed & Bayoumy, (2018)** who reported that nursing staff working had high perception regarding crisis management. Also,

While, these results were inconsistent with a study conducted by **Badparva B, Maroufizadeh S, Eslami-Kenarsari H, Abdollahi S, Babakian P, Sayyad S, Pourvakhshoori N, (2023)** which reflected that most of the participants believed that the managers' performance during the pandemic was at a medium level. Moreover, a research conducted by **Ozmen & Arslan Yurumezoglu, (2022)** reported that nurse managers had trouble with fulfilling their managerial roles during the COVID19 pandemic.

Nursing staff' perception of crises leadership

As regard total levels of crises leadership dimensions as perceived by the studied nursing staff, the current study showed that all of them perceived high level of traits of crises leadership and most of them perceived high level of decision-making during crisis and communications dimensions of crises leadership. In addition, all of the studied nursing staff perceived high level of total crisis leadership during pandemic.

This may be due to the rigorous training and preparation that nursing staff undergo, particularly in handling crises situations. Nursing professionals are often trained to remain calm and composed under pressure, making them naturally inclined towards exhibiting traits of crises leadership during challenging times. Additionally, the nature of their work demands quick and effective decision-making, especially in crisis scenarios where split-second decisions can have significant impacts on patient outcomes. The emphasis on communication within health care teams further strengthens their ability to coordinate and lead during crises. Moreover, the heightened awareness and importance of crisis management during a

pandemic could have contributed to the perception of high levels of crisis leadership among the studied nursing staff, as they are on the front-line dealing with the immediate impacts of such situations.

These findings were compatible with a study conducted by **Ali FR, Elsharawy AM, M Abdelmonem A, (2023)** found that the highest percentage of the studied nurses perceived high level of crisis leadership during COVID-19. In this concern, **Kim, (2021)** argued that the key attributes of crisis leadership—clear, fast, and frank communication and a high degree of collaboration; sharing of information; decision-making and fair prioritization; building trust; and competency of the leader—are characteristics that improve crisis leadership in public health emergencies.

Likewise, a study carried out by **Reed & Fitzpatrick, (2024)** reported that approximately half of the participants perceived medium level of crisis leadership. Conversely, a study conducted by **Samuel P, Griffin M, White M, (2015)** reported a high level of crisis leadership

On contrary, **Kagan I, Shor R, Ben Aharon I, Yerushalmi S, Kigli-Shemesh R, Gelman S, Itzhaki M ,(2021)** whose study revealed that nurse leaders have felt difficulties leading and communicating to and with staff through screens during the pandemic. In this concern, **Heide & Simonsson, (2021)** argued that leaders during pandemic crisis need to be more creative and flexible with their communication strategies, focusing on sense-making and listening.

Correlation between Nursing staff' perception about crises management and crises leadership.

The two variables in the current study had a very strong positive association in terms of

statistics between nursing staff perception of the overall crises management and the overall crises leadership. In addition, there was a highly statistically positive correlation between all dimensions of nursing staff perception of crises management and all dimensions of nursing staff perception of crises leadership except between nursing staff perception of hospital management, traits of crises leadership and decision-making during crisis. As well as, there was no correlation between nursing staff perception of restoration activity and nursing staff perception of traits of crises leadership.

Thus, incorporation of leadership activities helps to ensure sustainability of collaborative and empowering environment within health care organizations thus, it affects the crisis management during COVID-19. Correspondingly, **Gyekye, (2023)** whose study affirmed that there was positive correlation between effective nursing leadership and management during the COVID-19 pandemic.

Relation between nursing staff perception about crises management and their personal characteristics.

The results of the current study showed that relations between preparedness and prevention dimension, learning dimension and nurses' sex were statistically significant. Also, statistically significant relation was found between learning dimension and nurses' years of experience. This can be interpreted as female nurses possess higher mean score of preparedness and prevention dimension than males, while male nurses have higher mean score of learning dimension than females. As well, nurses who have more than 20 years of experience were more likely to have higher mean score of learning dimension than others.

Al Thobaity A, Plummer V, Innes K, Copnell B, (2015) found that there was significant relation between nurses' perception regarding learning dimension and their years of work experience. In contrast, **Martono M, Satino S, Nursalam N, Efendi F, Bushy A., (2019)** whose study reported that there was no significant association between nurses' perception regarding preparedness and their sex.

These findings agreed with the findings of **Hasan MK, Younos TB, Farid ZI, (2021)** which reported that there was significant association between nurses' perception regarding preparedness and their sex. In the opposite line, a study carried out by **Al Khalaileh MA, Bond E, Alasad JA, (2012)** indicated that, there wasn't association between nurses' perception regarding preparedness for crisis management and their gender.

Regarding years of experience, the current study findings demonstrated that nurses who have more than 20 years of experience were more likely to have higher mean score of learning dimension than others. This may be due to the accumulation of knowledge, skills, and expertise that comes with years of experience in the nursing profession. Nurses with over 20 years of experience have likely encountered various crises and emergencies throughout their careers, allowing them to develop a deeper understanding of effective crisis management strategies.

Conclusion

Based on the result of the present study it was concluded that all nursing staff at Tanta chest and Tanta Fever hospitala had a high perception level about crises management as well as about crises leadership. Also, there was high statistically significant positive

correlation between overall nursing staff perception of crises management & over all nursing staff perception of crises leadership.

Recommendations

For the hospital management

1. Accurate continuous implementation of crisis instructions which helps overcome any crises and succeed in establishing and maintaining safety.
2. The crisis management committee should maintain pre-prepared plan for overcoming crisis and make sure that all nursing staff steady recognize their roles, responsibilities and tasks during a crisis.
3. Holding emergency risk management plan to maintain coordination between different sectors of hospital maintaining risk assessment, prevention, preparedness, response and recovery.

For the nursing manager

4. Nursing manager should constantly educate the future generation of nurses about the possible course of actions to be followed in crisis circumstances.
5. Providing continuous assessment of all nursing staff categories on preparedness, response, recovery and evaluation of crisis management.
6. Creating practical procedures and protocols for dealing with crises, using illustrations to help nursing staff in understanding their roles.
7. Conducting training programs and workshop to the nursing staff for updating their knowledge and information about how to manage the crisis.

For the nursing staff

8. Participating in decision-making and problem solving and appreciate the development of innovative ideas regarding crisis management which raise the healthcare hospital's rank.

For further studies

9. Further research to assess factors affecting level of preparedness and performance of nursing staff during crisis management.
10. Educational program ought to be actively established and developed in a crisis management and applied to a wide range of courses in different places to ensure generalizability.

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