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Examining the impact of the COVID-19 pandemic on general self-efficacy among the frontlines

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ABSTRACT

This study aims to examine the impact of the COVID-19 pandemic on general self-efficacy among the frontlines in the northern region of the Kingdom of Saudi Arabia. This research employed a descriptive-correlational approach to examine the impact of the COVID-19 pandemic on general self-efficacy among the frontlines. The study took place at the major government hospitals in the northern region of Saudi Arabia. The researcher used simple random sampling to ensure the representativeness of the population. The frequency and percentage were utilized to determine the demographic profile of the respondents. T-test and one-way Analysis of Variance (ANOVA) were used to determine significant differences. Moreover, bivariate-r was used to test whether a statistically significant relationship exists between the variables. This study was conducted between November and December 2021. Nurses scored high on the impact of event scale (38.83±21.62) and general self-efficacy (25.93±6.88). There are significant differences found on gender to IES (t=2.110; p<0.36), ward assignment (t=244; p<.034), age (F=11.28; p<.001), and years of experience (F=10.11; p<.001). Conversely, no significant difference was found on gender to GSE (t=-.847; p>.398) ward assignment (t=-1.092; p>.253), age (F=.212; p>.932), and years of experience (F=.611; p>.655). Lastly, there is no significant relationship between the impact of COVID-19 and general self-efficacy (r=.170; P<.75). Despite the psychological effects of COVID-19, nurses still cope with the challenges. Male nurses, those assigned in the COVID-ward, aged 26-30 years old, and with 16 years and more experience were most affected during the COVID-19. No significant difference was found in demographic characteristics of GSE, and lastly, no significant relationship between the impacts of COVID-19 on GSE.

1. Introduction

The infectious disease, known as COVID-19, is critical to the well-being of healthcare professionals, which in turn has a detrimental impact on patient care (An et al., 2020). This may reduce the effectiveness of the healthcare system's response to the pandemic and create an uncontrolled incidence rate. Such a condition has simultaneously resulted in a reduction in the quality of life in terms of both physical and mental health (Lai et al., 2019) due to the high stress they experienced (Cao et al., 2020) and the risk of contracting the disease (Pasay-an et al., 2022). Indeed, the frontline healthcare workers have sacrificed their well-being and some have become infected or died, resulting in high levels of psychological stress (Liu et al., 2019). While this COVID-19 pandemic presents a unique set of challenges for healthcare professionals, especially their health, it is essential to support them through positive reinforcement. In this context, it may result in the healthcare workers having proactive behaviors towards response effectiveness. Therefore, the need to explore the general self-efficacy and quality of life among these healthcare professionals is paramount.

Drawing back from the experience of severe acute respiratory syndrome coronavirus 1 (SARS-CoV-1) 2003 outbreak, studies have found the same after-effects with the COVID-19 pandemic. For example, the psychological strain of working under such stressful conditions (Kang et al., 2018) can have a significant impact on the physical healthcare workers' well-being (Jones et al., 2020), and feel stigmatized because they were known to interact with sick patients (Lee et al., 2018; Pasay-an et al.,

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2022), and burnout (Kang et al., 2018). In addition, the degree of exposure to infected patients was linked to increased levels of distress among healthcare personnel (Kang et al., 2018). This exceptional ability of this COVID-19 pandemic to incite fear and subsequent inadequate psychological and social response adaption endangers the optimal quality of life (Woon et al., 2021). As such, this indicates the development of adequate evidence-based support that requires the identification of individual psychological disorders and their risk factors (Aoyagi et al., 2015; Xiang et al., 2020).

Aside from a multi-faceted and nuanced approach needed to help the healthcare providers in battling the after-effects of the COVID-19 pandemic, the emerging role of self-efficacy can be seen as valuable to the quality of life. Self-efficacy in this context is the conviction in one's ability to take on difficult or unfamiliar tasks and deal with adversity that arises from certain demanding situations (Cross et al., 2006). In this aspect, Bandura (1999) saw that people with high self-efficacy can recover more quickly from setbacks and remain committed to their objectives. A growing corpus of research has been founded on the role of general self-efficacy towards health behavior and quality of life. To Cramm et al. (2013), health behaviors and quality of life may be predicted through general self-efficacy. Also, it was found that improved self-efficacy is associated with better personal wellbeing, personal success, and a lower level of effective tiredness in healthcare workers (Milam et al., 2019). Moreover, Fatima and Jibeen (2019) found that self-efficacy was a better predictor of quality of life. While there is literature relating to the effect of the COVID-19 pandemic, there is a dearth of literature relating to self-efficacy to improve the quality of life of healthcare workers.

The significance of this study revolves within the context of engaging in self-efficacy among healthcare workers. This gives them the understanding to see challenges as opportunities rather than threats and that they are more organically motivated to battle the effect of COVID-19. In turn, these healthcare workers developed and strengthened their self-efficacy. Overall, policymakers can use the data to figure out how to improve the effectiveness of social initiatives aimed to mitigate the consequences of the COVID-19 pandemic and strengthen self-efficacy as a response to future pandemic circumstances. Therefore, this study aims to examine the impact of the COVID-19 pandemic on general self-efficacy among the frontlines in the Hail region, Kingdom of Saudi Arabia.

2. Materials and methods

2.1. Design

This research employs a quantitative-correlational approach to examine the impact of the COVID-19 pandemic on general self-efficacy among the frontlines.

2.2. Setting/sampling

The study took place at the government hospitals of Hail City. This includes Hail General Hospital, King Khalid Hospital, King Salman Specialist Hospital, and Convalescent hospital. The researcher used simple random sampling to ensure the representativeness of the population where 244 nurses (93.84% response rate) were asked to participate. Included in this study were nurses who understand English and nurses who have direct contact with the patient.

2.3. Data collection

Data collection commenced with the approval of the Institutional Review Board of the University of Hail. In addition, consideration has been made with the approval of the hospital directors of each participating hospital. A Google Form survey was sent to the participants where they were instructed to read the informed consent before proceeding to answer the questionnaire. Assurance to the participants was given that all data gathered are treated with the utmost confidentiality. This study was conducted between November and December 2021.

2.4. Questionnaire

This study used two questionnaires. The first is the impact of event scale (IES) (Weiss, 2007) which has 22 items that can be answered on a 5-point Likert scale ranging from 0 (not at all) to 4 (very) (significantly). According to Weiss (2007), while no particular cut-off score exists, scores larger than 24 should be considered concerning; the higher the score, the greater the risk and its related health and wellbeing effects. The second is the validated general self-efficacy scale adapted from Chen et al. (2001) consisting of eight Likert-type items with answers ranging from “Strongly disagree” to “Strongly agree. “The self-efficacy scale ranges from 1 to 5, with higher values indicating more self-efficacy.

The questionnaire was subjected to content validity to ensure relevance and purpose to measure. This adapted-modified questionnaire was pre-tested in the Hail region. The Cronbach's alpha coefficient of the questionnaire was computed to measure internal consistency, and reliability yielded to 0.87.

2.5. Data analysis

SPSS Version 21 was used to analyze the data. The frequency and percentage were utilized to determine the demographic profile of the respondents. The t-test and one-way Analysis of Variance (ANOVA) was used to determine significant differences. Moreover, bivariate-r was used to test whether a statistically significant relationship exists between the variables.

3. Results

3.1. Demographic profile of the participants

Table 1 presents the demographic profile of the participants. Of the 244 nurses who part took in the survey, the majority of them belonged to 31-35 years old (59.8%), primarily female (84 %), assigned to the non-COVID ward (68.9%), and had 6-10 years of experience (41.8%).

Nurses scored high on the impact of event scale (38.83±21.62) and general self-efficacy (25.93±6.88) (Table 2).

Table 1: Demographic profile of the participants (N=244)

Indicators		
Age		
25 years old and below	28	11.5
26-30 years old	64	26.2
31-35 years old	146	59.8
36 years old and above	6	2.5
Gender		
Male	39	16
Female	205	84
Assigned Ward		
COVID-Ward	76	31.1
Non-COVID Ward	168	68.9
Years of Experience		
5 years and below	68	27.9
6-10 years	102	41.8
11-15 years	69	28.3
16 years and above	5	2.04

Table 2: Participant's score on IES and GSE

	Mean	Std. Deviation
IES Score	38.88	21.62
GSE	25.93	6.88

There were significant differences found in gender to IES (t=2.110; p<0.36) with males having the highest mean (45.80±27.27) and ward assignment (t=244; p<.034) specifically those on the COVID ward (43.30±17.21). Also, the age was found to have a significant difference (F=11.28; p<.001) with those in the 26-30 age range (55.67±23.28) in particular, and years of experience (F=10.11; p<.001) having the 16 years and above (73.00±12.26) the most affected. Conversely, there is no significant difference were found on gender to GSE (t=-.847; p>.398) ward assignment (t=-1.092; p>.253), age (F=.212; p>.932), and years of experience (F=.611; p>.655). Table 3 shows differences between demographic profile and impact of COVID-19 and general self-efficacy.

Table 3: Differences between demographic profile and impact of COVID-19 and general self-efficacy

		Mean	SD	t/F	df	Sig. (2-tailed)
		Gender				
IES	Male	45.80	27.27	2.110	244	.036
	Female	37.20	20.10			
GSE	Male	24.87	8.08	-.847	244	.398
	Female	26.00	6.80			
		Ward Assignment				
Total IES Score	COVID ward	43.30	17.21	2.129	244	.034
	Non-COVID ward	36.64	22.29			
GSE	COVID ward	25.03	6.40	-1.092	244	.253
	Non-COVID ward	26.16	7.14			
		Age				
IES	25 years old and below	25.21	13.35	11.281	4,240	.001
	26-30 years old	55.67	23.28			
	31-35 years old	35.65	21.76			
	36 years old and above	37.03	19.36			
GSE	25 years old and below	26.71	7.14	.212	4,240	.932
	26-30 years old	26.29	8.63			
	31-35 years old	25.71	5.93			
	36 years old and above	25.33	4.50			
		Years of experience				
IES	5 years and below	43.42	24.79	10.11	4,240	.001
	6-10 years	38.65	21.04			
	11-15 years	33.86	15.116			
	16 years and above	73.00	12.76			
GSE	5 years and below	25.02	6.457	.611	4,240	.655
	6-10 years	26.56	6.978			
	11-15 years	25.65	7.161			
	16 years and above	27.00	6.502			

There was no significant relationship between the impact of COVID-19 and general self-efficacy (r=.170; P< .75) (Table 4).

Table 4: Relationship between the impact of COVID-19 and general self-efficacy

		GSE	Total IES Score
GSE	Pearson Correlation	1	.170
	Sig. (2-tailed)		
Total IES Score	Pearson Correlation	.170	1
	Sig. (2-tailed)	.75	

4. Discussion

This study aimed to determine the impact of COVID-19 on the general self-efficacy of nurses working in the government hospitals of the Hail region, Kingdom of Saudi Arabia. In this present study, nurses scored high in the impact of events suggesting that they perceived stress brought about by the COVID-19 pandemic. Such stress can impair the nurse's ability to deal with the situation and eventually pressure them to leave their job. This finding supports the report of Galletta et al. (2021), where more than 60% of the participating nurses perceived themselves as having a high level of stress. Meanwhile, despite the impact of COVID-19, nurses perceived themselves with higher general self-efficacy, suggesting that they can deal with the present difficult situation. Having higher scores in self-efficacy can be credited to their continuous acknowledgment from their managers of their effort in battling COVID-19. Indeed, according to Manojlovich (2005) that self-efficacy in nurses is linked to professional autonomy and empowerment. Such a result indicates that if management provides nurses with the necessary support, encouragement, and rewards, staff nurses can be empowered despite the risk to their job.

The variations found in gender to IES with which male nurses scored higher than their female counterparts suggest that males are more psychologically burdened than females. This can be explained that males are typically the breadwinners and provide for their families necessities, such as the fear of the financial cost of the pandemic, which could add to male nurses' psychological stress. Earlier studies of gender differences conducted on the impact of COVID-19 regarding gender disagree with the present finding. For example, López-Atanes et al. (2020) and Lai et al. (2020) asserted that women are more likely to suffer psychologically burdened. The disparities noted among male and female in this study disagrees with the previous study (Ahmed et al., 2020).

The work assignment, particularly for nurses in the COVID-ward, was found to have a significant difference with IES implying that nurses here were more affected. Working in an environment with constant exposure to persons infected with COVID-19 is expected to instill fear in nurses because of the higher probability of acquiring the infection. This fear contributes to stress that weakens their immune system (Segerstrom and Miller, 2004), and a psychological burden resulting in frustration in their work. Maben and Bridges (2020) explained that healthcare workers attending to patients are the most vulnerable to distress and anxiety among the demographics. This highlights the importance of providing psychological support for healthcare workers not just in the pandemic, but programs to train the nurses in combatting mental health burdens or anxiety must be in place.

The age of the nurses, particularly 26-30, has a significant difference in the impact of COVID-19. This suggests that the age of nurses can be a factor in the management of the effect of COVID-19. Indeed, it is a common fact that healthcare providers were all uneased about the expected impact of COVID-19 because of the constant exposure to their patients. However, Balkhy et al. (2010) claimed that older people have greater acquiescence and involvement in preventive measures. Furthermore, Cai et al. (2020) asserted that older employees were more anxious owing to weariness due to long working hours and a shortage of PPE, whereas younger employees were far more concerned about their families. This present finding of the study indicates that age is more likely at risk to battle the effect of COVID-19 and that nurse managers need to consider age in the program planning.

The nurses' years of experience were found to be significantly different from IES. This suggests that nurses with 16 years and above experience are perceived to have more effect of the COVID-19 pandemic on them. Earlier research confirms that healthcare workers having more work experience are more affected (e.g. fear, anxiety, and stress) (Alnazly et al., 2021). According to Pasay-an (2020), one probable explanation is that those with long experience were being recognized to have more competencies, and they are being considered exposed in the area during the pandemic. Their nurse managers saw these experienced nurses as having superior workplace control and a more robust command of the situation. While all nurses, regardless of their experience, are essential members of the healthcare team, this study indicates that, more effort in managing the impact of COVID-19 be given to those who have long experience. Such finding needs to be interpreted with caution as Cai et al. (2020) asserted that employees with no experience need more social support.

The gender, ward assignment, age, and years of experience were found no significant difference with general self-efficacy, which suggests that these variables are not causal factors for the nurses to bounce back and stay committed to their goals. Further, this demonstrates that these nurses are better at recovering from the impact of COVID-19 as

they can approach the COVID-19 pandemic with the expectation of being able to regulate them. According to Mukhtar (2020), the healthcare workers' resilience and wellness strategies should be supported, and they should be aware of the pressures that can arise in healthcare daily and how they are amplified in situations such as this pandemic.

There is no significant relation between COVID-19 and general self-efficacy, which means that notwithstanding the effect of COVID-19, nurses viewed such challenges as opportunities to better themselves rather than threats to avoid. Indeed, such present finding of this study agrees with Mo et al. (2021) where the impact of COVID-19, such as anxiety, has no relationship with self-efficacy. Nevertheless, hospital authorities need to guarantee the personal safety of nurses not only through preventive and precautionary measures but also by ensuring that nurses will receive proper training to battle the psychological effect of COVID-19. To this end, self-efficacy is essential for self when assessing and controlling possible vulnerabilities.

One of the limitations of this study is the non-translation of the questionnaire to Arabic, so the nurses who do not understand English are included. It is important as well that their perspective be included. The researcher recommends that cultural adaptation of the questionnaire be considered in future interrogation.

This study has implications for nursing management and nursing education. For nursing management, nurse managers need to look into the unique needs of the nurses considering the present situation and plan for an educational program that helps the nurses to muddle through such situations like COVID-19. This prepares nurses with the essential skills to deal intelligently with various practical difficulties in the future. Further, this study implies nursing education the concepts and principles of developing general self-efficacy. This helps the students acquire knowledge and skills for role preparation and personal development.

5. Conclusion

Despite the psychological effects of COVID-19, nurses still cope with the challenges. Male nurses, those assigned in the COVID-ward, aged 26-30 years old and 16 years, and more experienced nurses were most affected during the COVID-19. There was no significant difference was found in demographic characteristics of GSE, and lastly, no significant relationship between the impact of COVID-19 on GSE.

Compliance with ethical standards

Ethical consideration

This research has been approved and cleared by the Institutional Review Board of the University of Hail prior to disseminating online questionnaires (H-2021-012). Confidentiality, anonymity, and respect for the rights of the participants were fully assured in this study.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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