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Organizational Commitment, Job Insecurity, and Turnover Among Nurses During COVID-19: A Multi-Center Study in a Middle-Income Country

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Abstract: Background: The COVID-19 pandemic has placed unprecedented strain on nurses, especially those working in COVID-19 isolation units across the Middle East and African regions, including Egypt. This immense pressure has not only jeopardized their career paths but also disrupted organizational outcomes, creating long-lasting challenges for healthcare systems in Egypt. **Objectives:** This study endeavors to assess the affective organizational commitment, job insecurity, and turnover intention among nurses serving in COVID-19 isolation units. **Methods:** A cross-sectional descriptive research design was employed, utilizing proportional stratified random sampling of 120 nurses. A Google Form link was sent via email to eligible nurses, inviting them to complete an electronic web-based questionnaire package that included scales for affective organizational commitment, job insecurity, and turnover intention. Data collection took place between April 2023 and May 2024. The ANOVA test was used to compare between more than two categories and the student t-test was used to compare two categories for normally distributed quantitative variables. Additionally, Pearson coefficient was used for bivariate analysis. Regression analysis was utilized to predict factors affecting job insecurity and turnover intention. Significance of the obtained results was judged at the 5% level. **Results:** Majority of participants (88%) were female, and 60% were aged between 20 and 29. Among the single participants, 58.2% reported low affective organizational commitment, and 61.5% expressed a high intention to leave their jobs. Notably, low organizational commitment and high turnover intentions were observed in more than half of the single participants (58.2% and 61.5%, respectively), compared to their married counterparts. A negative and substantial relationship was detected by Pearson correlation test between affective organizational commitment with both job insecurity and turnover intention ($r= -0.225$, $p < 0.013$; $r= -0.227$, $p < 0.002$, respectively), highlighting the predictive role of affective organizational commitment in retention intention. This association was validated by linear and multiple regression analysis, which revealed that affective organizational commitment predicted job insecurity and turnover intention (B=-0.225, t=-2.509, P< 0.013; B= -0.305, t= -3.125, P<0.002). **Conclusions:** Participants reported lower scores in affective organizational commitment and higher scores in both job insecurity and turnover intention. A significant difference in organizational commitment and turnover intentions was observed based on marital status, with more than half of single nurses indicating an intention to leave, compared to nearly one-third of married nurses. The existing findings call for the development of resilience training programs and capacity-building workshops to help nurses adapt and cope with adverse and unforeseen situations, such as COVID-19.

Keywords: Affective Organizational Commitment, Job Insecurity, Turnover Intention, Nurses, COVID-19.

Introduction

Although COVID-19 struck worldwide, nurses have persisted at the vanguard and are actively involved in managing this universal crisis [1,2]. The adverse ramifications of the pandemic have left a noticeable impact on nurses' organizational trajectories, according to the World Health Organization (WHO). Earlier literature reported that nursing resources per 1,000 citizens are among the lowest in the Organization for Economic Cooperation and Development (OECD) region [3]. It is projected that the proportion of employed nurses and midwives will remain low until 2030. Likewise, it was outlined that the pandemic exacerbated immense job-related stress on staff that they hadn't experienced before, which affected their disposition to continue their professional trajectory as members of the organization [4]. The facet that would threaten their active involvement and participation in the workforce and assure organizational survival [5].

Affective organizational commitment is a positive feeling that reflects how much an employee identifies with, participates in, and feels emotionally attached to their organization [6]. As frontline healthcare providers, nurses have faced increased workloads due to heightened patient care responsibilities and intensified emotional strain caused by the nature of the pandemic [7,8]. A recent study on nurses' affective organizational commitment found a significant inverse relationship between emotional exhaustion, stress, and affective commitment. The overwhelming work demands can lead to insufficient personal resources to fulfill work-related commitments, causing nurses to lose trust in their organizations, weakening their emotional bonds, and exacerbating feelings of job insecurity [9,10].

Interestingly, the pandemic posed a considerable threat to nurses' sense of job security. Job insecurity is portrayed as "individuals' perceptions about the consequences of taking

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interpersonal risks in their work environment" [11]. Scholars have reported that the negative aftermaths of the pandemic intensified nurses' sense of job insecurity. This insecurity stemmed from several factors include, but not limited to, fears of contracting infection, work overload, scarcity of hospital supplies, the continual influx of COVID-19 cases and the uncertainty about the disease [12,13]. This, by virtue, has been found to adversely impact nurses' organizational commitment and increase their inclination to consider leaving the organization [14]. Historically, job insecurity was found to be affected by looming crises such as pandemics [15]. As such, the COVID-19 pandemic can influence feeling of security and consequently impact nurses' turnover and turnover intention. These findings were further confirmed by Tang et al. (2022), who reported that nurses' sense of job insecurity is a precursor of organizational turnover [16].

Nurse turnover has been recognized as a global healthcare system issue, particularly during the pandemic [17]. In an integrative review examining the prevalence of nurse turnover and turnover intention before and after the COVID-19 pandemic [17], it was found that, of the ten post-COVID-19 studies, two evaluated nurses' intention to stay and retention intention within the organization, with respective scores of 2.00 and 3.91 [18.19]. The other post-COVID-19 studies indicated that the mean score for nurses' intention to leave their jobs ranged between 2.23 and 3.42 [9, 20]. Additionally, the mean scores for professional turnover intention in two post-COVID-19 studies were 1.86 and 2.87, respectively [9, 21]. According to Nashwan and colleagues, turnover significantly increased from a mean of 13.24 to 15.54 [22]. Similarly, Said and El-Shafei's comparative study of 210 nurses from Zagazig Fever Hospital (ZFH), a COVID-19 triage hospital, and 210 nurses from Zagazig General Hospital (ZGH), a non-triage, non-isolation hospital, revealed significant differences in the nurses' intentions to leave their current positions (ZFH = 40.0%; ZGH = 30.5%), leave their organizations (ZFH = 45.2%; ZGH = 34.3%), and leave the nursing profession due to the impact of the pandemic (ZFH = 24.8%; ZGH = 10.0%) [23]. The professional turnover rates for nurses were measured in three of the 32 pre-COVID-19 studies, with rates varying from 11.2% to 42.2% [24, 25]. In contrast, 29 pre-COVID-19 studies assessed nurses' organizational turnover intention, with rates varying from 14.06% to 94% [21, 26]. The average intention of nurses to leave before COVID-19 ranged from 1.88 to 3.70 [27, 28].

The theoretical foundations and hypothesis formulation of the study

The study is grounded in both the Job Demands-Resources (JD-R) model and the Conservation of Resources (COR) Theory, which together provide a comprehensive understanding of organizational commitment, job insecurity, and turnover intention [29, 30, 31]. Both theories suggest that high job demands, coupled with a lack of resources, not only contribute to emotional exhaustion but also increase turnover intentions as employees seek more supportive work environments that better meet their needs [30]. For example, the JD-R model posits that job demands, such as heavy workloads and emotional strain, require sustained effort and can lead to stress and burnout, especially when job resources-like social support, autonomy, and opportunities for growth-are insufficient. This imbalance results in emotional exhaustion, reduced affective organizational commitment, increased job insecurity, and, consequently, higher turnover intention as employees become more concerned about their job stability [32]. Similarly, COR theory emphasizes that individuals strive to acquire and protect resources such as job security and emotional support to cope with stress. When these resources are scarce or threatened, employees experience stress, leading to diminished organizational attachment and heightened job insecurity and turnover intention [30].

Drawing upon the existing theoretical framework, the study hypothesizes that affective organizational commitment is negatively associated with both job insecurity and turnover intention. Specifically, nurses with lower levels of affective organizational commitment are expected to perceive higher job insecurity and exhibit an increased intention to leave their organization. Additionally, the research question was to explore whether affective organizational commitment influences job insecurity and turnover intention among nurses working in COVID-19 isolation units.

Significance of the study and Identified Knowledge Gap

Bae et al. (2021) signified that nurses' turnover intention is a costly and pressing agenda that compromises not only clinical outcomes but also the healthcare sector [33]. The World Bank estimates that global growth will shrink by roughly 8%, with low-income countries experiencing most of the impact [34]. This seems to be the same scenario in Egypt; the Egyptian health sector has witnessed chronic financial austerity across the Middle East and North Africa (MENA) regions because of the pandemic. Even though nurses' number in Egypt is growing on annual basis, the shortage of nurses compared to the vast population base is a substantial concern that cannot be overlooked. Unfortunately, nurse turnover exacerbates shortages and exerts an additional burden on the Egyptian health sector, which remains suffering from a substantial shortage of nurses, especially important following the COVID-19 pandemic [35]. This is indeed an area worthy of investigation, as it represents the first documented example in one of the largest Arab countries in the MENA region, such as Egypt, to assess organizational trajectories and their outcomes. This exploratory study addresses previous calls for research by conducting a secondary analysis of data collected from an evaluation of Mental Health First Aid as a supportive strategy for addressing organizational environment-related factors [36].

Unlike other professions, nurses experience significantly higher work-related stress compared to the general population. It is not surprising, therefore, that the unprecedented emotional stress and psychological repercussions among nurses were heightened during the pandemic, as evidenced by prior studies on the severe acute respiratory syndrome (SARS) epidemic. In this regard, the WHO emphasizes the need to prioritize the culture of psychological safety in the workplace to sustain nursing teams and guarantee their withstand amid any future outbreaks [34, 37]. Therefore, this study aims to investigate how the COVID-19 pandemic has impacted the organizational trajectories of nurses, with a particular focus on retention strategies in Egypt. The findings from this research could enable nurse managers to explore strategies that enhance nurses' affective organizational commitment and professional

productivity amidst similar future outbreaks. This, in turn, could support Egyptian's efforts to establish a foundation for building a more resilient community capable of withstanding adverse shocks such as the COVID-19 pandemic. This facet would contribute to propelling Egypt towards achieving the concept of “Leaving No One Behind” and regional sustainable development goals [38].

Considering that the Egyptian healthcare system was already fragile before the pandemic, investigating organizational commitment, job insecurity, and turnover intentions during the exceptional circumstances of the COVID-19 pandemic is particularly significant and cannot be overlooked. Understanding these dynamics is crucial for enabling healthcare organizations to implement targeted interventions that foster supportive work environments, enhance staff retention, and ensure workforce stability during future crises. The findings could help nurse managers and policymakers develop effective strategies to reduce nurse turnover during similar crises.

Operational Definition of Organizational Trajectories

The Organizational Trajectories, in this study, are concerned with assessing nurses’ affective organizational commitment, job insecurity, and turnover.

AIM

This study aims to assess the affective organizational commitment, job insecurity, and turnover intention among nurses serving in COVID-19 isolation units. Further objectives were to explore the associations between sociodemographic and work-related characteristics of nurses and their reported affective organizational commitment, job insecurity and turnover intentions.

Materials and Methods

Design

This study employed a cross- sectional retrospective descriptive research design. The retrospective design is a well-established approach as it allows researchers to efficiently gather data at a single point in time, providing a snapshot of the current state of a phenomenon. This approach is particularly useful for the rapid data collection required during the pandemic to evaluate nurses' experiences. It offers a comprehensive understanding of the potential correlations between variables of interest (e.g., organizational commitment, job insecurity, turnover intentions) within a specific population, which can inform future research or interventions. The study was conducted and reported in adherence to the guidelines for observational studies as outlined in the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement.

Setting

COVID-19 isolation units of two hospitals, namely Smouha University Hospital and Maamoura Chest Hospital.

Participants

The sample size was calculated using G*Power (version 3.1.9.7) [39] based on specified parameters, including a 95% power (1-β error probability), a medium effect size of 15%, and a 5% α error probability. This resulted in a minimum enrollment of 120 nurses. To ensure diversity in the sample, a quota convenience sampling technique sampling method was drawn based on shared attributes among nurses, such as gender, age, professional qualifications, and years of professional experience. Eligible nurses were grouped into strata reflecting these attributes, and a random selection was made from each stratum in proportion to its representation in the overall nursing workforce at the two participating hospitals. Participants who were eager to take part in this study and deliver direct nursing care to patients with COVID-19 were included. However, nurses who dealt with managerial or administrative work were excluded.

Questionnaires and study variables

Dependent Variables

Tool I. Emotional Commitment Scale (ECS)

This scale was used to measure affective attachment to an organization. The scale consists of six items rated on a Likert-type scale (e.g., 1 = strongly disagree to 5 = strongly agree), with higher scores indicating high emotional commitment level [40]. In the present study, the ECS was valid and reliable, as demonstrated by a Cronbach's α value of 0.83.

Tool II. Job Insecurity Scale (JIS)

This tool was endorsed to assess employees' perceptions of uncertainty and fear regarding the continuity of their current employment. The JIS typically includes 4- items rated on a five-point Likert scale (e.g., 1 = strongly disagree to 5 = strongly agree), with higher scores reflecting greater perceived job insecurity [41]. The scale demonstrated validity and reliability, with a Cronbach's α value of 0.89 in the current study.

Tool III. Turnover Intention Scale (TIS)

This is a widely used instrument to measure an individual’s inclination or intent to leave their current job or organization. The scale typically consists of 3-items rated on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating high intentions to leave [42]. The TIS has demonstrated strong reliability and validity in the current study (Cronbach's Alpha Coefficient=0.92).

Independent Variables

Socio-demographic and work-related characteristics such as nurses’ age, gender, years of experience, etc.….

Study Procedure

Data collection commenced after receiving ethical approval (IRB00013620/129/9/2023). A pilot study was conducted with 15 nurses who met the eligibility criteria to assess the feasibility, transparency, objectivity, and applicability of the measured constructs. These nurses were excluded from the main study. A list of participants was obtained from the head of the nursing staff after the study's purpose was explained. The names of eligible nurses who fulfilled the inclusion criteria were arranged alphabetically and randomly selected using a random number generator program. The eligible nurses were then contacted via email to invite them to participate in the study. The email included details about the study’s aim and objectives, potential benefits, and possible risks. Nurses who agreed to participate received a Google Form link via email to complete the electronic web-based questionnaire package. This package included a consent form, details of the study’s aim and objectives, and data collection tools. Three reminder emails were sent to encourage survey

completion. Data collection occurred between April 2023 and May 2024.

Statistical analysis

Data analysis was operated using SPSS version 23. For continuous variables, means and standard deviations were employed, whereas frequency and percentages were computed for categorical variables. The ANOVA test was used to compare between more than two categories and the student t-test was used to compare two categories for normally distributed quantitative variables. Additionally, Pearson coefficient was used for bivariate analysis. Moreover, Regression analysis was employed to predict factors affecting job insecurity and turnover intention. The significance of the obtained findings was judged at the level ≤ 0.05.

Results

More than half of study participants (60 %) exhibits that were between the ages of 20 to less than 30, with the majority of them being females (88%). More than half of the nurses were single, lived with their families, and had between 5 and 10 years of experience (56.75%, 58.3%, and 58.3%, respectively) (Table 1).

Table (1): Baseline Demographic and Work- related Characteristics of Nurses (n=120)

Demographic and Work- related Profile		(n= 120)	
		N	%
Age	20- <30	72	60.0
	30- <40	34	28.3
	40 - <50	14	11.7
	Mean ± SD	29.95 ± 7.29	
Gender	Male	33	27.5
	Female	87	72.5
Marital status	Single	68	56.7
	Married	48	40.0
	Divorced/ Widow	4	3.3
Educational attainment	Nursing school	20	16.7
	Technical Institute	69	57.5
	Bachelor of Nurses	25	20.8
	Postgraduate Nurses	6	5.0
Current Job description	Supervisor Nurses	10	8.3
	Staff Nurses	110	91.7
Income	Not enough	26	21.7
	Enough	80	66.7
	More than enough	14	11.7
Cohabitation	With spouse	50	41.7
	with family/ brothers	70	58.3
Hospital setting	Smouha University Hospital	68	56.7
	Maamoura Chest Hospital	52	43.3
Years of experience	1<5 years	22	18.3
	5<10 years	70	58.3
	≥10 years	28	23.3
Number of working hours/day	1-6 hrs.	36	30.0
	6-12 hrs.	60	50.0
	≥12 hrs.	24	20.0
Number of days off per week	One day	80	66.7
	Two days	34	28.3
	More than two days	6	5.0

In Figure 1. As per the data obtained, participants' affective job commitments obtained the lowest mean score compared to job insecurity, and turnover intention (9.70 ± 4.57, 14.2 ± 3.09, 15.11 ± 7.74, respectively).

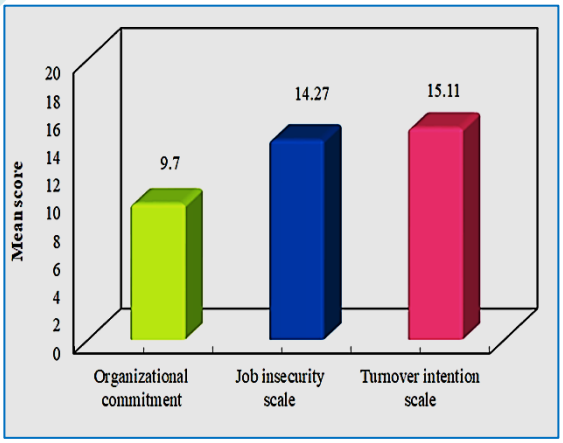

Figure (1): Organizational commitment and job insecurity and turnover intention among nurses.

Table 2 displays nurses' affective organizational commitment relates to their work-related and demographic attributes. Based on marital status, there is a notable difference in nurses' organizational commitment, with more than half of the single participants experiencing low organizational commitment (58.2%). The existing results could suggest that social support system might significantly affect nurses' organizational

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trajectory- outcomes. Paradoxically, cohabitation was significantly related to affective organizational commitment level, indicating that living with family/ brothers may exacerbate experience of low affective organizational commitment among participants. This finding indicates that, under certain circumstances, organizational support may be of substantial importance than the support received from one's social environment, or regardless of the presence of a social network.

Looking at table 3, a statistically significant correlation between nurses' sense of job insecurity and the number of days off per week was evident. Nurses who took only one day off per week showed a high rate of job insecurity (63.0%) compared to those who took two days off per week (31.5%). This highlights the potential impact of shorter hospital leave durations on nurses' experiences of job insecurity. The relationship between feelings of job insecurity and time spent in the hospital work environment, particularly amid the pandemic, suggests that prolonged exposure to a tense workplace leads to an increased sense of job insecurity.

Table 4 outperforms the nurses' turnover intention according to socio-demographic and work-related characteristics among nurses. A statistically significant correlation was found between turnover intention and marital status, with 61.5% of single nurses indicating an intention to leave compared to 36.3% of married nurses. Additionally, cohabitation was significantly related to turnover intention, indicating the influence of social factors on job-related organizational path.

The correlation matrix in table 5 displays that nurses' job commitment showed a nuanced significantly strong negative correlation with job insecurity scale with emotional commitment scores ($r= -0.225$, $p < 0.013$). Furthermore, there is a significant negative correlation between nurses' turnover intention with job commitment scores ($r= -0.227$, $p < 0.002$). The matrix also showed a significantly strong positive correlation between nurses' turnover intention and job insecurity scores ($r = 0.674$, $p < 0.001$).

With reference to linear regression analysis for the effect of affective organizational commitment on job insecurity displayed in Table 6. A negative association was observed between affective organizational commitment and job insecurity (Beta= -0.225). At the standard significance value of ≤ 0.05, the pvalue of 0.013 suggested that lower levels of affective organizational commitment are correlated with increased feelings of job insecurity.

Table 7 reflects the results of the regression model used to examine the independent relationship of affective organizational commitment with turnover intention, when the effects of other covariates were accounted for. Model 1 denotes that affective organizational commitment was negatively correlated with turnover intention (B= -0.305, t= -3.125, P<0.002). Models 2 reflects that the association between affective organizational commitment and turnover intention continued positively significant even after controlling the socio- demographic covariates. The increment in R2 was significant across the two models, explaining 10% of the variance in turnover intention ($F = 8.086$, $p <0.001$). In conclusion, this model highlights the significance of affective organizational commitment and place of residence (rural) in predicting and influencing nurses' turnover intention.

Discussion

Staff nurses, as healthcare providers working at the epicenter of the pandemic, played a pivotal role in combating the outbreak. Thus far, research suggests that nurses' experiences of stress are influenced by organizational climate [43]. Building on existing literature, this study validates the conceptual framework by examining the organizational trajectory of nurses working in COVID-19 isolation units. The organizational trajectory profile was examined by evaluating the affective organizational commitment, job insecurity, and turnover intention among nurses serving in COVID-19 isolation units.

The existing findings support evidence from the WHO that the COVID-19 continues to impose an enormous detrimental impact on nurses' clinical career paths across the globe [34]. In the current sample, the majority of participants exhibited low levels of affective organizational commitment, high job insecurity, and turnover intention at the field hospital, even after controlling for potential confounding covariates including cohabitation, marital status, as well as number of days off per week. This might be attributed to the ripple changes of the pandemic, which remain touchable in the clinical setting. Nurses remain challenged by the ever-increasing work-related factors such as increased workload and long working hours containing sporadic epidemics. It is possible that the findings of this study are indicative of work-related stress, as all the study respondents are working in the COVID-19 isolation units. Additionally, nurses who took only one day off per week showed a high rate of job insecurity compared to nurses who took two days off per week. Mohammadi et al. (2021a) reported that working in COVID-19 units is quite challenging compared to working in other hospital units [44]. It causes considerable mental strain and tension that surpasses nurses' capacity for endurance, extending beyond their abilities to preserve their psychological and mental equilibrium [45]. Skalski et al. (2022) also highlighted that nurses are suffering from dysfunctional thinking, which hinders their abilities to reappraise the sobering realism of the pandemic [46]. As they become mentally exhausted and drained out to deal with this critical scenario [47], The facets that might contribute to diminishing their job-related organizational path. In this context, Eweida et al. (2021) suggested that supplying nurses with mental preparedness at the time of global crisis such as COVID-19 pandemic is of prime importance [45]. The literature has identified several factors that positively influence nurses' perceptions of working conditions, thereby enhancing resilience [47,48]. These factors include the remuneration and compensation system, workplace justice, the treatment of nurses in healthcare, and affective organizational bonding and attachment to the workplace [36].

Table (2): Affective Organizational Commitment of Nurses in relation to Socio-demographic and Work-related Characteristics (n= 120)

	Affective organizational commitment				c2	MCp
	Low <50% (n=110)		High ≥50% (n=10)			
	No.	%	No.	%		
Age						
20- <30	66	60.0%	5	50.0%		
30- <40	32	29.1%	3	30.0%		
40 - <50	10	9.1%	2	20.0%	2.048	0.554
50 - ≤60	2	1.8%	0	0.0%		
Gender						
Male	30	27.3%	3	30.0%		
Female	80	72.7%	7	70.0%	0.034	1.000
Area of residence						
Urban	78	70.9%	7	70.0%		
Rural	32	29.1%	3	30.0%	0.004	1.000
Marital status						
Single	64	58.2%	4	40.0%		
Married	44	40.0%	4	40.0%		
Divorced/ Widow	2	1.8%	2	20.0%	10.70*	0.016*
Educational attainment						
Nurses school	18	16.4%	2	20.0%		
Nurses Technical Institute	66	60.0%	3	30.0%		
Bachelor of Nurses	22	20.0%	3	30.0%	63.395	0.067
Postgraduate Nurses	4	3.6%	2	20.0%		
Current Job description						
Supervisor Nurses	8	7.3%	2	20.0%		
Staff Nurses	102	92.7%	8	80.0%	1.944	0.196
Having children						
Yes	36	32.7%	3	30.0%	0.031	1.000
No	74	67.3%	7	70.0%		
Income						
Not enough	26	23.6%	0	0.0%		
Enough	72	65.5%	8	80.0%	3.545	0.138
More than enough	12	10.9%	2	20.0%		
Cohabitation						
Alone	0	0.0%	2	20.0%		
With spouse	46	41.8%	4	40.0%	10.08*	0.008*
with family/ brothers	64	58.2%	4	40.0%		
Hospital setting						
Smouha University Hospital	62	56.4%	6	60.0%	0.049	1.000
Maamoura Chest Hospital	48	43.6%	4	40.0%		
Years of nursing experience						
1<5 years	20	18.2%	1	10.0%		
5<10 years	64	58.2%	7	70.0%	0.411	0.903
≥10 years	26	23.6%	2	20.0%		
Number of working hours/day						
1-6 hrs.	30	27.3%	5	50.0%		
6-12 hrs.	58	52.7%	3	30.0%	2.578	0.281
≥12 hrs.	22	20.0%	2	20.0%		
Number of days off per week						
One day	76	69.1%	4	40.0%		
Two days	28	25.5%	6	60.0%	4.554	0.095
More than two days	6	5.5%	0	0.0%		

Table 3. Relationship between job insecurity with the socio-demographic and work-related characteristics of nurses (n = 120)

	Job insecurity				c2	MCp
	Low <50% (n=12)		High ≥50% (n=108)			
	No.	%	No.	%		
Age						
20- <30	9	75.0%	62	57.4%		
30- <40	1	8.3%	34	31.5%		
40 - <50	2	16.7%	10	9.3%	3.733	0.272
50 - ≤60	0	0.0%	2	1.9%		
Gender						
Male	5	41.7%	28	25.9%		
Female	7	58.3%	80	74.1%	1.342	0.307
Area of residence						
Urban	11	91.7%	74	68.5%		
Rural	1	8.3%	34	31.5%	2.801	0.177
Marital status						
Single	6	50.0%	62	57.4%		
Married	6	50.0%	42	38.9%		
Divorced/ Widow	0	0.0%	4	3.8%	1.142	0.713
Education						
Nurses school	2	16.7%	18	16.7%		
Nurses Technical Institute	7	58.3%	62	57.4%		
Bachelor of Nurses	3	25.0%	22	20.4%	0.472	0.954
Postgraduate Nurses	0	0.0%	6	5.6%		
Current Job description						
Supervisor Nurses	2	16.7%	8	7.4%		
Staff Nurses	10	83.3%	100	92.6%	1.212	0.271
Having children						
Yes	3	25.0%	36	33.3%	0.342	0.559
No	9	75.0%	72	66.7%		
Income						
Not enough	2	16.7%	24	22.2%		
Enough	8	66.7%	72	66.7%	0.667	0.797
More than enough	2	16.7%	12	11.1%		
Cohabitation						
Alone	0	0.0%	2	1.9%		
With spouse	6	50.0%	44	40.7%	0.707	0.802
with family/ brothers	6	50.0%	62	57.4%		
Hospital setting						
Smouha University Hospital	8	66.7%	60	55.6%		
Maamoura Chest Hospital	4	33.3%	48	44.4%	0.543	0.550
Years of nursing experience						
1<5 years	1	8.3%	20	18.5%		
5<10 years	9	75.0%	62	57.4%	1.459	0.587
≥10 years	2	16.7%	26	24.1%		
Number of working hours/day						
1-6 hrs.	5	41.7%	30	27.8%		
6-12 hrs.	7	58.3%	54	50.0%	3.703	0.148
≥12 hrs.	0	0.0%	24	22.2%		
Number of days off per week						
One day	12	100.0%	68	63.0%		
Two days	0	0.0%	34	31.5%	6.557*	0.037*
More than two days	0	0.0%	6	5.6%		

Table 4. Relationship between Turnover Intention with Socio-demographic and work-related characteristics of Nurses (n = 120)

	Turnover intention				c2	p
	Low <50% (n=29)		High ≥50% (n=91)			
	No.	%	No.	%		
Age						
20- <30	15	51.7%	56	61.5%		
30- <40	8	27.6%	27	29.7%		
40 - <50	6	20.7%	6	6.6%	4.647	0.193
50 - ≤60	0	0.0%	2	2.2%		
Gender						
Male	10	34.5%	23	25.3%		
Female	19	65.5%	68	74.7%	0.935	0.348
Placed of residence						
Urban	24	82.8%	61	67.0%		
Rural	5	17.2%	30	33.0%	2.632	0.105
Marital status						
Single	12	41.4%	56	61.5%		
Married	15	51.7%	33	36.3%		
Divorced/ Widow	2	6.9%	2	2.2%	7.998*	0.024*
Education						
Nurses school	8	27.6%	12	13.2%		
Nurses Technical Institute	16	55.2%	53	58.2%		
Bachelor of Nurses	3	10.3%	22	24.2%	5.147	0.155
Postgraduate Nurses	2	6.9%	4	4.4%		
Current Occupation						
Supervisor Nurses	4	13.8%	6	6.6%		
Staff Nurses	25	86.2%	85	93.4%	1.492	0.252
Having children						
Yes	13	44.8%	26	28.6%	2.649	0.104
No	16	55.2%	65	71.4%		
Income						
Not enough	6	20.7%	20	22.0%		
Enough	19	65.5%	61	67.0%	0.173	0.917
More than enough	4	13.8%	10	11.0%		
Cohabitation						
Alone	2	6.9%	0	0.0%		
With spouse	15	51.7%	35	38.5%	7.347*	0.017*
With family/ brothers	12	41.4%	56	61.5%		
Hospital setting						
Smouha University Hospital	20	69.0%	48	52.7%		
Maamoura Chest Hospital	9	31.0%	43	47.3%	2.356	0.125
Years of nursing experience						
1<5 years	3	10.3%	18	19.8%		
5<10 years	16	55.2%	55	60.4%	3.259	0.196
≥10 years	10	34.5%	18	19.8%		
Number of working hours/day						
1-6 hrs.	11	37.9%	24	26.4%		
6-12 hrs.	16	55.2%	45	49.5%	4.432	0.109
≥12 hrs.	2	6.9%	22	24.2%		
Number of days off per week						
One day a week	23	79.3%	57	62.6%		
Two days a week	4	13.8%	30	33.0%	4.343	0.103
More than two days a week	2	6.9%	4	4.4%		

Table 5. Correlation Matrix between organizational commitment, job insecurity and turnover intention among nurses (n = 120)

		Emotional commitment scale	Job insecurity scale (JIS)	Turnover intention scale
Emotional commitment scale		1		
Job insecurity scale (JIS)	**r**	-0.225*	1	
	p	0.013*		
Turnover intention scale	**r**	-0.227*	0.674*	1
	p	0.002*	<0.001*	

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

Table 6. Linear Regression Analysis shows effect of Affective Organizational Commitment on Job insecurity

	B	Beta	t	p	95% CI	
					LL	UL
Affective organizational commitment	-0.166	-0.225	-2.509*	0.013*	-0.298	-0.035
R^2= 0.051, Adjusted R^2= 0.043, F= 6.297*, p=0.013*						

F,p: f and p values for the model
R^2: Coefficient of determination
B: Unstandardized Coefficients
Beta: Standardized Coefficients
t: t-test of significance
LL: Lower limit UL: Upper Limit
*: Statistically significant at $p \leq 0.05$

Table 7. Hierarchical Multiple Linear Regression Analysis of the Factors affecting turnover intention

	B	Beta	t	p	95% CI	
					LL	UL
Model 1						
Affective organizational commitment	-0.305	-0.277	-3.125*	0.002*	-0.499	-0.112
R^2= 0.076, Adjusted R^2= 0.069, F= 9.769*, p=0.002*						
Model 2						
Affective organizational commitment	-0.322	-0.291	-3.351*	0.001*	-0.512	-0.132
Place of residence (Rural)	2.146	0.213	2.447*	0.016*	0.409	3.882
R^2= 0.121, Adjusted R^2= 0.106, F= 8.086*, p=0.001*						

F,p: f and p values for the model
R^2: Coefficient of determination
B: Unstandardized Coefficients
Beta: Standardized Coefficients
t: t-test of significance
LL: Lower limit UL: Upper Limit
*: Statistically significant at $p \leq 0.05$

Pearson's correlation analysis in the current study supported our hypothesis by revealing a significantly strong negative correlation between affective organizational commitment and both job insecurity and turnover intention among participants. Again, this finding can be explained through the lens of both the JD-R and COR theories within the context of the COVID-19 pandemic [29,30]. According to the JD-R theory, high job demands- such as long working hours, increased patient loads, emotional strain from caring for critically ill patients, and heightened time pressures-combined with a lack of job resources like social support, autonomy, and adequate rest, contributed to stress and burnout among nurses [1, 5]. These key contributing factors led to a decrease in affective organizational commitment, as nurses felt less emotionally attached to their organizations. This was due to emotional depletion and concerns about their future in such a taxing environment, which contributed to heightened job insecurity. Simultaneously, the COR theory highlights that, during the COVID-19 pandemic, nurses often felt emotionally exhausted with fewer resources to manage stress, contributing to job insecurity and higher turnover intentions as employees sought positions with better support systems, more stable work environments, or roles that offered greater flexibility to meet their personal and professional needs [9, 32].

The low organizational commitment and high turnover intentions observed in the current study among single participants, compared to their married counterparts, can be

attributed to differences in work-life dynamics and the fewer familial obligations that single individuals experience. Without family obligations, single nurses often have more flexibility to pursue personal and professional goals, which may lead them to seek better opportunities if their current job does not meet their expectations for career advancement, work-life balance, or job satisfaction. This justification is supported by the study conducted by Ibegbulam and Ejikeme (2021), which found that married individuals tend to be more dedicated to their organizations due to their need for greater stability and security in their careers, as well as having more responsibilities to their families [49]. Similarly, existing literature has reported higher turnover intentions among single employees compared to their married counterparts. These findings are attributed to fewer financial or familial constraints that tie single employees to a particular job, allowing them to explore opportunities for higher pay, better working conditions, or more flexible schedules elsewhere [50, 51]. Additionally, single employees may feel less loyalty to their current organization, as they do not have the same level of family-related attachment or need for stability that married employees might have. As a result, they may be more inclined to explore new career paths that better align with their aspirations or offer improved work environments [52]. However, this gap in research calls for further investigation to provide a more nuanced understanding of why single employees are particularly vulnerable to low organizational commitment and high turnover.

Moreover, in Egypt, social and cultural expectations, family structures, and economic constraints have significantly impacted nurses' ability to balance work and family life, particularly during the pandemic [35]. For example, in Egypt, where family obligations are central to the culture, nurses-especially women-are expected to balance both professional duties and caregiving roles at home [13]. This dual burden became even more overwhelming during the pandemic, as nurses faced the heightened risks of the virus while enduring long hours, increased patient loads, and the emotional strain of caring for critically ill patients, all while ensuring the well-being of their families. Consequently, these combined social, cultural, and economic pressures left many nurses feeling emotionally drained, disconnected from their work, and uncertain about their future in the profession [46].

It is worth noting that the prediction model in the current study, using linear and hierarchical multiple regression analysis, revealed that affective organizational commitment was identified as an independent predictor of nurses' job insecurity and turnover intention. As theoretically anticipated, emotionally committed employees are more engaged in pro-organization activities, such as lower absenteeism and reduced turnover intention [29,30]. This underscores the importance of affective organizational commitment as a core concern for top-level and human resource managers, with the goal of enhancing the job-related experiences of nurses and fostering an environment that nurtures emotional attachment. When employees are emotionally invested in their organizations, they are more likely to dedicate themselves to their roles, resulting in higher retention rates and, ultimately, greater organizational stability [36].

Unsurprisingly, the hierarchical multiple regression also revealed that rural regions, as a place of residence, were a significant predictor of nurses' turnover. This can be attributed to several critical factors exacerbated by the COVID-19 crisis. During the pandemic, rural healthcare facilities in middle-income countries such as Egypt faced overwhelming patient loads, staff shortages, and limited resources, which made the work environment more stressful and demanding [53]. Nurses in rural areas often had fewer opportunities for professional development, support networks, and access to mental health resources compared to their urban counterparts, which intensified feelings of isolation and burnout. Additionally, the fear of contracting the virus and limited access to personal protective equipment (PPE) heightened job insecurity [54]. As a result, the strain of the pandemic amplified turnover rates in rural regions, as nurses sought environments offering better resources, safety, and professional growth opportunities [35].

This work has an array of shortcomings. Due to its cross-sectional approach, causal relationships cannot be ascertained among the variables of interest. Collecting data through online surveys may lead to selection bias by excluding nurses who lack reliable internet access or digital literacy, thus limiting representativeness, particularly in resource-constrained settings. Future studies should consider incorporating in-person or telephone surveys alongside online questionnaires to address this issue. Since the study focused solely on currently employed nurses, it does not capture the full scope of turnover, particularly the experiences and perspectives of those who decided to leave their jobs. Nevertheless, the use of a stratified random sampling method ensured that the study findings provided a reliable foundation for analyzing group differences in organizational trajectories among nurses working in COVID-19 isolation units. This approach strengthened the study's robustness by ensuring a diverse sample that accurately represented the nursing population. This inclusivity allowed for a comprehensive and nuanced examination of the study objectives, leading to more generalizable and insightful findings across various subgroups within the nursing workforce.

Conclusion

The study concluded that participants reported lower scores in affective organizational commitment and higher scores in both job insecurity and turnover intention. However, nearly two-thirds of nurses who took only one day off per week reported a higher sense of job insecurity compared to those who took two days off per week. A significant difference in organizational commitment and turnover intentions was also observed based on marital status, with more than half of single nurses indicating an intention to leave, compared to nearly one-third of married nurses. A strong, inverse correlation was found between affective organizational commitment scores and job insecurity and turnover intention. Furthermore, our study demonstrated that affective organizational commitment was the most significant predictor of job insecurity and turnover intention. These findings underscore the importance of developing resilience training programs and capacity-building activities to strengthen nurses' organizational trajectories, enabling them to better cope with unforeseen challenges like the COVID-19 pandemic. Understanding the key factors influencing nurses' organizational outcomes can help nurse managers and policymakers implement supportive measures, empowering healthcare professionals to be better prepared for future national health emergencies.

Relevance to clinical practice

The existing findings Provides a solid ground for understanding the intricate relationships that can be used to frame organizational trajectory determinants. From an applied

perspective, utilizing this data from a cross-correlational design would enable nursing leaders to develop training programs that foster a climate of job security and ensure the organizational sustainability of the nursing profession.

Key points for policy, practice and/or research

- The post-pandemic period, particularly in middle-income countries, has exacerbated the ongoing shortage of nursing manpower, presenting significant challenges to nurses' career trajectories and organizational pathways.
- Nurse managers and policymakers should create proactive wellness plans to strengthen nurses' emotional attachment to their organizations and enhance the appeal of the nursing profession.

Ethics approval and consent to participate

The study adhered to the guidelines and regulations of the Declaration of Helsinki (DoH-Oct 2008). Official approval to conduct the study was granted by the Research Ethics Committee of the Faculty of Nursing (IRB00013620/129/9/2023). Participants were informed about the study's aims and objectives and were assured of their right to decline participation or withdraw at any time. Data confidentiality was strictly maintained.

Consent for publication

Not Applicable.

Availability of data and materials

The author has full control of all primary data and agrees to allow the journal to review the data if requested.

Author's contribution

The principal author was responsible for the entire manuscript, including the initial study plan, conceptualization, writing the methodology, data collection, drafting the original manuscript, data analysis and interpretation, and editing the final draft.

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Conflicts of interest

The author declares that there is no conflict of interest regarding the publication of this article

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