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2024

Healthcare Workers with Attitude: COVID-19 Pandemic Affects Their Work-Related Attitudes

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3 December 2023

I.   Abstract

The COVID-19 pandemic left an unforgettable mark on the world, affecting individuals and societies on an unprecedented scale in this modern era. This study investigates the impact of the pandemic on the attitudes of healthcare professionals, specifically doctors and nurses working in a hospital in the southwestern United States. My research question is: did the COVID-19 pandemic change healthcare professionals' work-related attitudes, specifically sense of calling, work meaningfulness, strength of workplace friendships, and organizational identification? Data collected from two cohorts of healthcare professionals both before and after the COVID-19 outbreak in the months of February 2019, January and February 2020, and May 2020 to evaluate additional potential changes. The two-tailed paired sample t-test results indicate that among male and doctor respondents, there was an increase in work meaningfulness while female respondents' work meaningfulness decreased. Additionally, male respondents' sense of calling increased. Lastly, doctors' workplace friendships decreased.

II.   Introduction

In the 21st century, few events have left as unforgettable a mark on our world as the COVID-19 pandemic, a seismic 'black swan' event that reshaped global dynamics. This historic crisis left no corner of the globe untouched, affecting individuals and societies on an unparalleled scale. Its most profound impact was felt by those who stood closest to the epicenter, the dedicated healthcare professionals.

The primary focus of this study is to investigate potential shifts in the perceptions and attitudes of healthcare professionals, specifically hospital doctors and nurses, toward their careers and work in the wake of the COVID-19 pandemic. The research question is framed as follows: "Did the COVID-19 pandemic change healthcare professionals' work-related attitudes, specifically sense of calling, work meaningfulness, strength of workplace friendships, and organizational identification?" This research paper's underlying purpose is to respond to the aforementioned research question.

The paper begins with reviewing relevant literature, then continues by detailing the research methodology, followed by presenting data analysis results. Afterward, the paper offers opportunities for further discussion, and finally, the study concludes with a summary of key findings and their broader implications.

III.   Literature review

A considerable body of research highlights the adverse effects of the COVID-19 pandemic on healthcare workers' mental health. Utilizing the keywords 'attitudes', 'healthcare workers', and 'COVID-19', three relevant papers were found which found. Allen and Cug (2020) found that the pandemic led to an increase in sleep disturbances and elevated mental health distress[1]. Mohsin et al. (2021) conducted a cross-sectional study in Saudi Arabia and discovered heightened levels of fear and anxiety among healthcare workers[2]. Furthermore, Sagaltici et al. (2022) compared different medical professions in a regional hospital in Turkey and reported an increased risk of burnout and psychological symptoms among healthcare workers during the pandemic[3]. These findings hold significant relevance to our research question because they establish the grounds for discussion regarding the effects that the COVID-19 pandemic had on healthcare workers.

While the literature search yielded valuable insights into the broader impact of the COVID-19 pandemic on healthcare workers' mental health, limited information was found specifically regarding how the pandemic altered healthcare workers' attitudes toward their sense of calling, workplace meaningfulness, strength of workplace friendships, and organizational identification. We also attempted a literature review search utilizing the keywords 'attitudes', 'healthcare workers', and 'natural disaster' to see if other healthcare crises had an effect on the specific attitudes listed above. No information on the specific attitudes was found, however, there was information found on how natural disasters had a negative impact on the healthcare workers' mental health. Our research aims to contribute to this understudied aspect by

addressing the question of whether the COVID-19 pandemic instigated significant shifts in healthcare workers' work-related attitudes listed above.

A sense of calling in the context of work refers to a deep sense of personal meaning and purpose in one's job or career[4] (Wrzesniewski, A., & Dutton, J. E. 2001). Work Meaningfulness is the perception that one's work is significant, valuable, and contributes to a larger purpose[5] (Rosso et al., 2010). Workplace Friendships are social relationships formed among coworkers that involve companionship, trust, and support[6] (Barsade & S. G. 2002). Organizational identification is the extent to which an individual perceives a sense of belonging and attachment to their organization[7] (Ashforth et al., 1989).

IV.   Methodology

The research design involved the distribution of an online survey to healthcare professionals actively working in the southwestern United States. These participants were either enrolled in a healthcare MBA program in the region or were recruited by students within the program.

Data was obtained from two cohorts of healthcare professionals, including doctors and nurses, with each cohort participating in three waves of data collection. The first cohort, completed Time 1 and Time 2 questionnaires in February 2019; the second cohort completed T1 and T2 questionnaires between late January and early February 2020. Data collected during T1 and T2 were originally part of a different study, however, due to the COVID-19 pandemic, additional data was collected from the same respondents to explore the pandemic effects on healthcare workers. Hence, Cohort 1 and Cohort 2 respondents completed the Time 3 (T3) questionnaire between April 28th and May 8th, 2020. All questions used a Likert scale. (See Figure 1 below for a timeline of the data collection).

	2019	2020				
	Feburary	January	Feburaury	March	April	May
Cohort 1						
Time 1 & Time 2 questionaire (Pre COVID-19)	■■■■					
Time 3 questionaire (During COVID-19)					■■■	
Cohort 2						
Time 1 & Time 2 questionaire (Pre COVID-19)		■■■■				
Time 3 questionaire (During COVID-19)					■■■	

Figure 1: Timeline of the Data Collection

Out of the 274 doctors and nurses who participated or recruited participants for T1 and T2 data collection, 172 individuals (62.8%) were successfully located and agreed to participate in T3, with 126 participants ultimately following through. After cleaning the data which involved removing respondents who left a question blank, 118 participants were left. Descriptive statistics were applied to these variables, along with a t-test, to ascertain whether there were statistically significant differences in the mean scores for each attitude being tested (sense of calling, workplace meaningfulness, strength of workplace friendships, and organizational identification) between T1 and T3, as well as T2 and T3. (See Table 1 below for the respondent demographic information and Table 2 below for the verified scales used for each attitude).

Table 1: Respondent Demographic Information

Demographics Variables	N	(%)
Sex		
Male	37	(30.58)%
Female	81	(69.42)%
Ethnicity		
White or Causcasian	69	(58.47)%
Black or African-American	25	(21.19)%
Hispanic or Latino	11	(9.32)%
Asian	12	(10.17)%
Native American	0	(0.00)%
Other	1	(0.85)%
Age Range		
24-29	15	(12.71)%
30-39	40	(33.90)%
40-49	29	(24.58)%
50-59	29	(24.58)%
60-69	4	(3.39)%
70-71	1	(0.85)%
Occupation		
Doctor	32	(27.12)%
Nurse	86	(72.88)%

Table 2: Verified Scales Used for Each Attitude

Variable	Questions	Likert Scale	Score Meaning	Scale Used
Calling	1. Working in healthcare feels like my calling in life. 2. It sometimes feels like I was destined to work in healthcare. 3. Working in healthcare feels like my niche in life. 4. I am definitely an healthcare worker. 5. My passion for healthcare goes back to my childhood 6. I was meant to work in healthcare	Strongly Disagree (1) – Strongly Agree (5)	High scores indicate a high calling	Bunderson & Thompson (2009)
Work Meaningfulness	1. The work that I do is important. 2. I have a meaningful job. 3. The work that I do makes the world a better place. 4. What I do at work makes a difference in the world. 5. The work that I do is meaningful	Strongly Disagree (1) – Strongly Agree (5)	High scores indicate high work meaningfulness	Bunderson & Thompson (2009)
Workplace Friendships	1. I have formed strong friendships at work 2. I socialize with coworkers outside of the workplace. 3. I can confide in people at work. 4. I feel I can trust many coworkers a great deal. 5. Being able to see my coworkers is one reason why I look forward to my job. 6. I do not feel that anyone I work with is a true friend.	Strongly Disagree (1) – Strongly Agree (5)	High scores indicate strong workplace friendships	Nielson, Jex, & Adams (2000)
Organization Identification	1. When someone criticizes my organization, it feels like a personal insult. 2. I am very interested in what others think of my organization. 3. When I talk about my organization, I usually say "we" rather than "they." 4. My organization's successes are my successes. 5. When someone praises my organization, it feels like a personal compliment.	Strongly Disagree (1) – Strongly Agree (5)	High scores indicate high organizational identification	Ashforth & Mael (1992)

V.   Results

These findings highlight several statistically significant results. To begin, among male respondents, there was a notable increase in work meaningfulness from a mean of 4.40 to 4.47. The statistical significance is underscored by a p-value of 0.03. Additionally, male respondents' sense of calling increased from a mean of 3.68 to 3.89. The statistical significance is underscored by a p-value of 0.078. Female respondents' work meaningfulness decreased from a mean of 4.53. to 4.43. The statistical significance is underscored by a p-value of 0.0701. Doctors' work meaningfulness increased from a mean of 4.33 to 4.47. The statistical significance is underscored by a p-value of 0.0957. Additionally, doctors' workplace friendships decreased from a mean of 3.93.to 3.78. The statistical significance is underscored by a p-value of 0.0977. (See Table 3-7 below for the t-test results).

Table 3: T-Test Results for All Respondents (118 respondents)

Variable	Time	Mean	SD	T-test p-value
Sense of Calling	T1 (Pre COVID-19)	4.03	0.81	0.4678
	T3 (During COVID-19)	4.04	0.65	
Work Meaningfulness	T1 (Pre COVID-19)	4.42	0.67	0.3967
	T3 (During COVID-19)	4.44	0.52	
Workplace Friendships	T1 (Pre COVID-19)	3.95	0.69	0.1509
	T3 (During COVID-19)	3.90	0.68	
Organizational Identification	T2 (Pre COVID-19)	3.75	0.70	0.2221
	T3 (During COVID-19)	3.70	0.64	

Table 4: T-Test Results for Female Respondents (81 respondents)

Variable	Time	Mean	SD	T-test p-value
Sense of Calling	T1 (Pre COVID-19)	4.19	0.81	0.1406
	T3 (During COVID-19)	4.10	0.65	
Work Meaningfulness	T1 (Pre COVID-19)	4.53	0.67	0.0701
	T3 (During COVID-19)	4.43	0.52	
Workplace Friendships	T1 (Pre COVID-19)	4.00	0.70	0.1834
	T3 (During COVID-19)	3.94	0.68	
Organizational Identification	T2 (Pre COVID-19)	3.72	0.70	0.2939
	T3 (During COVID-19)	3.68	0.64	

Table 5: T-Test Results for Male Respondents (37 respondents)

Variable	Time	Mean	SD	T-test p-value
Sense of Calling	T1 (Pre COVID-19)	3.68	0.78	0.078
	T3 (During COVID-19)	3.89	0.68	
Work Meaningfulness	T1 (Pre COVID-19)	4.20	0.86	0.03
	T3 (During COVID-19)	4.47	0.49	
Workplace Friendships	T1 (Pre COVID-19)	3.82	0.65	0.3091
	T3 (During COVID-19)	3.77	0.79	
Organizational Identification	T2 (Pre COVID-19)	3.82	0.70	0.2975
	T3 (During COVID-19)	3.73	0.76	

Table 6: T-Test Results for Nurse Respondents (86 respondents)

Variable	Time	Mean	SD	T-test p-value
Sense of Calling	T1 (Pre COVID-19)	4.03	0.86	0.3978
	T3 (During COVID-19)	4.05	0.70	
Work Meaningfulness	T1 (Pre COVID-19)	4.46	0.78	0.3635
	T3 (During COVID-19)	4.43	0.52	
Workplace Friendships	T1 (Pre COVID-19)	4.00	0.70	0.3553
	T3 (During COVID-19)	3.90	0.66	
Organizational Identification	T2 (Pre COVID-19)	3.75	0.67	0.2025
	T3 (During COVID-19)	3.74	0.65	

Table 7: T-Test Results for Doctor Respondents (32 respondents)

Variable	Time	Mean	SD	T-test p-value
Sense of Calling	T1 (Pre COVID-19)	4.02	0.76	0.3943
	T3 (During COVID-19)	4.00	0.58	
Work Meaningfulness	T1 (Pre COVID-19)	4.33	0.65	0.0957
	T3 (During COVID-19)	4.47	0.46	
Workplace Friendships	T1 (Pre COVID-19)	3.93	0.65	0.0977
	T3 (During COVID-19)	3.78	0.87	
Organizational Identification	T2 (Pre COVID-19)	3.73	0.78	0.2087
	T3 (During COVID-19)	3.58	0.75	

VI. Discussion

The two-tailed paired sample t-test results indicate an interesting finding that male respondents' work meaningfulness increased while female respondents' work meaningfulness decreased. Meaning that there was a shift in the perception of their work contributing more value to a larger purpose. The contrast between the two sexes can act as a starting point for future research on underlying factors that affect both sexes' work meaningfulness and to explore how they are similar and different.

Furthermore, the contrast between the change in the perception of males' and females' work meaningfulness during a global health crisis raises questions about the resilience and adaptability of how organizations foster these positive attitudes to enhance overall preparedness for future crises and to what extent do healthcare workers' attitudes towards their sense of calling, work meaningfulness, workplace

friendships, and organizational identification serve as protective factors or vulnerabilities in maintaining their mental and emotional well-being during a global health crisis?

While this study provides valuable insights, several limitations should be acknowledged. The research is limited in scope to the southwestern United States, and the findings may not necessarily apply to healthcare professionals in other regions. This study does not account for potential regional variations or variations in the intensity of the pandemic's impact on different healthcare facilities. The study design focused on a particular point in time during the pandemic, and the long-term effects and potential delayed changes in attitudes were not explored. Moreover, the use of self-report measures may introduce response bias and the field of study does not account for external factors that may influence healthcare professionals' attitudes during a crisis.

To build on this research, investigating interventions or support mechanisms that can enhance healthcare professionals' resilience and commitment during healthcare crises is a critical avenue for future research. The study of effective strategies to promote a sense of calling, work meaningfulness, and strong workplace relationships during challenging times would offer valuable insights for healthcare organizations and policymakers. Investigating the support mechanisms used by the hospitals from which the respondents are employed may serve as a starting point. An additional future research opportunity is to research underlying factors that affect both sexes' work meaningfulness and to explore how they are similar and different.

These future research opportunities aim to provide a more nuanced and comprehensive understanding of the dynamics affecting healthcare professionals' attitudes and commitment during critical events, such as pandemics, and to inform strategies for promoting their well-being and professional dedication.

VII.   Conclusion

This study explored the impact of the COVID-19 pandemic on the attitudes and commitment of healthcare professionals in the southwestern United States. Two-tailed paired sample t-test results indicate that among male and doctor respondents, there was an increase in work meaningfulness while female respondents' work meaningfulness decreased. Additionally, male respondents' sense of calling increased. Lastly, doctors' workplace friendships decreased. The study offers valuable insights into healthcare workers' work-related intrinsic motivation and points to the need for further research to explore interventions that can bolster their well-being and commitment in the face of adversity. Recognizing and nurturing the commitment of healthcare professionals is paramount, ensuring not only their own well-being but also the quality of care they provide to patients in all circumstances.

VIII.   References

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