

The impact of social stigma and interaction anxiety during crises on healthcare workers' job satisfaction: Evidence from the COVID-19 pandemic

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Abstract

The COVID-19 pandemic has had a profound effect on the mental health and job satisfaction of healthcare workers (HCWs), contributing to heightened levels of stigma and anxiety within this population. Although there has been significant research focusing on various mental health outcomes for HCWs, there remains a lack of studies directly linking social stigma and interaction anxiety to job satisfaction. This study aims to address this gap by exploring the lived experiences of healthcare workers in Jordan, focusing on their encounters with social interaction anxiety and social stigma arising from the pandemic. To achieve this, we have developed a model based on the short social interaction anxiety and social stigma scales. Our research methodology entailed selecting a diverse sample of 198 healthcare workers in Jordanian hospitals through convenience sampling. We then analyzed their data using structural equation modeling (SEM) to gain insights into the complex relationships between various variables. The study's findings identified three critical dimensions of social stigma—fear, prejudice, and stereotype—along with social interaction anxiety, each of which negatively affects job satisfaction by 41%. These results highlight the considerable influence that stigma and social interaction anxiety have on the experiences of health workers in times of crisis.

Keywords: Covid-19, Fear, Prejudice, Social interaction anxiety, Social stigma, Stereotypes.

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1. Introduction

In any society, particularly during infectious disease outbreaks like the COVID-19 pandemic, contracting certain illnesses can have psychological and social repercussions [1]. Among these are the patient's apprehension regarding societal responses, the stigma associated with the disease, and the fear of being perceived as a vector of transmission [2]. The onset of COVID-19 has intensified instances of stigma and discriminatory behaviors toward individuals who are carriers or have been infected [3].

In early 2020, the COVID-19 pandemic presented significant obstacles to healthcare institutions worldwide, emphasizing the essential role of healthcare workers (HCWs) [4]. Those directly treating COVID-19 patients faced not only physical risks but also social and psychological burdens. Social interaction anxiety and stigma emerged as significant concerns, potentially affecting HCWs' well-being and the functionality of the healthcare system [5].

Insufficient information and the spread of misinformation regarding COVID-19 have led to the unjust stigmatization of healthcare workers [6]. This stigma continues to linger even after the pandemic, presenting a psychological challenge for caregivers [7]. Addressing this matter requires thorough approaches, such as customized initiatives for stigma reduction and studies to better understand its psychological impacts [7].

Although many studies have investigated the psychological effects of COVID-19 on healthcare professionals, there is a significant gap in research that directly links social stigma and social interaction anxiety to job satisfaction. Most existing studies concentrate on broader psychological outcomes such as stress, anxiety, and depression [8-11]. Consequently, this study aims to delve into the lived experiences of healthcare workers in Jordan, focusing on their encounters with social interaction anxiety and social stigma arising from the pandemic.

Understanding the effects of social stigma and social interaction anxiety on job satisfaction is essential for various reasons. Studies have shown that social stigma can significantly affect the mental well-being of healthcare professionals, leading to increased stress, anxiety, and depression levels [12, 13]. These mental health challenges can subsequently impair job performance and satisfaction, compromising the overall quality of patient care [9]. By focusing on these factors, we can better understand the challenges faced by healthcare personnel during this unprecedented time.

This article follows a well-defined structure that begins by examining the psychological effects of the COVID-19 pandemic on healthcare workers, providing essential context for our research. We analyze the current literature on this topic, highlighting vital theoretical frameworks underpinning the study. Building on this literature review, we propose our research model. Following a discussion of our findings, we emphasize both the theoretical and practical implications of our research and potential directions for future studies.

2. Literature Review

The COVID-19 pandemic has profoundly transformed the working conditions for healthcare workers (HCWs), resulting in increased job demands and emotional strain [14]. Amid ongoing uncertainty, the persistent risk of infection, and concerns about transmitting the virus to their families, HCWs have encountered significantly heightened stress levels [10, 15]. These pressures have been further intensified by prevalent psychological issues, including anxiety, depression, and burnout, which have affected HCWs on a global scale [9, 16]. The high-risk nature of their roles and continuous exposure to COVID-19 patients have compounded these psychological hardships [11, 17].

Furthermore, the pandemic has not only posed serious physical health risks but also led to severe psychological ramifications for HCWs, primarily due to the stigmatization they face [18]. This stigma, driven by fear, misinformation, and negative perceptions, has resulted in the mistreatment of healthcare workers and infringements on their rights [19].

During the COVID-19 pandemic, healthcare workers (HCWs) faced heightened stigma due to their association with the virus, which was perceived as a threat to public health [20]. This stigma manifested in various forms, including stereotypes, fear, and prejudice [21], which collectively contributed to the psychological and emotional burden on HCWs [22].

The Stereotype dimension represents simplified and generalized ideas about specific groups of individuals [23]. In the context Covid 19 outbreak, Healthcare workers (HCWs) encountered unfair stereotyping as potential virus distributors, leading to damaging social isolation and discrimination [24, 25]. This prejudice not only influenced their interactions with the public but also strained their relationships with friends and family, heightening feelings of isolation and stress for HCWs [26]. The erroneous perception of HCWs as dangers to safety resulted in concerning mistreatment, including being denied access to public transport and even facing eviction from their residences [25].

Furthermore, fear and prejudice directed towards healthcare workers (HCWs) were significantly exacerbated by the anxiety surrounding the transmission of COVID-19 [9]. This heightened fear resulted in various forms of mistreatment, including verbal and physical assaults, social exclusion, and discrimination in public settings [11]. The apprehension of contracting the virus also intensified the psychological stress faced by HCWs, as they continually worried about their safety and that of their families [27]. This combination of fear and prejudice not only impacted their mental well-being but also adversely affected their job performance and overall job satisfaction [12].

The stigma associated with COVID-19 also has profoundly affected healthcare workers (HCWs), resulting in increased anxiety related to social interactions [7]. Many HCWs have reported heightened levels of anxiety in social situations due to fears of ostracism or discrimination, which have been intensified by concerns about potentially transmitting the virus to others [28]. Consequently, some healthcare workers have experienced social isolation and loneliness [27]. This anxiety and stress connected to social interactions have adversely impacted their mental health, leading to increased rates of depression and burnout among HCWs [16, 17].

The impact of these stigma and social interaction anxiety extends beyond healthcare workers (HCWs) themselves, adversely affecting their families as well [29]. Despite the enduring nature of the pandemic, negative attitudes toward HCWs

continue to persist, presenting ongoing psychological challenges as they fulfill their critical responsibilities amid widespread societal fears and misconceptions about their roles [7].

2.1. Theoretical Model and Hypotheses

This research utilizes the Short Social Interaction Anxiety and Social Stigma Scale to create an all-encompassing model aimed at comprehending how COVID-19 has affected healthcare workers' job satisfaction. By utilizing this approach, the research delves deeper into the factors influencing job satisfaction among healthcare professionals during the pandemic.

The upcoming sections will meticulously examine these research factors and their implications for job satisfaction. Moreover, Figure 1, a visually compelling representation of the proposed hypotheses, will be presented. This diagram, with its clear and concise depiction of the interconnected pathways, will captivate your interest and provide a deeper understanding of the complex interrelationships under investigation in the study.



2.2. Social Stigma of COVID-19

2.2.1. Stereotype

Stereotyping is a common cognitive behavior that arises from the human need to categorize and simplify the complexities of the world around us [30]. This inclination often leads to social bias, prejudice, and discrimination. During the COVID-19 pandemic, the impact of stereotypes has heightened, resulting in discrimination, exclusion, and even hostility, which have emerged as significant social issues affecting political and social stability [30, 31].

Stereotyping of healthcare workers (HCWs), who are often perceived as vectors of the virus, creates a hostile work environment characterized by fear and discrimination [7]. Research indicates that HCWs have faced various forms of mistreatment, including verbal abuse and social exclusion, which stem from public misconceptions about their roles during the pandemic [20, 32]. This negative perception not only affects their mental health, manifesting as increased anxiety and depression, but also diminishes their overall job satisfaction as they grapple with the dual burden of caring for patients while facing societal backlash and stigma [7, 18].

The stigma associated with their roles can profoundly influence the mental health of healthcare workers (HCWs), resulting in sensations of inadequacy and burnout [33]. Exposure to negative stereotypes often undermines their self-efficacy and motivation, making it difficult for them to perform their duties effectively [15, 34]. Research indicates that HCWs experiencing high levels of stigma tend to report lower job satisfaction and are more inclined to contemplate leaving the profession [10, 35]. This issue is not a recent development; historical evidence from past epidemics, such as SARS and MERS, reveals similar trends where HCWs were wrongfully perceived as threats to public health, perpetuating a harmful cycle of stigma and discontent [36].

Thus, $H_{1:}$ Stereotype of the COVID-19 outbreak has a negative direct effect on healthcare workers' job satisfaction.

2.2.2. Prejudice

Prejudice plays a significant role in the stigma surrounding COVID-19 [37] characterized by negative attitudes and emotional reactions towards individuals based on prevalent stereotypes [38]. This phenomenon can result in discriminatory behaviors against those infected with the COVID-19 virus. Prejudice not only involves the acceptance of damaging stereotypes but also elicits strong emotional responses, such as anger or fear, towards the affected group [39]. It is a cognitive

and emotional response that can manifest in discriminatory actions [40]. While stereotypes represent generalized beliefs about a group, prejudice encompasses an evaluative aspect—typically unfavorable—and its emotional reactions [41].

During the COVID-19 outbreak, healthcare workers encountered considerable prejudice as a form of stigma. This experience has significantly affected their mental health and overall well-being [18]. Research have shown that HCWs were often perceived as carriers of the virus, leading to discrimination and social exclusion [42, 43]. For instance, nurses caring for COVID-19 patients reported being avoided, treated as dirty, and facing discrimination towards their family members [43]. This stigmatization was not limited to personal interactions but extended to public spaces and even within their communities, where they were often scolded, isolated, and excluded [20]. Such experiences of prejudice were compounded by the visible markers of their profession, such as wearing scrubs and personal protective equipment, which heightened the fear and perception of them being disease carriers [44].

Furthermore, the psychological burden associated with this stigma exacerbates the challenges faced by healthcare workers (HCWs) in their demanding roles [45, 46]. This prejudice can undermine their self-esteem and diminish their sense of professional fulfillment as they strive to provide care while being viewed as potential carriers of the virus [47]. Research has shown that HCWs facing substantial stigma are at an increased risk of experiencing burnout and lower job satisfaction levels [24, 48]. The emotional consequences of this stigma can lead to diminished motivation and commitment to their work, which, in turn, worsens issues related to job performance and overall morale within healthcare settings [12, 49].

H₂: Prejudice of the COVID-19 outbreak has a negative direct effect on healthcare workers' job satisfaction.

2.2.3. Fear

The fear dimension of stigma about COVID-19 describes the apprehension and anxiety experienced by individuals [50] particularly healthcare workers (HCWs), regarding potential infection and its associated social consequences [7]. This fear encompasses the risk of contracting the virus and the concern about being perceived as a carrier. Such perceptions can lead to discrimination, social isolation, and various forms of stigmatization [51]. Reports from HCWs indicate experiences of being scolded, discriminated against, and, in some cases, physically assaulted due to their connection with COVID-19 patients [20]. The visible markers of their profession, such as scrubs and personal protective equipment, often intensify this perception, reinforcing the view of HCWs as potential disease carriers [8, 52].

The stigma associated with fear has a significantly detrimental impact on healthcare workers' job satisfaction. The emotional strain of being stigmatized can lead to feelings of depression, loneliness, and a wish to resign from their jobs [27]. The psychological pressure connected to stigma worsens the already heightened levels of stress and burnout that HCWs face during the pandemic [53]. Studies have shown that stigma can profoundly affect mental well-being, resulting in increased anxiety, stress, and depression, which subsequently hurt job performance and overall job satisfaction [27, 53]. The anxiety of being stigmatized not only affects mental health but also lowers the quality of professional life for HCWs, leading to decreased compassion satisfaction and a rise in burnout and secondary traumatic stress [54].

H_{3:} Fear of the COVID-19 outbreak has a negative direct effect on healthcare workers' job satisfaction.

2.2.4. Social Interaction Anxiety

Anxiety related to social interactions has emerged as a significant concern for healthcare workers (HCWs) amid the COVID-19 pandemic [55]. This type of anxiety is marked by feelings of apprehension and fear when engaged in interpersonal and social situations, including meeting and talking with others [56]. Social interaction anxiety has been intensified by the unique social dynamics introduced by the pandemic [57].

The pandemic has presented unprecedented stressors, including fears of infection, prolonged working hours, and social isolation due to distancing measures [58]. These factors have intensified anxiety and depression among healthcare workers, with studies indicating high prevalence rates of anxiety (34.4%) and depression (31.8%) within this group [16, 59]. The constant fear of contracting the virus, coupled with the pressures of working in high-risk environments, has led to increased psychological distress, which directly affects job satisfaction [60]. Healthcare workers who experience elevated levels of anxiety and depression are less likely to find their work fulfilling and are more prone to burnout and job dissatisfaction [61].

Furthermore, the anxiety surrounding social interactions arising from the pandemic has disrupted the support systems that healthcare workers depend on, further diminishing their job satisfaction [62]. Social distancing policies and isolation periods have restricted interactions with colleagues, friends, and family—critical emotional support and resilience sources [63, 64]. The absence of social support has been associated with heightened psychological distress and decreased job satisfaction among healthcare professionals [24, 64]. Research has demonstrated that social support can alleviate the negative consequences of work-related stress and anxiety [65, 66]. However, the pandemic has strained these support networks, leaving healthcare workers increasingly vulnerable to the adverse effects of social interaction anxiety [66].

 $H_{4:}$ Social Interaction Anxiety due to the COVID-19 pandemic has a negative direct impact on healthcare workers' job satisfaction.

3. Methodology

A robust quantitative method was employed to effectively achieve the goal of this study, utilizing structured questionnaires directed at healthcare workers (HCWs) in Jordan. We implemented convenience sampling and collected data from four prominent hospitals. A comprehensive statistical analysis was performed, incorporating exploratory factor analysis, confirmatory factor analysis, and rigorous validity and reliability tests to ensure the integrity of the findings.

The population studied comprised healthcare personnel working in Jordan's healthcare sector, which employs over 30,000 medical professionals [67]. Notably, Jordan boasts a physician ratio of approximately 27.8 per 10,000 individuals,

significantly surpassing the global average of 16.4 [68]. The healthcare workforce is diverse, with nurses representing 44% of the workforce, physicians 25%, pharmacists 16%, and dentists 15% [67]. Furthermore, the country benefits from a robust healthcare infrastructure, featuring more than 120 hospitals and medical centers, both public and private, which are vital to providing comprehensive healthcare services nationwide.

A convenience sampling technique was employed to gather data from healthcare personnel engaged with COVID-19 patients who opted to participate in the study. A total of 206 participants completed the questionnaire, with 202 partially completed and 198 fully completed, making them suitable for statistical analysis. Data collection occurred between December 2021 and March 2022, an extended timeframe due to the significant workload and pressure on healthcare workers, which limited their available leisure time for questionnaire completion.

Given the large population of the study community and the challenges of conducting a comprehensive survey during and after the pandemic, the sample was drawn from four prominent hospitals [69, 70]. Two of these were governmental or semigovernmental institutions: Al Bashir Hospital and the University of Jordan Hospital, both known for their high patient capacity, as they serve a substantial portion of Jordan's population under civil health insurance. The sample also included two major private hospitals, the Jordan Hospital and the Specialty Hospital, which are notable for treating many patients.

3.1. Sample Characteristics

Table 1 summarizes the extracted study characteristics. The study encompasses a diverse demographic profile. In terms of gender distribution, 61.6% of participants identify as female, while 38.4% identify as male. Regarding age, the majority (52.5%) are aged between 21 and 34, followed by 29.3% aged 35-44 and 18.2% aged 45 and above. Education levels vary, with 16.2% having education below a diploma, 59.4% holding a Bachelor's degree, and 24.4% possessing education levels beyond a Bachelor's. Income distribution shows 12.6% with above-average income, 74.7% with average income, and 12.6% with below-average income. Marital status reveals 24.7% single individuals, 63.6% married, and 11.6% falling under other categories. Occupation-wise, the participants include 23.7% doctors, 35.6% allied health professionals, 20.1% nurses, and 20.6% individuals in administrative positions.

Demographics	Categories	Count	Column N %
Gender	Female	122	61.6%
	Male	76	38.4%
Age	21-34	104	52.5%
	35-44	58	29.3%
	45+	36	18.2%
Education level	Less than Diploma	32	16.2%
	BA	117	59.4%
	Above BA	48	24.4%
Income	Above Average	25	12.6%
	Average	148	74.7%
	Below average	25	12.6%
Marital status	Single	49	24.7%
	Married	126	63.6%
	others	23	11.6%
Job Type	Doctors	46	23.7%
	Allies Health Professions	69	35.6%
	Nurses	39	20.1%
	Administration	40	20.6%
Job duration	Continuous	166	84.3%
	Discontinuous	31	15.7%

Table 1.

4. Results

4.1. The Study's Reliability and Validity

The study utilizes robust steps to examine the effects of social stigma and anxiety on job satisfaction among health workers, employing IBM SPSS 23 and IBM AMOS 23. Following the approach outlined by Hair, et al. [71] the researchers first perform confirmatory factor analysis (CFA) to validate the measurement model, thereby ensuring the reliability and validity of the involved constructs [72]. This analysis assesses the model's fitness indices, confirming that their respective indicators accurately represent the latent variables [69, 73]. In the subsequent step, structural equation modeling (SEM) is utilized to test the hypotheses derived from the theoretical framework, providing a comprehensive understanding of the relationships between the constructs while accommodating both direct and indirect effects [69, 74].

The study presents an innovative measurement model rooted in reflective measurement theory, which is especially effective for capturing complex constructs such as social stigma and anxiety. This approach posits those changes in the latent construct result in variations in the observed indicators, thereby ensuring precise and consistent measurement. The theoretical framework draws from significant contributions in the fields of social work and health literature, including works by

Nochaiwong, et al. [75]; Fergus, et al. [76] and Kumar, et al. [77] which highlight the psychological impacts of stigma and anxiety on healthcare professionals.

The model was initially analyzed using a dataset, which resulted in robust fit indices. Notable metrics included χ^2 (139) = 270.839, $\chi^2/df = 1.948$, CFI = 0.952, SRMR = 0.054, RMSEA = 0.069, and a P-value greater than 0.05, all indicative of a satisfactory fit in line with the criteria outlined by Crawford and Kelder [78].

Tables 2 and 3 serve as further confirmation of the instrument's validity and reliability used in this study. The alpha value, surpassing the 0.70 threshold, and the factor loadings, exceeding the recommended 0.50 threshold as suggested by Hair, et al. [79] instill confidence in the model's performance. Additionally, the Average Variance Extracted (AVE) above 0.50 signifies satisfactory convergent validity, as per the guidelines from Hair, et al. [79].

A thorough examination of the instrument's validity has confirmed its adequate discriminant validity, as highlighted in Tables 3 and 4. The Composite Reliability (CR) values surpass the AVE values, and the AVE values are more significant than both the Average Shared Variance (ASV) and Maximum Shared Variance (MSV) values [69]. Furthermore, the correlations among independent variables are kept below the 0.70 threshold, as recommended by Almén, et al. [80] and Mdanat, et al. [72]. All Heterotrait-Monotrait Ratio (HTMT) values also remain below the 0.80 benchmark, thereby confirming discriminant validity according to the standards established by Henseler, et al. [81] and Mdanat, et al. [72].

In conclusion, these findings collectively support the reliability and validity of the measurement model in assessing the relevant constructs.

Table	2.
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CFA and descriptive statistic	Easter Loadings	~*	M(CD)	Showmood	Vuntoria
Items	Factor Loadings	u	M(SD)	Skewness	Kurtosis
JS3	0.967	0.936	0.936 3.64(1.041)		-0.308
JS2	0.973				
JS5	0.949				
JS4	0.926				
JS1	0.860				
SIA5	0.963	0.895	3.25 (.889)	0.744	0.474
SIA3	0.917				
SIA2	0.861				
SIA1	0.892				
SIA4	0.809				
Fear3	0.903	0.914	3.64 (1.043)	742	-0.187
Fear1	0.865				
Fear2	0.892				
Perjudice3	0.763	0.889	3.90 (.831)	776	-0.268
Perjudice1	0.900				
Perjudice2	0.855				
Stereotype3	0.670	0.753	3.98 (.784)	.316	895
Stereotype2	0.772				
Stereotype1	0.776				

Note: JS Service quality, SIA: Social Interaction Anxiety. α= Cronbach's Alpha coefficient; M(SD)= Mean & Standard deviation.

Table 3.

Study model's validity. AVE MSV Factors CR MaxR Job Social Fear Prejudice Stereotype Satisfaction **(H)** anxiety Job Satisfaction 0.972 0.876 0.980 0.936 0.186 Social 0.950 0.792 0.184 0.964 -0.4290.890 Interaction Anxiety Fear 0.917 0.786 0.089 0.919 -0.220 -0.1170.887 0.249 0.879 0.708 0.221 0.894 -0.365 0.113 0.841 Prejudice 0.547 0.221 0.790 -0.432 0.299 0.470 Stereotype 0.783 0.144 0.739

Note: Composite Reliability = (CR) > 0.70, Average Variance Extracted = AVE > 0.50, Maximum Shared Variance = AVE > MSV and McDonald Construct Reliability = MaxR(H) > 0.7.

Table 4.

HTMT Analysis.

Factors	Job Satisfaction	Social anxiety	Fear	Prejudice	Stereotype
Job Satisfaction					
Social Interaction Anxiety	0.496				
Fear	0.238	0.115			
Prejudice	0.361	0.079	0.257		
Stereotype	0.421	0.165	0.296	0.436	

4.2. Structural Model

This study utilized Structural Equation Modeling (SEM) to explore the impact of social stigma and anxiety on job satisfaction among health workers during the COVID-19 pandemic. The findings revealed a satisfactory model fit, in accordance with the criteria established by Crawford and Kelder [78]: χ^2 (139) = 243.316, $\chi^2/df = 1.750$, CFI = 0.962, SRMR = 0.053, RMSEA = 0.062, and a P value exceeding 0.05. This suggests that the model accurately reflects the data without needing any modifications, as depicted in Figure 2. The robustness of the structural model indicates its effectiveness in capturing the intricate relationships between the variables, thereby providing a reliable framework for understanding how social stigma and anxiety affect job satisfaction among health workers during exceptional circumstances.

The findings from the study reveal that three dimensions of social stigma—fear, prejudice, and stereotype—have a significant negative impact on job satisfaction among health workers during the COVID-19 pandemic. Specifically, the analysis supports the hypotheses for each stigma dimension (fear: $\beta = -0.165$, P < 0.001; prejudice: $\beta = -0.171$, P < 0.001; stereotype: $\beta = -0.225$, P < 0.01). This highlights the pervasive nature of stigma in healthcare environments and its harmful effects on employee morale and job satisfaction during a global health crisis.

Furthermore, the research uncovers a significant negative relationship between social interaction anxiety and job satisfaction among health workers during this period, supporting hypothesis H4 ($\beta = -0.448$, P > 0.05). This finding underscores the critical role of social anxiety, in addition to stigma, in shaping job satisfaction levels in this context, providing further insights for interventions to enhance employee well-being.

Overall, the structural model utilized in the study explained 41% of the variance in job satisfaction among health workers during the pandemic, emphasizing the importance of addressing stigma-related challenges to enhance workplace satisfaction and the overall well-being of this vulnerable population.

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Hypotheses testing.								
Hypothesis	Predictors	Outcomes	Beta	S.E.*	t-value	P value		
H1	Social interaction anxiety	Job satisfaction	-0.448	0.071	7.076	***		
H2	Fear	Job satisfaction	-0.165	0.091	2.529	0.011		
Н3	Prejudice	Job satisfaction	-0.171	0.13	2.367	0.018		
H4	Stereotype	Job satisfaction	-0.225	0.164	2.775	0.006		

Note: S.E. = Standard Error, **P<0.01, *** P<0.001.



5. Discussion

This study reveals significant findings regarding the impact of social interaction anxiety and social stigma on job satisfaction among health workers during the COVID-19 pandemic. The analysis identifies three critical dimensions of social stigma-fear, prejudice, and stereotype-along with social interaction anxiety, each of which negatively affects job satisfaction. The support for hypotheses H1 to H4 is evidenced by statistically significant coefficients. These results highlight the considerable influence that stigma and social interaction anxiety have on the experiences of health workers in times of crisis.

The results of this study align with an expanding body of literature that underscores the harmful effects of social stigma on healthcare workers, especially in the context of the COVID-19 pandemic. For example, a qualitative study conducted by Kwaghe, et al. [82] revealed that frontline healthcare workers in Nigeria faced significant stigma, which was exacerbated by the fear and anxiety associated with their roles during the pandemic. This stigma not only adversely affected their mental health but also reduced the quality of care they delivered, reinforcing our findings that social stigma negatively influences job satisfaction among health workers [83].

Fear, particularly as a form of stigma, becomes especially evident during health crises like the COVID-19 pandemic. Research has shown that the fear of contagion can lead to severe stigmatization of healthcare workers. A study conducted by Janoušková, et al. [35] demonstrates that fear-driven perceptions can lead to harmful labeling and discrimination, casting healthcare providers as "plague spreaders" or channels of disease transmission. Our findings underscore this reality, revealing that fear significantly undermines job satisfaction among health workers. Those who face intensified fear stemming from stigma often feel devalued and unsupported, which can have detrimental effects on their well-being and professional fulfillment [84].

In addition, prejudice significantly affects healthcare workers, fueled by negative attitudes towards them due to their connection with COVID-19. A study by Ramaci, et al. [10] revealed that healthcare professionals faced prejudice from the public and peers, leading to feelings of isolation and lower job satisfaction. This prejudice results in workplace discrimination, further harming mental health and job satisfaction for health workers. Our findings confirm that prejudice correlates with reduced job satisfaction.

Stereotypes, fixed and oversimplified beliefs about a particular group [85] also significantly contribute to the stigma faced by health workers, resulting in discrimination, diminished self-esteem, and reduced job satisfaction among healthcare professionals [86]. Research, including a study by Baldassarre, et al. [2] and Nashwan, et al. [87] indicates that healthcare workers were perceived as virus carriers, adversely affecting their mental health and the quality of care they provide.

Furthermore, Duguid and Thomas-Hunt [88] revealed that stereotypes related to competence and warmth obstruct effective communication and collaboration within healthcare teams. Additionally, Ramaci, et al. [10] emphasized that stereotypes fueled by societal fears and misinformation led to isolation and decreased morale. This body of research highlights the necessity of addressing these stereotypes to enhance healthcare delivery and healthcare professionals' mental well-being.

Furthermore, our findings regarding social interaction anxiety are consistent with previous studies that indicate this type of anxiety further exacerbates the challenges faced by healthcare workers. Research highlights significantly elevated levels of anxiety, depression, and other mental health issues among healthcare professionals during the pandemic [16]. For example, hierarchical regression analysis from related studies demonstrated that COVID-19 stigmatization directly affected the anxiety levels and performance of frontline health workers [12]. This result emphasizing the substantial psychological burden endured by healthcare workers.

In our study, health workers may have internalized societal fears related to COVID-19, resulting in a heightened awareness of anticipated stigma that surpasses actual instances of discrimination or prejudice from others. This internalization can create a cycle in which anticipated stigma intensifies feelings of anxiety, significantly impacting job satisfaction through direct experiences.

5.1. Study Implications

This study significantly advances the literature by clarifying how social stigma—fear, prejudice, and stereotypes relates to job satisfaction in healthcare settings. Our findings show that these dimensions negatively impact job satisfaction, aligning with theories on social stigma and occupational stress, particularly during health crises. This nuanced view reveals that those specific aspects of stigma influence job outcomes differently.

We also enhance the discussion on anticipated stigma, which raises health workers' awareness of societal biases but does not necessarily lead to direct discrimination. While anticipated stigma may increase anxiety, it has a lesser effect on job satisfaction than experienced stigma.

This research highlights the interconnections between anxiety, stigma, and job performance, emphasizing how psychological well-being affects professional outcomes. The findings support and expand existing theoretical frameworks related to workplace mental health, such as stress and coping theories. They primarily illuminate the specific stressors healthcare workers encounter in high-pressure settings. Furthermore, this study emphasizes the importance of incorporating mental health considerations into occupational health theories, especially during public health crises.

Practically, the study's findings underscore the critical need for healthcare organizations to adopt targeted interventions aimed at reducing stigma and social interaction anxiety, particularly those rooted in fear, prejudice, and stereotypes that negatively impact job satisfaction. By implementing public awareness campaigns, organizations can effectively challenge harmful stereotypes and address misconceptions, thereby improving the public's perception of healthcare workers.

In addition, healthcare settings should prioritize policies that prevent workplace prejudice and discrimination while also providing strong mental health support. This approach can help alleviate feelings of isolation among staff and enhance overall morale. Furthermore, training programs designed to equip staff with strategies for managing anticipated stigma and coping with anxiety related to their roles are empowering tools that may further improve the well-being and job satisfaction of healthcare workers, especially during crises.

Together, these approaches can create a more nurturing and resilient healthcare atmosphere, positively impacting staff and the communities they support.

5.2. Limitations and Future Research

This study recognizes various limitations that could influence the generalization and interpretation of its results. The dependence on self-reported data collected via online surveys creates the potential for response bias, as participants may downplay experiences related to stigma due to fears of being judged or adhering to social norms. Additionally, the cross-sectional nature of the research limits the ability to establish causal relationships between social stigma, anxiety, and job satisfaction among healthcare workers. While the sample size is adequate for initial analysis, it may not comprehensively capture the diverse experiences within different healthcare environments or geographic areas, possibly missing variations in stigma perceptions influenced by cultural or institutional elements. Moreover, the study does not account for changes in stigma perceptions over time, particularly as the pandemic progressed and public attitudes evolved.

Future investigations should implement longitudinal designs to assess how stigma and its various aspects shift over time and their long-term effects on job satisfaction and mental health. Broadening the sample to encompass a more comprehensive array of healthcare professionals and settings could significantly improve our understanding of the factors influencing job satisfaction in various contexts. Lastly, exploring the interaction between social stigma and other psychological factors, such as resilience and coping mechanisms, could yield important insights for developing targeted support interventions for healthcare workers during crises.

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Appendix 1.

Exploratory Factor Analysis.

Factor Analysis

KMO and Bartlett's Test					
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.					
Bartlett's Test of Sphericity	Approx. Chi-Square	3669.934			
df					
	Sig.	0.000			
~					

	Initial	Extraction
JS1	1.000	0.703
JS2	1.000	0.702
JS3	1.000	0.772
JS4	1.000	0.837
JS5	1.000	0.812
Stereotype1	1.000	0.781
Stereotype2	1.000	0.853
Stereotype3	1.000	0.859
Perjudice1	1.000	0.869
Perjudice2	1.000	0.843
Perjudice3	1.000	0.826
Fear1	1.000	0.834
Fear2	1.000	0.833
Fear3	1.000	0.853
SIA1	1.000	0.818
SIA2	1.000	0.941
SIA 3	1.000	0.942
SIA 4	1.000	0.898
SIA 5	1.000	0.909

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Total variance	e explained									
Component	Initial eigenvalues			Extra	Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	
1	7.114	37.441	37.441	7.114	37.441	37.441	4.434	23.336	23.336	
2	3.806	20.030	57.471	3.806	20.030	57.471	4.252	22.378	45.713	
3	1.922	10.116	67.587	1.922	10.116	67.587	2.596	13.661	59.375	
4	1.611	8.479	76.066	1.611	8.479	76.066	2.491	13.109	72.484	
5	1.432	7.538	83.603	1.432	7.538	83.603	2.113	11.119	83.603	
6	0.480	2.528	86.132							
7	0.434	2.285	88.416							
8	0.362	1.906	90.322							
9	0.328	1.729	92.051							
10	0.254	1.335	93.386							
11	0.240	1.261	94.647							
12	0.233	1.227	95.874							
13	0.189	0.993	96.866							
14	0.164	0.861	97.727							
15	0.139	0.733	98.461							
16	0.110	0.580	99.041							
17	0.078	0.409	99.450							
18	0.064	0.338	99.788							
19	0.040	0.212	100.000							
Extraction Met	hod Princin	al Component	Analysis							

F	Component								
	1	2	3	4	5				
JS3	0.922								
JS2	0.917								
JS5	0.899								
JS4	0.879								
JS1	0.836								
SA5		0.905							
SA3		0.893							
SA2		0.885							
SA1		0.873							
SA4		0.858							
Fear3			0.910						
Fear1			0.904						
Fear2			0.903						
Perjudice3				0.871					
Perjudice1				0.865					
Perjudice2				0.863					
Stereotype3					0.873				
Stereotype2					0.765				
Stereotype1					0.750				
Extraction Meth	od: Principal C	component Ana	alysis.		•				

Rotation Method: Varimax with Kaiser Normalization.

Note: a. Rotation converged in 6 iterations.