



## PERCEIVED OCCUPATIONAL RISK AND CORRUPTION TOLERANCE IN HEALTHCARE WORKERS: MEDIATORY ROLES OF PERCEIVED ORGANIZATIONAL SUPPORT

**\*Adepeju OGUNGBAMILA**

Adekunle Ajasin University, Nigeria  
Email: [adepeju.ogungbamila@aaua.edu.ng](mailto:adepeju.ogungbamila@aaua.edu.ng)

**Bolanle OGUNGBAMILA**

Adekunle Ajasin University, Nigeria  
Email: [bolanle.ogungbamila@aaua.edu.ng](mailto:bolanle.ogungbamila@aaua.edu.ng)

**Tolulope Abraham AJILEYE**

Adekunle Ajasin University, Nigeria  
Email: [tolulope.ajileye@aaua.edu.ng](mailto:tolulope.ajileye@aaua.edu.ng)

**\*Correspondence:** Adepeju Ogungbamila (PhD), Department of Pure & Applied Psychology, Adekunle Ajasin University, PMB 001 Akungba-Akoko, Ondo State, Nigeria. ORCID: <https://orcid.org/0000-0002-6407-8654>. Telephone: +234-8168269540. E-mail Address: [adepeju.ogungbamila@aaua.edu.ng](mailto:adepeju.ogungbamila@aaua.edu.ng)

### ABSTRACT

Corruption and its tolerance may worsen the negative consequences of the mass exodus of healthcare workers on the remaining employees and the recipients of their services, especially in the face of inadequate organizational support. This study, therefore, investigated how perceived occupational risk (perceived work safety risk and work-related abuse and threats) predict corruption tolerance; and whether perceived organizational support mediated the relationships. This cross-sectional survey was conducted among 388 healthcare workers (168 males; 220 females) of three large public healthcare facilities in southwestern Nigeria. The participants responded to measures of perceived work safety, work-related abuse and threats, perceived organizational support, and corruption tolerance. Results of the 3-step hierarchical multiple regression showed that corruption tolerance significantly increased as healthcare workers felt unsafe and were abused and threatened at work. However, healthcare workers became significantly intolerant of corruption as the level at which they felt that the organization supported and was concerned about their well-being increased. As indicated in the results of Baron and Kenny's mediation test, perceived organizational support significantly mediated the relationships of perceived work safety risk and work-related abuse and threats with corruption tolerance in such a way that when healthcare workers felt supported and appreciated at work, they tended to be less tolerant of corruption despite the perceived unsafe, abusive and threatening work environment. Consequently, managers of healthcare facilities should, engage in deliberate and overt efforts that reduce perceived occupational risk and discourage behaviors that threaten the physical and psychological well-being of healthcare workers in order to reduce corruption tolerance among healthcare workers.

**Key words:** corruption, perceived support, work safety risk, threat, health worker, Nigeria

### INTRODUCTION

Corruption tolerance, which has been defined as employees' acts that overlook or indirectly support the selfish use of public office or position for private benefits (Ogungbamila & Ajagunna, 2023; Ogungbamila & Ajayi, in review), could have adverse effects on the health sector and worsen the negative consequences of the mass exodus of healthcare workers on the remaining employees in the health sector and the recipients of their services. This situation calls for serious

concern in developing countries, such as Nigeria, which has been adjudged as one of the top countries affected by the mass emigration of healthcare workers in Africa (Adebayo & Akinyemi, 2021; Okafor & Chimereze, 2020; Uneke *et al.*, 2008). Studies have shown that the public healthcare facilities in Nigeria, for example, is beleaguered with severe dearth of healthcare workers (Akinyemi *et al.*, 2022; Adebayo & Akinyemi, 2021); where less than 169 healthcare workers attend to more than 100,000 patients (Chankova *et al.*, 2007). This has pushed Nigeria below 2.1, which is a lot lower than the minimum of 4.5 healthcare workers to 1,000 patients; as recommended by World Health Organization-WHO (Adhikari *et al.*, 2021). WHO (2020) projected that the situation may get worse by 2030. The inadequate number of healthcare workers may increase their workload, compromise their health, and may also make healthcare workers overlook or condone corruption, especially if they feel that the organization does not reciprocate their extra efforts with commensurate levels of recognition and support.

For example, studies have shown that the rising level of emigration of healthcare workers in Nigeria, which has resulted in an increase in the negative imbalance in the healthcare worker to patient ratio, especially in public healthcare facilities, could be associated with organizational factors such as harsh work environment, low remuneration, and inadequate facilities (Onah *et al.*, 2022; Yakubu *et al.*, 2023), which may result in occupational burnout (Buowari, 2020; Ogungbamila, 2013), high perceived occupational risk, low work safety (Allen *et al.*, 2019; Innocent *et al.*, 2022; Lawal *et al.*, 2022), and low level of perceived organizational support (Adekanmbi *et al.*, 2022; Ogbonnaya *et al.*, 2018) among the remaining healthcare workers. This may be because the dearth of healthcare workers might create additional workload, health, and occupational challenges for the remaining healthcare workers, which could adversely affect their social and professional behaviors towards others (patients, relatives of patients and other healthcare workers).

When healthcare workers face huge workload, work pressure, and the associated adverse effects, they may have less cognitive and emotional resources to take the needed precautions against occupational and safety risks. The situation may be further compounded by perceived low support from the organization and its agents, which could lead healthcare workers to engage in, condone, or support behaviors, such as corruption and its tolerance that may be aimed at underscoring the perceived inadequacy in the level of organizational support (Adekanmbi *et al.*, 2022; Ogungbamila, 2023).

Apart from responding to perceived occupational risk with a range of work-related behaviors (Tawiah *et al.*, 2022) that may help them avert, avoid, or cope with the risk; healthcare workers may also react to such risks with corruption (e.g., spending time away from work in pursuit of personal interest or to make extra money at the expense of the organization) or corruption tolerance (Angell *et al.*, 2023; Glynn, 2022; Hutchinson *et al.*, 2019). Corruption or its tolerance in the health sector may further put the well-being of the organization and others (healthcare workers and patients) at risk (Hutchinson *et al.*, 2019; Vian, 2020).

It is, therefore, important that the perceived occupational risk of healthcare workers is adequately managed in order to prevent the negative reactions that may hurt the organization and the recipients of their services. Consequently, investigating the connections of perceived work safety risk, work-related abuse and threats, and organizational support with corruption tolerance may provide further evidence in support of the need to reduce occupational risk and provide the required support for healthcare workers, especially in countries with acute shortage of healthcare workers in order to reduce the level at which healthcare workers tolerate corruption. This may indirectly enhance the quality of their healthcare services.



## Perceived occupational risk and corruption tolerance

Perceived occupational risk refers to employees' feelings that the physical, biological, and psychological environments of their job are capable of exposing them to harm that may result in negative effects on their physical and or psychological health (Shan *et al.*, 2022). Perceived occupational risk may be more pronounced among healthcare workers because they work in one of the most harmful work environments (Jacobson, 2004) that may make them vulnerable to psychosocial, physiological, biochemical, and physical risks at work (Popp & Friedman, 2016), which may compromise their professional efficiency, personal well-being, and the well-being of their patients as well as the productivity and smooth operations of the healthcare organization (Ghosh, 2013). In most developing countries, such as Nigeria, the situation may be worse as fewer healthcare workers attend to extremely high number of patients (Akinyemi *et al.*, 2022; Adebayo & Akinyemi, 2021) amidst inadequate facilities and poor safety and risk reduction strategies (Allen *et al.*, 2019; Rai *et al.*, 2021; Yakubu *et al.*, 2023).

In this study, occupational risk was measured from two angles. On the one angle is the aspect of perceived work safety risk, which covers the five important aspects of work safety (job safety, safety of coworkers, safety of supervisor, safety practices of the management, and safety programme policies) as identified by Hayes *et al.* (1998). The other angle covered the aspect of work-related abuse and threats. In the current study, work-related abuse and threats refer to uncomplimentary remarks, psychological and physical harms and threats as well as impurities that healthcare workers suffer at work because of the perceived actions or inactions of other healthcare workers, patients and relative of patients. Work-related abuse and threats may be associated with the severe pressure occasioned by the acute dearth of healthcare workers (Adebayo & Akinyemi, 2021; Akinyemi *et al.*, 2022), which may adversely affect healthcare workers' social and professional behaviors towards others (patients, relatives of patients and other healthcare workers). As a result of this, patients, relatives of patients, and other healthcare workers may in turn become highly impatient, aggressive, and engage in activities that may further compromise the health and safety conditions in the healthcare facility. Therefore, healthcare workers may also be exposed to additional occupational risk in the form of work-related abuse and threats which are not adequately captured in Hayes *et al.*'s (1998) conceptualization and measurement of perceived work safety.

Perceived occupational risk may affect the feelings of healthcare workers towards their job, which may affect the quality of their services to patients. For example, Gyekye (2005) and Shan *et al.* (2022) reported that perceived occupational or safety risks had a significant inverse relationship with job satisfaction. This implies that when healthcare workers feel unsafe, their level of positive feelings towards their job reduce. Therefore, high occupational risk may lead to low job satisfaction, which may prompt employees, including healthcare workers, to reduce their work output and exhibit low moral behavior (Katsuro *et al.*, 2010) as well as high turnover intention (Akinyemi *et al.*, 2022). Healthcare workers, who decided to remain in and are still employed by a healthcare facility; where the organization or its agents are perceived to be responsible for the high occupational risk and low job satisfaction, may feel justified to support or tolerate corruption in form of absenteeism, theft and diversion of hospital resources and safety equipment, improper billing and fraudulent claims (Glynn, 2022) as well as illegal moonlighting and other rent-seeking activities (Hutchinson *et al.*, 2019), which in turn may further increase occupational risk for other healthcare workers and reduce access and quality of care to patients (Vian, 2020). Based on the position of literature, the following hypotheses were formulated.

1. Perceived work safety risk will positively and significantly predict corruption tolerance.
2. Work-related abuse and threats will significantly and positively predict corruption tolerance.

### **Perceived organizational support, occupational risk and corruption tolerance**

Perceived organizational support, which refers to the level of employees' feeling that the organization and its agents value their contributions and are concerned about and engage in purposeful actions that promote their well-being (Eisenberger *et al.*, 1997; Eisenberger *et al.*, 1986), has been associated with positive work behavior, organizational performance and patient satisfaction in the healthcare sector (Ogbonnaya *et al.*, 2018). Liu *et al.* (2015) reported that perceived organizational support was positively and strongly linked with high job satisfaction, low turnover intention, and high career success of male nurse in Tianjin, China.

Employees, including healthcare workers, may also feel that the organization attaches great value to their inputs and cares about their well-being if it encourages and provides the opportunity for speaking against occupational risk. Tucker *et al.* (2008) tested the level at which employees' perception that the supports of the organization and co-workers for safety predict the extent to which 213 urban drivers in the United Kingdom speak against occupational risk. Results showed that perceived organizational and coworker support for safety independently and collectively increased the level at which employees raised their voices against occupational risk. This implies that healthcare workers may feel safe at work when they perceive that the organization and others at work are concerned about safety and provide the necessary opportunity to change unsafe work conditions through their voices and actions.

In such condition, healthcare workers may be more willing to engage in behaviors that enhance the safety of the organization and others at work, even when such beneficial behaviors are not captured by the organization's formal reward system. For example, Reader *et al.* (2017) found, in a study involving 820 employees in 22 offshore oil and gas installations in the North Sea, United Kingdom, that the greater the health-support activities, the greater the perceive organizational support, and the higher the employees' commitment to the organization and engagement in safety-related citizenship behavior.

The principle of reciprocity (Deckop *et al.*, 2003; DeLamater & Ward, 2013; Thibaut & Kelley, 2017) of the social exchange theory (Blau, 2017; Cropanzano & Mitchell, 2005; Homans, 1961) submits that employees, including healthcare workers, engage in behaviors that promote mutually rewarding relationship with the organization or its agents with the expectations that their contributions to the interdependence relationship would be adequately valued, fairly rewarded, and appropriately reciprocated by the organization.

However, when healthcare workers perceive a breakdown in social exchange, depicted by low perceived organizational support, they may not only reduce their willingness to engage in behaviors that promote occupational safety but also engage in and tolerate behaviors that undermine work safety, honesty, integrity, and moral standards of the organization and the care of patients. This is because a low perception of organizational support amid high perceived occupational risk may justify engagement in and or tolerating corruption (Glynn, 2022; Hutchinson *et al.*, 2019). Going by the principle of reciprocity, the following hypotheses were formulated.

3. Perceived organizational support will significantly and negatively predict corruption tolerance.
4. Perceived organizational support will significantly mediate the connection between perceived work safety risk and corruption tolerance.

5. Perceived organizational support will significantly mediate the link between work-related abuse and threats and corruption tolerance.

## METHODS

### Design and participants

A cross-sectional survey design was adopted to study 388 healthcare workers (168 or 43.3%; males; 220 or 56.7% females) that were selected from three large public healthcare facilities in southwestern Nigeria. Majority of them (264 or 68%) were at the senior staff and 124 (32%) were at the junior staff. The participants had diverse qualifications; as 137 (35.3%) had National Diploma or its equivalent; 126 (32.5%) had first degree or its equivalent; and 125 (32.2%) had postgraduate degree or its equivalent. Most of the participants (281 or 72.4%) were nurses; 55 (14.2%) of them were medical doctors and pharmacists; and 52 (13.4%) were medical laboratory scientists and health technicians. Majority of the participants (263 or 67.8%) were married; 78 (20.1%) of them were single; and 47 (12.1%) were no longer with their spouses due to separation, divorce or death. The participants had been on the job between 3 and 32 years ( $M = 11.48$ ;  $SD = 6.12$ ).

### Measures

Hayes *et al.*'s (1998) Work Safety Scale (WSS) was adopted to assess *perceived work safety risk*. WSS was designed to assess the feelings, thoughts, and actions about hazards and accident-related issues and activities of employees, including healthcare workers, in the workplace. It was a 50-item scale with 5 sub-scales of 10 items each that covered five aspects of work safety (job safety, safety of coworker, safety of supervisor, safety practices of the management, and safety programme policies). The participants rated the extent to which the statement, phrase and word in each item of the instrument described their job, safety of coworker, safety of supervisor, safety practices of the management, and safety programme policies on a 5-point Likert scale (5 = strongly agree; 4 = agree; 3 = neither agree nor disagree; 2 = disagree; 1 = strongly disagree). Examples of items are: "Risky" (job), "Follow safety rules" (coworker), "Encourages safety behaviors" (supervisor safety), "Provides safe working conditions" (management safety practices), and "Effective in reducing injuries" (safety programmes). Hayes *et al.* (1998) developed and validated the WSS across 3 studies. They reported that the sub-scales of WSS had internal consistency values that ranged from .89 (coworker safety) to .96 (supervisor safety).

Since the present study focused employees' overall concern about occupational risk and its management in the workplace, the total scores on WSS were used. A Cronbach's alpha of .97 was recorded for WSS in the present study. WSS was scored in such way that score that were up to or higher than the mean indicated high level of perceived work safety risk while healthcare workers whose scores were below the mean felt that their job was not risky.

*Work-related abuse and threats* were assessed with the Healthcare-giver Abuse and Threat Scale (HATS), which was developed to bridge the perceived gap in the items of the WSS on the other forms of safety risks such as verbal abuse, physical attacks, and contaminations as a result of negligence that healthcare workers may suffer on the job. These are other important aspects of the safety concerns of healthcare workers, especially in Nigeria; where there is acute shortage of healthcare workers and safety facilities.



This 12-item measure was developed based on the experiences of six serving and 4 retired healthcare workers about aggression and contamination in hospital settings. The items reflected their experiences on verbal aggression (abusive words and threats), physical aggression (physical attacks), and contaminations (based on negligence) from patients, relatives of patients, and others healthcare workers.

The HATS was piloted with WSS on a sample of 93 healthcare workers in public health facilities (20 laboratory technician; 36 nurses; 15 doctors; 7 pharmacists; 6 record officers; 9 ward maids) with job tenure of at least 5 years. On HATS, the participants indicated how often they had been exposed to abuse, threats, physical assaults and contamination in the last six months in the course of performing their duties. The item on HATS were rated on a 5-point Likert scale (5 = several times per day; 4 = once or twice per day; 3 = once or twice per week; 2 = once or twice per month; 1 = less than once per month or never). Sample items included: "How often have you been exposed to abusive words from patients?", "How often have you been threatened by relatives of patients?", and "How often have you been exposed to contaminations because other healthcare workers failed to comply with safety rules?" The results showed that HATS had a Cronbach's alpha of .78. It was positively related with WSS [ $r(91) = .67, p < .01$ ], which had .92 Cronbach's alpha.

The data from the main study showed that HATS had a Cronbach's alpha of .96. Scores on the HATS were interpreted in such a way that as healthcare workers' score increased, the level at which they were exposed to verbal, physical attacks and contamination in the workplace also increased.

*Perceived organizational support* was evaluated with the 8-item version of the Survey of Perceived Organizational Support (SPOS) scale (Eisenberger *et al.*, 1986). SPOS was designed to assess employees' feelings of how well their organization cared about them, their contributions, and supported their well-being. The participants rated their responses on a 7-point Likert scale (1 = strongly disagree; 2 = slightly disagree; 3 = moderately disagree; 4 = neither agree nor disagree; 5 = slightly agree; 6 = moderately agree; 7 = strongly agree. Examples of items are: "The organization values my contribution to its well-being", "The organization ignores my complaints" (reverse scored), and "The organization cares about my general satisfaction at work". According to Eisenberger *et al.* (1997) the 8-item version of SPOS had a Cronbach's alpha of .90. Among Ghanaian industrial workers, Gyekye and Salminen (2007) found a Cronbach's alpha of .97 for the 8-item version of the scale. In the current study, the 8-item version of SPOS had a Cronbach's alpha of .97. Scores that were up to or higher than the mean indicated that the healthcare workers felt supported and valued by the organization and score that were lower than the mean reflected perceived low organizational support.

*Corruption tolerance* was assessed using Corruption Tolerance Inventory (CTI). It was a 21-item developed by Ogungbamila and Ajayi (in review) to determine the level at which employees overlook or indirectly support corruption in the workplace. It was scored on a 6-point Likert scale (0 = not at all; 1 = a little; 2 = moderately; 3 = quite often; 4 = most of the time; 5 = always). Examples of items include: "I feel that my behaviors indirectly encourage corruption" and "I feel upset when others try to cover up corruption" (reverse scored). Ogungbamila and Ajayi (in review), in a study of public sector employees in Nigeria, found a Cronbach's alpha of .87 for CTI. A Cronbach's alpha of .97 was obtained for CTI with the present sample. The participants' responses to CTI were interpreted in such that scores that were up to or higher than the mean showed that the healthcare workers overlooked corruption while scores that were below the mean showed that the healthcare workers did not support corruption in the workplace.

**Procedure**

The permission and cooperation of the heads of the public hospitals selected for the study were obtained. The potential participants were intimated with the aim of the study. They were told that though the study posed no psychological and other threat to their job and well-being, they were free to opt out of the study at any point. In addition to the fact that the name of organization, department, and location were omitted from the questionnaire, the participants were also assured of the confidentiality and anonymity of their responses. In all, 400 copies of the questionnaire were distributed across units in the healthcare facilities to those who opted to participate in the study. They completed the questionnaire in between duties during work hours. Data collection took two weeks. Out of the 400 copies of the questionnaire, 392 were retrieved but 4 individuals did not complete important aspects of the questionnaire. Therefore, final analysis was based on 388 copies of the questionnaire.

**Analysis**

Inter-variable correlations were conducted on the data. In order to test hypotheses 1 to 3, a 3-step hierarchical multiple regression was performed on the data. Baron and Kenny's (1986) tests of mediation, which involved a combination of four simple regression analyses, were conducted on hypotheses 4 and 5.

**RESULTS**

**Test of relationships**

The type of relationships among the variables as well as their mean and standard deviation scores were determined. Table 1 shows the results.

Table 1:  
**Mean, SD, and Inter-variable correlations**

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Age	1										
2. Gender	-.12*	1									
3. Marital status	.28***	.09	1								
4. Type of healthcare professional	.04	.004	.19**	1							
5. Academic qualification	.00	-.11*	.04	-.29***	1						
6. Job status	.41***	.09	.32***	.04	.07	1					
7. Job tenure	.78***	-.09	.24***	-.06	.03	.37***	1				
8. Perceived work safety risk	-.03	-.08	-.14**	-.09	.06	-.11*	.04	1			
9. Work-related abuse and threats	-.09	-.08	-.15**	-.10*	.06	-.09	-.02	.86***	1		
10. Perceived organizational support	.02	.09	.14**	.11*	-.10*	.04	-.05	-.74***	-.55***	1	
11. Corruption tolerance	.04	-.05	-.13*	-.12*	.10*	-.07	.09	.59***	.44***	-.80***	1
<b>M</b>	<b>41.69</b>	-	-	-	-	-	<b>11.48</b>	<b>117.83</b>	<b>32.14</b>	<b>28.28</b>	<b>57.71</b>
<b>SD</b>	<b>8.30</b>	-	-	-	-	-	<b>6.12</b>	<b>11.95</b>	<b>15.07</b>	<b>16.14</b>	<b>16.72</b>

**Note:** \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .  $N = 388$ . Gender and job status were coded as dummy variables. Gender was coded male 0; female 1. Job level was coded junior 0; senior level 1. Marital status was coded single 0; married 1; no longer with spouse (due separation, divorce or death) 2. Type of healthcare professional was coded as Laboratory scientists and Health technicians 1; Nurses 2; Medical doctors and Pharmacists 3. Academic qualification was coded as National Diploma or its equivalent 1; first degree or its equivalent 2; postgraduate degree or its equivalent 3.

Results in Table 1 show that corruption tolerance significantly increased as healthcare workers felt that their safety at work was compromised [ $r(386) = .59, p < .001$ ] and as they were exposed to abuse and threats [ $r(386) = .44, p < .001$ ]. However, corruption tolerance significantly reduced as healthcare workers felt that the organization appreciated their contributions and made efforts to improve their well-being [ $r(386) = -.80, p < .001$ ]. Healthcare workers, who felt unsafe at work, also tended to report high level of abuse and threats at work [ $r(386) = .86, p < .001$ ].

Three of the socio-demographic variables were related with corruption tolerance. Corruption tolerance was significantly related with employees' marital status; with those who were single being less tolerant of corruption than those who were married or were no longer with their spouses due to separation, divorce or death [ $r(386) = -.13, p < .05$ ]. Medical laboratory scientists and health technicians were significantly the most tolerant of corruption compared with nurses and medical doctors and pharmacists [ $r(386) = -.12, p < .05$ ]. Corruption tolerance significantly increased as healthcare workers acquired more academic qualifications [ $r(386) = .10, p < .05$ ].

### Test of hypotheses 1 to 3

Hypotheses 1 to 3 were evaluated with a 3-step hierarchical multiple regression analysis. The socio-demographic variables were regressed on the corruption tolerance in step 1 of the analysis. This was because some of the socio-demographic variables had significant relationships with corruption tolerance. The effects of perceived work safety risk and work-related abuse and threats (the predictor variables) were added to the model in step 2 of the analysis. Effects of perceived organizational support (the mediator variable) was added to the model in step 3 of the analysis. Table 2 shows the results.

Table 2:

**Summary of the 3-Step Hierarchical Multiple Regression on the Influence of Perceived Work Safety Risk, Work-related Abuse and Threats, and Perceived Organizational Support on Corruption Tolerance**

Models	$\beta$	$t$	$R$	$R^2$	$\Delta R^2$	$F$
<i>Model 1 – Socio-demographic variables</i>	-	-	.23	.05	.05	2.91**
Age	-.003	-.04				
Gender	-.01	-.15				
Marital status	-.13*	-2.36*				
Type of healthcare professional	-.05	-.98				
Academic qualification	.09	1.65				
Job status	-.09	-1.69				
Job tenure	.15**	2.83**				
<i>Model 2 -Predictors</i>	-	-	.61	.38	.33	25.38***
Age	.03	.45				
Gender	.02	.40				
Marital status	-.07	-1.63				
Type of healthcare professional	-.03	-.46				
Academic qualification	.06	1.60				
Job status	-.02	-.38				
Job tenure	.06	1.61				
<b>Perceived work safety risk</b>	<b>.78***</b>	<b>9.76***</b>				
<b>Work-related abuse and threats</b>	<b>.24</b>	<b>3.07**</b>				



<i>Model 3 – Mediator</i>	-	-	.81	.66	.28	71.71***
Age	.07	1.67				
Gender	.05	1.61				
Marital status	-.03	-.48				
Type of Healthcare professional	-.01	-.36				
Academic qualification	.03	.47				
Job status	-.08	-1.63				
Job tenure	.04	1.74				
Perceived work safety risk	-.06	-1.64				
Work-related abuse and threats	.03	.49				
<b>Perceived organizational support</b>	<b>-.82***</b>	<b>-17.46***</b>				

**Note:** \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .  $N = 388$ . Gender and job status were coded as dummy variables. Gender was coded male 0; female 1. Job level was coded junior 0; senior level 1. Marital status was coded single 0; married 1; no longer with spouse (due separation, divorce or death) 2. Type of healthcare professional was coded as Laboratory scientists and Health technicians 1; Nurses 2; Medical doctors and Pharmacists 3. Academic qualification was coded as National Diploma or its equivalent 1; first degree or its equivalent 2; postgraduate degree or its equivalent 3.

Table 2 indicates that all the socio-demographic variables contributed 5 percent to the level of corruption tolerance among the healthcare workers who participated in this study ( $R = .23$ ,  $R^2 = .05$ ,  $\Delta R^2 = .05$ ,  $F = 2.91$ ,  $p < .01$ ). The bulk of these changes came from the effects of marital status and job tenure. Healthcare workers became less tolerant of corruption before they got married than when they got married or were no longer with their spouses due to separation, divorce or death ( $\beta = -.13$ ,  $t = -2.36$ ,  $p < .05$ ). The more healthcare workers stayed on the job, the more tolerant of corruption they became ( $\beta = .15$ ,  $t = -2.83$ ,  $p < .01$ ). Other socio-demographic variables did not exert significant influence on corruption tolerance. This implies that healthcare workers condoned corruption irrespective of their age, gender, healthcare profession, academic qualification, and job status.

The addition of the predictor variables (perceived work safety and work-related abuse and threats) led to a 38 percent increase in the level of corruption tolerance ( $R = .61$ ,  $R^2 = .38$ ,  $\Delta R^2 = .33$ ,  $F = 25.38$ ,  $p < .001$ ). At the individual level, perceived work safety risk was significantly related with increasing level of corruption tolerance ( $\beta = .79$ ,  $t = 9.76$ ,  $p < .001$ ). This implies that when healthcare workers felt that their safety had been compromised at work they tended to condone or indirectly support corruption. Similarly, healthcare workers also tended to overlook or condone corruption when they experienced abuse and threat at work ( $\beta = .24$ ,  $t = 3.07$ ,  $p < .001$ ). These results supported hypotheses 1 and 2.

The results in Table 2 also provided evidence in support of hypothesis 3. Corruption tolerance significantly reduced when healthcare workers felt that the organization appreciated their contributions and made efforts to enhance their welfare ( $\beta = -.82$ ,  $t = -17.46$ ,  $p < .001$ ). The inclusion of perceived organizational support contributed 66 percent to the reduction in the level of corruption tolerance ( $R = .81$ ,  $R^2 = .66$ ,  $\Delta R^2 = .28$ ,  $F = 71.71$ ,  $p < .001$ ).

### Test of hypotheses 4 and 5

In order to evaluate hypotheses 4 and 5, two sets (one for each independent variable) of Baron and Kenny's (1986) mediated test were conducted. In the first set, and in line with the recommendations of Baron and Kenny (1986), four simple regression analyses were conducted. In the analyses; (a) perceived organizational support (the mediator variable) was regressed on perceived work safety risk (the predictor variable), (b) corruption tolerance (the outcome variable) was regressed on perceived organizational support, (c) corruption tolerance was regressed on perceived work safety risk when the effects of perceived organizational support were removed,

and (d) the extent to which perceived work safety risk predicted corruption tolerance when the effects of perceived organizational support were included in model.

The second set of Baron and Kenny's (1986) mediation test also covered four simple regression analyses. The analyses assessed (a) the level at which work-related abuse and threats (the predictor variable) predicted perceived organizational support (the mediator variable), (b) the level at which perceived organizational support predicted corruption tolerance (the outcome variable), (c) the level at which work-related abuse and threats predicted corruption tolerance when the effects of perceived organizational support were removed from the model, and (d) the level at which work-related abuse and threats predicted corruption tolerance when perceived organizational support was included in the model. Table 3 shows the results.

Table 3:

**Summary of Baron and Kenny's Mediation Test on Corruption Tolerance**

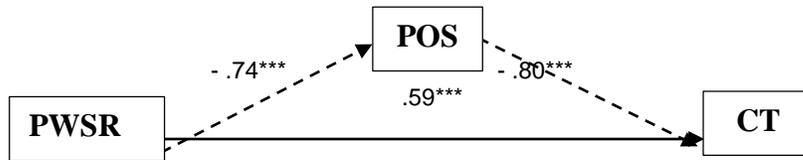
Predictors	Direct and Indirect Paths	$\beta$	$t$	SE	$R^2$	$\Delta R^2$
Perceived work safety risk	PWSR to POS	-.74***	-21.71***	.02		
	POS to Corruption tolerance	-.80***	-26.43***	.05		
	PWSR to Corruption Tolerance (without POS)	.59***	14.27***	.03	.35	
	PWSR to Corruption Tolerance (with POS)	-.02	-.37	.04	.64	.29
Work-related abuse and threats	WAT to POS	.55***	13.00***	.05		
	POS to Corruption tolerance	-.80***	-26.43***	.05		
	WAT to Corruption Tolerance (without POS)	.44***	9.54***	.08	.19	
	WAT to Corruption Tolerance (with POS)	-.01	-.23	.07	.64	.45

**Note:** \*\*\*  $p < .001$ .  $N = 388$ . PWSR = Perceived work safety risk. POS = Perceived organizational support. WAT = Work-related abuse and threats

As presented in Table 3, the more healthcare workers felt unsafe in the workplace the less they felt that the organization was concerned about and valued their well-being ( $\beta = -.74$ ,  $t = -21.71$ ,  $p < .001$ ). Table 3 shows that as healthcare workers felt supported by the organization; they also tended to be intolerant of corruption ( $\beta = -.80$ ,  $t = -26.43$ ,  $p < .001$ ). Corruption tolerance increased as healthcare workers felt unsafe in the workplace ( $\beta = .59$ ,  $t = 14.27$ ,  $p < .001$ ). However, when perceived organizational support was included in model connecting perceived work safety and corruption tolerance, perceived work safety had no significant influence on corruption tolerance ( $\beta = -.02$ ,  $t = -.37$ ,  $p > .05$ ).

The inclusion of perceived organizational support to the model, significantly neutralized the power of perceived work safety risk to predict corruption tolerance to the extent that healthcare workers became intolerant of corruption, despite the unsafe work environment, as long as the organization recognized their contribution and was concerned about their well-being ( $\beta = -.02$ ,  $t = -.37$ ,  $R^2 = .64$ ,  $\Delta R^2 = .29$ ,  $p > .05$ ). The hitherto positive and significant relationship, before the inclusion of perceived organizational support in the model, became negative and was no longer significant. In fact, the effects of perceived work safety risk on corruption tolerance reduced from .59 (without perceived organizational support) to -.02 (with the inclusion of perceived organizational support). As suggested by Baron and Kenny (1986), this was an indication of total mediation. Therefore, the results in Table 3, supported hypothesis 4. The results are graphically depicted in Figure 1.

**Figure 1: Summary of the Mediation Effects of Perceived Organizational Support on the Relationship between Perceived Work Safety Risk and Corruption Tolerance**

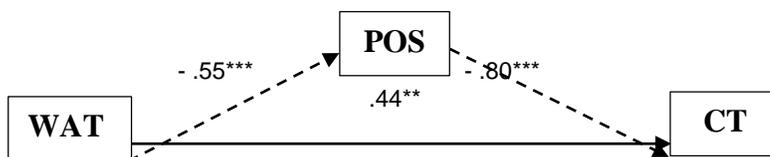


**Note:** \*\*\*  $p < .01$ .  $N = 388$ . PWSR = Perceived work safety risk. POS = Perceived organizational support. CT = Corruption tolerance.

The results of the second set of Baron and Kenny’s (1986) test of mediation indicated that perceived organizational support significantly decreased as healthcare workers reported work-related abuse and threats from patients, relatives of patients and coworkers at work ( $\beta = -.55$ ,  $t = -.13.00$ ,  $p < .001$ ). Corruption tolerance also significantly decreased as healthcare workers felt supported by the organization ( $\beta = -.80$ ,  $t = -26.43$ ,  $p < .001$ ). However, corruption tolerance significantly increased as healthcare workers experienced work-related abuse and threats from patients, relatives of patients, and coworkers at work ( $\beta = .44$ ,  $t = .9.54$ ,  $p < .001$ ).

The inclusion of perceived organizational support in the model connecting work-related abuse and threats with corruption tolerance did not only alter the positive relationship between work-related abuse and threats and corruption tolerance from positive to negative but also made it very weak and insignificant ( $\beta = -.01$ ,  $t = -.23$ ,  $R^2 = .64$ ,  $\Delta R^2 = .45$ ,  $p > .05$ ). The power of work-related abuse and threats as an effective predictor of corruption tolerance dropped from .80 (without perceived organizational support) to -.01 (with perceived organizational support). In line with the submission of Baron and Kenny (1986), these indicated that perceived organizational support totally mediated the connection between work-related abuse and threats and corruption tolerance. Based on these results, the position of hypothesis 5 is confirmed. Figure 2 is a graphical summary of the results.

**Figure 2: Summary of the Mediation Effects of Perceived Organizational Support on the Relationship between Work-related abuse and threats and Corruption Tolerance**



**Note:** \*\*\*  $p < .001$ .  $N = 388$ . WAT = Work-related abuse and threats. POS = Perceived organizational support. CT = Corruption tolerance.

## DISCUSSION AND CONCLUSION

Corruption and its tolerance may worsen patients’ access to and the quality of care received from public healthcare facilities. Corruption tolerance can also be a strong source of compromise for the well-being of the organization and its employees, especially in Nigeria and other developing countries with serious negative imbalance in healthcare worker to patient ratio. Perceived occupational risk may prompt corruption tolerance among healthcare workers, especially when they feel that the organization neither appreciates their contributions and nor cares about their well-being. This study was, therefore, a test of the extent to which perceived



work safety risk and work-related abuse and threats were related with corruption tolerance and whether perceived organizational support mediate such relationships in healthcare workers.

As the results of the present study indicate, healthcare workers condoned and supported corruption as they felt unsafe and at risk of work-related abuse and threats at work. These findings reflect the position of previous studies (e.g., Angell *et al.*, 2023; Glynn, 2022; Hutchinson *et al.*, 2019) on the consequences of perceived occupational risk. Healthcare workers, who felt that their safety on the job was compromised because of inadequate facilities and poor management of safety issues, might have had negative feelings toward the job and the organization (Shan *et al.*, 2022) and engaged in low moral behaviors that encourage and tolerate corruption (Glynn, 2022; Hutchinson *et al.*, 2019; Katsuro *et al.*, 2010). Though forming the intention and leaving the organization and or the risky job may be a viable option for avoiding occupational risk among healthcare workers (Akinyemi *et al.*, 2022), some of them might not want to leave without subtly or indirectly making the organization and its agents pay. Tolerating, encouraging or support rent-seeking behavior in the workplace might have been one of the healthcare workers' ways of making the healthcare organization pay for putting their lives at risk.

Perceived work safety risk and work-related abuse and threats as well as corruption tolerance reduced significantly as healthcare workers felt appreciated, supported and cared for by the organization and others at work. These results were in tandem with the expectations of this study. The results also confirmed the findings of previous studies (e.g., Reader *et al.*, 2017; Tucker *et al.*, 2008). This might be because perceived organizational support has generally been connected with positive feelings and positive work behaviors in healthcare workers (Liu *et al.* 2015; Ogbonnaya *et al.*, 2018). Consequently, the healthcare workers might have felt obliged to reciprocate the care and support they received from the organization with behaviors that encouraged and promoted occupational safety; but with behaviors that discouraged and were intolerant of corruption. Therefore, the findings of the current study extended the principle of reciprocation (Deckop *et al.*, 2003; DeLamater & Ward, 2013; Thibaut & Kelley, 2017) and the general submissions of the social exchange theory (Blau, 2017; Cropanzano & Mitchell, 2005; Homans, 1961).

Low tolerance for corruption and other positive behaviors, which promote the well-being of the organization as well as improve the safety and welfare of others at work, might be important ways of appreciating the organization for living up to expectations in the mutually rewarding and interdependent relationship. High tolerance for corruption and perceived occupational risk and report of work-related abuse and threats among healthcare workers, who felt unsupported by the organization, might be a signal that they blame the organization and its agent for not shielding them adequately from hazards and risks at job and breaking down the work-related social contract. Consequently, such healthcare workers might have felt justified to engage in and tolerate corruption and behavior that undermine work safety, honesty, integrity, and moral standards of the organization and the care of patients (Glynn, 2022; Hutchinson *et al.*, 2019).

As proposed in hypotheses 4 and 5, perceived organizational support totally mediated the relationships of perceived work safety risk and work-related abuse and threats with corruption tolerance. Based on the results, perceived organizational support reduced the level at which healthcare workers condoned or supported self-serving behaviors that were detrimental to the organization and those connected with it, despite high perceived work safety risk and in the presence of work-related abuse and threats. This might be because the activities of the organization and other organization members prevented and neutralized perceived work safety risk and work-related abuse and threats at work, which invariably reduced the extent to which healthcare workers became tolerant of corruption in the workplace. This implies that healthcare



workers tended to be unsupportive of behaviors that promote self-interest, especially those that compromised the well-being of the organization, its employees, and the recipients of their healthcare services. The findings of the current study extended the social exchange theory (Blau, 2017; Cropanzano & Mitchell, 2005; Homans, 1961) to capture corruption tolerance as a possible consequence of employees' perceived breach in the social exchange contract between them and healthcare organization, especially when their safety is at risk without adequate organizational efforts directed at mitigating or managing the situation. Consequently, the healthcare workers might have felt justified to condone or support corruption and felt unconcerned about occupational risk and safety of patients and others at work.

### **Conclusion**

Healthcare workers who felt that their safety had been compromised at work tended to be more tolerant or supportive of corruption than those who felt safe at work. In the same vein, healthcare workers overlooked or condoned corruption when they experienced work-related abuse and threats at work. However, their level of corruption tolerance significantly reduced when they felt that the organization appreciated their contributions and cared about their well-being despite perceived occupational risk and exposure to work-related abuse and threats.

### **Implications of the findings**

The theoretical implication of the findings of this study was that healthcare workers may see tolerance for corruption as a justifiable way of protesting perceived inadequate support and recognition from the organization and its agents for their contribution to the care of patients and the well-being of the organization. This condition was not effectively captured in the postulations of the social exchange theory (Blau, 2017; Cropanzano & Mitchell, 2005; Homans, 1961). With these results, the principle of social exchange theory can be used to explain corruption and its tolerance in healthcare organizations. In terms of the practical implications of the study, managers of healthcare facilities should engage in deliberate and overt efforts that reduce perceived occupational risk and discourage behaviors that threaten the physical and psychological well-being of healthcare workers. The research implication of the findings of this study was that, beyond turnover intention, emigration, and low job satisfaction, corruption tolerance could be healthcare workers' other way of reacting to high levels of perceived work safety risk and work-related abuse and threats, especially in the face of low perceived organizational support.

However, there is still a need to investigate how the type of perceived organizational support such as organization's support for and the opportunities to protest perceived occupational hazard and safety risk (Tucker *et al.*, 2008), could reduce corruption tolerance. This would provide a knowledge-based intervention on the type of support that the management of healthcare facilities should further provide to its workers in order to stem corruption and its tolerance that may be associated with perceived work safety risk and work-related abuse and threats.

### **Limitations of the study and the direction for future studies**

Despite the contribution of this study to social exchange theory (Blau, 2017; Cropanzano & Mitchell, 2005; Homans, 1961), research, and practice, it has some short-comings. One of the major short-comings of this study was that the sample was drawn from three public healthcare facilities in southwestern Nigeria. Therefore, the results of the study may not adequately represent the entire population of healthcare workers in Nigeria. The current study did not cover healthcare workers in private healthcare facilities.



Future studies should, therefore, reflect samples of healthcare workers drawn from public and private healthcare facilities across Nigeria. This would provide a more robust understanding of the mediatory effects of perceived organizational support on the connections of perceived work safety risk and work-related abuse and threats with corruption tolerance and provide a clearer policy direction on the management of perceived occupational risk and corruption in the health sector.



## REFERENCES

- Adebayo, A., & Akinyemi, O. O. (2021). "What are you really doing in this country?": Emigration intentions of Nigerian doctors and their policy implications for human resource for health management. *Journal of International Migration and Integration*, 23, 1377–1396. <https://doi.org/10.1007/s12134-021-00898-y>
- Adekanmbi, F. P., Ukpere, W. I., & Kelvin-Iloafu, L. E. (2022). The relational effects of perceived organizational support, fear of COVID-19, and work-related stress on the safety performance of healthcare workers. *Frontiers in Psychology*, 13, 963683. <https://doi.org/10.3389/fpsyg.2022.963683>
- Adhikari, S., Clemens, M., Dempster, H., & Ekeator, N. L. (2021). A global skill partnership in nursing between Nigeria and the UK. Centre for Global Development. <https://www.cgdev.org/publication/global-skill-partnership-nursing-between-nigeria-and-uk#>.
- Akinyemi, B., Ogundele, A. I., Olutuase, S., & George, B. (2022). The influence of organizational factors on registered nurses' work attitudes in Nigeria. *International Journal of Psychological Studies*, 14(1), 21 – 36. <https://doi.org/10.5539/ijps.v14n1p21>
- Allen, O. T., Nwaogazie, I. L., & Douglas, K. (2019). Analyses and assessment of health care workers (HCWs) towards occupational hygiene (OH) and infection control (IC) practices in selected tertiary healthcare facilities within parts of Niger Delta, Nigeria. *Asian Journal of Research in Nursing and Health*, 2(1), 71-84.
- Angell, B., Onwujekwe, O., Roy, P., Nwokolo, C., McKee, M., & et al. (2023). Designing feasible anti-corruption strategies in the Nigerian health system: A latent class analysis of a discrete choice experiment. *World Development*, 166, 106208. <https://doi.org/10.1016/j.worlddev.2023.106208>
- Baron, R. M., & Kenny, D. A. (1986). The moderator –mediator variable distinction in social psychology research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173 – 1183.
- Blau, P. (2017). *Exchange and power in social life*. Routledge.
- Buowari, D. Y. (2020). Job satisfaction: The Nigerian doctor's story. *World Medical Journal*, 66, 35–37.
- Chankova, S., Nguyen, H., Chipanta, D., Kombe, G., Onoja, A., & Ogungbemi, K. (2007). *Catalyzing human resources mobilization: A look at the situation in Nigeria*. Paper presented at the Global Health Council Annual Conference, Washington, DC.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900.
- Deckop, J. R., Cirka, C. C., & Andersson, L. M. (2003). Doing unto others: The reciprocity of helping behavior in organizations. *Journal of Business Ethics*, 47(2), 101-113.
- DeLamater, J., & Ward, A. (2013). *Handbook of social psychology*. Springer.
- Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, 82(5), 812-820.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507.
- Ghosh, T. (2013). Occupational health and hazards among health care workers. *International Journal of Occupational Safety and Health*, 3(1) 1 – 4.



- Glynn, E. H. (2022). Corruption in the health sector: A problem in need of a systems-thinking approach. *Frontiers in Public Health*, 10, 910073. <https://doi.org/10.3389/fpubh.2022.910073>
- Gyekye, S. A. (2005). Workers' perceptions of workplace safety and job satisfaction. *International Journal of Occupational Safety and Ergonomics*, 11(3), 291–302. <https://doi.org/10.1080/10803548.2005.11076650>
- Gyekye, S. A., & Salminen, S. (2007). Workplace safety perceptions and perceived organizational support: Do supportive perceptions influence safety perceptions? *International Journal of Occupational Safety and Ergonomics*, 13(2), 189–200.
- Hayes, B. E., Perander, J., Smecko, T., & Trask, J. (1998). Measuring perceptions of workplace safety: Development and validation of the work safety scale. *Journal of Safety Research*, 29(3), 145–161.
- Homans, G. C. (1961). *Social behavior: Its elementary forms*. Harcourt, Brace
- Hutchinson, E., McKee, M., & Balabanova, D. (2019). What drives health workers to break the rules and use public resources for private gain? A review of the literature on sub-Saharan Africa. *Anti-corruption Evidence Working Paper 009*. <https://researchonline.lshtm.ac.uk/id/eprint/4659912/1/ACE-WorkingPaper009-HealthWorkersBreakRules-190430.pdf>
- Innocent, D. C., Emerole, C. O., Ezejindu, C. N., Dozie, U. W., Obani, S. I., Uwandu-Uzoma, A. C., Nwaokoro, C. J., Udeh, M. U., Eneh, S. C., Uwaezuoke, A. C., Iwuji, K. M., Udoewah, S. A., Uzowuihe, P. N. and. Maduekwe, V. C. (2022). Examination of common occupational hazards among healthcare workers in a university healthcare center in southeastern Nigeria. *Health*, 14, 833-852. <https://doi.org/10.4236/health.2022.148059>
- Jacobson, B. A. (2004). Occupational risk factors: Impact and implication for pretention. *International Journal on Risk Management*, 7(4), 46-58.
- Katsuro, P., Gadzirayi, C. T., Taruwona, M., & Mupararano, S. (2010). Impact of occupational health and safety on worker productivity: A case of Zimbabwe food industry. *African Journal of Business Management*, 4(13), 2644-2651.
- Lawal, L., Lawal, A. O., Amosu, O. P., & et al., (2022). The COVID-19 pandemic and health workforce brain drain in Nigeria. *International Journal for Equity in Health*, 2, 174. <https://doi.org/10.1186/s12939-022-01789-z>
- Liu, J., Yang, J., Yang, Y., & Liu, Y. (2015). The relationships among perceived organizational support, intention to remain, career success and self-esteem in Chinese male nurses. *International Journal of Nursing Sciences*, 2, 398-393. <http://dx.doi.org/10.1016/j.ijnss.2015.01.004>
- Ogbonnaya, C., Tillman, C. J., & Gonzalez, K. (2018). Perceived organizational support in health care: the importance of teamwork and training for employee wellbeing and patient satisfaction. *Group & Organization Management*, 43(3), 475-503. <https://doi.org/10.1177/1059601118767244>
- Ogungbamila, A. (2023). Influence of perceived organisational support on the dimensions of psychological well-being among police personnel in Nigeria. *International Journal of Psychological Studies*, 15(4), 35-48. <https://doi.org/10.5539/ijps.v5n4p35>
- Ogungbamila, B. (2013). Occupational burnout among employees in some service occupations in Nigeria: Are health workers different? *Psychological Thought*, 6(1), 153–165. <https://doi.org/10.5964/psyct.v6i1.47>
- Ogungbamila, B., & Ajagunna, F. A. (2023). When tolerance becomes healthy: Influence of corruption tolerance on psychological distress among employees in Nigeria. *Trends in Psychology*. <https://doi.org/10.1007/s43076-023-00326-3>
- Ogungbamila, B., & Ajayi, O. F. (In review). Relationship between moral intelligence and corruption tolerance among public sector employees: Does life satisfaction matter? *Mediterranean Journal of Social & Behavioral Research*.
- Okafor, C. J., & Chimereze, C. (2020). Brain drain among Nigerian Nurses: Implications to the migrating nurse and the home country. *International Journal of Research and Scientific Innovation*, 7(1), 15-21.



- Onah, C. K., Azuogu, B. M., Ochie, C. N., Akpa, C. O., Okeke, K. C., Okpunwa, O. O., Bello, H. M., & Ugwu, G. O. (2022). Physician emigration from Nigeria and the associated factors: the implications to safeguarding the Nigeria health system. *Human Resources for Health*, 20, 85. <https://doi.org/10.1186/s12960-022-00788-z>
- Popp, W., & Friedman, C. (2016). Occupational health risks for healthcare workers. In C. Friedman & A. Arbor (Eds.), *IFIC basic concepts of infection control* (pp. 1 – 14). [https://www.theific.org/wp-content/uploads/2016/04/22-Occ-Health\\_2016.pdf](https://www.theific.org/wp-content/uploads/2016/04/22-Occ-Health_2016.pdf)
- Rai, R., El-Zaemey, S., Dorji, N., Rai, B. D., & Fritschi, L. (2021). Exposure to occupational hazards among health care workers in low- and middle-income countries: A scoping review. *International Journal of Environmental Research and Public Health*, 18, 2603. <https://doi.org/10.3390/ijerph18052603>
- Reader, T. W., Mearns, K., Lopes, C., & Kuha, J. (2017). Organizational support for the workforce and employee safety citizenship behaviors: a social exchange relationship. *Human Relations*, 70(3), 362-385.
- Shan, B., Liu, X., Gu, A., & Zhao, R. (2022). The Effect of Occupational Health Risk Perception on Job Satisfaction. *International Journal of Environmental Research and Public Health*, 19, 2111. <https://doi.org/10.3390/ijerph19042111>.
- Tawiah, P. A., BaffourAwuah, A., Effah, E. S., et al. (2022). Occupational health hazards among healthcare providers and ancillary staff in Ghana: A scoping review. *BMJ Open*, 12, e064499. <https://doi.org/10.1136/bmjopen-2022-064499>
- Thibaut, J. W., & Kelley, H. H. (2017). *The social psychology of groups*. Routledge.
- Tucker, S., Chmiel, N., Turner, N., Hershcovis S. M., & Stride, C. B. (2008). Perceived organizational support for safety and employee safety voice: The mediating role of coworker support for safety. *Journal of Occupational Health Psychology*, 13(4), 319 – 330. <http://dx.doi.org/10.1037/1076-8998.13.4.319>
- Uneke, C. J., Ogonna, A., Ezeoha, A., Oyibo, P. G., Onwe, F., Ngwu, B. A. F., & Innovative Health Research Group. (2008). The Nigeria health sector and human resource challenges. *The Internet Journal of Health*, 8(1). <https://doi.org/10.5580/d5a>
- Vian, T. (2020). Anti-corruption, transparency and accountability in health: Concepts, frameworks, and approaches. *Global Health Action*, 13, 1694744. <https://doi.org/10.1080/16549716.2019.1694744>
- World Health Organization. (2020). *State of the world's nursing 2020: Executive summary*. <https://apps.who.int/iris/handle/10665/331673>
- Yakubu, K., Shanthosh, J., Adebayo, K. O., Peiris, D., & Joshi, R. (2023). Scope of health worker migration governance and its impact on emigration intentions among skilled health workers in Nigeria. *PLOS Global Public Health*, 3(1), e0000717. <https://doi.org/10.1371/journal.pgph.0000717>

## APPENDIX

### Healthcare-giver Abuse and Threat Scale

**INSTRUCTION:** Please, indicate how often you have been exposed to risks, abuse, threats, and physical assault in the last six months in the course of performing your duties.

1. How often have you been exposed to abusive words from patients?
2. How often have you been exposed to abusive words from relatives of patients?
3. How often have you been exposed to abusive words from other health workers?
4. How often have you been threatened by patients?
5. How often have you been threatened by relatives of patients?
6. How often have you been threatened by other health workers?
7. How often have you been exposed to physical attacks from patients?
8. How often have you been exposed to physical attacks from relatives of patients?
9. How often have you been exposed to physical attacks from other health workers?
10. How often have you been exposed to contaminations because patients failed to comply with safety rules?
11. How often have you been exposed to contaminations because relatives of patients failed to comply with safety rules?
12. How often have you been exposed to contaminations because other health workers failed to comply with safety rules?