

The Effects of Workplace Safety on Healthcare Workers' Mental Health

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INTRODUCTION

The healthcare industry has various positions for everyone to contribute based on their role. Not a lot is known about their mental health, which can lead to risks in a healthcare climate. It is difficult to recognize the difficulties workers have, so it is important to maintain their safety amongst them.

Symptoms like anxiety and depression from healthcare workers range from 10% to 70% and 9% to 54% (Ramacciati et al., 2017). Studies have also shown that poor safety climates can result in higher levels of depression, anxiety, and stress among healthcare workers, as well as a higher risk of burnout and turnover intentions (Hoffman & Mark, 2019).



AIM

The study's purpose is to examine the effects of healthcare workers' perceived workplace safety on their mental health.

START
STUDENT AGING RESEARCHERS IN TRAINING

METHOD

Participants and Procedure

In March 2022, we collected self-reported data using an online survey from a diverse sample of US healthcare workers (N = 200).

Interviews took approximately 1 hour to complete, and participants are compensated in the form of a \$50 gift card for their time.

The sample included a broad range of healthcare occupations, including low-wage healthcare support roles. The sample represented 28 states plus Washington, DC, and was diverse with respect to gender and race/ethnicity.

Measures

Perceived Workplace Safety

National Institute for Occupational Safety and Health (NIOSH) Worker Well-Being Questionnaire

Anxiety

10-item Severity Measure for Generalized Anxiety Disorder

Depression

Patient Health Questionnaire

PTSD

PTSD Checklist

Occupational Level

Reported type of occupation in the healthcare sector

Covariates

Gender specific risks



RESULTS

59.5% of the sample had moderate or worse anxiety symptomatology, 29.5% had moderate or worse depression, and 22.5% had a probable PTSD diagnosis

Our regression results suggest that greater perceived workplace safety was associated with less mental health symptomatology among non-prescriber/non-administrator healthcare workers, but not for higher-wage healthcare workers.

TABLES AND FIGURES

Table 1. Sample Characteristics (N = 200 healthcare workers)

	Overall Sample (N = 200) % (n) or mean (± SD)	Prescriber/ Administrator (n = 49) % (n) or mean (± SD)	Other Healthcare Worker (n = 151) % (n) or mean (± SD)
Age, years	30.8 (± 7.3)	31.5 (± 4.2)	30.6 (± 8.1)
Gender Identity			
Man	32.5% (65)	53.1% (26)	25.8% (39)
Woman	66.5% (133)	46.9% (23)	72.9% (110)
Non-binary/genderqueer	1.0% (2)	0.0% (0)	1.3% (2)
Race/Ethnicity			
Non-Hispanic white	54.5% (109)	42.9% (21)	58.3% (88)
Non-Hispanic Black	17.5% (35)	12.2% (6)	19.2% (29)
Non-Hispanic Asian	14.0% (28)	34.7% (17)	7.3% (11)
Non-Hispanic American Indian or Alaska	1.0% (2)	2.0% (1)	0.7% (1)
Native	10.0% (20)	4.1% (2)	11.9% (18)
Hispanic or Latinx	3.0% (6)	4.1% (2)	2.7% (4)
Other			
Education			
High school diploma or equivalent (GED)	3.0% (6)	0.0% (0)	4.0% (6)
Some college (no degree)	5.0% (10)	0.0% (0)	6.6% (10)
Associate's/Other Technical 2-year degree	14.0% (28)	0.0% (0)	18.5% (28)
Bachelor's/Other 4-year degree	35.5% (71)	0.0% (0)	47.0% (71)
Graduate or Professional degree	42.5% (85)	100.0% (49)	23.8% (36)
Family Income			
Less than \$10,000	0.5% (1)	0.0% (0)	0.7% (1)
\$10,000 - \$19,999	3.5% (7)	0.0% (0)	4.6% (7)
\$20,000 - \$29,999	2.0% (4)	0.0% (0)	3.3% (5)
\$30,000 - \$39,999	4.5% (9)	0.0% (0)	6.0% (9)
\$40,000 - \$49,999	10.0% (20)	4.1% (2)	11.9% (18)
\$50,000 - \$74,999	19.5% (39)	20.4% (10)	19.2% (29)
\$75,000 - \$99,999	20.0% (40)	12.2% (6)	22.5% (34)
\$100,000 - \$149,999	24.0% (48)	30.6% (15)	21.9% (33)
\$150,000 or more	15.5% (31)	32.7% (16)	9.9% (15)
Years in Job			
Less than 1 year	14.5% (29)	10.2% (5)	15.9% (24)
1 - 5 years	61.0% (122)	77.6% (38)	55.6% (84)
6 - 10 years	17.5% (35)	8.2% (4)	20.5% (31)
11 - 20 years	6.0% (12)	4.1% (2)	6.6% (10)
More than 20 years	1.0% (2)	0.0% (0)	1.3% (2)
Hospital Setting			
No	46.0% (92)	14.3% (7)	56.3% (85)
Yes	54.0% (108)	85.7% (42)	43.7% (66)

Table 2. Effect of workplace safety climate on anxiety symptomatology among healthcare workers by occupational level

Workplace Safety Score	Anxiety Symptomatology, Prescriber/Administrator		Anxiety Symptomatology, Other Healthcare Worker	
	RR (95% CI)	aRR (95% CI)	RR (95% CI)	aRR (95% CI)
Workplace Safety Score	0.96 (0.87, 1.06)	0.99 (0.90, 1.10)	0.96 (0.93, 0.99)*	0.96 (0.93, 0.99)*
Gender Identity				
Man	Referent		Referent	
Woman	2.40 (1.11, 5.20)		1.47 (1.04, 2.08)*	
Non-binary	NA*			2.17 (0.59, 7.94)
Hospital Setting				
No	Referent		Referent	
Yes	1.48 (0.50, 4.34)		1.18 (0.87, 1.60)	

*p < 0.05; RR = rate ratio, aRR = adjusted rate ratio, CI = confidence interval, NA = not applicable (omitted from model); *No prescribers or healthcare administrators identified as non-binary

Table 3. Effect of workplace safety climate on depression symptomatology among healthcare workers by occupational level

Workplace Safety Score	Depression Symptomatology, Prescriber/Administrator		Depression Symptomatology, Other Healthcare Worker	
	RR (95% CI)	aRR (95% CI)	RR (95% CI)	aRR (95% CI)
Workplace Safety Score	0.93 (0.82, 1.05)	0.96 (0.84, 1.10)	0.96 (0.93, 0.99)**	0.95 (0.92, 0.99)**
Gender Identity				
Man	Referent		Referent	
Woman	1.83 (0.76, 4.41)		1.01 (0.74, 1.39)	
Non-binary	NA*			1.31 (0.40, 4.24)
Hospital Setting				
No	Referent		Referent	
Yes	1.99 (0.60, 6.53)		1.23 (0.93, 1.62)	

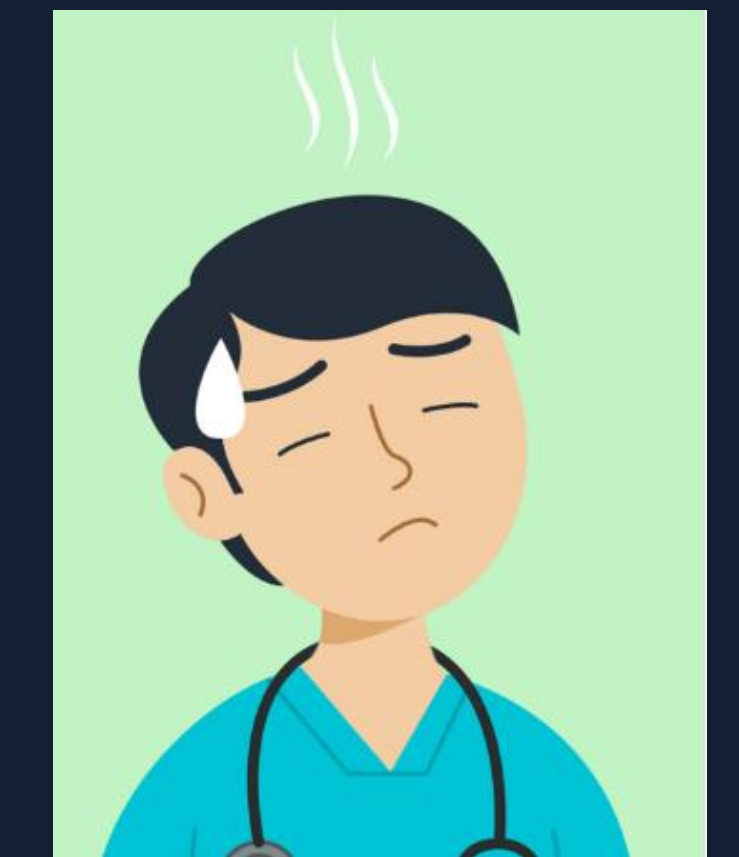
**p < 0.01; RR = rate ratio, aRR = adjusted rate ratio, CI = confidence interval, NA = not applicable (omitted from model); *No prescribers or healthcare administrators identified as non-binary

MORE RESULTS

Table 4. Effect of workplace safety climate on post-traumatic stress disorder symptomatology among healthcare workers by occupational level

Workplace Safety Score	PTSD Symptomatology, Prescriber/Administrator		PTSD Symptomatology, Other Healthcare Worker	
	RR (95% CI)	aRR (95% CI)	RR (95% CI)	aRR (95% CI)
Workplace Safety Score	1.00 (0.85, 1.17)	1.04 (0.87, 1.23)	0.96 (0.92, 1.01)*	0.96 (0.92, 1.00)*
Gender Identity				
Man	Referent		Referent	
Woman	1.96 (0.65, 5.93)		0.83 (0.55, 1.26)	
Non-binary	NA*			1.04 (0.21, 5.06)
Hospital Setting				
No	Referent		Referent	
Yes	1.67 (0.37, 7.47)		1.10 (0.76, 1.58)	

*p < 0.10; RR = rate ratio, aRR = adjusted rate ratio, CI = confidence interval, NA = not applicable (omitted from model); *No prescribers or healthcare administrators identified as non-binary



CONCLUSIONS

Lower-wage healthcare workers appear to be more susceptible to the effects of workplace safety climate on mental health.

Workplace safety may represent a modifiable risk factor for the mental health of healthcare workers.

Healthcare organizations should address systemic safety issues to positively affect the health and well-being of their workers.

ACKNOWLEDGEMENTS

I would like to express my gratitude to my advisor, Dr. Rachel A. Hoopsick, who helped me along the way and allowed me to understand the research. Your advice and consideration throughout the process has been invaluable.

Also, I would like to thank my group under Dr. Rachel A. Hoopsick, Joshua Silvestre, and Alex Kim, who provided great guidance and resources.

Lastly, I am grateful for the START program for the opportunity and supporting me throughout my research journey since last fall semester of 2022.