Using the Health Belief Model to describe factors influencing factory workers' workplace safety practices in Nnewi, Anambra State, Nigeria

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Introduction

Workplace hazards are major sources of injury and disability amongst the labour force. Most occupations are prone to injuries, however work-related injuries are common among factory workers Some studies report lack of adequate safety education and lack of protective measures for factory staff.

Objective

The aim was to determine the factors affecting workers' injury reduction practices using the constructs of the health Belief Model.

Methods: A cross-sectional descriptive study design was used. The sampling frame was six thousand eight hundred and ninety-two (6,892). The sample size for this study (816) was determined using a table by Krejcie and Morgan (1970). The Anambra State Ministry of Health, Ethical Review Board, approved the research protocol.

Results

Table 1: Respondents' socio-demographic characteristics

Variables	Frequency (%) n
Gender	
Male	618(97.5)
Female	16(2.5)
Age	
21-30	214(33.8)
31-40	187 (29.4)
>40	233 (36.8)
Marital status	
Single	205 (32.3)
Married	381 (60.1)
Divorced	33 (5.2)
Widowed	15 (2.4)
Educational qualification	
Primary	155 (24.4)
Secondary	458 (71.9)
Tertiary	23 (3.6)
Working Experience	
< 1 year	46(7.3)
1-2 years	206 (32.5)
3-4 years	292 (46.1)
5 or more years	90 (14.2)
Length of service with factory	
< 1 year	50(7.9)
1-2 years	314 (49.5)
3-4 years	240 (37.9)
5 or more years	30 (4.7)
Monthly Income	
<30,000	283 (44.6)
30,000-40,999	117 (18.5)
41,000 and above	234 (36.9)

Table 2: Key findings

The Health Belief Model Constructs	Key findings
High Perceived susceptibility	• Majority 602 (95%) believe that they are likely to develop a job-related health issue
High Perceived severity	• Most of the respondents, 594 (93.7%) believe that their current job is hazardous • Majority, 587 (92.6%) of respondents have had at least 1 job-related injury within the past year and • Of the 587 above, 439 (74.8%) had been absent from work due to the job-related injury
Perceived barriers	• Majority of respondents, 548 (86.4%) said there was no health and safety policy at their workplace.
Perceived benefits	• All 634(100%) were informed about the health effects related to their work and • 614 (96.8%) said they were trained to use protective clothing at work when they were initially hired.
Modifying variables	• Age: Of the 182 respondents with high level of workplace hazard exposure, 117 (64.3%) were 26-30 years old (the youngest age group in this study). • Work experience: Majority, 497(78.6) had four or less years of experience at their jobs
Cues to action	• More than half of the respondents, 432 (68.1%) said they know a predecessor who was injured at work • Of the 432 above, 423 (97.9%) believed the injury was preventable
Low Self-efficacy	• Only 141 (22.2%) used protective equipment all the time.

Table 3: Comparison of respondents' levels of safety practices and PPE use with their level of hazard exposure

Variables	Level of hazard exposure n(%)			Pearson's Chi square (χ^2)	p-value
	Low	Moderate	High		
Level of safety practices					
Low	8 (3.3)	180 (75.0)	52 (21.7)	15.258	0.004*
Moderate	9 (3.4)	100 (38.3)	152 (58.2)		
High	3 (1.3)	152 (65.0)	79 (33.8)		
Level of PPE use					
Low	20(5.0)	367(92.2)	11(2.8)	364.771	0.001*
Moderate	0(0.0)	43 (37.7)	71(62.3)		
high	0(0.0)	22(18.0)	100(82.0)		

*significant at p<0.05 at 95% confidence interval

Conclusion

High perceived susceptibility to and perceived severity of work-place injury did not translate to use of PPE or other safety practices. Injury prevention trainings (increasing perceived benefits of PPE use and self-efficacy) and providing incentives for appropriate, correct and consistent PPE use (increasing self-efficacy) could motivate workers to take appropriate action

References

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