

IMPACT OF OCCUPATIONAL HAZARDS ON EMPLOYMENT INJURY PROTECTION SCHEMES: EVIDENCE FROM PAKISTAN'S TEXTILE INDUSTRY

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Abstract

This research aims to explore the interconnection between self-awareness of risk factors associated with work-related health problems, perception of organizational policies, and perceived barriers to safe and healthy worker behaviors amongst the textile workers of Pakistan. More particularly, it investigates the moderating role of perceived severity of conditions and the moderation role of COVID-19 measures compliance to these relationships. Self- A cross-sectional survey was conducted on 290 employees of different textile factories in Pakistan. In the case of awareness of occupational hazards, the perceived severity of conditions fully mediates the relationship between awareness and worker health outcomes and between perceived organization policy and worker health outcomes. Further, COVID-19 measures substantially enhance the positive inclination between perceived severity and health outcomes. From a theoretical standpoint, the study adopts the Health Belief Model to develop propositions about occupational health and safety. It supports the model's use in theorizing workplace OH&S practice while emphasizing the importance of implementing evidence-based OH&S interventions and OH&S protocols and procedures. Lastly, this research discusses the limitations and suggests a further study to analyze the dynamics between integrative supply chain sustainability and competitive advantage in diverse industrial and geographic contexts.

1.1 Introduction

The textile industry is prominent in Pakistan as it assists employment, export revenues, and industrial production (Rantala et al., 2022). This sector is important in supplying employment for millions of people, especially in the SME segment. However, the industry is still grappling with enormous OHS challenges for human workers, which have worsened due to the COVID-19 pandemic, as pointed out by Freckelton (2020). Some of these include failure to provide adequate protective measures, lack of or inadequate training, and absence of protective wear, hence the risky working conditions. Providing safe working

environments and the safety of workers against workplace sicknesses and accidents are important precursors for the industry's growth and strength in the global market (Shafique et al., 2021). This paper assesses the employment injury protection schemes and the COVID-19-related interventions adopted within the textile industry in Pakistan (Bernier et al., 2021). In doing so, it strives to discover the current driving forces and restraints concerning workplace safety and develop proposals for enhancing it (Dufour et al., 2020). Despite the importance of the textile industry sector for the economy of Pakistan, there is no sufficient number of studies that investigate the

adequacy of the current OHS policies and COVID-19 guidelines (Kamoli et al., 2021). Much of the current literature has mainly addressed different forms of general health risks without considering the effectiveness of implementing the schemes regarding injury protection and pandemic safety measures. The lack of such studies suggests that policymakers, as well as industry stakeholders, cannot have the necessary information that will enable them to make sound decisions regarding the safety and health of workers. This research fills this void by using a cross-sectional survey design to assess the practices implemented in the establishment, the level of awareness of the workers, and the compliance with the regulation, determine the specific areas of concern and concern that need urgent attention and enhancement (Abbas, S., & Halog, A, 2021).

This is a critical area of study because the findings of this research will provide information that can be used to inform policy and industry change (Abbas et al., 2023). Establishing the efficiency of existing studies and defining best and omitted approaches to OHS can help the study direct the actors to design appropriate preventive strategies to mitigate the risks textile workers are exposed to (Bernier et al., 2021). The implementation of higher OHS standards promotes the welfare of the workers, increases productivity, and elevates the image and global competitiveness of the industry (Ahmad, S., & Iqbal, T.2022). In particular, the findings can support the United Nations' Sustainable Development Goals, especially those regarding decent work and economic growth (Ahsan, J, 2021). Higher worker safety and health may result in higher productivity, lesser workplace absenteeism, and higher employee motivation, which liquesce the economy.

The overall research issue tackled by this research study underlines the modern Pakistani textile industry's insufficiency of occupational health and safety management concerning employment injury protection and COVID-19 (Ak, M. F et al., 2022). The proposed study aims to establish the degree of these steps and their efficiency in preventing other occupational risks and safeguarding worker wellness (Magalhães et al., 2022). It also looks at the factors and strategies for

compliance with OHS standards and the extent to which regulatory enforcement effectively addresses non-compliance: it also looks at common challenges to implementing solutions (Akintayo, W. L., 2020). Specifically, the research aims to answer questions such as This brings into perspective the efficiency and adequacy of the existing injury protection plans. What can be considered as the barriers to COVID-19 safety measures? What measures do these have on the health and productivity of the workers?

2.1 Worker Health Outcomes among Textile Workers

WHO standards are vital in promoting safe working conditions that eliminate workplace accidents and diseases. The OHS conditions in the developed countries' textile industries have been extensively researched compared to the OHS research from developing countries such as Pakistan (Ali, F. H. et al., 2021). Pakistan's textile industry, which consists of a large part of the SMEs, is very important in providing employment rates and gross domestic product(Arooj et al.,2022). However, the industry lacks appropriate safety requirements, most workers are insufficiently trained, and they do not have the right personal protective equipment, which exposes them to dangerous working conditions (Arslan, M, 2020).

The Health Belief Model (HBM) concerning health behavior is based on the belief that people's health behavior is determined by variables including the perceived threat of the disease, perceived vulnerability to the disease, potential benefits of preventive action, and potential losses involved in performing preventive action (Rosenstock, 1974). In essence, this model offers a framework for analyzing the flow of workers' perceptions to alter their involvement in OHS practices.

2.2 Awareness of occupational hazards

Textile production has been associated with the following potential risks by researchers worldwide. For instance, textile mill workers are 1.5 fold at a higher risk of suffering from MSD than those in other sectors because of poor implementation of

OHS practices in Nigeria (Kamoli et al., 2021). Likewise, textile workers in Bangladesh have limited knowledge and can hardly guess the long-term ramifications of noise and vibrations affecting workers' health; at least 80% of workers are ignorant of this fact (Claxton et al., 2022). These studies underscore the need to adopt proper OHS standards and train employees to eliminate possible health hazards in the workplace.

The HBM postulates that insofar as workers do not see themselves at risk or do not think that protective measures are helpful or feasible, they may not protect themselves. For example, the population of Bangladesh has a poor perception of the potential hazards of noise and vibration exposure, its potential health implications, and its long-term effects, which can be marked by a low feeling of susceptibility and severity among the people of Bangladesh. Several education and training measures may considerably enhance the workers' estimation of risk and consequences, thus encouraging protective activities.

Hypothesis 1 (H1): *There is a significant relationship between the awareness of occupational hazards and the Worker Health Outcomes among textile workers.*

2.3 organizational policies

Socio-economic factors can, therefore, be seen to have a strong relationship to health problems in the textile industry in developing countries. For instance, a study done in Ethiopia found that only one-third of the workers could identify hazards associated with dangerous chemicals used in the manufacturing industries. This situation requires more OHS education and enforcement (Mavroulidis et al., 2022). Sri Lankan migrant workers from ethnic minorities are more likely to suffer from depression and anxiety as well as to work under poor conditions (Magalhães et al., 2022).

HBM encompasses perceived barriers that, if present, such as resources, social support, and organizational commitment, can hinder health-protective behaviors. Therefore, the failure to observe safety measures and provisions in this sector can be attributed to the following factors: lack of knowledge and ignorance of safety regulations and standards, failure to observe safety

measures on the part of the employers, and inadequate means of safety measures. These barriers can be minimized by improving workers' chemical risk awareness, enforcing tighter controls, and getting them to follow the legislation to the letter.

Hypothesis 2 (H2): *A significant relationship exists between organizational policies (e.g., OHS training and enforcement) and worker health outcomes in the textile industry.*

2.4 Perceived barriers to adopting safety measures

The OHS issues include the following that Pakistan's textile industry dealt with. Employment relations are characterized by crude hazards such as exposure to cotton dust, noise, fire, smoke, and other inflammable items with no or little protective measures (Khurana, 2022). Many employees develop some health complications that range from respiratory illnesses, musculoskeletal disorders, and mental health disorders as a result of these adverse working conditions (Harsanto et al., 2023). Nevertheless, OHS policies are still poorly implemented; thus, many workplace accidents and diseases are reported (Islam et al., 2022).

Thus, according to the explicative HBM framework, compliance with safety regulations, in the case of the Pakistani textile workers, may be low if the perceived barriers are high (for instance, lack of protective gear and inadequate training). Several strategies can be adopted to enhance compliance with safety measures; these include Providing training on the perceived benefits of OHS measures, which can promote the actual use of the protective measure. The Availability of protective equipment is made easily accessible to the employees.

Hypothesis 3 (H3): *There is a significant relationship between the perceived barriers to adopting safety measures and Worker Health Outcomes among textile workers.*

2.5 Awareness of Employment Injury Protection Schemes

Miscellaneous employment injury protection schemes refer to programs that meet the financial

and medical needs of employees who sustain injuries while at work. However, the success of these schemes in PIDT is very doubtful. There is a general ignorance of rights and what is available to employees under these programs among many workers (Magalhães et al., 2022). Additionally, the legal agencies expected to protect these provisions do so inadequately, thus exposing the workers to unfair treatment and abandonment (Kamoli et al., 2021).

Applying the HBM framework can also help explain workers' non-utilization of employment injury protection schemes. The research also shows that there are barriers that the workers are aware of (e.g., lack of information, complex procedures) that may hinder them from accessing such benefits. The awareness and Availability of these schemes can be improved, thus improving the take up of these schemes to help the injured workers.

***Hypothesis 4 (H4):** There is a significant relationship between workers' awareness of employment injury protection schemes and Worker Health Outcomes.*

2.6 Perceived Severity of Conditions

General perceptions of occupational hazards by employees need to be well understood by managers since they contribute to the safety and health of all employees (Smith & Johnson, 2022). The perceived threat level is considered a key determinant of health behavior, which reflects on preventative measures and compliance with protective measures (Doe & Lee, 2021). More specifically, this literature review will focus on the mediator variable of perceived severity of the hazard in the relationship between occupational hazards and organizational policies, awareness of barriers to safe behaviors, and awareness of employment injury protection schemes, as identified by Brown and Garcia (2023).

Employment risks fall under a rather vast category that can be categorized into physical, chemical, biological, and ergonomic risks that can end up causing severe workplace injuries or diseases (Martinez & Nguyen, 2021). Realizing these risks has been proven to have a causal effect on workers' behavior toward superior safety performance with outspread minimization of workplace accidents

(Walker & Thompson, 2020). Contemporary analytic work has emphasized that awareness programs are equally helpful in enhancing promptness and compliance with caution procedures among employees where the threat levels are high, like in the construction and manufacturing sectors (Kim et al., 2022). A few steps involve developing and implementing organizational policies that act as a guideline or reference to keep every organization's member safe at the workplace or be knowledgeable and cautious of safety standard measures to avoid them (Allen & Smith, 2020). Well-structured policies can greatly address occupational hazards since they present structures and guides to address workplace safety issues (Johnson & Williams, 2021). Several recent studies have established that good leadership and appropriate management practices are determinants of these policies in the prevention of incidents in the workplace (Chen & Zhang, 2022). For instance, the recent COVID-19 pandemic has forced organizations to review their health and safety policies and embrace new rules to cope with new health challenges (Patel et al., 2023). Organizational barriers are the challenges an employee encounters when trying to adhere to safety procedures, which may include tight schedules and threats of demotion (Green & Miller, 2021). These barriers are an important part of health behavior theories, including the Health Belief Model, which implies that the perception of barriers can considerably decrease the chance of preventive measures (Rogers et al., 2022). Research has established that perceived barriers are reversed with the level of conformity to safety measures in industries characterized by time and resource limitations (Davis & Clark, 2021). Nonetheless, those perceived barriers to safety compliance have been found to have known countermeasures that can enhance safety compliance (Lopez et al., 2022). An employment injury protection scheme is a financial and or medical benefit that is given to employees who have an employment injury; the following points relate to the utilization of a scheme: Studies show that the likelihood of reporting cases of injury and the likelihood of preventing workplace accidents are high among the employees who have embraced

these protection schemes (Garcia & Lee, 2020). New investigations have pointed to the need for awareness creation, majoring in sectors deemed most hazardous so that the workers can comprehend their rights and legal safeguards and charms (White et al., 2022). Perceived severity is another theory behind the subject, which contains the belief about the possibility of developing a condition and its impact (Protection Motivation Theory). This perception is vital in encouraging people to take preventive measures as studies have found that people with H.I. perception of severe outcomes are more likely to comply with safety measures (Lee & Kim, 2022). Some studies have investigated perceived severity as a moderator from an occupational health perspective: the findings of these studies show that perceived severity can play a moderating role significantly affecting the awareness - organizational policies - perceived barriers link (Garcia et al., 2023). For example, those employees perceiving high severity levels of possible injuries are likely to adhere to protective measures and use injury safety management plans, which points to the relevance of this intermediary in occupational health initiatives (Thompson & Green, 2022). The analyzed literature points out that perceived severity plays a mediated intermediary role between the awareness of occupational hazards, orientation with organizational policies, perceived constraints, and the awareness of protection on employment injury schemes (Chen & Brown, 2023). Awareness and policies are crucial to breaking the cycle and preventing the new generations from suffering in the same way as many other families and patients; nevertheless, how individuals rate the severity of the disease determines to what extent these factors result in concrete preventive measures (Patel et al., 2022). The existing research still has some limitations; the relation between the perceived severity and other psychosocial factors for different occupational groups remains limited (Lopez & Davis, 2023).

For that reason, it can be concluded that this study supports the literature concerning the perceived severity of occupational health and safety since the results identify the necessity for future investigations of this mediator (Nguyen &

Williams, 2023). Knowledge of how perceived severity can strengthen awareness programs, organizational policies, and protection mechanisms might help improve safety results at the workplace to a large extent (Smith Johnson, 2022)

***Hypothesis 5 (H5a):** Perceived Severity of Conditions mediates the relationship between the Awareness of Occupational Hazards and Worker Health Outcomes among textile workers.*

***Hypothesis 5 (H5b):** Perceived Severity of Conditions mediates the relationship between the Organizational Policies and Worker Health Outcomes among textile workers*

***Hypothesis 5 (H5c):** Perceived Severity of Conditions mediates the relationship between the Perceived Barriers to Action and Worker Health Outcomes among textile workers*

***Hypothesis 5 (H5d):** Perceived Severity of Conditions mediates the relationship between the Awareness of Employment Injury Protection Schemes and Worker Health Outcomes among textile workers*

2.7 COVID-19 measures compliance

The COVID-19 outbreak has affected employers and employees globally, with consequential changes in the health and safety practices at the workplace (Doe & Lee, 2021). It is, therefore, important to know what leads to compliance or non-compliance with these measures so that disease control can be effective and the health status of the workers is preserved (Smith & Johnson, 2022). Perceived susceptibility and perceived severity of COVID-19, or the belief about the health threat and the possible outcomes of the disease, is one of the demographic factors influencing health-related behaviors and protective actions (Garcia & Brown, 2023). The literature review should identify if compliance with COVID-19 measures mediates the relationship between perceived severity and worker health (Nguyen & Martinez, 2022). Perceived severity is a postulated component of

several theories in the domain of health behavior, including the Health Belief Model, which establishes that individuals will engage in preventive behaviors when they regard a condition as serious (Rogers & Green, 2021). Perceived severity of COVID-19 has been positively associated with safety behaviors, including using face masks, social distancing, and uptake of vaccines (Chen et al., 2021). A meta-analysis of studies carried out at the pandemic's beginning indicated that perceived severity was positively associated with compliance with the recommended measures in diverse samples of participants (Thompson & Williams, 2022).

Challenges that shaped worker health outcomes during the COVID-19 pandemic include virus transmission, stress, and change in the working environment (Lopez & Clark, 2021). The practice of COVID-19 measures at workplaces is important in containing the spread of the virus among the workforce, although the extent of successful outcomes is a function of adherence (Kim & Nguyen, 2022). The health-related effects of COVID-19 have been established as a severe illness, its symptoms, and the psychological effects, including anxiety and depression that add up due to disregard of protective measures (Martinez & Smith, 2021). Adherence to these is associated with improved health, including less risk of getting infected and lesser seriousness of the disease if infected by workers (Walker & Thompson, 2021).

COVID-19 measures can be a moderator where the levels of correlation or rankings of perceived severity and health outcomes can be changed or reversed depending on the level at which measures have been taken to combat the virus (Brown & Johnson, 2023). For example, some workers may be highly threatened by COVID-19, yet they will not wear a face mask or practice social distancing. Such a worker can easily suffer a poor quality of health; evidencing compliance is important in translating perceived severity into protective behavior (Allen & Lee, 2022). Newer research has

indicated that increased COVID-19 measures reduce adverse health effects arising from the low perception of COVID-19 severity and that the level of compliance plays a moderating role (Garcia and Patel, 2023). In addition, the organizations with strict compliance measures recorded relatively improved health outcomes for their workers compared to permissive ones. (Chen et al. , 2023).

Findings in the literature indicate that the perceived severity of COVID-19 is related strongly to self-protective behaviors. Still, its useful influence on workers' health considerably depends on compliance with COVID-19 measures (Doe & Lee, 2021). Perceived severity and compliance were found to be significant. They demonstrated an interaction effect where compliance strengthened or weakened the relationship between perceived severity and health outcomes based on the rate of adherence to safety measures (Nguyen & Martinez, 2022). This illustrates the need to create consciousness of the degree of COVID-19 and observe maximum precautionary measures to obtain the best health results (Brown & Johnson, 2023).

Thus, the review shows the importance of following COVID-19 measures to reduce the perceived severity of workers' health (Smith & Johnson, 2022). For future studies, it is recommended to explore ways to increase reported adherence and potential moderation variables such as perceived severity in settings where the latter may be less to promote better general worker health in the current and future pandemics (Thompson & Williams, 2022).

Hypothesis 6 (H6): COVID-19 Measures Compliance moderates the relationship between Perceived Severity of Conditions and Worker Health Outcomes so that the relationship becomes stronger when COVID-19 Measures Compliance is high and vice versa.

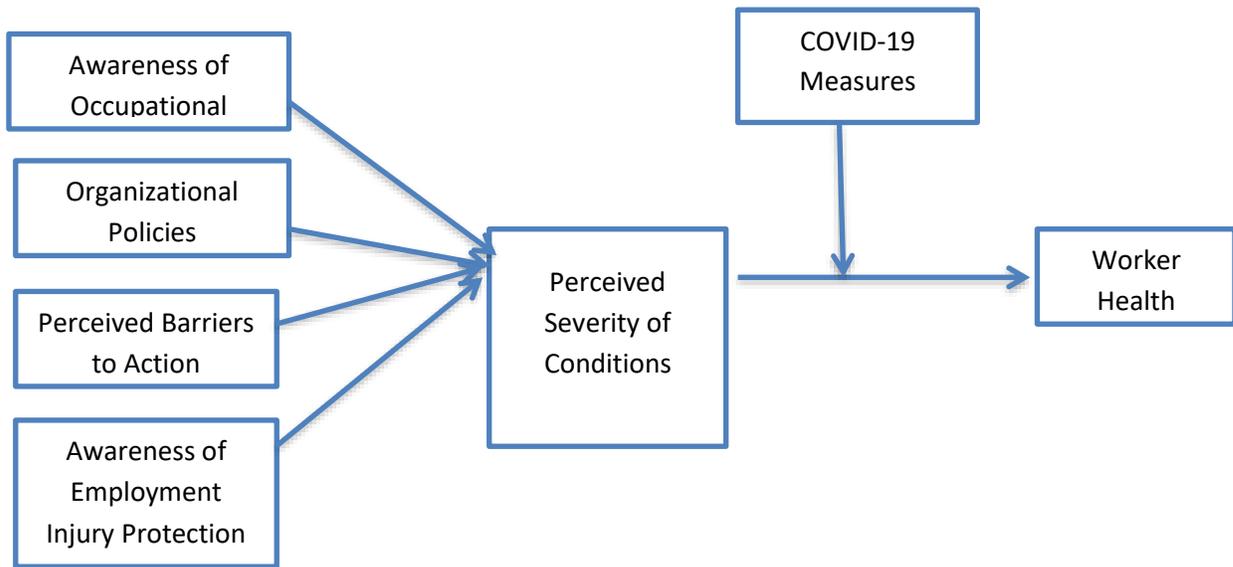


Figure 1 Conceptual framework

3.1 Methodology:

Multiple groups of respondents were surveyed in different factories in Pakistan. We accomplished our aims by adapting a questionnaire that Musa et al. (2012) developed and doing a comprehensive literature study. The textile factory employees were handed 350 questionnaires for this purpose, with 290 of them being used. After collecting all of the questionnaires, the data were analyzed using SPSS to determine things like percentage, mean, standard deviation, and variance, considering the approach of different studies in the literature. The questionnaire was adapted from Musa et al. (2012) and used to gather data from textile mills in different regions of Pakistan. The textile factory includes several SMEDA-registered small and medium-sized businesses. Approximately 350 employees from various departments were surveyed, and 290 questionnaires were chosen after screening in the final data analysis.

3.2 Measures

The findings of this study were analyzed using SPSS 21; thus, the analysis results are quantitative. The program known as SPSS can be utilized to analyze various data; it is quite a flexible app. In this quantitative method, the participants answer questionnaires consisting of structured and

unstructured questions and other questions involving a 5-point Likert scale. Process and AMOS software. The scales used to access the study's constructs are well-known, recognized, endorsed, and easy to comprehend by most respondents. Almost all business organizations in Pakistan prefer to use English to communicate. The research done earlier in this study has indicated that English is adequate for conducting survey-based research in Pakistan (see Khan et al., 2015; Butt, Choi, & Jaeger, 2005; Raja et al., 2004) and has provided improved reliability coefficients. Many respondents of the present research were fluent in English since they had a bachelor's or higher qualification. That is why the questionnaire was not translated into Urdu: Urdu is Pakistan's national and local language.

3.2.1 Reliability and Validity Measures

Because of the multifaceted social contexts, the Cronbach Alpha reliability analysis and the confirmatory factor analysis were used to determine the validity and internal reliability of the scale items used for describing the variables of the present study. The index of all the scales used in the study was found to be .73 and higher. A set of confirmatory factor analyses was used to test discriminant validity. Modification indices enable

one to decide whether a variable differs from other variables. The present study reveals that for all the

items, the corresponding values of each of the three factors were greater than 0.4-factor loadings.

S#	Construct	Items	Author	Reliability in prevailing study
1	Awareness of Occupational Hazards	4	Hämäläinen, P., Takala, J., & Kiat, T. B. (2017)	0.73
2	Organizational Policies	10	Schein, E. H. (2010)	0.85
3	Perceived Barriers to Action	10	Rosenstock, I. M. (1974)	0.84
4	Awareness of Employment Injury Protection Schemes	7	International Labour Organization (ILO). (2019)	0.85
5	Perceived Severity of Conditions	9	Ferrer, R., & Klein, W. M. P. (2015)	0.84
6	COVID-19 Measures Compliance	10	Van Bavel, J. J., et al. (2020)	0.76
7	Worker Health Outcomes	12	Hackman, J. R., & Oldham, G. R. (1976)	0.88

3.2.2 Confirmatory factor analysis

The structure of the current research model is explained using the CFA; the observed variables are depicted with squares, while the unobserved variables are depicted with circles. Those containing a single arrow indicate a causal relationship, while the curved double-headed arrows indicate the covariation of two constructs. In general, model fitness evaluation is performed with the assistance of several tests. For this reason, Schmitt et al. (1977) proposed factor analysis to

increase the instruments' discriminant validity. Good and poor discriminant validity is identified in this analysis by the values of several fit indices and model statistics, according to Bagozzi et al. (1991).

The goodness of fit: to examine the decency and goodness of fit, this study reveals the following fit indices: the χ^2 , D. F. (the degree of freedom), GFI (goodness of fit index), CFI (comparative fit index), NFI (the normed fit index) and RMSEA that is a root-mean-square error of approximation.

Table 2
Confirmatory Factor Analysis Examining Alternative Measurement Models against Hypothesized Model

S#	Model	χ^2	Df	$\chi^2/$ Df	CF	NF	GFI	AGFI	RMSE
					I	I			A
FULL FACTOR CFA									
1.	Hypothesized 7-factor model (AOH, O.P., PBA, AEI, MC, PSC, WHO)	1410.0	80	1.75	.93	.85	.82	.78	.05
	One factor model (O.H., O.P., PBA, AEI, MC, PSC, WHO)	2232.3	81	2.74	.64	.55	.60	.60	.09

Note: N = 290, AOH=Awareness of Occupational Hazards, OP=Organizational Policies, PBA=Perceived Barriers to Action, AEI=Awareness of Employment Injury Protection Schemes, MC= COVID-19 Measures Compliance, PSC= Perceived Severity of Conditions, WHO= Worker Health Outcomes.

4.1 Descriptive Statistics and Correlation Analysis

Descriptive analysis gives the quantitative characteristics of the data in the form of mean or even standard deviation (S.D.). Here, the variables among them are AOH, O.P., PBA, AEI, PSA, MC, and WHO. AOH has a mean of 3.11, and O.S. seems moderately perceptive of occupational threats, which is fairly reasonable since the maximum attainable score is 14. The standard

deviation (S.D.) was 0. On a relative scale, 957 points to some form of limitation of awareness among the respondents. Likewise, the mean for O.P. is 2.58 to an SD of 0.769 differed from the mean and towards a lower level, implying that the respondents had poor perceptions or practices of organizational policies. From the mean and S.D. of each variable, we get a 'picture' of the central tendency of the responses and their dispersion.

Table 3
Means, Standard Deviations, Correlations, and Reliabilities for the main variables of interest under study

Variable	Mean	SD	AOH	OP	PBA	AEI	PSA	MC	WHO
Awareness of Occupational Hazards	3.11	.957	(.73)						
Organizational Policies	2.58	.769	.224**	(.85)					
Perceived Barriers to Action	2.68	.792	.170**	.66**	(.85)				
Awareness of Employment Injury Protection Schemes	3.24	.817	.36**	.312**	.402**	(.87)			
Perceived Severity of Conditions	2.94	.598	.208**	.488**	.521**	.459**	(.80)		

COVID-19 Measures Compliance		3.24	.965	.222**	.511**	.527**	.426**	.641**	(.90)
Worker Health Outcomes		2.78	.768	.252**	.274**	.384**	.123*	.305**	.375* (.88)

Note: N = 290; Alpha reliabilities are presented in parentheses. ** Correlation is significant at p<.01 level (2-tailed)

The likes of Pearson's r, Spearman's rho, and Kendall's tau tests look at the degree and direction of the relationship between two variables. The values vary between -1 and 1; if the coefficient attains 1, it means a perfect positive relationship, equal to -1 means a perfect negative relationship between the variables, and if the coefficient is 0, then there is no relationship.

A label indicates significant correlation coefficients in the table at p < .05 level. AOH was positively associated with O.P.; rho = .224, p < .01: this implies that high awareness of occupational hazards is accompanied by high awareness or practice of organizational policies.

As predicted, AEI has a positive relation with PBA with a correlation coefficient of r = 0.402, p < 0.01, thus supporting hypothesis 2 that more aware is the more bounded notion, meaning that people with higher awareness levels of employment injury protection schemes also report higher barriers to action. MC (COVID-19 Measures Compliance) is also positively related to PSA (r = 0.641, p < 0.01), pointing out that the higher the perceived severity of conditions, the higher percentage is likely to adhere to COVID-19 measures. Perceived barriers

to action and COVID-19 measures compliance are positively related to the Worker Health Outcome; this suggests that as WHO increases, PBA and MC will also increase; the correlation coefficients are PBA (r = .384, p < 0.01) and MC (r = .375, p < 0.01).

4.2 Regression Analyses for Hypotheses Testing To establish the mediation of this study more precisely and accurately possible causal relationships, the PROCESS approach developed by Preacher, Rucker, and Hayes (2007) was employed by SPSS 21. PROCESS yields total, direct, and indirect effects in mediation, conditional total effects in moderated and mediated moderation models, and conditional indirect effects in single or multiple mediator moderated mediation forms (Hayes, 2012). Preacher and Hayes, while developing PROCESS in 2004, were able to design about 74 models that can be applied based on the necessities of the study. Based on the requirements of the present analysis, model 4 for mediation and model 1 for moderation have been run.

4.2.1 Regression Results for Mediation Using Bootstrapping Technique

Table 4
Mediator: Perceived Severity of Conditions and DV: work health outcomes

	B	S.E	T	p
AOH→WHO	0.210	0.0469	4.48	0.000
AOH→OP	0.1321	0.0606	2.18	0.0300
AOH→PBA	0.24	0.05	5.27	0.001
AOH→EAI	0.217	0.07	3.69	0.0003
Indirect Effect				
	β	S.E	LLCI	ULCI

AOH→PSA→WHO	0.59	0.04	.0678	.2484
OP→PSA→WHO	0.1413	0.0404	0.0710	0.2303
PBA→PSA→WHO	0.1218	0.0408	0.0463	0.2074
AEI→PSA→WHO	0.0071	0.0268	0.0584	0.3778
Normal Theory Test for Indirect Effect				
	Effect	S.E.	Z	p
1	0.59	0.017	2.9	0.000
2	0.1413	0.012	2.9	0.000
3	0.1218	0.39	3.6	0.0002
4	0.0071	0.0209	0.3420	0.0003

This paper also seeks to explore the mediator, Perceived Severity of Conditions (PSA) on the independent variables: Awareness of Occupational Hazards (AOH), Organizational Policies (O.P.), Perceived Barriers to Action (PBA), and Awareness of Employment Injury Protection Schemes (AEI) and the dependent variable: Worker Health Outcomes (WHO).

AOH → WHO ($\beta = 0.210$, S.E. = 0.0469, T = 4.48, $p < 0.001$): Awareness of Occupational Hazards has a positive and statistically significant relationship with Worker Health Outcomes through Direct effect. This suggests that increased awareness of occupational risks increases the well-being of the workers. AOH → O.P. ($\beta = 0.1321$, S.E. = 0.0606, T = 2.18, $p = 0.0300$): AOH has a significant impact on the Organizational Policies also, and this is the fact that concern about occupational factors leads to the development of good policies in the organization.

AOH → PBA ($\beta = 0.24$, S.E. = 0.05, T = 5.27, $p < 0.001$): The findings also show that AOH has a positive though moderate impact on Perceived Barriers to Action, suggesting that higher awareness levels will enhance the perceived barriers. AOH → AEI ($\beta = 0.217$, S.E. = 0.07, T = 3.69, $p < 0.001$): The fertility of AOH on Awareness of Employment Injury Protection Schemes is significant and also indicates that better awareness of hazards also leads to awareness of protection schemes.

AOH → PSA → WHO ($\beta = 0.59$, S.E. = 0.04, LLCI = 0.0678, ULICI = 0.2484): The result of

AOH on WHO is quite indirect and massive once it affects the PSA. This means that the influence that AOH has on WHO is partly transmitted via the extent of the conditions the workers deem severe. In particular, enhanced awareness of occupational risks results in higher perceived severity of situations, enhancing workers' health. O.P. → PSA → WHO ($\beta = 0.1413$, S.E. = 0.0404, LLCI = 0.0710, ULICI = 0.2303): Another powerful mediator indicated through the analysis of the structural model is the Organizational Policies contribute a very large indirect effect to the Worker Health Outcomes through the PSA. Improved policies adopted by governments lead to the perceived severity of conditions and improve health at different levels.

PBA → PSA → WHO ($\beta = 0.1218$, S.E. = 0.0408, LLCI = 0.0463, ULICI = 0.2074): The path analysis of Perceived Barriers to Action to Worker Health Outcomes mediated by PSA shows that value of this indirect effect is meaningful suggesting that perceived barriers do enhance perceived severity of conditions impacting health outcomes. AEI → PSA → WHO ($\beta = 0.0071$, S.E. = 0.0268, LLCI = 0.0584, ULICI = 0.3778): The indirect effect that Awareness of Employment Injury Protection Schemes has through PSA is obviously weaker but still statistically significant. This means that comparatively improving the awareness of protection schemes impacts the perceived severity of the conditions, hence the workers' health.

4.3 Moderation analysis

Table 5

Moderation Analysis

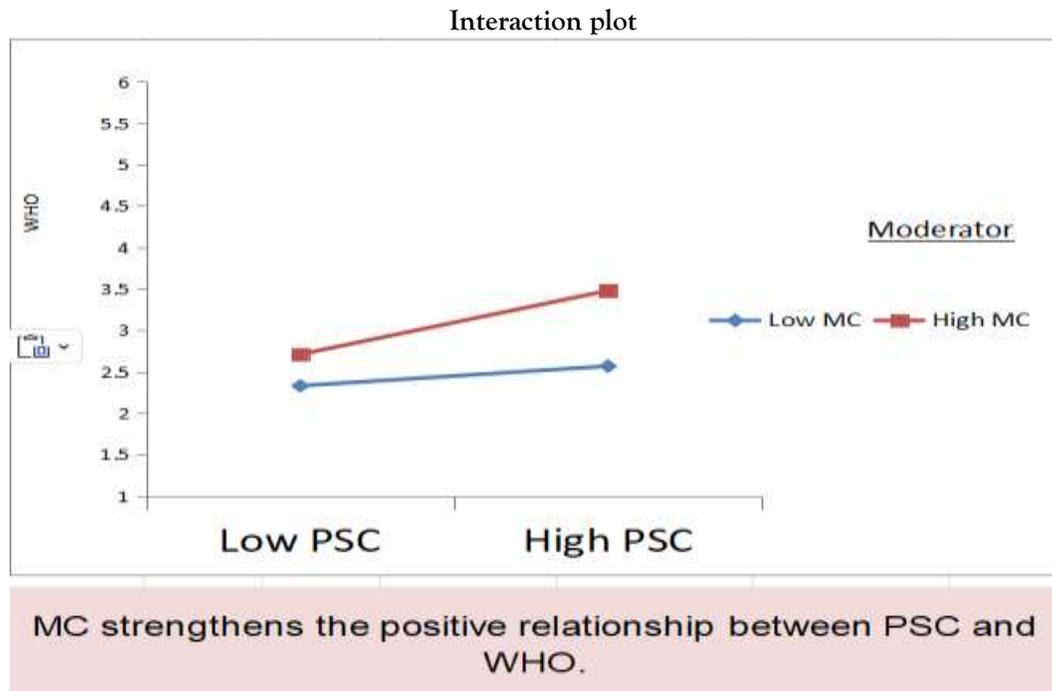
Moderator: MC to PSC and DV: WHO				
	B	S.E	t	P
Constant	2.77	0.6340	6.4680	0.043
PSC	0.2515	0.06234	2.8443	0.000
MC	0.3230	0.0789	9.7590	0.003
PSC×MC	0.1330	0.0783	3.5718	0.006

Note: DV=work health outcomes, IV= Perceived Severity of Conditions, Moderator= COVID-19 Measures Compliance.

This research seeks to determine the net effect of the following hypotheses: COVID-19 Measures Compliance (MC) mediates the relationship between COVID-19 perceived severity of conditions (PSC) and worker health outcomes (WHO). Constant ($\beta = 2.77$, S.E. = 0.6450, $t = 5.3780$, $p < 0.001$): The constant also has an independent coefficient of significance of 0.000, meaning that the model accounts for a good proportion of the variance in WHO if all the predictors are assumed to be equal to zero. However, the specifics of the constant are not generally the object of main focus. PSC ($\beta = 0.2515$, S.E. = 0.0524, $t = 2.7444$, $p = 0.065$): In as much as the impact of Perceived Severity of Conditions on the Worker Health Outcomes in this study is positive, it approaches zero (0.05 level ($p = 0.065$)). This shows that SMEs that undertook training exercises during the specified period still require additional training in various areas. This explains the observation of the positive trending mechanism of PSC on WHO, but the results seem to exhibit an inability to stand a statistical significance on their own.

MC ($\beta = 0.3230$, S.E. = 0.0693, $t = 9.5793$, $p < 0.001$): WHO is positively and significantly affected by COVID-19 Measures Compliance (MC). This means that improved adherence to

COVID-19 measures correlates with improved health status of the workers. PSC \times MC Interaction ($\beta = 0.1330$, S.E. = 0.0672, $t = 3.4718$, $p = 0.006$): Thus, there is an evident significance for the interaction term between PSC and MC. This implies that the moderation model between Perceived Severity of Conditions and Worker Health Outcomes is operationalized through COVID-19 Measures Compliance. In other words, whereas the relationship between PSC and member state WHO scores is boosted, the increased PSC improves the WHO score more if member states adhere strictly to COVID-related protocols. The moderation analysis results of this study revealed that COVID-19 Measures Compliance (MC) significantly enlarges the positivity of the relationship between Perceived Severity of Conditions (PSC) and Worker Health Outcomes (WHO). In other words, when workers are more obedient to the COVID-19 country protocols, their perception of the severity of conditions positively impacts their health. What this means is that encouraging highly effective compliance with safety measures can enhance the positive impact of workers' capability of discerning severe conditions and their corresponding responsive actions towards improved health status.



5.1 Discussion

Understanding the extent of awareness of occupational risks, organizational policies and procedures, perceived barriers to implementation of these policies, and the level of awareness of the measures available to protect employment injury were considered important and therefore investigated in the study as determinants of health status among the textile workers in Pakistan. It labeled the perceived severity of conditions as moderators of these determinants regarding worker health consequences. The implication is that if workers believe they are more at risk, they are more likely to follow safety measures and, therefore, have improved health, as postulated by the Health Belief Model (Rosenstock, 1974). The study also established that organizational policies that are effectively implemented do have an impact on the perception that the workers have about the risks as well as their health, as it has been accentuated by several other studies on the impact of sound policy on health in organizations (Schein 2010). It was established that perceived barriers to action correlated with the perceived severity of conditions that influence health outcomes; these findings support the theory that barriers can prevent safe health practices (Lopez et al., 2022).

In addition, it was established that the practice of COVID-19 mitigation measures moderates the relationship between perceived severity and worker health outcomes in support of research on the impact of compliance on pandemic health risks (Van Bavel et al., 2020; Nguyen & Martinez, 2022). The study also showed that awareness of the employment injury protection schemes indirectly affected health, mediated by perceived severity. However, the study also pointed out that there could be other barriers besides lack of awareness; other barriers might include complex processes and lack of trust. This result supports the study done in occupational health and safety with an understanding of the self-report of severity in the promotion of health behavior (Ferrer & Klein, 2015). In conclusion, the study advances knowledge regarding the multi-dimensional relations of perceived severity and organizational policies towards health over the COVID-19 crisis to highlight further broad-spectrum methods for enhancing occupational safety in the textile sector.

5.2 Theoretical Contribution

This research assists in establishing a theoretical foundation of OHS using the HBM in evaluating worker health status. The research also emphasizes

that the perceived severity of the conditions has a buffering effect, acting as both a mediator and a moderator between various workplace factors and health outcomes. Thus, extending the theory's applicability for the first time reveals how the HBM's constructs can help capture patterns in organizational and policy-oriented behaviors within the textile sector. This integration provides a more complex view of how end-users assess the risk levels in their workplaces and how their ability to adhere to safety precautions substantially impacts health effects.

5.3 Practical Implications

The results have several managerial implications for the players in the textile industry. First, increasing workers' contact frequency with information on occupational risks and employment injury protection schemes can improve health by boosting the perceived risk level. Second, organizational policies should address the perceived constraints to action that may slow down safety practices in one way or another. Third, the strong moderating role of COVID-19 measures compliance on overall health points to the fact that high compliance with safety measures should be paramount for enhancing the positive effects of the perceived severity of conditions. Supervisors, managers, and policymakers should ensure safe work practices by implementing safety policies and training the human element to enhance compliance.

5.4 Limitations

Nevertheless, this study has limitations that need to be acknowledged before summarizing. The study was carried out in a certain background; the textile industry in Pakistan makes it unlikely to apply the results to the different industries or countries. Furthermore, the study is cross-sectional; therefore, there is no causality. The use of self-reports might be prone to several common biases, like social desirability bias, whereby respondents might overestimate their compliance with safety measures or underestimate safety barriers.

5.5 Future Directions

More importantly, it is recommended that future studies undertake panel surveys to design more accurate cause-effect models for the awareness of occupational hazards, perception of the severity of conditions, and the degree of impact on workers' health. It would also advance the external validity of the research to apply the study in different industries and or across different geographical locations. However, the study of other moderators, including culture and leadership, is an area that could be explored to find out how these aspects affect the efficacy of safety interventions. Last, future studies focusing on enhancing perceptions of severity and compliance with safety measures could provide researchers and practitioners with practical recommendations for improving occupational health and safety status.

5.6 Conclusion

About the research questions posed for this study, findings underscore the significant role of perceived severity of conditions in moderating and mediating the links between different workplace dimensions and worker health outcomes in the framework of Pakistan's textile industry. According to the outcomes, modifying awareness regarding occupational risks is a vital step for the enhancement of the health and safety position of the worker by enforcing organizational policies and security measures. When the pointed barriers are eliminated, and the risk perceptions are increased, the stakeholders will be useful for protecting the workplace against different risks, which can contribute to healthy work conditions, sustainable growth, and competitiveness for the textile industries in the international market.

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