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Research Article

Enhancing Workplace Safety Perception through Job Security: The Roles of Employee Engagement and Job Autonomy

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Abstract: This research aims to explore the intricate relationships between human factors affecting information security, the sense of security, occupational health and safety for social workers, and the professional and occupational well-being of social workers. Furthermore, this research has used sense of security as a mediating variable among the proposed direct path of this research. In response to the evolving landscape of information technology and its impact on social work practice, the study seeks to contribute empirical insights that inform organizational policies, educational frameworks, and support structures. This research employed the STATA-SEM approach for advanced statistical analysis. Moreover, the data was collected from 199 social workers, working in the Kingdom of Saudi Arabia. The study validates measurement instruments adapted from prior research and utilizes Direct Path and Mediating Path Analyses to explore the proposed direct and mediated impacts. The empirical findings reveal significant direct influences of human factors on professional security and safety, occupational health and safety, and the sense of security. The study also reveals the critical mediating role of sense of security, elucidating its impact on broader dimensions of social work practitioners' well-being. This research contributes novel insights by blending quantitative rigor with nuanced exploration, enriching our theoretical understanding of information security challenges in social work. The findings hold significance for policymakers, organizational leaders, and educators, offering practical strategies to foster a secure and supportive work environment for social work professionals in the face of escalating information security demands.

Keywords: Information Security, Social Work, Human Factors, Sense of Security, Occupational Well-being.

1. Introduction

Organizational research has focused on workplace safety perception because of its effects on employee well-being and organizational effectiveness. Gupta, Chakravorty [1] describe "workplace safety perception" as employees' attitudes, beliefs, and conscious awareness of workplace safety procedures and practices. To establish successful safety programs and rules that prevent accidents and boost productivity, it is needed to understand employees' safety views [2]. Safety-focused companies protect their workers and create a positive work culture, which can boost job satisfaction and performance [8]. Many factors affect worker safety perception, such as organizational policies, leadership commitment, employee engagement, employment stability, and work independence [3]. The literature shows its importance as recent studies have emphasized a holistic approach that encompasses psychological and organizational elements [4]. Physical dangers were the primary focus of workplace safety research; however, some studies have discussed them. This addition recognizes that the firm's culture, management, and physical surroundings affect employees' safety views [4]. AlMunthiri, Bani Melhem [5] stressed the importance of a positive safety climate, characterized by a shared awareness of safety, to encourage employee safety habits. Nguyen and Petchsawang [6] stressed leadership's importance in safety culture. They suggested that leaders that priorities safety might impact how their employees view and act on safety [6]. According to Hooi and Chan [7], dangerous work environments can increase employee stress, anxiety, and quitting, compounding the organization's problems. Based on this evidence, improving workplace safety is both a moral imperative and a strategic goal for organizations seeking long-term sustainability and competitiveness [8].

Research on workplace safety perception shows that many factors influence employees' safety perception [9]. Safety climate refers to employees' views of an organization's safety policies, practices, and procedures [10]. Yang, Liu [11] found that a positive safety climate reduces injuries and increases safety compliance. In a another study, Edmondson and Matthews [12] found that the safety environment impacts safety practices and mediates the relationship between organizational factors and safety outcomes. Job security has been demonstrated to strongly affect workplace safety perceptions [13]. Inoue,

Eguchi [14] observed that employees with strong job security are more likely to report safety breaches and participate in safety behaviors because they are not scared about losing their jobs. Muthuswamy and Umarani [15] in a study found that job security reduces stress and worry. When job security is uncertain, these two factors may distract workers from safety. This association underlines the importance of organizational stability in promoting safety-first culture [16]. Additionally, employee involvement influences job security views [17]. Dahiya and Raghuvanshi [18] found that engaged workers are more likely to follow safety rules and participate in safety initiatives. Workplace engagement is marked by high energy, dedication, and involvement. Okros and Virga [19] found that engaged workers are more likely to spot and fix safety hazards, making the workplace safer. Employee involvement also improves communication and teamwork, which are crucial for workplace safety, according to Sheehan, Tham [20]. Moreover, job autonomy is the extent to which workers can control and decide on their work [21]. Robin, Kumaran [22] observed that job autonomy increases job satisfaction and drive, which can increase safety emphasis. Saeed, Hassan [23] showed that job autonomy allows workers to make safe judgements. These studies demonstrate that job autonomy affects employees' perception and engagement with numerous workplace safety aspects.

Despite the fact that workplace safety perception has been the subject of numerous research, there are still gaps in the knowledge [24]. In these job safety focused research, job security, employee empowerment, and job autonomy have not been given in-depth attention. These characteristics have been studied separately, but integrative study is needed to determine how they affect safety results [25]. These factors synergistic influence help illuminate how organizations can improve worker safety perception [26]. Work security may affect safety perception differently in societies with diverse employment stability and organizational norms [27]. Considering these contextual factors increases study generalizability and applicability. Finally, further research is needed on how job security, employee empowerment, and autonomy affect workplace safety perception. Although empirical research is rare but autonomy, motivation, and empowerment may mediate and moderate [28, 29]. The mechanisms can explain safety perception and inform focused solutions.

Organizational psychology and management theories underpin this research. Job Demands-Resources (JD-R) theory explains job security, interest, autonomy, and how safe people think their workplace is [28]. JD-

R states that job security and autonomy boost employee engagement, which improves work outcomes including safety perception. Employee involvement mediates job security and workplace safety expectations, following our model. Work security influences employee involvement and safety perception, according to Social Exchange Theory (SET) [30]. SET believes employees reward good behavior with job stability. Job stability pushes workers to work harder and follow safety rules. Job security enhances employee engagement and safety perception. SDT Vieira dos Santos, Gonçalves [28] demonstrates how job autonomy moderates the job security-workplace safety perception relationship. According to SDT, autonomy is a basic psychological need that boosts effort. Employment autonomy empowers and promotes safety practices, amplifying the positive effects of employment stability on safety perception. This theoretical framework suggests job autonomy moderates job security and workplace safety perception. Job security, employee involvement, and job autonomy affect workplace safety perception. The study questions whether employee engagement mediates the relationship between job security and workplace safety perception and whether job autonomy moderates it. The study seeks to fill literature gaps and explain workplace safety perception drivers. This can provide organizational strategies to promote safety culture and prevent workplace injuries.

2. Literature Review

Workers' perceptions of workplace safety encompass their attitudes, beliefs, and knowledge of policies and procedures. According to the Xu, Liu [31], safety culture and accident prevention depend heavily on how people perceive safety. Employee opinions are influenced by corporate policy, management's emphasis on preventive care, and safety precautions [32]. Workers are more likely to follow safety procedures and do their jobs safely if they feel that their employer prioritizes safety [33]. Employee complacency or disregard for safety regulations can result from a management team that is viewed as not being committed to safety, which can increase workplace accidents and injuries [34]. According to Robertson [35] research, workplace hazards can be decreased and safety perceptions raised by effective communication, strict safety regulations, and employee participation in safety decision-making. Communication, training, and feedback can also change safety perceptions [36]. Updated and engaging safety training programmers can boost employees' safety awareness and belief in the company's commitment to their health [37]. When employees receive constant feedback on safety performance and see that their issues are addressed quickly, their safety perception improves, leading to higher safety compliance [38]. Leadership impacts safety perception; transformational leadership styles that emphasize safety, promote, and recognize safe behaviors can create a strong safety culture [39]. Additionally, safety perception surveys and evaluations can help organizations discover safety culture deficiencies and implement focused remedies. All levels of the organization must work together to improve workplace safety perception [40].

An individual's perception of job security indicates the possibility that they will keep their current position without involuntary unemployment [41]. It includes contractual stability, organizational financial health, and economic conditions and is crucial to an employee's work life [42]. However, workplace safety perception incorporates employees' attitudes, beliefs, and awareness of safety standards at work. The company's safety rules, safety measures' visibility, and management's dedication to safety impact this view [43]. Understanding an effective workplace where people feel safe and secure requires both aspects. Research shows that job security affects organizational outcomes including workplace safety perception. Rasool, Wang [44] found that insecure workers had increased stress and anxiety, which can distract them from safety practices. According to Rasool, Wang [44], unstable workers may not report safety breaches or risks for fear of losing their jobs. Moriano, Molero [45] found that job security improves employees' well-being and makes them more aware of workplace safety. These studies show that job stability affects how employees view and participate in workplace safety [1]. Based on these empirical findings, the hypothesis that job security greatly affects employee workplace safety perception can be formed. Employees who feel confident in their work are less stressed and distracted, allowing them to focus on safety standards [3]. This sense of security can also allow staff to report harmful conditions without repercussions, improving safety culture [4]. Job security can also create a positive workplace culture where employees feel appreciated and trust management's safety commitment. According to Nguyen and Petchsawang [6] study, job security positively affects workplace safety perception because secure individuals are more inclined to follow safety procedures.

H1: Job security significantly influences the workplace safety perception of employees.

Engagement has been linked to several positive organizational outcomes, including workplace safety perception, according to empirical studies [46]. Employee engagement—the emotional and psychological commitment of individuals to their organization has been linked to improved job satisfaction, productivity, and organizational performance [47]. Alshaabani, Hamza [48] found that engaged workers are more inclined to go above and beyond their job duties and participate in organizational initiatives, including safety programmes. Chen, Nguyen [8] found that employee engagement reduces accidents and improves safety. This study shows that engaged workers are more likely to be proactive about workplace safety. Based on these empirical findings, the hypothesis that employee engagement greatly affects workplace safety perception can be formulated [12]. Engaged employees are more likely to support the company's aims and values, such as workplace safety. This alignment gives workers ownership and responsibility for workplace safety [14]. Engaged workers also communicate and collaborate more, which can improve safety awareness and compliance [16]. They also attend more safety training and implement what they learn to their daily work, establishing a safety culture. Higher employee engagement may lead to a more positive image of workplace safety since engaged employees actively maintain and improve safety measures [17]. Employee involvement affects organizational culture and climate, which affects workplace safety perception. Engaged workers foster a safety-focused workplace [20]. Strong communication, trust, and safety responsibility are key to an effective safety management system in this positive culture [22]. Engaged employees are more likely to believe their company cares about their well-being and safety, which increases their trust in management's safety practices [24]. Trust fosters safety behaviors and beliefs, producing a positive loop that improves workplace safety. Based on empirical support from previous research [26], employee engagement strongly improves workplace safety perception because engaged employees actively contribute to and reinforce a strong safety culture.

H2: Employee engagement significantly influences the workplace safety perception of employees.

Past empirical research has extensively investigated how job security and employee involvement affect workplace safety perception, but there is growing interest in how they interact [28]. Rice, Martin [27] found that job security reduces stress and anxiety, improving safety compliance. However, Homann, Limbert [25] found that employee involvement highly predicts safety outcomes including lower accident rates and better safety behaviors. These research provide useful insights into the direct impacts of job security and employee involvement on workplace safety perception, but they also reveal that engagement may mitigate this link [21]. Okros and Virga [19] suggested that employment resources like job security can boost employee engagement, which improves work-related outcomes like safety perception. From these empirical findings, the hypothesis that employee engagement strongly mediates job security and workplace safety perception can be developed [18]. Employee engagement increases when they feel secure in their work. This security reduces job loss anxieties, allowing employees to put more emotional and psychological energy into their work, improving engagement [15]. Engaged workers are committed, passionate, and focused, which promotes workplace safety. Thus, job stability increases employee involvement and workplace safety perceptions [13]. Employees with work security are more engaged because engagement mediates the favorable effect of job security on safety perception. Workplace safety and job security are mediated by employee engagement because of its influence on corporate culture and behavior [11]. Employee participation in training, exercises, and reporting of hazards is essential to workplace safety. Employee participation is increased when they actively participate in these activities [9]. People who participate become more conscious of their own safety, which inspires their colleagues and fosters a culture of safety. Active employees provide an example of safety for the business [7]. The ripple effect, according to AlMunthiri, Bani Melhem [5], contends that consistent employment raises employee engagement and boosts business success. Employee engagement so contributes to the relationship between job stability and workplace safety [4]. This guarantees that worker safety results from security measures by promoting involvement.

H3: Employee engagement significantly mediates the relationship of job security and workplace safety perception of employees.

Prior studies have demonstrated that job stability and autonomy, either separately or in combination, enhance a variety of organizational outcomes, including worker safety [44]. According to Rasool, Wang [44], employment stability reduces employee stress and enhances safety compliance, making the workplace safer. Workplace autonomy, or the degree of control and choice employees have over their work activities and procedures, has been found by Moriano, Molero [45] to boost job

satisfaction, motivation, and performance. Work autonomy, according to Wang, Ahmad [46], enhances performance and gives workers the power to defend others as well as themselves. The data shows that workers' opinions and behaviors about workplace safety are influenced by their level of job stability and freedom [49]. The empirical evidence indicates that workplace safety and job security are significantly moderated by job autonomy [43]. Employees are more likely to take initiative and increase safety when they are at ease and have decision-making authority. Worker adaptability to dangers and method changes made possible by job autonomy lowers accident rates and boosts safety [42]. Job autonomy gives employees the confidence and authority to handle safety concerns proactively, enhancing job security [41]. Thus, job autonomy may enhance the favorable effect of job security on workplace safety perception because secure and empowered employees are more likely to engage in safe work behaviors [40]. Job autonomy moderates the association between job security and workplace safety perception by affecting employee motivation and engagement [2]. Autonomy boosts intrinsic motivation by giving workers more ownership and responsibility [1]. Increased motivation can promote involvement, which AlMunthiri, Bani Melhem [5] link to better safety outcomes. When job security and autonomy are present, people are more motivated and proactive in safety [38]. Job autonomy appears to enhance job security's benefits, improving workplace safety perception [37]. Thus, job autonomy significantly moderates the relationship between job security and workplace safety perception, empowering employees to engage in proactive and engaged safety practices.

H4: Job autonomy significantly moderates the relationship of job security and workplace safety perception of employees.
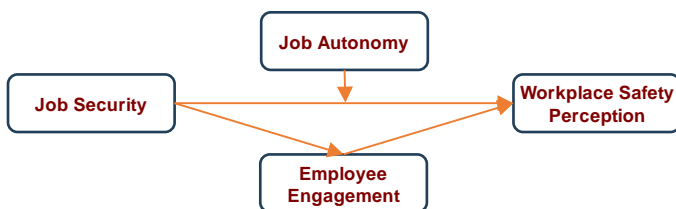

Figure 1: Theoretical Model

3. Methodology

The study examined employment stability, autonomy, engagement, and workplace safety perception on Saudi construction sites. The survey included 249 construction workers from diverse departments. Purposive sampling was used to reflect varied construction site positions and duties. Data was collected via self-administered questionnaires for chosen employees. The questionnaires measured job security, autonomy, engagement, and workplace safety perception using scales from previous research. These scales were chosen for reliability, validity, and research relevance (see Table 1).

Table1: Questionnaire details.

Variable	No of items	Adopted from
Job security	Four	[50]
Job autonomy	Three	[51]
Employee engagement	Twelve	[52]
Workplace safety perception	Fourteen	[53]

Data was analyzed using Stata Structural Equation Modelling (SEM) software after collection. SEM was used to test this study's theoretical model because it can examine complex correlations between several variables concurrently. The analysis used confirmatory factor analysis (CFA) to evaluate the measurement model's fit and path analysis to determine the research variables' direct and mediated linkages. Cronbach's alpha, composite reliability, and average variance extracted were used to evaluate the measuring scales' reliability and validity. CFA verified the measurement model's fit to the data. After that, route analysis examined the hypothesized links between job security, autonomy, engagement, and workplace safety perception. The study used strict methods to assure validity and reliability. The research used strong statistical methods and established measuring scales to shed light on organizational elements affecting construction worker safety perception.

4. Results

Table 2 indicates job security, autonomy, engagement, and workplace safety perception's reliability and validity. Cronbach's Alpha, CR, and AVE are essential for determining measure consistency and variables validity. Cronbach's Alpha of 0.862 indicates strong internal

consistency in the job security measure. A Composite Reliability (CR) of 0.894, above the 0.70 criterion, indicates that the construct successfully evaluates employment security. Job security's Average Variance Extracted (AVE) is 0.500, satisfying the minimum threshold of 0.50, indicating convergent validity because half of the indicators' variance is explained by the latent construct. The job autonomy metric has great internal consistency with a Cronbach's Alpha of 0.892. Job autonomy has a Composite Reliability (CR) of 0.833, considerably above the threshold, indicating its reliability. The AVE for job autonomy is 0.525, exceeding the 0.50 standard, showing excellent convergent validity and that the concept captures a significant percentage of the variance in the observed variables.

Table 2: Variables reliability and validity.

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Job security	0.862	0.894	0.500
Job autonomy	0.892	0.833	0.525
Employee engagement	0.824	0.895	0.507
Workplace safety perception	0.853	0.884	0.549

Table 3: Measurement Items Fitness Statistics.

Variable	Indicator	Original Sample
Job security	JS1	0.655
	JS2	0.705
	JS3	0.726
	JS4	0.658
Job autonomy	JA1	0.562
	JA2	0.555
	JA3	0.595
Employee engagement	EE1	0.606
	EE2	0.783
	EE3	0.575
	EE4	0.524
	EE5	0.625
	EE6	0.672
	EE7	0.707
	EE8	0.599
	EE9	0.624
	EE10	0.637
	EE11	0.783
	EE12	0.822
Workplace safety perception	WSP1	0.660
	WSP2	0.696
	WSP3	0.585
	WSP4	0.511
	WSP5	0.749
	WSP6	0.656
	WSP7	0.683
	WSP8	0.698
	WSP9	0.552
	WSP10	0.545
	WSP11	0.676
	WSP12	0.666
	WSP13	0.765
	WSP14	0.724

Cronbach's Alpha for employee engagement is 0.824, indicating strong internal consistency. Composite Reliability (CR) is good at 0.895, indicating reliable construct measurement. AVE is 0.507, barely above the 0.50 criterion, suggesting that the construct explains more than half of the variance in its indicators, validating the convergent validity of the employee engagement measure. Workplace safety perception has a Cronbach's Alpha of 0.853, showing good item internal consistency. Composite Reliability (CR) is 0.884, substantially over the permissible range, showing construct reliability. The AVE is 0.549, exceeding the 0.50 threshold, indicating convergent validity because the construct accounts for more than half of the variance in the observed variables.

Table 4 shows the Confirmatory Factor Analysis (CFA) results for job security, job autonomy, employee engagement, and workplace safety perception's measurement model fit. The coefficients (OIM Coef.) show each indicator's standardized loading on its latent construct. A numeric identification follows each component (JS for job security, JA for job autonomy, EE for employee engagement, and WSP for workplace safety perception). The coefficients show how strong and how directed the relationship between observable variables and their constructs is. The standard errors, z-scores, and p-values of these coefficients determine if the observed variables significantly contribute to the measurement of their

constructs. The measurement model's high standardized loadings and statistically significant coefficients for most variables confirm its validity.

Table 4: Confirmatory Factor Analysis.

| Measurement	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
JS1	1.000	(constrained)				
JS2	0.563	0.043	10.887	0.000	0.381	0.545
JS3	0.590	0.047	10.553	0.000	0.149	0.568
JS4	0.169	0.084	8.875	0.000	0.256	0.831
JA1	0.216	0.039	74.487	0.000	0.252	0.777
JA2	0.224	0.066	3.072	0.000	0.425	0.713
JA3	0.513	0.081	8.466	0.000	0.166	0.755
EE1	0.706	0.081	8.833	0.000	0.205	0.795
EE2	0.584	0.081	8.390	0.000	0.153	0.744
EE3	1.000	(constrained)				
EE4	0.583	0.078	9.000	0.000	0.273	0.744
EE5	0.579	0.041	69.461	0.000	0.204	0.720
EE6	0.541	0.082	8.390	0.000	0.168	0.754
EE7	0.461	0.094	7.597	0.000	0.230	0.763
EE8	1.000	(constrained)				
EE9	0.526	0.075	10.461	0.000	0.280	0.898
EE10	0.557	0.086	8.257	0.000	0.216	0.781
EE11	0.631	0.045	61.505	0.000	0.077	0.183
EE12	0.085	0.087	9.284	0.000	0.348	0.910
WSP1	1.000	(constrained)				
WSP2	0.403	0.078	9.860	0.000	0.273	0.875
WSP3	0.149	0.083	9.000	0.000	0.252	0.833
WSP4	0.671	0.039	72.133	0.000	0.113	0.347
WSP5	0.669	0.036	77.559	0.000	0.104	0.379
WSP6	0.586	0.073	9.292	0.000	0.138	0.555
WSP7	0.647	0.060	9.760	0.000	0.718	0.867
WSP8	0.730	0.037	77.810	0.000	0.182	0.418
WSP9	0.682	0.063	9.893	0.000	0.215	0.706
WSP10	0.586	0.038	76.466	0.000	0.205	0.367
WSP11	0.666	0.041	68.751	0.000	0.112	0.388
WSP12	0.430	0.037	78.394	0.000	0.230	0.647
WSP13	0.289	0.038	78.711	0.000	0.314	0.458
WSP14	0.508	0.039	75.948	0.000	0.311	0.714
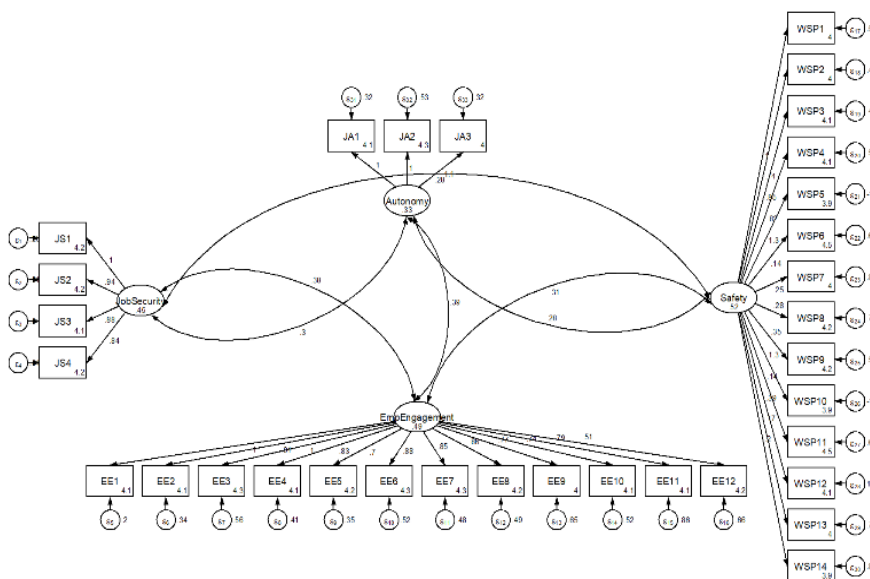
Figure 2: Estimated Model

Table 4 shows fitness statistics for measurement items for each study variable. These statistics evaluate indicator goodness-of-fit to latent constructs. The Original Sample column shows each indicator's factor loadings, which show how much of the observed variable's variance is explained by its construct. Better measurement fitness is shown by higher factor loadings, which indicate stronger indicator-construct correlations. Overall, most indicators across all variables have good fitness statistics, indicating that the measuring items reflect the intended characteristics. These findings strengthen the measurement model and validate the study's measurement tools.

Table 5: Chi-square Fit statistics

Fit statistic	Value	Description
Likelihood ratio	7750.722	model vs. saturated
p > chi2	0.000	
chi2_bs(2728)	3205.039	baseline vs. saturated

p > chi2   0.000

Table 5 shows the structural equation model's overall fit chi-square fit statistics. The model's probability ratio chi-square value of 7750.722 compares to a saturated model, which fits perfectly. The model significantly differs from the saturated model with a 0.000 p-value. Compared to a baseline model, the baseline chi-square value of 3205.039 produces a significant p-value of 0.000. While not perfect, the model outperforms the baseline model and fits the observed data well.

Table 6: R-square statistics Model Goodness of Fit Statistics.

	Saturated Model	Estimated Model	R Square
SRMR	0.038	0.066	
Job security			0.243
Job autonomy			0.532
Employee engagement			0.552

Table 6 shows R-square statistics for structural equation model goodness of fit. The Saturated Model column shows R-square values for a perfect fit model, while the Estimated Model column shows estimated model values. SRMR values show the difference between observed and predicted covariance matrices, with lower values suggesting better fit. Job security, job autonomy, and employee engagement R-square values show how much variance the exogenous variables explain in the endogenous variables. The factors explain nearly 50% of the variance in work autonomy and employee engagement in this model, with R-square values of 0.532 and 0.552, respectively. This shows that the model fits the data well and sheds light on variable relationships.

Table 7: Path Analysis.

|	OIM Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Job security significantly influences the workplace safety perception of employees.	0.573	0.202	3.899	0.000	0.339	0.454
Employee engagement significantly influences the workplace safety perception of employees.	0.506	0.124	3.454	0.000	0.262	0.749
Employee engagement significantly mediates the relationship of job security and workplace safety perception of employees.	0.479	0.118	3.271	0.000	0.248	0.709
Job autonomy significantly moderates the relationship of job security and workplace safety perception of employees.	0.503	0.144	11.130	0.000	0.284	0.872
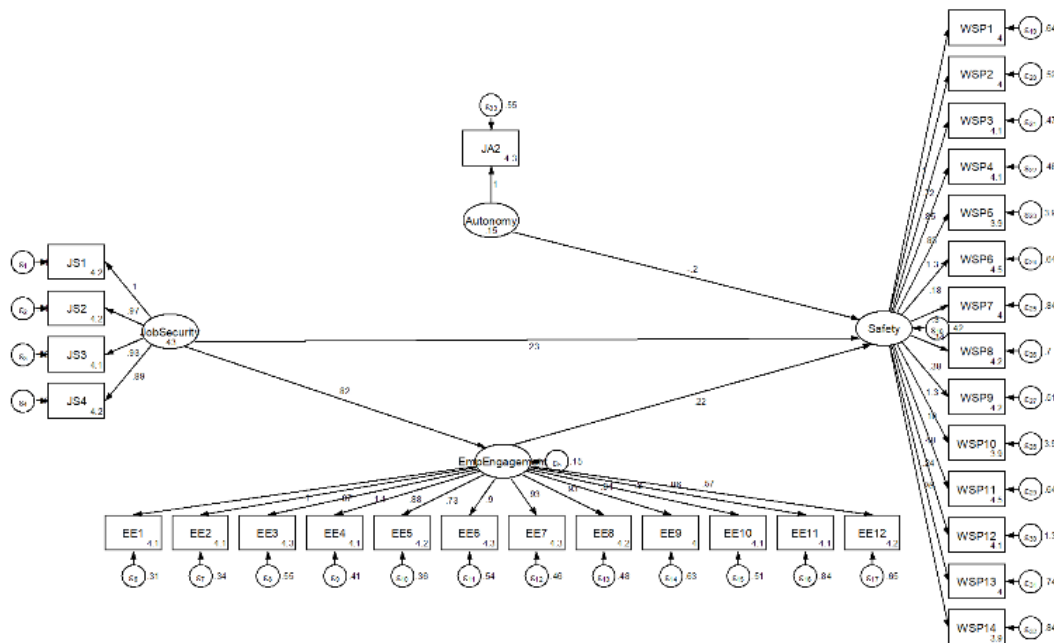
Figure 3: Structural Model for Path Analysis.

The route analysis results in Table 7 show the direct and mediated interactions between structural equation model variables. Firstly, job security positively impacts workplace safety perception with a path coefficient of 0.573 (z = 3.899, p < 0.001). This suggests that job security strongly affects workplace safety perceptions. Organizational stability is crucial to promoting a safety-focused culture because employees who feel secure at work are more likely to feel safe. Employee involvement positively impacts workplace safety perception, with a path coefficient of 0.506 (z = 3.454, p < 0.001). This demonstrates that employee engagement strongly affects workplace safety perception. Engaged workers, who are passionate, dedicated, and focused on their work, are more likely to priorities safety and follow safety regulations, making the workplace safer.

Employee involvement significantly mediates the association between job security and workplace safety perception (z = 3.271, p < 0.001). Employee involvement appears to mediate the impacts of job security on workplace safety. We found that employee engagement mediates the association between job security and workplace safety perception, underscoring the necessity of a supportive and engaging work environment to maximize the favorable impacts of job security on safety perception. Finally, job autonomy significantly moderates the link between job security and workplace safety perception (z = 11.130, p < 0.001) with a path coefficient of 0.503. This shows that job autonomy improves job security and workplace safety perception. Companies that give workers a lot of control over their work processes boost the positive benefits of job security on safety perception, emphasizing the necessity of letting workers own safety efforts.

5. Discussion

The complex relationship between job security, employee engagement, job autonomy, and workplace safety perception is a key subject of research. This study shows that these elements greatly influence an organization's safety culture. This study examines the direct, mediating, and moderating interactions between these variables to show how job security and job autonomy, through employee engagement, increase employee safety. This discussion chapter explores these links, revealing the principles that support good safety management techniques and the importance of psychological and organizational elements in promoting a safe and productive workplace.

This research strongly supports the first hypothesis (H1) that job stability significantly affects employee workplace safety perception. As in earlier studies, employees who feel secure in their jobs are more likely to follow safety standards and report dangers without repercussions. This supports Ahmad, Ullah [39] findings that job security reduces stress and anxiety, allowing workers to prioritize safety. A culture of trust and openness can be fostered by job stability, enabling staff members to discuss safety issues and suggest solutions. This study demonstrates that workers' perceptions of safety are enhanced by job security. Stability within the organization is essential for a robust safety culture. The second hypothesis (H2), according to statistics, is that perceptions of workplace safety are influenced by employee participation. This is a result of engaged employees taking a more proactive approach to workplace safety. This bolsters the substantial body of evidence that links higher organizational performance such as safety and accident rates to employee engagement. Engagement raises interest, commitment, and level of immersion in the work, which raises involvement and safety attention. According to this study, employees that are engaged are more likely to go above and above for safety. This study demonstrates how an organizational culture that prioritizes safety is fostered by engaged employees.

These concepts demonstrate the connections between workplace security, employee involvement, and employment stability. The feeling of safety may be indirectly enhanced by job stability if it fosters employee involvement. Employment that provides stability fosters higher levels of worker engagement and ensures their safety. Engagement serves as an intermediary, hence enterprises must offer sufficient employment opportunities and actively include individuals in workplace safety. Furthermore, these findings have a substantial impact on the organization's policies and operations. Companies should provide highest importance to

communication, leadership, and employee safety in order to establish secure and pleasant work environments. Consequently, companies have the ability to foster a safety culture that safeguards employees and enhances efficiency.

Hypothesis three (H3): Employee engagement governs the perceptions of job security and workplace safety. Perceptions of safety are correlated with employment stability. Workplace safety is not solely dependent on employment stability; it is mostly influenced by employee involvement. Based on [35] Employment Demands-Resources (JD-R) model, having a stable and secure job enhances employee engagement and leads to positive work outcomes. Enhanced job security alleviates stress and enhances stability, hence augmenting employee engagement. Workers that are engaged exhibit higher levels of enthusiasm, passion, and focus, resulting in the adoption of proactive safety procedures and the acquisition of knowledge. Engagement highlights the importance of a workplace that provides support and security by addressing both job security and the perception of safety. The fourth hypothesis (H4), that job autonomy considerably moderates the link between job security and workplace safety perception, shows that autonomy improves safety outcomes. Results show that employment stability improves workplace safety, especially when employees have a lot of autonomy. [31] Self-Determination Theory posits that autonomy is a psychological need. Fulfilling this demand motivates intrinsically and improves work habits. This supports the theory's core ideas. Professional autonomy empowers and holds people accountable, especially for safety decisions. This empowerment allows them to address safety issues in a proactive and inventive manner, improving their workplace safety perception. Giving employees control over their work procedures can boost the safety perception benefits of job stability, making them more engaged and safety-conscious. The moderating effect of job autonomy shows this is possible.

Accepting all four hypotheses gives strong data showing the relationship between job security, employee engagement, job autonomy, and workplace safety perception. Data show that job stability alone improves safety perception. The impact is greatly increased with considerable staff involvement. work autonomy additionally moderates the favorable impact of work stability on safety perception. This research suggests that companies seeking to improve workplace safety should take a holistic strategy. Job security, employee engagement, and work process control should be part of this approach. They can develop a strong safety culture that reduces risks and increases well-being and productivity if they embrace this approach. We should research these dynamics in other organizations to learn more about successful safety management solutions.

To improve research, this study looked at perceptions on workplace safety, employee engagement, job security, and autonomy. Employee attitudes towards safety are greatly influenced by organizational variables, thus having a supportive and empowered work environment is essential. The study shows that job security affects safety perception directly and indirectly employee engagement, emphasizing the necessity for organizations to priorities stability and trust in safety culture. Job autonomy modifies the favorable benefits of job security on safety perception, emphasizing the need of empowering employees to actively participate in safety measures. The study uses cross-sectional data and self-reported assessments, yet it provides useful insights. However, this research can help organizations build evidence-based workplace safety and employee well-being programmes. Future research should use longitudinal or experimental designs, investigate additional moderators and mediators of the relationships examined herein, and replicate the study across diverse organizational contexts to better understand organizational factors affecting workplace safety. These study directions can help scholars design effective interventions and policies to make workplaces safer and healthier worldwide.

6. Implications of the Study

The intricate relationship between organizational features and worker safety perception is illuminated by this study. Structural equation modelling was used to analyses job security, autonomy, employee engagement, and workplace safety perception. This shows how job stability affects employees' workplace safety views. Job security affects safety perception and employee involvement, emphasizing the importance of organizational stability in safety. The study indicated that employee involvement moderates job security-safety perception. Safety requires addressing concrete and invisible organizational issues. Job autonomy moderates the favorable impacts of job security on safety perception, showing how giving workers with control over their work processes promotes safety. Empowering employees to engage in safety and company decisions is crucial. These theoretical insights help us understand the complexity of workplace safety perception and the need for a holistic strategy that includes organizational policies, employee engagement strategies, and autonomy-supportive practices to create a safer and healthier workplace.

This study affects companies seeking to boost worker safety and productivity. Research shows that corporate culture values job stability. Stable jobs improve confidence and workplace safety. Companies should invest in job security, honest organizational stability data, and tenure-protecting policies. Second, employee engagement ensures workplace safety, the survey showed. Employee engagement can be increased by providing a nice workplace, career development, and open communication. Third, the research emphasizes worker control over work processes to improve safety perception. Delegating decision-making, including employees in safety planning and implementation, and developing trust and responsibility empowers them. This can help firms create a safety-focused culture that protects workers and boosts performance and resilience. These findings demonstrate the need for a holistic approach to workplace safety and well-being that tackles actual and intangible organizational elements.

7. Limitations and Future Research Directions

This study illuminates job security, autonomy, employee engagement, and workplace safety perception, however it has significant limitations that should be addressed in future research. The study's cross-sectional data hinders causality determination. Experimental or longitudinal designs may explain this study's correlations' causal mechanisms. Self-reported measurements may raise common method bias, inflating variable linkages in the study. Multi-source and multi-method data collecting could solve this limitation in future research. The study solely evaluates safety perceptions, not accidents or near-misses. Including objective safety performance measures would reinforce the findings and explain how organizational factors affect workplace safety. Finally, the study's sample comes largely from one business or organization, limiting its generalizability. Future research could replicate the study across industries and organizations to test the relationships.

This study's limitations and findings propose research avenues. Researchers should first study how leadership styles, safety culture, and organizational norms affect employees' safety perspectives. Personality, work, and cultural variations should be investigated in future research on these connections. Longitudinal study could also explore how job stability, autonomy, and employee involvement affect workplace safety outcomes, demonstrating safety perception alterations' persistence. Researchers could also evaluate how safety training, leadership development, and job redesign generate a safety culture. As employment becomes more digital, future research may examine how remote labor, digital technologies, and automation effect workplace safety perception and organizational safety practices. By addressing these study directions, scholars can better understand the complicated relationship between organizational characteristics and workplace safety and propose evidence-based ways to increase employee well-being and organizational resilience.

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Appendix 1

Job Security

1. My present job enhances my job security feeling.
2. I feel my presence at the faculty is temporary.
3. There are no specific standards for continuity of work at the faculty.
4. I feel high confidence from the administration regarding my work.

Job Autonomy

1. I have the freedom to make decisions about my job.
2. How the job is done is essentially under my responsibility?
3. I determine how the job is done in line with my own opinions

Employee Engagement

1. Employees realize what is expected from them in performing the work.
2. Employees have tools and materials which are adequate to perform the work well.
3. In working, employees have opportunities to perform the best every day.
4. On weekend, employees obtain acknowledgement or praise toward the work which is performed well.
5. Employer of employees realizes to respect employees as human beings.
6. There is someone in the working place who gives support to the employees to develop themselves.
7. In working place, the opinion of employees is considered carefully.
8. Mission and vision of organization makes employees think that their work is highly essential for the company.
9. Employees' colleagues are committed to perform high-quality work.
10. Employees have close friends in the working place.
11. From last six months, there is someone who talks and provides suggestion regarding to the enhancement of employees in working
12. In recent year, employees obtain opportunities in the working place to learn and improve

Workplace Safety Perception

1. Safety management
2. Assessment of the safety level in the organization
3. Top management commitment to safety
4. Quality and adequacy of documentation and procedures
5. Openness and communications
6. Training
7. Priority to safety/importance given to safety related issues
8. Compliance with regulations and procedures
9. Working conditions regarding safety
10. "Absence of safety versus production" conflict
11. Employee's commitment and responsibility
12. Employee's attitude towards safety
13. Notions of risk prevention
14. Motivation and job satisfaction