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Article

Impact of toxic work environment on employee engagement mediated by employee well-being and supportive work culture

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Abstract: A decline in employee engagement in an organization often originates from the presence of toxic work environments which affects overall performance and productivity, thereby posing a significant threat to the company's success. Therefore, this research aimed to explore the impact of toxic work environments on employee engagement. Employee well-being and supportive work culture were used as mediating factors to analyze the correlation between employee engagement and toxic work environments. The research was conducted among 600 respondents in the coal mining industry using Partial Least Squares Structural Equation Modeling 4.1.0 as the quantitative methodology to determine the correlation. The results showed a clear reduction in employee engagement due to toxic work environments, with employee well-being and supportive work culture having negative effects. To reduce the harmful effects of toxic work environments, a supportive work culture and employee well-being were crucial mediating variables. Furthermore, the results suggested that the mediators could improve the level of engagement among workers. This research further contributed to the theory and subsequent publication offering intervention from corporate and government organizations. Future publications should consider pre- and post-intervention to measure toxic work environments' effect on employee engagement.

Keywords: bullying; discrimination; employee engagement; employee well-being; work culture; work environments; work-related physical violence

1. Introduction

The coal mining industry is an essential sector in the Indonesian economy, accounting for a minimum of 30% of energy consumption (Baskoro et al., 2021). Along with the economic benefits, this industry also has significant occupational security, health, and safety risks with mining divisions having a high incidence of injuries (Ajith et al., 2020). Additionally, the industry's work environment reports a high rate of discrimination and physical violence representing 92% and 87.7% respectively (Jain and Torres, 2021). Maslow's theory further emphasizes the fundamental role of security in fostering conducive work environments (WE) and promoting employee well-being (EW) as well as engagement (Maslow, 1958). Currently, efforts are in place to address physical violence, sexual harassment, and discrimination accounting for 41.5%, 32.3%, and 29.2% respectively (Jain and Torres, 2021). WE characterized by discrimination, bullying, sexual harassment, and physical violence are termed "Toxic", posing risks to health and safety, thereby diminishing employee engagement (EE) and well-being (Erwandi et al., 2021). These toxic environments will have an impact on organizational performance, significantly reducing employee motivation and engagement to achieve the objectives (Jain and

Torres 2021; Zhou et al., 2020).

EE can be considered "resources" invested to improve the organization's development. Engaged employees show enthusiasm, immersion in tasks, and persistence when faced with challenges and obstacles (Van Wingerden et al., 2017). Bakker (2011) showed that engaged employees exhibited openness to new experiences, thereby improving attendance and performance across physical, cognitive, and emotional engagement. Therefore, scholars have applied organizational behavior theories to explore EE (Jaskeviciute et al., 2021; Rasool et al., 2021; Sakka and Ahammad, 2020). The organizational environment also influences toxic WE, contributing to frequent physical violence and discrimination while reducing EW (Jain and Torres, 2021). These toxic environments are often caused by low levels of well-being and organizational support (Chari et al., 2022; Huhtala et al., 2011; Sorensen et al., 2021).

The research focused on two aspects, first, is how toxic WE directly influence EE negatively. Second, how the mediating role of EW and Support Work Culture (SW) impact both direct and indirect EE. Significantly, this research has not been conducted in the coal mining industry with discrimination and physical violence representing 92% and 87.7% respectively (Jain and Torres, 2021). While previous publications focused on positive environments, the current research explored the negative aspects. Other publications attributed toxic WE to leadership but this research related it to supervisors and co-workers. The publication comprises EE with the organization, as well as support from co-workers and supervisors, alongside organizational assistance. This investigation contributes to understanding the impact of toxic WE on negative workplace factors including superiors and coworkers, characterized by high levels of violence. Consequently, the research aimed to address three questions providing insight into critical aspects of EW and the relationship with workplace dynamics.

Research Question 1. What effect do WE have on EE?

Research Question 2. How does EW affect EE, and how does the WE relationship impact EE mediated by EW?

Research Question 3. How does SW impact EE, and how does the WE relationship affect EE mediated by SW?

The results show toxic WE contributing to reduced EE (Rasool et al., 2021) which leads to a worse workplace (Sakka and Ahammad, 2020). WE also comprise harmful working conditions such as discrimination, bullying, physical violence, and sexual harassment (Anjum and Ming, 2018; Stalcup, 2013). EW further improves EE (Sutton, 2020), while SW also enhances EE (Sarwar et al., 2020). The mediating role of EE and organizational support serve as an intervention to reduce WE by promoting EE (Moen et al., 2016; Rasool et al., 2021).

Various research has explored the impact of EE but often omits physical violence emphasizing a gap in understanding the factors influencing EE (Park et al., 2015; Wressell et al., 2018). Investigating the role of mediation shows that SW can reduce the negative effects on EE (Moen et al., 2016). Rasool et al. (2021) stated that EW was negatively influenced by the conservation of resources (COR) theory, connecting workplace discrimination, bullying, physical violence, and sexual harassment to increased mental fatigue and decreased commitment to the organization (Chari et al., 2022).

Organizational support acknowledges each employee's distinct value and represents the overall requirements the company has for the workers (Barrick et al., 2015; El Akremi et al., 2018; Volery and Tarabashkina, 2021). A literature review suggests that EE mediation and SW may influence the relationship between WE and EE (Duran and Sanchez, 2021). Investigating this relationship is crucial to determine the correlation between WE and EE along with influence. The research also underscores the importance of managing WE to enhance EE and aims to confirm the effects of WE and EE, as well as determine to mediating role of EW and SW. A hypothetical model signifying the relationships between WE, EE, SW, and EE are depicted in **Figure 1**.

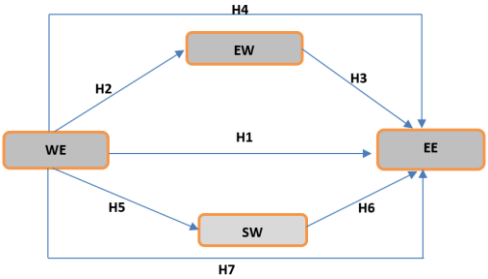

Figure 1. Framework of the relationship between WE and EE mediated by EW and SW.

1.1. Impact of WE on EE

Toxic WE represented a disappointing, negative, and uncomfortable atmosphere within a company's environment. The workplace could significantly affect companies due to the impact on EE, SW, and EW (Morrison and Nolan, 2007). This detrimental atmosphere probably led to overall losses for the company and also affected all workers. Toxic workplaces, including discrimination, sexual harassment, violence, and bullying, damaged emotional and labor well-being leading to burnout and reduced efficiency of the employees (Wressell et al., 2018).

Various research further analyzed toxic workplaces as a significant anomaly in organizations, attributing less attention from supervisors and coworkers to WE (Cho et al., 2016; Sloan, 2012). Preliminary research also showed a negative correlation between workplace violence and EE (Kaliannan and Adjovu, 2015; Tanwar and Kumar, 2019). The publication proved that WE factors such as discrimination, workplace bullying, physical violence, and sexual harassment correlated with the conservation of resources (COR) theory, emphasizing the negative relationship between toxic workplaces and EE.

Companies relied on EE to foster a positive work culture, as low EE led to a worse WE (Arnetz et al., 2018). EE was further categorized into "Job Engagement", reflecting an employee's loyalty and commitment to the job, and "Organizational Engagement", representing loyalty and commitment to the organization (Saks, 2006). Research showed that the effect of WE factors including work-related violence on individual engagement, job satisfaction, and enthusiasm was negative, thereby impacting organizational engagement and EE (Arnetz et al., 2018). Rasool et al. (2021) further confirmed that WE factors including discrimination, workplace harassment, and bullying negatively affected EE. Based on the results, WE had a negative effect

on EE with the following hypothesis.

- Hypothesis 1 (H1): WE showed negative implications for EE.

1.2. Influence of EW on EE and the Impact of WE on EW Mediated by EE

EW was examined from both subjective and objective perspectives to provide a comprehensive understanding of the impact on EW. Chari et al. (2018) categorized EW into five areas comprising workplace regulations, culture, and the physical attributes integrated within the environment's psychological and safety climate. These factors included information about organizational policies, initiatives, and practices that could affect EW (Mauno, 2010; Sorensen et al., 2021). Health status comprised both the physical and mental well-being of an individual (Andersson, 2008; Friedman and Kern, 2014; Green and Elliott, 2010), while the term "work evaluation and experience" referred to personal assessments of work-life norms, including elements of EE and job satisfaction (Batat, 2022; Jovanović, 2015). Additionally, EW could be influenced by external settings or aspects of life outside of work, such as the home, community, and society (Hooghe and Vanhoutte, 2011; Kingdon and Knight, 2007; Mauno, 2010).

Various research showed that WE exhibited a negative implication for EW (Rasool et al., 2021). Zhou et al. (2020) also suggested that WE negatively affected EE. Employees were more inclined to experience severe mental bullying in toxic workplaces, posing a threat to psychological health (Dos Santos, 2020). This research further showed that WE had a negative effect on EE with the following hypothesis.

- Hypothesis 2 (H2): WE suggested negative implications for EW.

The employees' physical and psychological well-being was essential in achieving several critical organizational objectives connected to high-performing companies, including EE (Galderisi et al., 2014). A more comprehensive deployment of psychological resources, such as EW tended to yield higher levels of engagement. Rasool et al. (2021) found a positive relationship between EW and EE in research conducted on small-medium enterprises. Low levels of EW were also found to have a negative impact on EE, where good EW could increase EE (Brad Shuck et al., 2011). Furthermore, WE were associated with increased EE and decreased incidences of bullying and physical violence (Hayat and Afshari, 2021). This research further suggested that EW positively influenced EE, as denoted by the following hypothesis.

- Hypothesis 3 (H3): EW has positive implications for EE

The performance of a worker would increase when proper care and attention were given. Consequently, the employees would interact positively with the organization when concern by the management was observed. Rasool et al. (2021) further showed that EW positively influenced EE and supportive as well as well-being-promoting environments led to improved performance among employees (Fotiadis et al., 2019). Therefore, employees would engage positively with the organization when corporate management prioritized well-being. A dedicated worker should also participate in the organizational success by actively contributing to achieving the company's objectives (Arenas et al., 2015). This research suggested that EW mediated the relationship between WE and EE, as formulated in the following hypothesis.

- Hypotheses 4 (H4): EW mediated the relationship between WE and EE.

1.3. Impact of SW on EE and the influence of WE on SW mediated by EE

A toxic workplace environment detrimentally affected employee outcomes by inducing stress and reducing engagement. However, several mediating factors such as supportive work culture and organizational support, were identified as potential mitigators of this negative effect (Mauno, 2010). Zhou et al. (2020) observed that organizational support positively influenced employee performance and commitment in an organization. McLellan et al. (2015) also asserted that employees receiving organizational support showed improvements in behavior and cognitive assessments. Therefore, this research suggested that WE exhibited a negative influence on SW with the following hypothesis.

- Hypothesis 5 (H5): WE had negative implications for SW.

Stein et al. (2020) recognized the significance of supervisor and colleague connections in predicting employee burnout, job satisfaction, workplace stress, intention to quit, and job satisfaction. Workplace violence and work-related harassment led to increased emotional exhaustion and decreased commitment to the organization (Laschinger and Grau, 2012). Similarly, research had shown that negative workplaces increased employee anxiety about the relationships with coworkers (De Clercq et al., 2018). Employees who lacked support at work experienced stress, leading to negative consequences such as reduced engagement, absences, and job-related errors (I. J. Park et al., 2020). Conflicts between employees within WE contributed to reduced work performance. However, there was an active change in attitude and behavior to achieve organizational objectives when the employee felt supported and valued by the management (Mirahsani et al., 2023). Organizational support reflected the overall expectations for the employees and recognized the value of each worker (Imran et al., 2020). Based on the results, SW was proposed to have positive implications for EE as formulated in the following hypothesis.

- Hypothesis 6 (H6): SW showed positive implications for EE.

Organizational support transformed the business and improved the efficacy of the core principles as well as the work culture (Fry et al., 2017), influencing employee output, work loyalty, and productivity. Employees were more motivated to mitigate negative effects and enhance WE in SW (Charoensukmongkol and Phungsoonthorn, 2022). Bakker et al. (2004) found the detrimental consequences of WE, emphasizing that EE increased when supervisors and coworkers supported employees. This research further estimated that SW mediated the negative implications between WE and EE as articulated in the following hypothesis.

- Hypothesis 7 (H7): SW mediated between WE and EE.

2. Materials and methods

The research used both online and offline surveys for data collection, which was conducted in September 2023 within the coal mining industry in Indonesia. Offline surveys were observed due to some coal exploration areas being difficult to reach via the Internet. Quantitative research with cross-sectional design was used after the

development of the instruments. Furthermore, a quantitative method using Structural Equation Modeling Partial Least Squares 4.1.0 (SEM-PLS) was adopted in this research. Data were collected from 600 respondents working in the coal mining industry with selection criteria due to the sector's hazardous nature.

2.1. Population and sample

The research delimited the population into groups of individuals, events, or other entities of interest for statistical analysis. To limit the population, the research focused on coal mining industry workers and sub-contractors. The number of workers estimated in this sector was approximately 23,857, including around 3121 foreign employees. The selection criteria for respondents did not include age, gender, position, permanent or contract workers, and educational background, with the lowest education requirement being elementary school level.

The sample was obtained from the predetermined population limits established in the research. Random sampling was used, ensuring that the probability of selecting respondents was known. A total of 600 respondents were selected, consisting of four coal exploration project locations in Indonesia. Before participation, respondents reviewed consent forms and scholars provided detailed explanations of the objectives, engagement criteria, confidentiality measures, incentive details, and scholar information. Consent to participate was confirmed by signing the willingness form, ensuring ethical compliance and voluntary engagement in the research.

2.2. Sociodemographic characteristics of respondents, variables, and measure

The section contained details regarding the respondents' work arrangements, including age, gender, job duration, education, ethnicity, employment status (full/part-time), income, marital status, and other demographic as well as occupational information. The research adopted four variables, each assessed using a 1-6 Likert scale. Specifically, there were four indicators for EE, five for both EW and SW each, as well as seven factors for WE. The Likert scale used ranged from 1 to 6, with 1 representing "strongly disagree" or "every day" and 6 denoting "strongly agree" or "never". There were four variables in total comprising 22 indicators which reflected various aspects of the research constructs. **Table 1** described the questionnaire variables, while **Table 2** outlined the measurement methods and guidelines for each variable.

Table 1. Variable of questionnaire.

Variable	Items	Source
EW	Four Items (Strongly Disagree–Strongly Agree)	Saleem et al., (2020)
EW	Six Items (Strongly Disagree–Strongly Agree)	Ahmed et al., (2020), Chari et al., (2022)
SW	Five Items (Strongly Disagree–Strongly Agree)	Chari et al., (2022)
EW	Seven Items (Every Day–Never)	Chari et al., (2022)

Source: Author, 2024.

The research used Structural Equation Modeling (SEM) using SmartPLS 4.1.0 to

measure the relationships (Sarstedt et al., 2019). The correlation was examined between WE including discrimination, workplace bullying, physical violence, and sexual harassment as well as EE, following the assessment guidelines outlined in **Table 2**.

Table 2. Guidelines of the reflective measurement (Hair et al., 2019).

Measurement	Indications	Level of acceptance
Indicator reliability	Outer loadings	Outer loading <0.400 delete, >0.400 but <0.700 retain when Average variance extracted >0.500, >0.700 retain indicator.
Internal consistency	Cronbach's alpha, *Rho-A*, and *Rho-C*	Average variance Extracted (AVE)>0.500, Cronbach alpha, *Rho-A*, *Rho-C* > 0.700, *Rho-A* value between *Cronbach's alpha* and *Rho-C* showed reliability.
Convergent	*AVE*	*AVE* > 0.500 or higher to ensure convergent validity.
Discriminant	Fornell-Larcker	A latent variable's square root of the *AVE* should be greater than the correlations with all other variables combined.
	Heterotrait-monotrait ratio (HTMT)	When *HTMT* was < 0.85, the discriminant was considered valid.

3. Results and discussion

3.1. Demographics profile of respondents

Table 3 described the characteristics of respondents in the research, which included a total of 600. Female respondents were in the minority comprising only 5% while males constituted the majority with 95%. The age distribution of respondents was as follows, the most represented age group was 18–29 years old, accounting for 34.33% of the population, followed by 30–44 years at 31.66%, 45–55 years at 21.33%, and over 55 years at 12.66%. All respondents were in permanent employment or full-time positions with no individuals employed on part-time contracts. Regarding educational attainment, the majority representing 53.66% had completed high school, while 46.33% held a bachelor's degree or higher. In terms of income, 46% of the respondents earned between US$3500 and US$5000 per year, 24.33% received between US$5001 and 6500 annually, 21% garnered US$6501 and 8000/year, as well as 8.66% earning more than US$8000/year. Additionally, the majority of respondents were married denoting 61.33%, and 38.66% were not married.

Table 3. Demographic profile of respondents.

Characteristics	Category	Number of samples (*n*)	Percentage (%)
Work Arrangement	Standard Work Arrangement	594	99.00
	Contract Worker	6	1.00
Sex	Male	540	95.00
	Female	60	5.00
Age	18–29 years	206	34.33
	30–44 years	190	31.66
	45–55 years	128	21.33
	>55 years	76	12.66

Table 3. (*Continued*).

Characteristics	Category	Number of samples (*n*)	Percentage (%)
Duration of Job	1–5 years	172	28.66
	6–10 years	144	24.00
	11–15 years	158	26.33
	16–20 years	104	17.33
	>21 years	22	3.66
Education	Senior High School	322	53.66
	Diploma	128	21.33
	Bachelor's or higher	150	25.00
Ethnic	Asia	448	74.66
	others	152	25.33
Full or part-time	Full time	600	100.00
	Part-time	0	0.00
Income	US$3500–US$5000 Annually	276	46.00
	US$5001–US$6500 Annually	146	24.33
	US$6501–US$8000 Annually	126	21.00
	>US$8000 Annually	52	8.66
Marital status	Married	368	61.33
	Unmarried	232	38.66

Source: Summary Survey by Authors, 2024.

3.2. Retained and deleted indicators

Table 4 presented the outcomes concerning the retained and deleted indicators. Variables with an outer loading less than 0.400 were deleted, those between 0.400 and 0.700 were retained when the *AVE* value exceeded 0.500, and values greater than 0.700 were also retained. Consequently, three indicators were removed due to having an outer loading value below 0.400, a SW indicator, and two WE. Further information on the measurement results was described in **Table 4**.

Table 4. Retained and deleted indicators.

Variable	AVE		Retained or deleted	*Rho-C*
	Before the deletion of indicators	After the deletion of indicators		
Employee Engagement (EE)	0.555	0.553	All four Indicators were retained	0.832
Employee Well-being (EW)	0.566	0.564	All six Indicators were retained	0.886
Supportive Work Culture (SW)	0.601	0.564	Four indicators were retained and 1 (SW5) was deleted	0.873
Toxic Work Environment (WE)	0.434	0.570	Five indicators were retained and 2 (WE5, WE7) were deleted	0.838

Source: Analysis data by authors, 2024.

3.3. Internal consistency reliability and convergent validity

The measurement in this step included the measurement of the value of skewness and kurtosis. All indicators of EW were found to be within acceptable limits, with a maximum skewness value of 0.845 and a maximum kurtosis of 1.288. The AVE,

composite reliability (Rho-A), and composite reliability (Rho-C) values were also within permissible limits, namely *AVE* > 0.500, *Cronbach Alpha* > 0.700, *Rho-A* > 0.700, and *Rho-C* > 0.700. Additionally, the value of *Rho-A* fell between Cronbach's alpha as the lower bound and *Rho-C* as the upper bound showing that all constructs were valid and reliable.

Considerations for retaining or deleting items were based on the following criteria, indicators with outer loading <0.400 were removed, those between 0.400 and 0.700 were retained when *AVE* extracted 0.500, and variables exceeding 0.700 were retained. Furthermore, **Table 5** described the results of Internal consistency reliability and convergent validity after modification.

Table 5. Internal consistency reliability and convergent validity.

Variable	Code of item	Outer loading	*AVE*	*Cronbach alpha*	*Rho-A*	*Rho-C*
EE	EE1	0.737	0.553	0.734	0.808	0.830
	EE2	0.869				
	EE3	0.671				
	EE4	0.680				
EW	EW1	0.757	0.564	0.854	0.849	0.885
	EW2	0.792				
	EW3	0.736				
	EW4	0.778				
	EW5	0.812				
	EW6	0.616				
SW	SW1	0.815	0.564	0.883	0.917	0.926
	SW2	0.901				
	SW3	0.873				
	SW4	0.839				
WE	WE1	0.797	0.570	0.797	0.814	0.865
	WE2	0.821				
	WE3	0.835				
	WE4	0.795				
	WE6	0.461				

Source: Analysis data by authors, 2024.

Based on the validity and reliability measurement results, all indicators met the requirements outlined in **Table 2**. Therefore, all latent variables were considered valid and reliable for the research. These results ensured the accuracy and consistency of the data used in the analysis.

3.4. Discriminant validity of fornell-larcker

Table 6 described the validity of discriminants according to Fornell-Larcker's criteria. The traditional assessment of discriminant validity required that an indicator's external charge on a construct was more significant than all the cross-loadings with other variables. Furthermore, each indicator's AVE square root had to exhibit a greater association with different attributes than the highest correlation.

All constructs were valid in this research based on the Fornell-Larcker discriminant validity assessment. The measurement for the four indicators namely EE, EW, SW, and WE denoted 0.743, 0.751, 0.858, and 0.755 respectively. These values were considered valid due to the higher cross-loadings compared to other constructs. The results confirmed the distinctiveness of the constructs and the ability to measure unique aspects of the phenomenon under investigation.

Table 6. Discriminant of Fornell-Larcker.

	EE	**EW**	**SW**	**WE**
EE	0.743	-	-	-
EW	0.225	0.751	-	-
SW	−0.201	−0.139	0.858	-
WE	−0.317	−0.24	0.346	0.755

Source: Analysis data by authors, 2024.

3.5. Discriminant validity of heterotrait-monotrait (HTMT)

Table 7 explained the discriminant validity using the Heterotrait-Monotrait (HTMT) ratio with a value <0.850. Furthermore, the measurement of discriminant validity with HTMT for all four constructs was considered valid as all the measurement outcomes were less than 0.850. These results confirmed that the constructs exhibited distinctiveness, supporting the validity of the analysis.

Table 7. Heterotrait-Monotrait ratio (HTMT).

	EE	**EW**	**SW**	**WE**
EE	-	-	-	-
EW	0.237	-	-	-
SW	0.228	0.137	-	-
WE	0.393	0.257	0.388	-

Source: Analysis data by authors, 2024 (outside diagonal was the correlation coefficient, and diagonal was the square root of *AVE*).

3.6. Hypothesis testing

The measurement of hypotheses testing according to H1–H7 was presented in **Table 8.** Hypotheses were accepted or rejected based on a significance level (*P*-value) less than 0.05 and a critical *t*-value exceeding 1.645. The measurements used bootstrapping with a subsample of 5000, a significance level of 0.05, and a one-tailed test. Furthermore, the patch coefficient was depicted in **Figure 2**, and the results of hypothesis testing were detailed in **Table 8.**

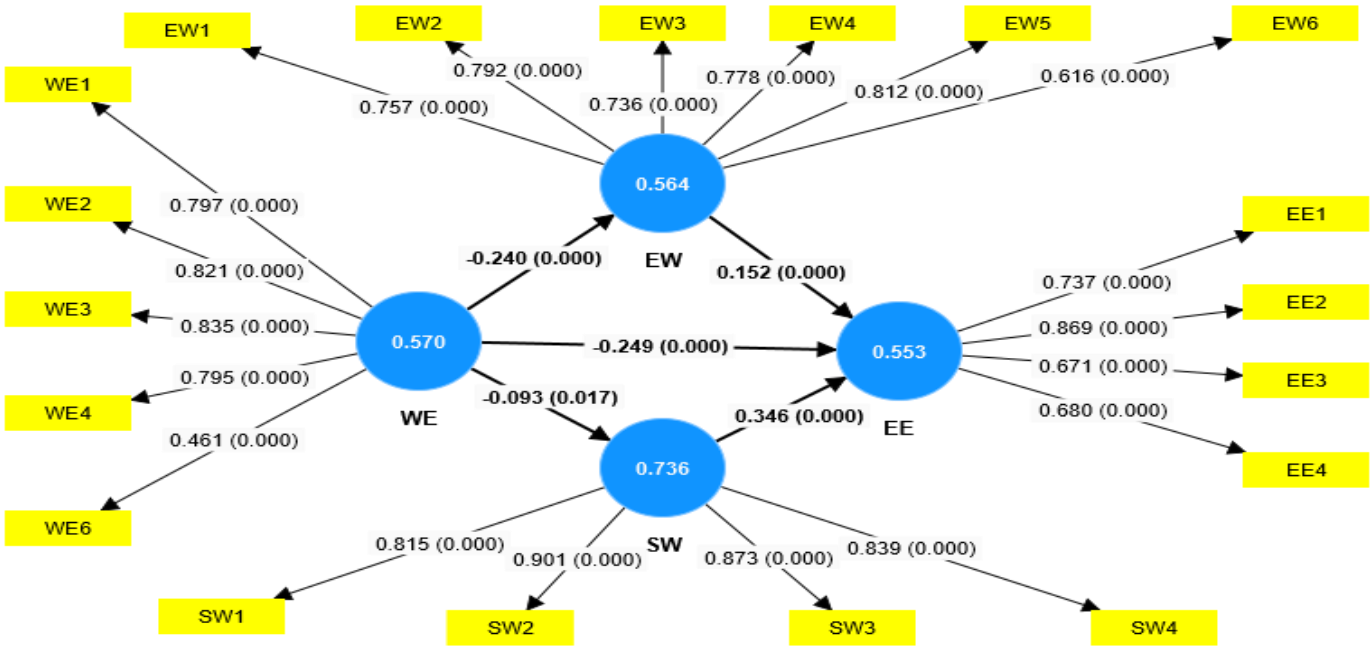

Figure 2. Patch Coefficients after modification (bootstrapping subsample 5000, level significance 0.05, one-tailed test).

Table 8. Summary hypothesis testing (direct and mediation).

Hypotheses	Path	Standard Beta	Standard Error (SE)	*T*-value	*P*-value	Bias	Confidence interval		R^2 adjusted	f^2	*VIF*	Decision
							5%	95%				
Direct effect												
H1	WE → EE	−0.317	0.032	9.827	0.000	−0.004	0.365	−0.259	0.128	0.161	1.186	Accepted
H2	WE → EW	−0.240	0.039	6.168	0.000	−0.005	0.297	−0.170	0.429	0.181	1.000	Accepted
H3	EW → EE	0.152	0.035	4.309	0.000	0.003	0.089	0.207	-	0.251	1.065	Accepted
H5	WE → SW	0.346	0.032	10.884	0.000	0.003	0.164	−0.018	0.484	0.136	1.000	Accepted
H6	SW → EE	−0.093	0.044	2.116	0.017	−0.001	0.289	0.394	-	0.316	1.140	Accepted
Mediation effect												
H4	WE → EW → EE	−0.032	0.016	2.042	0.021	−0.001	−0.059	−0.006	-	-	-	Accepted
H7	WE → SW → EE	−0.036	0.009	3.874	0.000	−0.001	0.052	−0.022	-	-	-	Accepted

Note: 1 tailed test.

Based on the hypothesis measurements, *T*-values > 1.645 and *P*-values < 0.05 were obtained. Therefore, it was concluded that all hypotheses were accepted as follows.

H1 was accepted, showing that WE had negative implications for EE with a *T*-value of 9.827 and a *P*-value of 0.000.

H2 was accepted, suggesting that WE had negative implications for EW with a *T*-value of 6.168 and *P*-value of 0.000.

H3 was accepted, signifying that EW had positive implications for EE with a *T*-value of 4.309 and a *P*-value of 0.000.

H4 was accepted, showing that EE mediated the relationship between WE and EE with a *T*-value of 2.042 as well as a *P*-value of 0.021.

H5 was accepted, suggesting that WE had negative implications for SW with a

T-value of 10.884 and *P*-value of 0.000.

H6 was accepted, signifying that SW had positive implications for EE with a *T*-value of 2.116 and *P*-value of 0.017.

H7 was accepted, suggesting that SW mediated the relationship between WE and EE with a *T*-value of 3.874 and a *P*-value of 0.000.

4. Discussion

WE are identified as the cause of an uncomfortable work environment that affects EE negatively. A supportive working environment should assist a challenging workplace such as the coal mining sector. Support from supervisors and coworkers will also help employees feel safe conducting obligated duties and avoid stress. Previous research in small and medium-sized industries has shown that WE negatively affect EE. This research focuses on a significant sector in middle-income countries to explore the mediated effect of WE on EE through SW and EE.

The results suggest that H1 is supported, showing WE having a negative impact on EE. This correlated with Rasool et al.'s (2021) research in small and medium-sized industries in China showing that WE negatively affect EE due to factors such as bullying and harassment. The negative effects on EE due to WE can lead to decreased employee productivity and mental health conditions, including anxiety, depression, as well as stress (Anjum et al., 2018; Rasool et al., 2019).

Increasing EE further requires a strong commitment from the leadership as stipulated by Xu and Cooper Thomas (2011). Unengaged employees were also observed to cause losses to companies in the United States. A strategy to overcome this problem is maintaining good communication between leaders and coworkers. Employees who feel recognized and included tend to be more engaged, leading to better organizational outcomes (Osborne and Hammoud, 2017). Effective two-way communication is further essential for fostering EE and providing complete information to all employees to establish positive WE (Kang and Sung, 2017).

The current research confirms a negative relationship between WE and EE which is supported by H2. Psychological pressure and environmental changes obtained from WE can have a negative effect on EW and subsequently EE (Duran and Sanchez, 2021). The negative impact on EW will be a source of loss for the organization, leading to decreased EE (Duque et al., 2020). Chari et al. (2018) further asserted that EW was essential for maintaining occupational health and safety, while work environment factors would influence the element. Facing WE conditions for EW requires emotional balancing, the participation of superiors and colleagues in the organization, and a solid commitment to improving EW (Zhou et al., 2020). Furthermore, coworkers and supervisors should support EE, significantly impacting the organization (Ravalier et al., 2021).

The relationship between EW and EE was further examined, showing EW positively influencing EE which supports H3. High EW levels are associated with increased EE as expressed by Shuck and Reio (2014). EW is an essential factor in increasing EE and also a competitive advantage to the organization (Bedarkar and Pandita, 2014). Furthermore, the organization can support EW to be directly proportional to EE (Kurtessis et al., 2017). Organizations should prioritize employees'

physical and mental health as well as the environment of employment (Shuck and Reio, 2014).

The mediating role of EE in the relationship between WE and EE is further examined. The results show that EE mediates the relationship between WE and EE, supporting H4. EE reduces the negative impact of a discriminatory work environment, bullying, as well as physical violence and increases workers' participation (Zhou et al. 2020). Wood et al. (2013) surveyed 1733 respondents and found a close relationship between discrimination from all sources as well as EW. A prosperous work environment and increased employee roles are fostered by EW, serving as a positive mediator between WE and EE (Chumg et al., 2015).

SW is examined in this research as a mediator in the relationship between WE and EE using questions such as being treated with respect, recognition of work, rewarding contributions, and being given resources. The results confirm a negative relationship between WE and SW, supporting H5. Balch Samora et al. (2020) argued that mistreatments such as bullying, sexual harassment, and physical violence adversely affect employees' mental health, productivity, and contributions. Therefore, this mistreatment will reduce the roles and respect within the organization.

A discriminatory environment leads to decreased employee contribution due to the impact of verbal and non-verbal violence. Park et al. (2023) suggested that adverse treatment was positively related to violence against women, and further perpetuates negative behavior affecting the work culture. Other publications suggest that toxic workplaces often originate from organizational roles and support (Kartolo and Kwantes, 2019). The research further supports previous publications on organizational support theory (OST), emphasizing that employees' perceptions of workplace treatment significantly influence EE (Kurtessis et al., 2017). Effective communication among employees and superiors along with healthy environmental practices fosters high levels of EE (Attridge, 2009).

The research further explores the positive impact of SW on EE with SW positively influencing EE which supports H6. Rasool et al. (2021) found that organizational support positively affected EE among 301 employees in small and medium-sized businesses. Strong organizational support motivates active employee participation and contribution to individual values within the organization, thereby enhancing EE (Ababneh, 2021).

Tomlinson (2010) investigated automotive manufacturers and found that organizational support through the human resources department was a strategy used to increase EE and motivate active organizational engagement. Organizations that build EE will bring progress to the business and are also good practices in human resource development (Cattermole et al., 2013). SW plays a crucial role in cultivating a work environment and organizational culture that positively impacts the company (Shuck and Reio, 2014).

The research finally examines how SW mediates the relationship between WE and EE. The results support H7, showing positive mediation that SW can reduce the impact of WE on EE. Chen et al. (2020) conducted a research of 180 respondents in the automotive industry and further divided organizational support into two parts namely strengthening and slowing down employee support as well as being a solid mediation for EE. Reducing the impact of WE can also be carried out by increasing

employee contributions with good support from colleagues and superiors (Kartolo and Kwantes, 2019). These results confirm that mediating EW and SW such as organizational support, will reduce the impact of WE and increase EE. Creating a supportive environment where employees feel valued and respected leads to increased EE, which further supports business success and progress (Tomlinson, 2010).

5. Conclusion

In conclusion, this research used two methods to examine the relationship between WE and EE. First, the direct relationship between WE and EE was investigated. Second, EW and SW were examined as mediators in the relationship between WE and EE. The results showed that WE consisting of discrimination, work-related physical violence, and sexual harassment reduced EE. Furthermore, both EW and SW mediated the relationship between WE and EE, increasing EE as well as fostering business success.

The results of this research were divided into three parts, each providing insights into distinct aspects of the relationship between WE and EE. First, various forms of WE including discrimination, workplace bullying, physical violence at work, and sexual harassment reduced EE. This manifested in negative feelings towards colleagues and superiors, feeling less appreciated, and the onset of mental health disorders. The disruption affected organizational effectiveness by undermining work culture and reducing employee productivity. Strategies should be implemented to minimize the WE and increase EE.

Second, the roles of EW and SW were instrumental in reducing the adverse impact of WE while increasing EE. Increased well-being motivated employees to participate effectively and support a safer as well as more comfortable environment. EW also played a crucial role in reducing workplace violence and fostering a better work culture leading to achievement. Elevated EE promoted a harmonious work atmosphere, avoiding stress and mental disorders. Strong organizational support facilitated higher productivity and spurred business growth.

Third, organizational treatment, contribution, and support within SW acted as additional motivations for increased EE. Organizations should provide a more expansive space for employee participation to mobilize voluntary and responsible work behaviors. High EE also fostered a correlation towards common objectives, particularly crucial in high-risk workplaces such as coal mining sites. Good support from the company would reduce the negative impact on the WE and develop a good work culture. EE further balanced the workplace with emotional control, avoiding stress, and having mental disorders that could eliminate the potential for accidents at work.

6. Limitations and future research

This research was limited by the small number of female workers in the coal mining industry, comprising only 5% or 30 individuals out of 600 respondents. Future research should focus on the inclusion of female workers because the gender most often experiences violence in the workplace. Furthermore, the research was exclusively carried out in the coal mining industry in Indonesia. Despite comprising

both local and overseas workers, expanding the respondent pool to include individuals from middle-income countries was necessary. Gender variables could be incorporated in future research to explore the influence of WE on EE, possibly as moderating or moderator factors. Additionally, future research should also be developed by comparing the impact of WE on EE across middle-income countries.

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Abbreviations

>	More Than
<	Less Than
%	Percent
PLS-SEM	Partial Least Squares Structural Equation Modeling
AVE	Average Variance Extracted
HTMT	Heterotrait-monotrait Ratio
EE	Employee Engagement
WE	Toxic Work Environment
EW	Employee Well-Being
SW	Supportive Work Culture

References

Ababneh, O. M. A. (2020). The impact of organizational culture archetypes on quality performance and total quality management: the role of employee engagement and individual values. International Journal of Quality & Reliability Management, 38(6), 1387–1408. https://doi.org/10.1108/ijqrm-05-2020-0178

Ahmed, M., Zehou, S., Raza, S. A., et al. (2020). Impact of CSR and environmental triggers on employee green behavior: The mediating effect of employee well-being. Corporate Social Responsibility and Environmental Management, 27(5), 2225–2239. Portico. https://doi.org/10.1002/csr.1960

Ajith, M. M., Ghosh, A. K., & Jansz, J. (2020). Risk Factors for the Number of Sustained Injuries in Artisanal and Small-Scale Mining Operation. Safety and Health at Work, 11(1), 50–60. https://doi.org/10.1016/j.shaw.2020.01.001

Andersson, P. (2008). Happiness and health: Well-being among the self-employed. The Journal of Socio-Economics, 37(1), 213–236. https://doi.org/10.1016/j.socec.2007.03.003

Anjum, A., & Ming, X. (2018). Combating toxic workplace environment. Journal of Modelling in Management, 13(3), 675–697. https://doi.org/10.1108/jm2-02-2017-0023

Anjum, A., Ming, X., Siddiqi, A., et al. (2018). An Empirical Study Analyzing Job Productivity in Toxic Workplace Environments. International Journal of Environmental Research and Public Health, 15(5), 1035. https://doi.org/10.3390/ijerph15051035

Arenas, A., Giorgi, G., Montani, F., et al. (2015). Workplace Bullying in a Sample of Italian and Spanish Employees and Its Relationship with Job Satisfaction, and Psychological Well-Being. Frontiers in Psychology, 6. https://doi.org/10.3389/fpsyg.2015.01912

Arnetz, J., Hamblin, L. E., Sudan, S., et al. (2018). Organizational Determinants of Workplace Violence Against Hospital Workers. Journal of Occupational & Environmental Medicine, 60(8), 693–699. https://doi.org/10.1097/jom.0000000000001345

Attridge, M. (2009). Measuring and Managing Employee Work Engagement: A Review of the Research and Business Literature. Journal of Workplace Behavioral Health, 24(4), 383–398. https://doi.org/10.1080/15555240903188398

Bakker, A. B. (2011). An Evidence-Based Model of Work Engagement. Current Directions in Psychological Science, 20(4), 265–269. https://doi.org/10.1177/0963721411414534

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. Human Resource Management, 43(1), 83–104. Portico. https://doi.org/10.1002/hrm.20004

Balch Samora, J., Van Heest, A., Weber, K., et al. (2020). Harassment, Discrimination, and Bullying in Orthopaedics: A Work Environment and Culture Survey. Journal of the American Academy of Orthopaedic Surgeons, 28(24), e1097–e1104. https://doi.org/10.5435/jaaos-d-19-00822

Barrick, M. R., Thurgood, G. R., Smith, T. A., et al. (2015). Collective Organizational Engagement: Linking Motivational Antecedents, Strategic Implementation, and Firm Performance. Academy of Management Journal, 58(1), 111–135. https://doi.org/10.5465/amj.2013.0227

Baskoro, F. R., Takahashi, K., Morikawa, K., et al. (2021). System dynamics approach in determining coal utilization scenario in Indonesia. Resources Policy, 73, 102209. https://doi.org/10.1016/j.resourpol.2021.102209

Batat, W. (2022). The employee experience (EMX) framework for well-being: an agenda for the future. Employee Relations: The International Journal, 44(5), 993–1013. https://doi.org/10.1108/er-03-2022-0133

Bedarkar, M., & Pandita, D. (2014). A Study on the Drivers of Employee Engagement Impacting Employee Performance. Procedia - Social and Behavioral Sciences, 133, 106–115. https://doi.org/10.1016/j.sbspro.2014.04.174

Brad Shuck, M., Rocco, T. S., & Albornoz, C. A. (2011). Exploring employee engagement from the employee perspective: implications for HRD. Journal of European Industrial Training, 35(4), 300–325. https://doi.org/10.1108/03090591111128306

Cattermole, G., Johnson, J., & Roberts, K. (2013). Employee engagement welcomes the dawn of an empowerment culture. Strategic HR Review, 12(5), 250–254. https://doi.org/10.1108/shr-04-2013-0039

Chari, R., Chang, C.-C., Sauter, S. L., et al. (2018). Expanding the Paradigm of Occupational Safety and Health. Journal of Occupational & Environmental Medicine, 60(7), 589–593. https://doi.org/10.1097/jom.0000000000001330

Chari, R., Sauter, S. L., Petrun Sayers, E. L., et al. (2022). Development of the National Institute for Occupational Safety and Health Worker Well-Being Questionnaire. Journal of Occupational & Environmental Medicine, 64(8), 707–717. https://doi.org/10.1097/jom.0000000000002585

Charoensukmongkol, P., & Phungsoonthorn, T. (2022). The effect of cultural intelligence of top management on pro-diversity work climate and work attitudes of Myanmar migrant workers in Thailand. Equality, Diversity and Inclusion: An International Journal, 41(5), 760–777. https://doi.org/10.1108/edi-11-2020-0339

Chen, T., Hao, S., Ding, K., et al. (2020). The impact of organizational support on employee performance. Employee Relations: The International Journal, 42(1), 166–179. https://doi.org/10.1108/er-01-2019-0079

Cho, M., Bonn, M. A., Han, S. J., et al. (2016). Workplace incivility and its effect upon restaurant frontline service employee emotions and service performance. International Journal of Contemporary Hospitality Management, 28(12), 2888–2912. https://doi.org/10.1108/ijchm-04-2015-0205

Chumg, H.-F., Cooke, L., Fry, J., et al. (2015). Factors affecting knowledge sharing in the virtual organisation: Employees' sense of well-being as a mediating effect. Computers in Human Behavior, 44, 70–80. https://doi.org/10.1016/j.chb.2014.11.040

De Clercq, D., Haq, I. U., & Azeem, M. U. (2018). Self-efficacy to spur job performance. Management Decision, 56(4), 891–907. https://doi.org/10.1108/md-03-2017-0187

Dos Santos, L. M. (2020). Stress, Burnout, and Turnover Issues of Black Expatriate Education Professionals in South Korea: Social Biases, Discrimination, and Workplace Bullying. International Journal of Environmental Research and Public Health, 17(11), 3851. https://doi.org/10.3390/ijerph17113851

Duque, L., Costa, R., Dias, Á., et al. (2020). New Ways of Working and the Physical Environment to Improve Employee Engagement. Sustainability, 12(17), 6759. https://doi.org/10.3390/su12176759

Duran, M., & Sanchez, J. (2021). Employee Engagement and Wellbeing in Times of COVID-19: A Proposal of the 5Cs Model. International Journal of Environmental Research and Public Health, 18(5470), 2–15.

El Akremi, A., Gond, J.-P., Swaen, V., et al. (2015). How Do Employees Perceive Corporate Responsibility? Development and Validation of a Multidimensional Corporate Stakeholder Responsibility Scale. Journal of Management, 44(2), 619–657. https://doi.org/10.1177/0149206315569311

Erwandi, D., Kadir, A., & Lestari, F. (2021). Identification of Workplace Bullying: Reliability and Validity of Indonesian Version of the Negative Acts Questionnaire-Revised (NAQ-R). International Journal of Environmental Research and Public Health, 18(8), 3985. https://doi.org/10.3390/ijerph18083985

Fotiadis, A., Abdulrahman, K., & Spyridou, A. (2019). The Mediating Roles of Psychological Autonomy, Competence and Relatedness on Work-Life Balance and Well-Being. Frontiers in Psychology, 10. https://doi.org/10.3389/fpsyg.2019.01267

Friedman, H. S., & Kern, M. L. (2014). Personality, Well-Being, and Health. Annual Review of Psychology, 65(1), 719–742. https://doi.org/10.1146/annurev-psych-010213-115123

Fry, L. W., Latham, J. R., Clinebell, S. K., et al. (2017). Spiritual leadership as a model for performance excellence: a study of Baldrige award recipients. Journal of Management, Spirituality & Religion, 14(1), 22–47. https://doi.org/10.1080/14766086.2016.1202130

Galderisi, S., Rossi, A., Rocca, P., et al. (2014). The influence of illness-related variables, personal resources and context-related factors on real-life functioning of people with schizophrenia. World Psychiatry, 13(3), 275–287. https://doi.org/10.1002/wps.20167

Green, M., & Elliott, M. (2010). Religion, Health, and Psychological Well-Being. Journal of Religion and Health, 49(2), 149–163. https://doi.org/10.1007/s10943-009-9242-1

Hayat, A., & Afshari, L. (2021). Supportive organizational climate: a moderated mediation model of workplace bullying and employee well-being. Personnel Review, 50(7/8), 1685–1704. https://doi.org/10.1108/pr-06-2020-0407

Hooghe, M., & Vanhoutte, B. (2011). Subjective Well-Being and Social Capital in Belgian Communities. The Impact of Community Characteristics on Subjective Well-Being Indicators in Belgium. Social Indicators Research, 100(1), 17–36. https://doi.org/10.1007/s11205-010-9600-0

Huhtala, M., Feldt, T., Lämsä, A.-M., et al. (2011). Does the Ethical Culture of Organisations Promote Managers' Occupational Well-Being? Investigating Indirect Links via Ethical Strain. Journal of Business Ethics, 101(2), 231–247. https://doi.org/10.1007/s10551-010-0719-3

Imran, M. Y., Elahi, N. S., Abid, G., et al. (2020). Impact of Perceived Organizational Support on Work Engagement: Mediating Mechanism of Thriving and Flourishing. Journal of Open Innovation: Technology, Market, and Complexity, 6(3), 82. https://doi.org/10.3390/joitmc6030082

Jain, A., & Torres, L. (2021). Workplace Bullying in Asia: An Examination of the Policy Context in the Region. In: Asian Perspectives on Workplace Bullying and Harassment. Springer Singapore.

Jaskeviciute, V., Stankeviciene, A., Diskiene, D., & Savicke, J. (2021). The relationship between employee well-being and organizational trust in the context of sustainable human resource management. Problems and Perspectives in Management, 19(2), 118–131. https://doi.org/10.21511/ppm.19(2).2021.10

Jovanović, V. (2015). Beyond the PANAS: Incremental validity of the Scale of Positive and Negative Experience (SPANE) in relation to well-being. Personality and Individual Differences, 86, 487–491. https://doi.org/10.1016/j.paid.2015.07.015

Kaliannan, M., & Adjovu, S. N. (2015). Effective Employee Engagement and Organizational Success: A Case Study. Procedia - Social and Behavioral Sciences, 172, 161–168. https://doi.org/10.1016/j.sbspro.2015.01.350

Kang, M., & Sung, M. (2017). How symmetrical employee communication leads to employee engagement and positive employee communication behaviors. Journal of Communication Management, 21(1), 82–102. https://doi.org/10.1108/jcom-04-2016-0026

Kartolo, A. B., & Kwantes, C. T. (2019). Organizational culture, perceived societal and organizational discrimination. Equality, Diversity and Inclusion: An International Journal, 38(6), 602–618. https://doi.org/10.1108/edi-10-2018-0191

Kingdon, G. G., & Knight, J. (2007). Community, comparisons and subjective well-being in a divided society. Journal of Economic Behavior & Organization, 64(1), 69–90. https://doi.org/10.1016/j.jebo.2007.03.004

Kurtessis, J. N., Eisenberger, R., Ford, M. T., et al. (2017). Perceived Organizational Support: A Meta-Analytic Evaluation of Organizational Support Theory. Journal of Management, 43(6), 1854–1884. https://doi.org/10.1177/0149206315575554

Laschinger, H. K. S., & Grau, A. L. (2012). The influence of personal dispositional factors and organizational resources on workplace violence, burnout, and health outcomes in new graduate nurses: A cross-sectional study. International Journal of Nursing Studies, 49(3), 282–291. https://doi.org/10.1016/j.ijnurstu.2011.09.004

Maslow, A. H. (n.d.). A Dynamic Theory of Human Motivation. In: Understanding human motivation. Howard Allen Publishers.

Mauno, S. (2010). Effects of work–family culture on employee well-being: Exploring moderator effects in a longitudinal sample. European Journal of Work and Organizational Psychology, 19(6), 675–695. https://doi.org/10.1080/13594320903106588

McLellan, D. L., Cabán-Martinez, A. J., Nelson, C. C., et al. (2015). Organizational Characteristics Influence Implementation of Worksite Health Protection and Promotion Programs. Journal of Occupational & Environmental Medicine, 57(9), 1009–1016. https://doi.org/10.1097/jom.0000000000000517

Mirahsani, N., Azizan, O., Shahriari, M., et al. (2023). Green culture toward employee green behavior; the mediation roles of perceived support and green identity. Environment, Development and Sustainability. https://doi.org/10.1007/s10668-023-03291-0

Moen, P., Kelly, E. L., Fan, W., et al. (2016). Does a Flexibility/Support Organizational Initiative Improve High-Tech Employees' Well-Being? Evidence from the Work, Family, and Health Network. American Sociological Review, 81(1), 134–164. https://doi.org/10.1177/0003122415622391

Morrison, R. L., & Nolan, T. (2007). Negative relationships in the workplace: a qualitative study. Qualitative Research in Accounting & Management, 4(3), 203–221. https://doi.org/10.1108/11766090710826646

Osborne, S., & Hammoud, M. S. (2017). Effective Employee Engagement in the Workplace. International Journal of Applied Management and Technology, 16(1). https://doi.org/10.5590/ijamt.2017.16.1.04

Park, C. K., Park, S., & Jo, S. J. (2023). The effect of discriminatory culture against women and hierarchical culture on work–family conflict: the mediating role of sexual harassment. Baltic Journal of Management, 18(5), 612–626. https://doi.org/10.1108/bjm-11-2022-0410

Park, I.-J., Kim, P. B., Hai, S., et al. (2020). Relax from job, Don't feel stress! The detrimental effects of job stress and buffering effects of coworker trust on burnout and turnover intention. Journal of Hospitality and Tourism Management, 45, 559–568. https://doi.org/10.1016/j.jhtm.2020.10.018

Park, M., Cho, S., & Hong, H. (2015). Prevalence and Perpetrators of Workplace Violence by Nursing Unit and the Relationship Between Violence and the Perceived Work Environment. Journal of Nursing Scholarship, 47(1), 87–95. Portico. https://doi.org/10.1111/jnu.12112

Rasool, S. F., Maqbool, R., Samma, M., et al. (2019). Positioning Depression as a Critical Factor in Creating a Toxic Workplace Environment for Diminishing Worker Productivity. Sustainability, 11(9), 2589. https://doi.org/10.3390/su11092589

Rasool, S. F., Wang, M., Tang, M., et al. (2021). How Toxic Workplace Environment Effects the Employee Engagement: The Mediating Role of Organizational Support and Employee Wellbeing. International Journal of Environmental Research and Public Health, 18(5), 2294. https://doi.org/10.3390/ijerph18052294

Ravalier, J., Wainwright, E., Clabburn, O., et al. (2020). Working conditions and wellbeing in UK social workers. Journal of Social Work, 21(5), 1105–1123. https://doi.org/10.1177/1468017320949361

Sakka, G., & Ahammad, M. F. (2020). Unpacking the relationship between employee brand ambassadorship and employee social media usage through employee wellbeing in workplace: A theoretical contribution. Journal of Business Research, 119, 354–363. https://doi.org/10.1016/j.jbusres.2020.03.038

Saks, A. M. (2006). Antecedents and consequences of employee engagement. Journal of Managerial Psychology, 21(7), 600–619. https://doi.org/10.1108/02683940610690169

Saleem, Z., Shenbei, Z., & Hanif, A. M. (2020). Workplace Violence and Employee Engagement: The Mediating Role of Work Environment and Organizational Culture. SAGE Open, 10(2), 215824402093588. https://doi.org/10.1177/2158244020935885

Sarwar, A., Imran, M. K., Anjum, Z.-U.-Z., et al. (2020). How innovative climate leads to project success: the moderating role of gender and work culture. Innovation & Management Review, 17(4), 413–430. https://doi.org/10.1108/inmr-08-2019-0096

Shuck, B., & Reio, T. G. (2014). Employee Engagement and Well-Being. Journal of Leadership & Organizational Studies, 21(1), 43–58. https://doi.org/10.1177/1548051813494240

Sloan, M. M. (2012). Unfair Treatment in the Workplace and Worker Well-Being. Work and Occupations, 39(1), 3–34. https://doi.org/10.1177/0730888411406555

Sorensen, G., Dennerlein, J. T., Peters, S. E., et al. (2021). The future of research on work, safety, health and wellbeing: A guiding conceptual framework. Social Science & Medicine, 269, 113593. https://doi.org/10.1016/j.socscimed.2020.113593

Stalcup, A. M. (2013). Surviving toxic work environments. Analytical and Bioanalytical Chemistry, 405(4), 1145–1147. https://doi.org/10.1007/s00216-012-6612-4

Stein, M., Vincent-Höper, S., & Gregersen, S. (2020). Why busy leaders may have exhausted followers: a multilevel perspective on supportive leadership. Leadership & Organization Development Journal, 41(6), 829–845. https://doi.org/10.1108/lodj-11-2019-0477

Sutton, A. (2020). Living the good life: A meta-analysis of authenticity, well-being and engagement. Personality and Individual Differences, 153, 109645. https://doi.org/10.1016/j.paid.2019.109645

Tanwar, K., & Kumar, A. (2019). Employer brand, person-organisation fit and employer of choice. Personnel Review, 48(3), 799–823. https://doi.org/10.1108/pr-10-2017-0299

Tomlinson, G. (2010). Building a culture of high employee engagement. Strategic HR Review, 9(3), 25–31. https://doi.org/10.1108/14754391011040046

Van Wingerden, J., Derks, D., & Bakker, A. B. (2017). The Impact of Personal Resources and Job Crafting Interventions on Work Engagement and Performance. Human Resource Management, 56(1), 51–67. Portico. https://doi.org/10.1002/hrm.21758

Volery, T., & Tarabashkina, L. (2021). The impact of organisational support, employee creativity and work centrality on innovative work behaviour. Journal of Business Research, 129, 295–303. https://doi.org/10.1016/j.jbusres.2021.02.049

Wood, S., Braeken, J., & Niven, K. (2013). Discrimination and Well-Being in Organizations: Testing the Differential Power and Organizational Justice Theories of Workplace Aggression. Journal of Business Ethics, 115(3), 617–634. https://doi.org/10.1007/s10551-012-1404-5

Wressell, J. A., Rasmussen, B., & Driscoll, A. (2018). Exploring the workplace violence risk profile for remote area nurses and the impact of organisational culture and risk management strategy. Collegian, 25(6), 601–606. https://doi.org/10.1016/j.colegn.2018.10.005

Xu, J., & Cooper Thomas, H. (2011). How can leaders achieve high employee engagement? Leadership & Organization Development Journal, 32(4), 399–416. https://doi.org/10.1108/01437731111134661

Zhou, X., Rasool, S. F., & Ma, D. (2020). The Relationship between Workplace Violence and Innovative Work Behavior: The Mediating Roles of Employee Wellbeing. Healthcare, 8(3), 332. https://doi.org/10.3390/healthcare8030332

Appendix

Table A1. Research instrument.

Number	Code item	Item
Employee engagement		
1	EE1	I throw myself into my job and organization engagement.
2	EE2	I fulfil all the responsibilities required by my job.
3	EE3	I willingly give my time to help others who have work-related problems.
4	EE4	I always complete the duties specified in my job description.
Employee well-being		
5	EW1	Overall, how safe do you think your workplace is?
6	EW2	I generally feel favourable toward work at my organization.
7	EW3	My supervisor and coworker check in regularly enough to see how I am doing.
8	EW4	When I am stressed, I feel I have support and have available.
9	EW5	Our organizational culture encourages a balance between work and family life.
10	EW6	Our organization provides aid in stress management.
Supportive work culture		
11	SW1	At my organization, I am treated with respect.
12	SW2	My organization values my contributions.
13	SW3	My organization cares about my general satisfaction at work.
14	SW4	My organization is willing to extend resources to help me perform my job to the best of my ability.
15	SW5	I receive recognition for a job well done.
Toxic workplace environment		
16	WE1	I feel discriminated against in my job because of my age.
17	WE2	I feel discriminated against in my job because of my race or ethnic origin.
18	WE3	I feel discriminated against in my job because of my gender.
19	WE4	In the past 12 months, were you sexually harassed by anyone while you were on the job?
20	WE5	In the past 12 months, were you physically violent while you were on the job?
21	WE6	In the past 12 months, were you bullied, threatened, or harassed in another way by anyone while you were on the job?
22	WE7	In the past 12 months, have you been in a situation where any of your supervisor or coworkers put you down, condescending, made demeaning remarks about you, or addressed you in unprofessional terms?