



SAFETY MANAGEMENT PRACTICES AND EMPLOYEE TURNOVER INTENTIONS. A SURVEY OF CONSTRUCTION EMPLOYEES IN BAYELSA STATE, NIGERIA

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Abstract

The link between safety management practices and turnover intentions among construction employees in Bayelsa State have had little or no empirical backing. This study therefore probed the empirical link between safety management practices and turnover intentions among construction employees in Bayelsa State. To achieve this, the survey design was adopted and the questionnaire was used to generate relevant data. The respondents to the questionnaire comprised 212 workers drawn from five construction companies based in Bayelsa State. Data collected was analyzed with descriptive and inferential statistics, thus the hypotheses were tested using the Spearman's RHO with the aid of the statistical package for the social sciences (SPSS). The results indicated a negative and significant relationship between all the safety management variables and employees' turnover intentions. Consequently, it was established that there is a significant link between safety management practices and turnover intentions of employee in the studied organization. The study thus established that improvements in safety management practices will result in lower employee turnover in construction firms. It was thus recommended that there should be total commitment of executives and the entire workforce to the improvement of safe work practices in the company as this will minimize accidents and fatalities, foster employee satisfaction and reduce labour turnover.

Keywords: Safety management, turnover intentions, safety performance, safety training, management commitment to safety.

1. INTRODUCTION

Employees constitute the most valuable resource of any business endeavor. Their efforts are key to all organizational outcomes. In fact, they (employees) are the only resource that cannot be imitated by competitors (Indradevi, 2011). The success and otherwise of the organization depends for the most part, on the dedication and commitment of the employees. Consequently, organizations strive to keep their employees with them for as long as possible. Yet keeping employees in this manner is a serious concern for managers. A study by Barrett (2005) indicated that 75 percent of companies are not confident that their current talent pool is sufficient and would remain in the organization. Organizational commitment is a critical concern as employee turnover is fast becoming a serious concern for management of organizations.

Nevertheless, retaining current talent pool is even more a concern for construction companies were workers face frequent perils arising from chemical, biological, psychological, and ergonomic contacts (Hofmann, Burke, & Zohar, 2017). These had led to a geometric increase in cases of employee turnover among construction firms. To reduce this, most organizations within the global construction sector had resorted to safety management practices (SMP) as an

effective tool for combatting employee turnover (Salin, 2015; Searcy et al., 2016).

The construction sector in Nigeria is growing in complexity as it pushes to be competitive at the global level. It must therefore, approach safety not only as a means to avoiding unwanted accidents/costs but also as a strategic tool for maximizing competitiveness and profitability as well as retain valued employees. This approach to safety is achieved with sustainable SMP.

The safety management paradigm is not novel to the Nigerian constructions sector, it has gained fame as it is all embracing. Safety management provides organizations with competitive advantage by instituting a benign working place that results in constant and viable improvements in enterprise performance and at the same time curb employee turnover intentions. It is no news therefore that proper SMP result in improved safety in organization yet whether it is linked with employee turnover intentions within the Nigerian constructions sector remains a to be known. This study therefore seeks to investigate the link between SMP and employee turnover intentions in the Nigerian constructions sector.

1.1. Statement of the Problem

Customarily, safety among construction companies is measured by the rate of application of safety rules and

processes, and risk control methods. This approach to safety measurement fails to address such key issues as safety training, safety performance and management's commitment to safety. And this had made many construction firms to loose very talented staff to competing firms. Ensuring safety at work especially at construction sites is of utmost concern not only to management but also to the workforce. It is disheartening to note however, that most times both management and staffers had relegated the relevance of safety in most construction sites in Nigeria. Issues of accidents are almost still common place. Nevertheless, contemporary developments in safety management had generated improved outcomes.

Safety performance on sites is often measured with sheathing metrics as accidents and not with prominent metrics as safe work attitudes/behaviours. The dangers of implementing these customary tactics to safety is that companies invest most safety related energies on accidents reduction; construction employees hide unsafe acts for fear of being punished and are not committed to the safety initiative.

The foregoing notwithstanding, past studies show empirical confirmation that management practices (i.e. safety training, safety performance and management commitment to safety) play an important role in augmenting the safety performance of their staff and thus reduce could employee turnover (Hofmann, Burke, & Zohar, 2017). This study aims to examine the relationship between safety management and turnover intentions among employees of construction companies in Bayelsa State, Nigeria, since safety management practices seem to be essential for ensuring staff compliance with safety practices in organizations.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Safety Management

There are valid reasons to be nervous about health and safety in every endeavor. It is much truer for construction enterprises, whose workers are subject to a number of dangers that could potentially result in fatalities. Speaking about teacher safety, Jonathan and Mbogo (2016) noted that in order to ensure the security of the teaching staff, the equipment already in place must be properly maintained, and any missing pieces must be installed in accordance with health and safety regulations. Employee safety programs should be prioritized as it reduces expenditures, surge output, and save lives. Anthony et al. (2007) stated that staff involvement, ongoing monitoring, and a focus on general wellbeing should all be emphasized in health and safety programs.

Thus, safety management encompasses all the challenges related to guaranteeing workplace safety. Although safety management is primarily a managerial responsibility, it is expected that all organization stakeholders would actively participate in the process. By contrasting two different types of safety models, Robens (1972) challenges the conventional approach to workplace safety, known as the "careless worker" hypothesis. Employers used this model under the assumption that most accidents occurred as a result of workers inability to take precautions. He admitted in his study that the "careless worker" initiative rarely compensate for work - related

injuries caused by noise, poisonous substances, and unsafely constructed work systems. The "shared responsibility" paradigm, a new take on occupational safety, contends that collaboration between management and workers is critical to lowering rates of occupational hazards and disease (Bratton & Gold, 1999). Managers and staff must receive training to embrace a sound and secure outlook to preserve a benign and vigorous workplace. Such open-mindedness is not always associated with the advancement of equipment operation expertise or knowledge. Most people, for example, find it relatively simple to learning how to move a car. However, maturity of thought is essential. Although employers are anticipated to launch and preserve safe and healthy workplace, it is the employee's duty to work in ways that safeguards both their health and coworkers' (Bratton & Gold, 1999). Individual safety, safe work climate, and safe behavior are critical elements that superiors must ensure are present inside their enterprises. There are therefore, responsibilities for both the employer and employee in ensuring safety at work. These responsibilities are intended to reduce workplace hazards. Employees accounts for their health and safety with that those could be affected by their work or activities. If this could occur even in schools, it is expected that accidents will be more prevalent in the construction sector. Extra attention is therefore required on the part of management as employees are also expected to be more careful. Management has a significant responsibility to play in safety management, together with the workforce, yet all hands must be on deck in ensuring adequate safety management at work.

2.1.1. Safety performance

According to earlier definitions, safety performance is a comprehensive collection of rules, laws, and initiatives aimed at enhancing safety in organizations (Xia, et al., 2018), typically self-reported (Andersen, Nrdam, Joensson, Kines, & Nielsen, 2018), with a long-term goal of promoting workers' safety and health (Zahoor, et al., 2017). Fernández Muiz et al., (2017), revealed that the degree of safety in an organization occasioned by the actions its members is referred to as safety performance. The rate of safety that influences the frequency of workplace mishaps, injuries, and fatalities is commonly referred to as safety performance (Mullen et al., 2017). Safety performance is the penchant for mishaps to occur, which may likely not result in hurts, deaths, and damages (Erdogan et al., 2018).

Indexes of business safety performance are frequently acknowledged to be based on accident data and human factor components (Vinodkumar & Bhasi, 2010). Griffin and Curcuruto (2016) define safety performance as the actions people take to reduce injuries at work. Businesses attempt to improve their safety performance metrics in order to avoid employees from being injured (Erdogan et al., 2018). Thus a healthy understanding of the organizations rate of safety performance will sway employees to put in their best in the execution of their organizational duties. Reasoning in this direction, we propose that:

Ha₁. Safety performance will be negatively and significantly related to turnover intentions of construction workers in Bayelsa State.

2.1.2. Safety Training

One crucial safety management techniques that can have an impact on good safety performance results throughout an organization is safety training (Namian, et al., 2016). Formal training programmes and continuous development initiatives, which are fundamental components are used as safety performance pointers, are the two ways that safety training is conducted in organizations. Researchers have also highlighted the effectiveness of safety training in elucidating safety performance outcomes as a reliable scheme of guessing accidents and, consequently, influencing workers' safety behaviors (Randles et al., 2010).

Safety training is described as the dissemination of information about safety and how this understanding may help employees perform as safely as possible and without exposing them to any risks to their health (Law, Chan, & Pun, 2006). One of the most significant safety management strategies that can have an impact on high safety performance outcomes across sectors is safety training (Rose & Rae, 2017; Manu, et al., 2017; Marn et al., 2017).

Safety training has been the subject of numerous studies as a key element of safety management practice. For instance, Hasan and Jha (2013) asserted that creating training needs analyses, providing training in accordance with those findings, and, consequently, altering work practices are key to the effectiveness of training programs. Several studies have looked at safety training as a factor in determining safety performance (Bieder, et al., 2018). With adequate safety training, work hazards and possible fatalities could be minimized as all and sundry within the work space are breast with all safety measures through training. This will foster both employee job satisfaction and commitment and thus reduce turnover intentions of employees. We thus propose that:

Ha₂. Safety training will be negative and significantly related to turnover intentions of construction workers in Bayelsa State.

2.1.3. Management commitment to safety

The management's dedication to safety initiatives has been demonstrated by Vinodkumar and Bhasi (2010) as a significant factor in workplace safety performance. Management's commitment to safety is the degree of commitment shown by top executives or organizations to enhancing workplace safety, which is frequently conveyed in the safety-related guidance, support, and assistance provided to employees (Mooren, et al., 2014). As a consequence of senior management's commitment, employees perform in the safest manner possible, improving their safety-related behaviors, which leads to a drop in accidents, fatalities, and injuries (Bosak et al., 2013).

A hallmark of management's commitment is evidenced by their participation in safety committees, employee job training, and the consideration given to safety during the job

design phase. Certain studies (Hosny, et al., 2017; Laurent, et al., 2017; Lunau, et al., 2017; Mooren et al., 2014) have looked at management commitment to safety and how it may affect safety performance outcomes in organizations. Going by these submissions, we propose that:

Ha₃. Management commitment to safety will be negative and significantly related to turnover intentions of construction workers in Bayelsa State.

2.2. Turnover Intention.

Morin et al. (2016) rendered turnover intentions as employees' attempts or desires to leave the company. Turnover intention was defined by Yussof et al. (2004) as a voluntarily made choice to depart the company. Employee turnover includes both voluntary and involuntary departures from an organization (Bandhanpreet et al, 2013). Employees who are considering leaving a company do so because they stop identifying with the job (Bothma & Roodt, 2013). Saridakis and Cooper (2016), reported that there are four important stages in employees' intention to leave beginning from

- i. employee 's evaluation of the present job,
- ii. assessment of his/her degree of satisfaction with both the job and organization,
- iii. appraisal of the costs and implications connected with departing the organization, and
- iv. evaluation of the alternative positions available in comparison to the benefits of each.

Increased turnover intention may indicate that workers are disgruntled, disengaged, disorganized, or unproductive (Shipp et al., 2014). Cohen (2003) indicated that turnover intention is the most accurate indicator of actual turnover. Job satisfaction, organizational commitment, job stress, and position ambiguity were discovered by Calisir et al. (2011) to be significant predictors of turnover intention. Employees who had encountered workplace violence had a higher propensity to leave their jobs, according to Aytac et al. (2016). According to Firth et al. (2004), managers' and workers' attitudes on leaving their jobs also affect turnover intentions. According to Brown et al. (2013), organizational elements like management, supervision, and company culture as well as individual factors like professional aspirations and personal circumstances have an impact on employees' intentions to leave their jobs.

3. METHODOLOGY

The cross-sectional survey design was adopted for the study as relevant data was generated through a structured questionnaire designed for the purpose of the study. Overall, the study involved four variables: three for the components of safety management while turnover intentions was treated as a mono-construct variable. Both the three variables for safety management viz: safety training, safety performance and management commitment to safety and turnover intentions were measured with a 5-item Likert-type scale. All the scales were drawn from literature and modified to suit the needs of the current study. Generated data was descriptively and inferentially analyzed. Inferential analysis was done using the

Spearman's rank order correlation coefficient with the aid of SPSS version 23. The respondents to the questionnaire involved 299 construction employees drawn from 5 construction companies operating in Bayelsa State of Nigeria.

To ensure instrument reliability, the Cronbach's alpha coefficients were used. The alpha values indicated that the scales are reliable as shown in table 1 below along with the descriptive analysis of the data.

4. RESULTS

Table 1: Cronbach's Alpha Reliability Outcomes of Variables

Variables	Mean	Number of Items	Cronbach's Alpha
Safety Performance	4.0067	4	.922
Safety Training	4.2107	4	.958
Management commitment to safety	3.9264	4	.938
Employee Turnover Intentions	2.3411	4	.953

Source: SPSS Version 23 Output of Survey Data, 2022.

The scales used in the study were found to be reliable, the alpha values each of the three dimensions of safety management i.e. safety performance (0.922), safety training (0.958), and management commitment to safety (0.938) while turnover intentions was (0.953). All of these are way above the Burns Bush (1995) alpha benchmark of 0.65

More so, the high mean values for the items on safety management are suggestive that respondents agree generally to the issues raised in the questionnaire, thereby indicating that the studied construction firms had adequate safety management practices in place as all mean values are above 3.0. Meanwhile, the low mean score for employee turnover intentions suggest disagreement among respondents. This implies that the studied employees intend to remain in their respective organizations.

4.1. Demographic Analysis of Data

Table 4.2: Demographic Distribution of Respondents (n = 212)

Demographic variables	Options	Frequency	Percentage (%)
SEX:	Male	91	43
	Female	121	57
	Total	212	100
EDUCATIONAL LEVEL:	SSCE	64	30
	B.Sc./Equivalent Degrees	87	41
	Others	61	29
	Total	212	100
LENGTH OF SERVICE:	1-5 years	54	25
	6-10 years	76	36
	11 years and above	82	39
	Total	212	100

Source: Field Survey Data, 2022.

Sex: From Table 4.2 above shows that ninety (91) respondents i.e. 43% of the respondents are male, while, the rest one hundred and twenty one (121) which represents 57% of the total respondents are females. This shows most of the respondents are females.

Highest Educational Level: On respondents' highest educational level, the table reveals that 64 respondents i.e. 30% of the respondents holds the Senior Secondary School Certificate (SSCE), 87 (41%) of the respondents are holders of a first degree in engineering or its equivalents and the rest 29% of the respondents holds other educational qualifications that are not specified.

Length of Service: The last demographic variable on the table is respondents' length of services as construction workers. As indicated in the table, 54 respondents which is exactly 25% of the total respondents had been working for about 1 to 5 years, 76 respondents, i.e. 36% of the total number had been working for about 6-10 years and the rest 82 respondents i.e. 39% of the total number had been working for over 11 years.

4.2 Correlation Results

Table 3. Correlation results on safety training and employee turnover intentions

			Safety Training	Management Commitment	Safety Performance	Turnover Intentions
Spearman's rho	Safety training	Corr. Coefficient	1.000	-.858**	.962**	-.818**
		Sig. (2-tailed)	.	.000	.000	.000
		N	212	212	212	212
Management Commitment	Management Commitment	Corr. Coefficient	.858**	1.000	.848**	-.835**
		Sig. (2-tailed)	.000	.	.000	.000
		N	212	212	212	212
Safety performance	Safety performance	Corr. Coefficient	-.962**	.848**	1.000	-.841**
		Sig. (2-tailed)	.000	.000	.	.000
		N	212	212	212	212
Turnover intentions	Turnover intentions	Corr. Coefficient	-.818**	-.835**	-.841**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	212	212	212	212

Source: Field Survey Data, 2022. {**}. Correlation is significant at the 0.01 level (2-tailed)}.

Table 3 above shows the correlation results of the study. As indicated in the table, correlation between safety training and turnover intentions is -0.818 which is significant @ $p = .000 < .05$, between safety performance and turnover intentions is $r = -0.835$ which is significant @ $p = .000 < .05$ and between management commitment to safety and turnover intentions is $r = -0.841$ significant @ $p = .000 < .05$. Given the high values of the correlation coefficients, these results show that there is a strong inverse link between the safety management i.e. safety training, safety performance and management commitment to safety with employees' turnover intentions in the studied construction firms. This means that an improvement in any of the safety management dimensions will drastically result in a decrease in employee turnover intentions. These results thus reveal that:

1. Safety training is negative and significantly related to turnover intentions among employees of construction companies in Bayelsa State.
2. Safety training is negative and significantly related to turnover intentions among employees of construction companies in Bayelsa State.
3. Management commitment to Safety is negative and significantly related to significantly with turnover

intentions among employees of construction companies in Bayelsa State.

5. DISCUSSION AND POLICY IMPLICATIONS

The current study examined the link between safety management practices and employee turnover intentions in construction companies in Bayelsa State, Nigeria. The results of the tests revealed that safety management practices have a significant inverse relationship with employees' turnover intentions. These results are supported by earlier studies on the subject matter. Abdulrazak et al (2020) found that strengthening safety initiatives and improving workers' perceptions of the safety climate will help workers feel more satisfied with their jobs and be less likely to consider leaving. The study also corroborated the works of Smith, (2018); Dejoy et al., (2004); Flin, et al., (2000). Thus all the three components of the safety management are significantly related to employee turnover intentions. As the results reveal, improvements in safety management practices will result in reduction in employees' intention to quit,

Though there are differences in the definitions and components of safety management in literature, safety training, safety performance and management commitment to

safety have habitually been some of the best predictors of a safe work climate (Smith, 2018; DeJoy et al., 2004; Flin, et al., 2000). Consequently, safety management operations should not only affirm that safety is paramount, but also show that it takes precedence over all other considerations and is a core value of the company.

As all components of safety management are critical for a safe and sound work climate, all components must be given keen attention. This will promote a healthy culture of safety in the organization. Safety training programs should be made as exciting as possible. This would spur employees to look forward to every training session with enthusiasm and seeks to pay more attention to all the safety instructions given and are poised to apply such instructions in the execution of their duties. This will not only reduce accidents and injuries but also save money for the company as replacements from labour turnover will no longer be necessary but saved for other business purposes. The results are further supported by Hofmann et al. (2017), Vinodkumar and Bhasi, (2010) and Wachter and Yorio, (2014). They found safety training to be linked to improvements in behavioural skills and attitudes of employees. Additionally, thorough occupational health and safety initiatives for new hires, mentorship and succession planning programs, orientation for new employees, and advances to occupational well-being and safety systems are all functions of systematically planned comprehensive occupational health and safety programs. Organizations with low accident and injury reporting rates also have very advanced safety training courses.

Management commitment to safety is another significant aspect of safety management found to be significantly correlated to turnover intentions. Truth is no safety initiative can succeed without management support. Therefore, management commitment to safety is crucial in driving the safety initiative towards better or improved organizational performance. As shown by Feng, Acord, Cheng, Zeng, and Song, (2011), Hosny, Ea, and Ea, (2017), Laurent, Chmiel, and Hansez, (2017); Lunau, Dragano, Siegrist, and Wahrendorf, (2017) The level of commitment shown by management is evidenced by their participation in safety committees, employee job training, and the consideration given to safety during the job design phase. According to Mooren et al. (2014), safety management initiatives can lessen injury outcomes for commercial truck drivers in the US. This is also the case with the results of the current study. When management is committed to safety, the safety objectives of the organization can easily be achieved and this will result in improved competitiveness and better profitability with reduced employee turnover.

An understanding of the safety performance position of the organization will also give employees a positive outlook on overall organizational safety management practices. All of these three components should be treated as a whole as it will have a synergistic effect in the reduction of employee turnover.

REFERENCES

1. Andersen, L. P., Nørddam, L., Joensson, T., Kines, P., & Nielsen, K. J. (2018). Social identity, safety climate and self-reported accidents among construction workers. *Construction Management and Economics*, 36(1), 22-31.
2. Aytac, S., Dursun, S., & Akalp, G. (2016). Workplace violence and effects on turnover intention and job commitment: a pilot study among healthcare workers in Turkey, *European Scientific Journal*, 12(10), 458–465.
3. Balogun, A. O., Andel, S. A. & Smith, T. D., (2020). Digging deeper” into the relationship between safety climate and turnover intention among stone, sand and gravel mine workers: job satisfaction as a mediator. *International Journal of Environmental Research and Public Health*, 17, 17 - 8.
4. Bandhanpreet, K., Mohindru, and Pankaj, “Antecedents of turnover intentions: a literature review,” *Global Journal of Management and Business Studies*, vol. 3, no. 10, pp. 1219 – 1230, 2013.
5. Barrett, A., (2005). Star search: How to recruit, train, and hold on to great people. What works, what doesn't, *Business week*, Oct. 10, 68-78.
6. Bieder, C., Gilbert, C., Journé, B., & Laroche, H. (2018). *Beyond safety training: Embedding safety in professional skills*. Basel, Switzerland: Springer Open.
7. Bosak, J., Coetsee, W. J., & Cullinane, S. J. (2013). Safety climate dimensions as predictors for risk behavior. *Accident Analysis and Prevention*, 55, 256-264.
8. Bothma, C. F. & Roodt, G. (2013). The validation of the turnover intention scale, *SA Journal of Human Resource Management*, 11(1), 1–12.
9. Brahm, F., & Singer, M. (2013). Is more engaging safety training always better in reducing accidents? Evidence of self-selection from Chilean panel data. *Journal of Safety Research*, 47, 85-92.
10. Brown, A. R., Susomrith, P., Sitlington, H. B., & Scott, G. B. (2014). Determinants of employee-turnover intentions in atypical employment: the FIFO mining industry in Western Australia, *Australian Bulletin of Labour*, 40(2), 116–137.
11. Burns, A. C. & Bush, R. F. (1995). *Marketing Research*. Prentice Hall Publishers.
12. Cohen, J. M. (2002). Measuring safety performance in construction. *Occupational Hazards*, 64(6), 41-44.
13. DeJoy, D.M.; Schaffer, B.S.; Wilson, M.G.; Vandenberg, R.J.; Butts, M.M. Creating safer workplaces: Assessing the determinants and role of safety climate. *J. Saf. Res.* 2004, 35, 81–90
14. Erdogan, B., Ozyilmaz, A., Bauer, T. N., & Emre, O. (2018). Accidents happen: Psychological

- empowerment as a moderator of accident involvement and its outcomes. *Personnel Psychology*, 71(1), 67-83.
15. F. Calisir, C. A. Gumussoy, and I. Iskin, "Factors affecting intention to quit among IT professionals in Turkey," *Personnel Review*, vol. 40, no. 4, pp. 514–533, 2011
 16. Feng, X. Q., Acord, L., Cheng, Y. J., Zeng, J. H., & Song, J. P. (2011). The relationship between management safety commitment and patient safety culture. *International Nursing Review*, 58(2), 249-254.
 17. Fernández-Muñiz, B., Montes-Peón, J. M., & Vázquez-Ordás, C. J. (2017). The role of safety leadership and working conditions in safety performance in process industries. *Journal of Loss Prevention in the Process Industries*, 50, 403-415.
 18. Firth, L., Mellor, D. J., Moore, K. A., & Loquet, C., (2004). How can managers reduce employee intention to quit? *Journal of Managerial Psychology*, 19(2), 170–187.
 19. Flin, R., Mearns, K., O'Connor, P., and Bryden, R. (2000). Measuring safety climate: Identifying the common features. *Safety Science*, 34, 177–192.
 20. Flin, R.; Mearns, K.; O'Connor, P.; Bryden, R. Measuring safety climate: Identifying the common features. *Saf. Sci.* 2000, 34, 177–192
 21. Griffin, M. A., & Curcuruto, M. (2016). Safety climate in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 3, 191-212.
 22. Gunduz, M., & Laitinen, H. (2018). Observation based safety performance indexing method for construction industry–validation with SMEs. *KSCE Journal of Civil Engineering*, 22(2), 440-446.
 23. Hasan, A., & Jha, K. N. (2013). Safety incentive and penalty provisions in Indian construction projects and their impact on safety performance. *International Journal of Injury Control and Safety Promotion*, 20(1), 3-12.
 24. Hofmann, D. A., Burke, M. J., & Zohar, D. (2017). 100 years of occupational safety research: From basic protections and work analysis to a multilevel view of workplace safety and risk. *Journal of Applied Psychology*, 102(3), 375-388.
 25. Hosny, G., Ea, E., & Ea, S. (2017). A comparative assessment of safety climate among petroleum companies. *Egyptian Journal of Occupational Medicine*, 41(2), 307-324.
 26. Laurent, J., Chmiel, N., & Hansez, I. (2017). *Perceived management commitment to safety and safety behaviors: the moderating role of trust and support* (Unpublished Abstract). Paper presented at the 18th Congress of the European Association of Work and Organizational Psychology (EAWOP), Dublin, Ireland, 17-21 May.
 27. Law, W. K., Chan, A. H. S., & Pun, K. F. (2006). Prioritising the safety management elements: A hierarchical analysis for manufacturing enterprises. *Industrial Management and Data Systems*, 106(6), 778-792.
 28. Liu, S., Gyabeng, E., Sewu, G. J., Nkruma, N. K., & Dartey, B. (2019). Occupational Health and Safety and Turnover Intention in the Ghanaian Power Industry: The Mediating Effect of Organizational Commitment. *BioMed Research International*. ID 3273045, 10 pages <https://doi.org/10.1155/2019/3273045>
 29. Lunau, T., Dragano, N., Siegrist, J., & Wahrendorf, M. (2017). Country differences of psychosocial working conditions in Europe: the role of health and safety management practices. *International Archives of Occupational and Environmental Health*, 90(7), 629-638.
 30. Manu, P., Mahamadu, A. M., Ath, C., Heng, A. Y. T., & Kit, S. C. (2017). Health and safety management practices of contractors in South East Asia: A multi country study of Cambodia, Vietnam, and Malaysia. *Safety Science*, 107, 188-201.
 31. Marín, L. S., Lipscomb, H., Cifuentes, M., & Punnett, L. (2017). Associations between safety climate and safety management practices in the construction industry. *American Journal of Industrial Medicine*, 60(6), 557-568.
 32. Mooren, L., Grzebieta, R., Williamson, A., Olivier, J., & Friswell, R. (2014). Safety management for heavy vehicle transport: A review of the literature. *Safety Science*, 62, 79-89.
 33. Morin, A. J., Meyer, J. P., Ee' Be' langer, Boudrias, J. S., Gagne, M. & Parker, P. D. (2016). Longitudinal associations between employees' beliefs about the quality of the change management process, affective commitment to change and psychological empowerment, *Human Relations*, vol. 69(3), 839–867.
 34. Mullen, J., Kelloway, E. K., & Teed, M. (2017). Employer safety obligations, transformational leadership and their interactive effects on employee safety performance. *Safety Science*, 91, 405-412.
 35. Namian, M., Albert, A., Zuluaga, C. M., & Behm, M. (2016). Role of safety training: Impact on hazard recognition and safety risk perception. *Journal of Construction Engineering and Management*, 142(12), 1-10.
 36. Namian, M., Albert, A., Zuluaga, C. M., & Jaselskis, E. J. (2016). Improving hazard-recognition performance and safety training outcomes: Integrating strategies for training transfer. *Journal of Construction Engineering and Management*, 142(10), 1-11.
 37. Palancı, Y., Mengenci, C., Bayraktaroğlu, S., & Emhan, A. (2020). Analysis of workplace health and safety, job stress, interpersonal conflict, and turnover intention: a comparative study in the health sector. *Health Psychology Report*. <https://doi.org/10.5114/hpr.2020.99971> received

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38. Randles, B., Jones, B., Welcher, J., Szabo, T., Elliott, D., & MacAdams, C. (2010). *The accuracy of photogrammetry vs. hands-on measurement techniques used in accident reconstruction* (No. 2010-010065). SAE Technical Paper.
39. Rose, A., & Rae, W. I. D. (2017). Perceptions of radiation safety training among interventionalists in South Africa. *Cardiovascular Journal of Africa*, 28(3), 196-200.
40. Salin, D. (2015). Risk factors of workplace bullying for men and women: The role of the psychosocial and physical work environment. *Scandinavian Journal of Psychology*, 56(1), 69–77.
41. Saridakis, G. & Cooper, C. (2016). *Research Handbook on Employee Turnover*, Edward Elgar Publishing, Cheltenham, UK, 2016.
42. Searcy, C., Dixon, S. M., & Neumann, W. P. (2016). The use of work environment performance indicators in corporate social responsibility reporting. *Journal of Cleaner Production*, 112, 2907-2921.
43. Shahin, A., Naftchali, J. S., & Pool, J. K. (2014). Developing a model for the influence of perceived organizational climate on organizational citizenship behaviour and organizational performance based on balanced score card. *International Journal of Productivity and Performance Management*, 63(3), 290-307.
44. Shipp, A. J., Furst-Holloway, S., Harris, T. B., & Rosen, B. (2014). Gone today but here tomorrow: extending the unfolding model of turnover to consider boomerang employees,” *Personnel Psychology*, 67(2) 421–462.
45. Smith, T.D. (2018). An assessment of safety climate, job satisfaction and turnover intention relationships using a national sample of workers from the USA. *Int. J. Occup. Saf. Ergon*, 24, 27–34.
46. Vinodkumar, M. N., & Bhasi, M. (2010). Safety management practices and safety behaviour: Assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention*, 42(6), 2082-2093.
47. Wachter, J. K., & Yorio, P. L. (2014). A system of safety management practices and worker engagement for reducing and preventing accidents: An empirical and theoretical investigation. *Accident Analysis and Prevention*, 68, 117-130.
48. Xia, N., Griffin, M. A., Wang, X., Liu, X., & Wang, D. (2018). Is there agreement between worker self and supervisor assessment of worker safety performance? An examination in the construction industry. *Journal of Safety Research*, 65, 29-37.
49. Yousaf, A., Sanders, K., & Abbas, Q., (2015). Organizational/occupational commitment and organizational/occupational turnover intentions, *Personnel Review*, 44(4), 470–491.
50. Zahoor, H., Chan, A. P., Utama, W. P., Gao, R., & Zafar, I. (2017). Modeling the relationship between safety climate and safety performance in a developing construction industry: A cross-cultural validation study. *International Journal of Environmental Research and Public Health*, 14(4), 351.
51. Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology*, 65(1), 96–102.
52. Zohar, D., & Polachek, T. (2014). Discourse-based intervention for modifying supervisory communication as leverage for safety climate and performance improvement: A randomized field study. *Journal of Applied Psychology*, 99(1), 113-124.
53. Zohar, D., Huang, Y. H., Lee, J., & Robertson, M. (2014). A mediation model linking dispatcher leadership and work ownership with safety climate as predictors of truck driver safety performance. *Accident Analysis and Prevention*, 62, 17-25.