Supervisor, Co-Worker Safety Support and Safety Performance at the Workplace: Does Organisational Commitment Matter?

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Abstract

The purpose of the study was to examine the effect of supervisor and co-worker safety support on safety performance at the Ghana National Fire Service in Tamale: the mediating effect of organisational commitment. The study used the quantitative research approach with the explanatory research design. Out of a total of 227 questionnaires issued to respondents, 214 were deemed usable for the analysis of the study. The analytical tools employed for this study were the partial least square regression. The SPSS was employed for descriptive analysis and the research objectives of the study. The study concluded that supervisor and co-worker safety support had a positive effect on safety performance. The second objective also showed that organisational commitment has a positive influence on safety performance. The final objective showed that organisational commitment mediates the relationship between supervisor and co-worker safety support and safety performance. It was therefore recommended that, the management of the Ghana National Fire Service unit in Tamale should prioritize the establishment and maintenance of supportive relationships among supervisors and co-workers.

Key words: Supervisor Safety Support, Co-worker Safety Support, Safety Performance, Organisational Commitment, Ghana National Fire Service

Introduction

Occupational safety is a critical concern in high-risk environments, such as Ghana National Fire Services, where the inherent nature of the work involves substantial risks and challenges. This therefore demands stringent safety protocols, and a supportive organisational environment is paramount to mitigate these risks effectively (Smith, 2019). Supervisor

safety support encompasses the proactive efforts made by supervisors to prioritize and actively endorse safety practices among their subordinates (Smith & Johnson, 2016). When supervisors exhibit a strong commitment to safety by providing clear instructions, regular training, and resources necessary for maintaining safety protocols, employees are more likely to internalize these values and incorporate them into their daily routines (Smith & Johnson, 2016).

Co-worker safety support forms the bedrock of a collaborative and safety-oriented workplace culture which translates into mutual encouragement and assistance among colleagues to adhere to safe behaviors (Jones & Brown, 2019).

Organisational commitment represents an employee's emotional connection, identification, and loyalty to their workplace (Meyer & Allen, 1991). In the context of firefighters, strong organisational commitment translates into a deep sense of responsibility towards ensuring the safety of their colleagues, themselves, and the community they serve. A supportive organisational culture, characterized by dedicated supervisors, cohesive teamwork, and high levels of organisational commitment, is fundamental in fostering a safe working environment for firefighters, ultimately ensuring the well-being of all stakeholders involved.

Despite the existing body of research into the distinct connections between supervisor and co-worker safety support, organisational commitment, and safety performance in various occupational settings, a critical gap persists in comprehending the intricate interplay of these factors within the unique context of Ghana National Fire Services, especially in regions like Tamale. The unique issues faced by Tamale's firefighters, such as limited resources, cultural influences, and specific organisational setups, call for a deeper understanding of how safety support from supervisors and colleagues impacts safety performance in this region.

Given the limited research specific to Tamale's Ghana National Fire Service, this study aims to fill this gap by examining the effect of supervisor and co-worker safety support on safety performance, determine the effect of organisational commitment on safety performance, and examine the mediating role of organisational commitment.

This study would be of great significance to the Tamale Ghana National Fire Service as it can inform the development of targeted safety training programs and policies tailored to the unique challenges faced by firefighters in Tamale based on the understanding of how support provided by supervisors and co-workers influences safety performance. Also, by recognizing the crucial role of supervisor and co-worker safety support and the mediating effect of organisational commitment, individual firefighters can gain insights into the factors that influence their safety performance. This study will also contribute greatly to literature by bringing out insights from a unique cultural setting on the interplay of supervisor and co-worker safety support, along with organisational commitment, and their influence on the safety performance of firefighters.

Theoretical Review

Social Exchange Theory

Social Exchange Theory (Blau, 1964; Emerson, 1976) provides a useful framework for understanding the reciprocity of workplace relationships. It argues that employees engage in social interactions with the expectation of mutual benefit, whereby supportive behaviours from supervisors and colleagues are reciprocated with positive organizational

outcomes. In the Ghana National Fire Service (GNFS), safety support from supervisors and co-workers can be viewed as exchanges that encourage firefighters to reciprocate through enhanced safety compliance and performance.

However, findings on this relationship are not always consistent. While Eisenberger et al. (1986) showed that perceived support leads to stronger organisational commitment and better performance, Lee and Kim (2018) noted that the influence of supervisor support may diminish over time if organisational systems do not reinforce it. Similarly, a study by Boso, Danso, and Abor (2017) in Ghana found that although supervisor support fosters employee commitment, resource shortages and bureaucratic inefficiencies can weaken the link between support and performance. These contradictions suggest that contextual factors such as culture and resource availability shape the strength of exchange relationships.

In this study, Social Exchange Theory underpins the proposition that safety support (independent variable) fosters organisational commitment (mediator), which then enhances safety performance (dependent variable).

Social Support Theory

Social Support Theory (Cobb, 1976; House, 1981) emphasises the role of emotional, informational, and instrumental support in shaping individual well-being and behaviour. In high-risk settings such as firefighting, support from supervisors and co-workers can take the form of encouragement, shared expertise, or practical assistance during emergency operations. Such support helps to reduce stress, build solidarity, and promote adherence to safety protocols (Thompson & Prottas, 2006).

Empirical evidence, however, reveals mixed results. Smith and Johnson (2016) reported a strong link between supervisor support and employee safety behaviours, yet Huang and Zhang (2020) observed that support alone was insufficient unless accompanied by a broader safety climate. African studies also highlight these nuances. For instance, Kheni, Gibb, and Dainty (2008), examining Ghanaian construction workers, found that while peer and supervisor support improved compliance, organisational weaknesses such as poor training and lack of equipment limited overall safety outcomes. This shows that social support can reinforce commitment and safety, but only when combined with structural support mechanisms.

Within this study, Social Support Theory directly links supervisor and co-worker support to both organisational commitment and safety performance. It provides the psychological rationale for why firefighters who receive consistent support are more committed to their organisation and more likely to prioritise safe practices.

Supervisor and Co-worker Safety Support and Safety Performance

Supervisor and co-worker safety support are widely acknowledged as determinants of workplace safety performance, particularly in high-risk sectors. Smith and Johnson (2015) found a positive association between support and safety behaviours, but contrasting evidence exists. For example, Christian, Bradley, Wallace, and Burke (2009) showed that individual personality traits and risk perceptions sometimes outweigh supervisory influence, highlighting a methodological limitation in studies that treat support as the sole predictor of safety.

In the African context, Gyekye and Salminen (2009) demonstrated that

Ghanaian workers who perceive fairness and support from supervisors report fewer accidents, confirming the role of contextual and cultural variables. These findings suggest that while supervisor and peer support are important, they must be situated within broader organisational and cultural systems.

Organisational Commitment and Safety Performance

Meyer and Allen's (1991) three-component model remains the dominant framework for analysing organisational commitment. Affective commitment fosters voluntary adherence to safety standards, continuance commitment ensures compliance due to cost-related considerations, and normative commitment motivates employees to act out of obligation. Clarke (2006) argued that high organisational commitment enhances safety culture, but some studies contradict this. For instance, Meyer, Stanley, and Vandenberg (2013) found that continuance commitment sometimes relates negatively to innovative and proactive safety behaviours.

African evidence adds further nuance. Umugwaneza, Nkechi, and Mugabe (2019) reported that organisational commitment in Rwandan service organisations positively influenced employee safety behaviours, but only where management demonstrated fairness and transparency. This highlights the methodological limitation of assuming a uniform effect across contexts.

Mediating Role of Organisational Commitment

Chen and Wang (2016) demonstrated that supervisor and co-worker safety support influence safety performance indirectly through employees' safety knowledge and motivation, suggesting organisational commitment plays a mediating role. While their findings emphasise the positive influence of commitment, they also caution that mediation may vary by context. Supporting this, Niu and Liu (2022) argued that in Asian settings, cultural values moderated how commitment influenced safety behaviour.

In Ghana, Gyekye (2005) observed that employees' organisational commitment was a significant predictor of compliance with safety regulations in manufacturing firms, suggesting that commitment may amplify the impact of supervisor and peer support on safety performance. Thus, in the GNFS context, organisational commitment is conceptualised as the psychological mechanism through which safety support translates into improved safety performance.

Conceptual framework

The conceptual framework of this study is anchored in both Social Exchange Theory (Blau, 1964; Emerson, 1976) and Social Support Theory (Cobb, 1976; House, 1981). Social Exchange Theory suggests that supportive actions from supervisors and co-workers are perceived as valuable resources that employees feel obliged to reciprocate. In the Ghana National Fire Service (GNFS), when firefighters receive guidance, training, and encouragement from their supervisors and peers, they are more likely to demonstrate stronger organisational commitment (Eisenberger et al., 1986). This commitment, in turn, translates into higher safety performance, as employees repay the organisation through safer and more responsible behaviours.

Social Support Theory further explains the psychological and emotional mechanisms underpinning these relationships. Supervisor support provides informational and instrumental assistance, while co-worker support enhances emotional encouragement and solidarity. Together,

these forms of support foster a sense of belonging, reduce occupational stress, and strengthen organisational commitment (Thompson & Prottas, 2006). Organisational commitment then motivates firefighters to adhere to safety norms and engage in proactive safety behaviours (Meyer & Allen, 1991; Clarke, 2006). The framework therefore proposes that supervisor and co-worker safety support influence safety performance both directly and indirectly through organisational commitment, with both theories jointly explaining how supportive workplace relationships shape safety outcomes in the GNFS context.

Research methods

Research design

In line with this and the objectives of the study, the used a cross-sectional survey to aid the researcher to obtain information. The cross-sectional survey design was adopted for this study because it allowed for the collection of data from a relatively large number of participants at a single point in time, making it both cost-effective and time-efficient. This design was particularly suitable for examining the relationships between supervisor support, co-worker support, organisational commitment, and safety performance since it enabled the researcher to capture employees' perceptions and attitudes as they existed in their natural work settings. This research design was primarily informed by the intention of the researcher to give account of the various issues that were examined in the study

Sampling procedure

Sampling is a statistical approach of acquiring a representative population to take information or data concerning a whole population by analyzing only a portion of it (Babbie, 2007). Regarding this study, a census sampling technique was utilized because of the generally small population size. Considering this, a sample

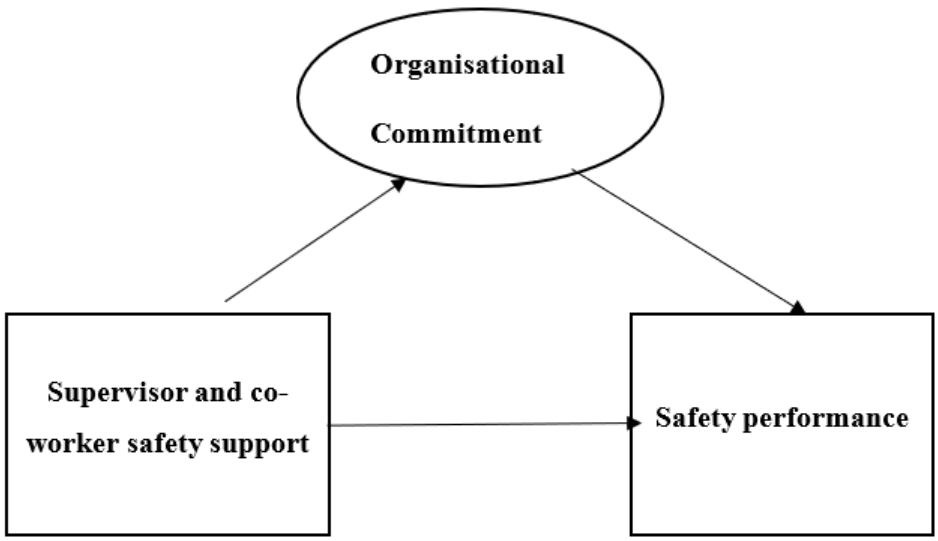

Figure 1: Conceptual Framework
Source: Authors' construct (2023)

size of two hundred and twenty-seven (227) was utilized which is comprised of staff at the study area.

Instrument and data collection

Primary data collection was done through structured questionnaire. The questionnaire was made up of four subdivisions. These subdivisions were in line with the specific objectives of this study. Section A of the questionnaire measured the Demographic data of the respondents and had three variables in all. Section B of the questionnaire measured the supervisor and co-worker support at the Ghana National Fire Service unit in Tamale. Section C of the questionnaire measured the safety performance at the organisation. And finally, section D measured the organisational commitment at the Ghana National Fire Service unit in Tamale.

The study employed well-established and validated measurement scales adopted from prior empirical research. Supervisor safety support and co-worker safety support were measured using items adapted from Hofmann and Morgeson (1999), while organisational commitment was assessed using the widely cited scale developed by Meyer and Allen (1991). Safety performance was measured with items adapted from Neal and Griffin's (2006) safety performance framework, which captures both safety compliance and safety participation behaviors. All items were measured on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. For example, items under supervisor safety support included statements such as *"My supervisor encourages safe working practices"*, while co-worker safety support included *"My colleagues help me when I have difficulties following safety procedures."* Organisational commitment items included *"I feel emotionally attached to this organisation"*, whereas safety performance items captured behaviors such as *"I consistently use the correct safety procedures."* These scales were carefully adapted to fit the Ghanaian workplace context while retaining their original psychometric properties.

Pre-testing

Prior to the main data collection, the questionnaire was pre-tested with 30 employees working in the Ghana National Fire Service in cape Coast, who shared similar characteristics with the study population. The aim was to evaluate the clarity, relevance, and appropriateness of the items. Feedback from the pre-test led to minor revisions in wording and sequencing, which improved comprehension and reduced ambiguity.

For validation, content validity was ensured through expert review by two university professors specialising in organisational behavior and one industry practitioner in workplace safety, all of whom confirmed that the items adequately captured the constructs of supervisor support, co-worker support, organisational commitment, and safety performance. A pilot test involving 20 respondents was subsequently conducted to assess reliability and construct validity. Results showed that all constructs achieved acceptable reliability thresholds, with Cronbach's alpha values ranging from 0.78 to 0.89 and composite reliability (CR) scores above 0.80. In addition, average variance extracted (AVE) values exceeded 0.50 for all constructs, indicating satisfactory convergent validity. These results confirmed that the measurement scales were both reliable and valid for the study context, justifying their use in the main survey.

Response Rate

A total of 227 questionnaires were issued from which all 227 were filled and returned to the researcher. However, per critical

examination of the returned questionnaires, 214 were deemed usable for the study, which represents a response rate of 94.3%. This means the usable questionnaires for the analysis of the study were two hundred and fourteen (214) as shown in Table 1.

Table 1: Response rate

Questionnaire	Count	Percentage (%)
Returned and Usable	214	94.3
Returned and Unusable	13	5.7
Total	227	100

Source: Field survey (2023)

Data processing and analysis

According to Vonrhein et al. (2011) data analysis entails simplifying data and explaining it in a manner that seeks to answer the research questions posed. Data analysis was also defined by Yan, Wang, Zuo and Zang, (2016) as the process of bringing order, structure and meaning to the mass of information collected as stated in Mertens (2005).

The statistical tools employed for this study were Statistical Package for Services Solution (SPSS) version 26. The SPSS was employed for descriptive analysis and the PLS SMART 3 (SEM) was adopted to examine the correlation and regression analysis for the study based on the research questions of this study. The descriptive statistics (frequencies and percentages) were employed to determine the characteristics of the respondents.

Common Method Bias (CMB)

To mitigate the risk of common method bias (CMB) in the PLS-SEM analysis, both procedural and statistical remedies were employed. Procedurally, respondents were assured of anonymity and confidentiality to minimize evaluation apprehension, and the items were carefully constructed to reduce ambiguity and leading questions. Additionally, predictor and criterion variables were placed in different sections of the questionnaire to psychologically separate them. Statistically, Harman's single-factor test was conducted, and the results indicated that no single factor accounted for the majority of variance, suggesting that CMB was not a major concern.

Results

Sample characteristics

Demographic information of the respondents is presented in Table 2. The result relating to the sex distribution of the respondents show that majority of administrative staff in the Ghana National Fire Service are males (60.7%). The remaining 39.3% of the respondents are female staff. The age distribution of the workers was between 31 and 40 years (44.4%). This is followed by those below the age of 30 (30.0%) and then those in the 41-50 years range (25.2%). The remaining 1.4% are above 51 years.

With the educational qualification, 29.9% of the respondents had their diploma education whilst 55.1% have had their 1st degree. The remaining 15.0% of the respondents have their 2nd degree education.

Table 2: Demographic characteristics

Variable	Options	Frequency	Percentage
Sex	Male	130	60.70%
	Female	84	39.30%
Age	Below 30 years	62	30.00%
	31-40 years	95	44.40%
	41-50 years	54	25.20%
	Above 51 years	3	1.40%
Level of Educational	Diploma	64	29.90%
	1st Degree	118	55.10%
	2nd Degree	32	15.00%
	Professional	0	0.00%
Marital Status	Married	119	55.60%
	Single	57	26.60%
	Divorced	27	12.60%
	Other	11	5.10%
Working experience	1-5 years	91	42.50%
	6-10 years	60	28.00%
	11-15 years	44	20.60%
	Above 16years	19	8.90%
Total		214	100.00%

Source: Field survey (2023)

Measurement model assessment

The results in Table 3 indicate that all latent variables in this study are reliable, as they all ranged between 0.727 and 0.873, loading well above the 0.7 thresholds. In addition, the convergent validity of the measures in the model was evaluated with the Average Variance Extracted (AVE). From Table 3, the AVE results range between 0.540 and 0.702. As proposed by Hair et al. (2019), an AVE of 0.50 or higher indicates that the construct explains 50% or more of the variance of the items that make up the construct. From Table 4, the AVE values of each construct (latent variable) are higher than the value of the correlation

between the constructs, thereby suggesting the requirement of discriminant validity is established. The results in table 5 shows that all HTMT values are well below the threshold of 0.850, indicating that discriminant validity has been established for this study. Having established internal consistency, reliability, convergent and discriminant validity, the structural model was assessed.

Table 3: Reliability and validity assessment

Items	Loadings	No. of items	CA	CR	AVE
SAFETY PERFORMANCE (SP)		6(10)	0.915	0.93	0.702
SP1	0.84				
SP3	0.873				
SP4	0.811				
SP5	0.867				
SP7	0.851				
SP9	0.78				
ORGANISATIONAL COMMITMENT (OC)		4(10)	0.732	0.82	0.54
OC3	0.727				
OC4	0.724				
OC6	0.762				
OC9	0.725				
SUPERVISOR AND CO-WORKER SAFETY SUPPORT (SCP)		9(10)	0.934	0.95	0.656
SS1	0.769				
SS2	0.744				
SS3	0.75				
SS4	0.795				
SS5	0.833				
CS1	0.853				
CS3	0.855				
CS4	0.864				
CS5	0.819				

Source: Field Survey (2023)

Note: SP- Safety Performance; OC- Organisational Commitment; SCP- Supervisor and Co-Worker Safety Support; SS- Supervisor Support; CS- Co-worker support.

The indicators (SP2, SP6, SP8, OC1, OC2, OC5, OC7, OC8, and CS2) were initially part of the measurement model before refinement in SmartPLS 3.0. However, during the model evaluation process, these indicators were removed because they did not meet the recommended factor loading thresholds or demonstrated cross-loadings that affected construct validity. The justification is based on established PLS-SEM criteria, as outlined below.

1. Indicator Retention and Deletion Criteria

In SmartPLS 3.0, reflective measurement model evaluation follows specific statistical standards (Hair et al., 2019; Sarstedt et al., 2022):

- Indicator Loading (λ): Retained indicators must have loadings ≥ 0.70, indicating that more than 50% of the variance in the indicator is explained by the latent construct. Indicators with loadings between 0.40 and 0.69 may be deleted if their removal leads to an improvement in Composite Reliability (CR) and Average Variance Extracted (AVE). Indicators with loadings below 0.40 are automatically deleted, as they fail to represent the construct adequately.

Based on these guidelines, indicators SP2, SP6, SP8, OC1, OC2, OC5, OC7, OC8, and CS2, were deleted because their loadings fell below 0.70 or negatively impacted the overall AVE and CR values. The final retained indicators thus represent the most reliable and valid measures of their respective constructs.

Table 4: Fornell Larcker criterion

Constructs	1	2
1. SP	0.838	
2. OC	0.651	0.735
3. SCP	0.698	0.697

Source: Field Survey (2023)

NB: Diagonal values in bold= square root of AVE; Off diagonal elements= correlation between constructs. SP- Safety Practices; OC- Organisational Commitment; SCP- Supervisor and co-worker safety practices

Table 5: Heterotrait-Monotrait Ratio (HTMT)

	1	2	3
1. Safety Performance			
2. Organisational Commitment	0.738		
3. Supervisor And Co-Worker Support	0.659	0.783	

Source: Field Survey (2023)

Structural model assessment

Hair et al (2019) proposed the following standard assessment criteria to be considered in a structural model assessment in PLS-SEM; Coefficient of determination (R^2), the blindfolding-based cross-validated redundancy measure (Q^2), the effect size (f^2), as well as the statistical significance and relevance of the path coefficients. The model indicating the various paths is shown in figure 2. The assessment of the structural model begins with assessing lateral collinearity among the constructs.

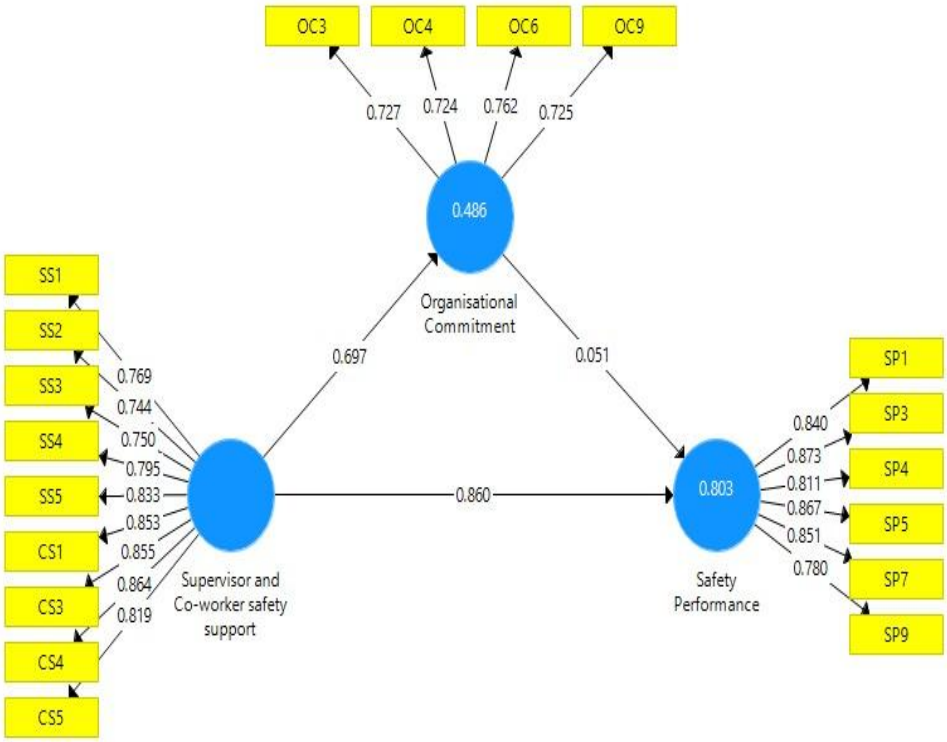

Figure 2: Model
Source: PLS Output (2023)

Table 6: Collinearity statistics (VIF)

	SAFETY PERFORMANCE	ORGANISATIONAL COMMITMENT	SUPERVISOR AND CO-WORKER
SP			
OC	2.77		
SCP	2.77	1	

Source: Field Survey (2023)

Collinearity Assessment

The results in Table 6 that VIF in all cases is less than 3. That VIF in all cases is less than 3, indicating that lateral multicollinearity is not a problem in this study (Hair et al., 2019). Also, the assessment of the structural paths and the model's explanatory power is presented in Table 7 regarding figure 2. Table 7 shows that Organisational Commitment (OC) has a moderate effect on Safety Performance (SP) (f^2=0.007). Also, the results show that Supervisor and co-worker safety support has a large effect size on Safety performance (f^2=1.934) and a large effect on Organisational Commitment (f^2=0.946). In addition to explanatory power, the predictive accuracy was assessed using the Q^2 (Geisser, 1974; Stone, 1974). As a guideline, Hair et al. (2019***)*** proposes that Q^2 values should be larger than zero for a specific endogenous construct to indicate predictive accuracy of the structural model for the construct. Specifically, Q^2 values higher than 0, 0.25 and 0.5 shows small, medium and large predictive relevance. The results show Q^2 values of 0.220 for Safety performance and 0.555 for organisational commitment. The model met the general requirement that Q^2 should be greater than 0. In addition, all predictors in the model had close to a medium predictive relevance on the endogenous variables.

Mediating analysis

The results from Table 8 show that the indirect effect (SCP -> OC -> SP) is statistically significant (β = 0.416, $p<0.05$: Table 8: Figure 2). Following the procedure defined by Nitzl, Roldán and Cepeda (2016), given that the direct effect is significant, the nature of the mediation effect of organisatioal commitment on the relationship between supervisor and co-worker safety support and safety performance among Ghana National Fire Service personnels in Tamale is a complimentary mediation.

Table 7: Structural model results (Direct effect)

Structural Path	Path Coefficient	T Statistics (|O/STDEV|)	*P* Value	R^2	f^2	Q^2	Conclusion
OC -> SP	0.551	5.074	0.007	0.634	0.01	0.22	Supported
SCP -> SP	0.697	13.246	0	0.465	1.93	0.22	Supported
SCP -> OC	0.86	14.871	0	0.634	0.95	0.56	Supported

Note: SP- Safety Practices; OC- Organisational Commitment; SCP- Supervisor and co-worker safety practices

Source: Field Survey (2023)

Table 8: Mediating analysis

PATH	Path coeff.	T Statistics (|O/STDEV|)	P-Values	Conclusion
SCP -> OC -> SP	0.416	5.495	0.000	Supported

Note: *SCP -> OC -> SP- Relationship between supervisor and co-worker safety support and safety performance through the mediating role of organisational commitment*
Source: Field Survey (2023)

Discussion

The findings of the structural model revealed that supervisor and co-worker safety support significantly predicted the safety performance of staff at the Ghana National Fire Service in Tamale. This positive and significant relationship indicates that as employees perceive higher levels of safety support from supervisors and colleagues, their safety performance is enhanced. This outcome is consistent with earlier studies by Hofmann and Morgeson (1999) and Neal and Griffin (2006), which emphasized the centrality of social support in shaping safety-related behaviors in high-risk environments. The present study, therefore, confirms and extends these prior findings by demonstrating that such supportive dynamics are equally critical in the Ghanaian firefighting context, where team cohesion and trust are essential for operational safety.

Regarding the second objective, the results indicated that organisational commitment also had a positive and significant influence on safety performance. Although the effect size was modest, the finding aligns with Meyer and Allen's (1991) framework, which positions commitment as a predictor of discretionary work behaviors, including compliance and participation in safety practices. This result also supports Pienaar and Willemse (2008), who found that organisational commitment fosters compliance with safety protocols in high-stress occupational settings. However, the relatively smaller effect size compared to supervisor and co-worker support suggests that while commitment is important, immediate sources of social support may exert stronger motivational influence on frontline safety performance.

Finally, the study revealed that organisational commitment partially moderated the relationship between supervisor and co-worker support and safety performance. This partial mediation suggests that while direct social support is critical for safety, its impact is amplified when employees are emotionally attached and committed to their organisation. This finding extends previous research by highlighting the complementary roles of social support and commitment in shaping safety behaviors. Whereas prior studies (e.g., Neal & Griffin, 2006; Christian et al., 2009) emphasized either social support or organisational commitment independently, this study demonstrates that their interaction creates a stronger foundation for sustaining safety performance. In the Ghanaian context, where firefighting personnel often face resource constraints and operational risks, such a synergistic effect underscores the importance of both supportive relationships and organisational loyalty in driving safe practices.

Conclusion

With respect to the first objective, it is concluded that supportive relationships between supervisors, co-workers, and

firefighters significantly enhance safety performance within the Tamale Ghana National Fire Service. In relation to the second objective, this study concluded that organisational commitment plays a crucial impact on safety performance within the Tamale Ghana National Fire Service. The research shows that when firefighters are emotionally connected and committed to their organisation, their dedication translates into heightened safety performance. From the third research objective, it was concluded that organisational commitment underscores the mediating role in the relationship between supervisor and co-worker safety support and safety performance within the Tamale Ghana National Fire Service.

Implications

This implies that when members of a Ghana National Fire Service unit perceive a high level of support in terms of safety measures and from their co-workers, it directly contributes to maximizing their safety performance. The correlation between safety and co-worker safety support and safety performance underscores the importance of fostering a culture of safety within Ghana National Fire Service units (Syed-Yahya, Noblet, Idris & Lee, 2022). By understanding and nurturing these relationships, Ghana National Fire Service units can create an environment where firefighters feel secure, supported, and motivated to perform at their best, ultimately leading to improved outcomes during emergencies and overall safety for everyone involved.

Furthermore, the study's findings highlight the critical role of organisational commitment in shaping the safety performance of fire personnel in Tamale. Organisational commitment, in this context, refers to the employees' loyalty, identification with the organisation's goals, and the willingness to go above and beyond their formal job requirements for the organisation's benefit (Umugwaneza, Nkechi & Mugabe, 2019). The level of dedication and attachment that fire personnel have towards their organisation directly impacts their safety performance. Fire departments can invest in programs that promote a sense of belonging, job satisfaction, and mutual respect among their employees. These efforts could include regular training sessions, team-building activities, and recognition programs that acknowledge and appreciate the dedication and hard work of the personnel.

Lastly, the study also revealed that organisations should not only focus on providing adequate support from supervisors and co-workers but also work on fostering a sense of commitment among employees (Niu & Liu, 2022). By enhancing organisational commitment, organisations can maximize the positive impact of safety support, leading to improved safety performance among employees. This finding emphasizes the importance of not only promoting a supportive work environment but also nurturing a strong organisational culture and commitment, which collectively contributes to enhancing overall safety outcomes within the workplace.

These findings align with previous research in organisational psychology and safety management, emphasizing the significance of social support and organisational culture in shaping employee behaviour and performance (Ji, Wei & Chen, 2019; Freitas, Silva & Santos, 2019).

Recommendations

From the first research objective, the study revealed that supervisor and co-worker safety support significantly influenced safety performance among personnel of the

Ghana National Fire Service. This finding points to the critical role of supportive workplace relationships in enhancing safety-related behaviors. Based on this, it is recommended that management strengthens a supportive safety culture by providing supervisors with training in effective safety leadership and encouraging peer-to-peer accountability systems. Initiatives such as team-based safety drills, peer mentoring, and regular safety briefings could be institutionalised to ensure that both supervisors and co-workers consistently reinforce safe practices in their daily operations.

Based on the second research objective, the results also showed that organisational commitment positively influenced safety performance, although the effect was modest compared to social support. This suggests that while commitment alone may not drive safety behavior as strongly as interpersonal support, it remains an important factor in ensuring long-term adherence to safe practices. To enhance commitment, leadership should introduce initiatives that foster employee loyalty and attachment to the organisation. Transparent communication of safety policies, recognition and reward schemes for employees who demonstrate exemplary safety behavior, and clear career development opportunities would
make personnel feel valued, which in turn would strengthen their dedication to organisational safety objectives.

Finally, from the third research objective, the study further established that organisational commitment partially mediated the relationship between supervisor and co-worker safety support and safety performance. This implies that while direct social support from supervisors and peers is critical, its positive effect on safety performance is amplified when employees also feel a strong commitment to the organisation. It is therefore recommended that the Ghana National Fire Service integrate both support mechanisms and commitment-building strategies within its safety management framework. Combining supervisor-led safety coaching with organisational initiatives such as employee welfare programs, participatory decision-making, and the communication of shared values would create a synergistic effect, ensuring that the benefits of supervisor and co-worker support are maximized through a loyal and committed workforce.

Limitations and directions for future studies

The mediating effect of organisational commitment, the results cannot be generalized to all Ghana National Fire Service units in Ghana. This is because, the study relied on the opinions and suggestions of staff of a specific Ghana National Fire Service unit in Tamale. In addition, the researcher considered only one mediating variable to improve staff performance. It is therefore suggested that further research be conducted in other Ghana National Fire Service units in different regions in Ghana, and also consider other mediating variables can be considered to understand the mechanisms of diverse roles of other variables in such relationships.

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