

# Workplace Safety Perceptions and Perceived Organizational Support: Do Supportive Perceptions Influence Safety Perceptions?

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*The current study investigated the relationship between organizational safety climate and perceived organizational support. Additionally, it examined the relationship with job satisfaction, worker compliance with safety management policies, and accident frequency. Safety climate and supportive perceptions were assessed with Hayes, Perander, Smecko, et al.'s (1998) and Eisenberger, Fasolo and LaMastro's (1990) scales respectively. Confirmatory factors analysis confirmed the 5-factor structure of Hayes et al.'s WSS scale. Regression analysis and t-tests indicated that workers with positive perspectives regarding supportive perceptions similarly expressed positive perceptions concerning workplace safety. Furthermore, they expressed greater job satisfaction, were more compliant with safety management policies, and registered lower accident rates. The perceived level of support in an organization is apparently closely associated with workplace safety perception and other organizational and social factors which are important for safety. The results are discussed in light of escalating interest in how organizational factors affect employee safety and supportive perceptions.*

perceived organizational support   safety management   organizational climate  
safety climate   industrial accidents

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## 1. INTRODUCTION

### 1.1. Organizational Climate

Organizational climate denotes the shared perceptions about organizational values, norms, beliefs, practices and procedures [1, 2, 3, 4]. It refers to the social and organizational conditions in which workers perform their assignments. The climate of an organization has been known to be an important antecedent of workplace performance. Workers' perceptions of the state of affairs and structures in place in their organizations have affected their perceptions of safety [3, 4] and

work behaviour [5, 6]. Organizational climate has also influenced interactions among workers [7, 8], shaped their affective responses to the work environment [9, 10], affected their levels of motivation [11], and influenced their skill training activities [12]. Thus, it is the consensual agreement of safety experts that organizational climate predicts safety climate, which in turn is related to safety performance (e.g., [11, 13]).

### 1.2. Organizational Safety Climate

Safety climate is considered a subset of organizational climate and refers to the coherent set of perceptions and expectations that workers

have regarding safety in their organizations [3, 5, 13]. Workers' perceptions on safety climate have been regarded as a principal guide to safety performance, as measuring the precursors of accidents identified in a safety climate analysis has provided compelling proactive accident management tools. Research reports along this line have indicated that workers with negative perceptions of safety climate (e.g., high workload, work pressure) tend to engage in unsafe acts, which in turn increases their susceptibility to accidents [14, 15]. Similarly, workers who have indicated job insecurity, anxiety and stress, have exhibited a drop in safety motivation [16, 17] and recorded a relatively higher accident involvement rate [18, 19, 20]. In contrast, workers with positive perceptions regarding safety climate have expressed greater job satisfaction [21] and registered fewer accidents [14, 22]. One aspect of organizational behaviour that is very likely to have an influence on workers' perceptions on organizational safety and in turn influence safe work behaviours is the extent to which workers perceive their organizations as being supportive and caring. This is technically referred to as perceived organizational support (POS).

### 1.3. POS

POS denotes the general perception concerning the extent to which workers perceive their organizations' contributions and concern for their well-being [23, 24, 25]. The organizational support theory supposes that workers infer the extent to which organizations care about their well-being from meaningful organizational and social organizational values, norms, beliefs, practices and structures that are operational at the workplace. Workers with supportive perceptions reciprocate POS with loyalty, efficiency and increased productivity. In short, they display greater emotional attachment, involvement and they internalize their organizational values and norms with stronger feelings of allegiance and faithfulness [25, 26, 27]. The social exchange theory [28] and the reciprocity theory [29] have been the central theories used in explaining the motivational basis behind these positive organizational behaviours.

Basically, what these theories espouse is that the expression of positive affect to and concern for others creates a feeling of indebtedness and a corresponding sense of obligation to respond positively in return. Research reports along this line have found that workers with higher perceptions regarding management's contributions, support and concern for their well-being have expressed greater job satisfaction [25, 30] reciprocated in undertaking prosocial organizational behaviours [26, 31, 32]. Additional research findings in both social psychology [33, 34] and organizational literature [35] tend to indicate that one type of prosocial behaviour facilitates other types of prosocial behaviours due to the personal values acquired through the socialization process. Based on this discussion, it is logical to expect that differences in perceptions of organizational support will affect differently workers' safety perceptions and their safety-related behaviours.

While the positive impact of POS as a desirable organizational outcome has been well documented, there is surprisingly little evidence on the empirical relationship between POS and safety climate. A notable exception is the work of Hofmann and Morgeson [32] that examined the effects of POS on safety communication, safety commitment, and accidents. Accordingly, the focus of this study was to empirically examine these relationships. Specifically, (a) it compared the safety perceptions of workers with high perspectives on POS and their counterparts with low POS perspectives. Additional comparative analyses involved the views of these two groups on (b) job satisfaction, (c) compliance with safety management policies, and (d) accident frequency. The paucity of research on organizational behaviour in developing nations, particularly Africa, constitutes another reason for these analyses.

### 1.4. Hypotheses

Consistent with the literature review and argumentations, the following hypotheses were proposed:

**H1:** A positive relationship between POS and safety climate was anticipated. Workers who

perceive support from their organizations would correspondingly have positive perceptions regarding safety climate, and vice versa.

**H2:** It was anticipated that workers with relatively higher supportive perceptions would express more job satisfaction than their counterparts with low perceptions.

**H3:** It was anticipated that workers with relatively higher supportive perceptions would be more compliant with safety management policies than their counterparts with lower or negative perceptions.

**H4:** It was anticipated that workers with relatively higher supportive perceptions would register fewer accidents than their counterparts with lower or negative perceptions.

## 2. METHOD

### 2.1. Participants

The participants were 320 Ghanaian industrial workers. They comprised of the following characteristics: 65% were male, 35% female; 75% were subordinate workers, 25% supervisors; 40% were single, 60% married. In terms of educational levels, 23% of the respondents reported having only basic education, 36% reported secondary or technical education, 38% reported having some professional or commercial education, and 3% university education. Regarding tenure, 13% of the respondents had been at the workplace for less than a year, 22% between 1 and 4 years, 21% between 5 and 10 years, 25% between 11 and 14 years, and 19% over 15 years.

### 2.2. Procedure

The presentation of the interview was done during lunch breaks. The duration varied from 15 to 20 min, depending on the context in which they were conducted, and on respondents' level of education. The questionnaire interview was presented in English. Where respondents were illiterate or semi-illiterate and had problems understanding English, the services of an interpreter were sought and the local dialect was used. The supervisors were educationally sound

and filled in the questionnaire on their own. To ensure accuracy of responses, particularly on issues that related to noncompliant job behaviours and worker counterproductive behaviours, it was emphasized that the study was part of academic work and that no person affiliated with their organizations was involved in any way. Participants were thus assured of complete confidentiality.

### 2.3. Instruments

#### 2.3.1. Organizational safety climate

Workers' perceptions of safety were measured with the 50-item workplace safety scale (WSS) developed by Hayes, Perander, Smecko, et al. [36]. This instrument assesses employees' perceptions of work safety and measures five distinct constructs, each with 10 items: (a) work safety (sample item: "Safety programs are effective";  $\alpha = .96$ ), (b) coworker's safety (sample item: "Pay attention to safety rules";  $\alpha = .80$ ), (c) supervisor safety (sample item: "Enforces safety rules";  $\alpha = .97$ ), (d) management's commitment to safety (sample item: "Responds to safety concern";  $\alpha = .94$ ), (e) satisfaction with safety program (sample item: "Effective in reducing injuries";  $\alpha = .86$ ). The total coefficient  $\alpha$  score was .89. Participants responded on a 5-point scale ranging from 1—*not at all* to 5—*very much*. Past research has shown this scale to have good psychometric properties [37].

#### 2.3.2. POS

POS was measured with the short version of Eisenberger, Fasolo and LaMastro's [24] survey. The scale consisted of eight items and assessed workers' evaluations of organizational issues that affected their well-being. Sample items were "The organization values my contribution to its well-being", "The organization takes pride in my accomplishments", and "Help is available from the organization when I have a problem". The total coefficient  $\alpha$  score was .97. Participants responded on a 5-point scale ranging from 1—*not at all* to 5—*very much*.

### 2.3.3. Job satisfaction

Job satisfaction was measured with Porter and Lawler's [38] one-item global measure of job satisfaction. This was chosen because single-item measures of overall job satisfaction have been considered to be more robust than scale measures [39]. Besides, it has been used extensively in the organizational behaviour literature [21, 40, 41]. The measure has five response categories ranging from *extremely dissatisfied* to *extremely satisfied*, corresponding to the 5-point response format (1—*not at all* to 5—*very much*). Thus, the scores were coded so that higher scores (4—*quite much* and 5—*very much*) reflected higher levels of job satisfaction, and lower scores (1—*very little* and 2—*quite little*) meant lower levels of job satisfaction or job dissatisfaction.

### 2.3.4. Items for compliance with safe work practices

Items for compliance with safety behaviour were pooled from the existing literature. They comprised of four questions that assessed workers' compliance with safe work behaviour. Sample items were "Keep my workplace clean", "Follow safety procedures regardless of the situation". Participants responded on a 5-point scale ranging from 1—*not at all* to 5—*very much*.

### 2.3.5. Accident frequency

Accident involvement rate was measured by participants' responses to the question that asked them to indicate the number of times they had been involved in accidents in the past 12 months. All cases studied were accidents classified as serious by the safety inspection authorities.

## 2.4. Data Analysis

Statistical analyses of the data were carried out with the SAS statistical package, version 8.2. The responses of all eight POS items were calculated and a median split was performed to segregate the sample into two groups: participants with a high perspective regarding POS ( $n = 166$ ), and participants with a low POS perspectives ( $n = 154$ ). Using this as an independent variable,

differences among the scores were identified by a one-tailed  $t$ -test analysis. This provided an item-by-item score for the two categories of workers on all the 50 items of the safety perception scale. The dimensions of safety climate were treated as dependent variables and regression analysis was conducted to investigate the degree to which the five subscales on WSS predicted POS.

## 3. RESULTS

The hypotheses of the study focused on the relationships between POS, safety perception, job satisfaction, safe work behaviour, and accident frequency. It was hypothesized that POS would be positively related to safety perceptions, job satisfaction, compliance with safety management policies, and negatively to accident frequency. The findings supported the hypotheses.

### 3.1. Hypothesis 1

The  $t$  tests revealed differences of statistical significance between the two categories of workers on all except for managements' attitude and commitment to safety. A dissection of the five subsets on the WSS is presented first. This is followed by item-by-item analyses presented in a tabular format in Table 1. Regarding *work safety*, workers with low supportive perceptions significantly perceived their jobs to be more hazardous than their counterparts with high perceptions ( $t = 17.99$ ,  $df = 299$ ,  $p < .001$ ). They significantly considered their job assignments as being *dangerous* ( $t = 12.14$ ,  $df = 302$ ,  $p < .001$ ), *safe* ( $t = -10.93$ ,  $df = 302$ ,  $p < .001$ ), *hazardous* ( $t = 10.05$ ,  $df = 301$ ,  $p < .001$ ), *risky* ( $t = 14.55$ ,  $df = 301$ ,  $p < .001$ ), *unhealthy* ( $t = 14.03$ ,  $df = 301$ ,  $p < .001$ ), *unsafe* ( $t = 15.52$ ,  $df = 301$ ,  $p < .001$ ), and *scary* ( $t = 15.61$ ,  $df = 299$ ,  $p < .001$ ). With such appraisals, they felt they *could get hurt* ( $t = 14.84$ ,  $df = 301$ ,  $p < .001$ ), and were thus worried about their health and death, *fear for health* ( $t = 14.28$ ,  $df = 301$ ,  $p < .001$ ), *chance of death* ( $t = 13.84$ ,  $df = 301$ ,  $p < .001$ ).

Regarding *coworker safety*, workers with relatively higher supportive perceptions significantly noticed and appreciated their coworkers' contributions towards safety

**TABLE 1. Means (*M*) and Standard Deviations (*SD*) of Perceived Organizational Support (POS) and Workplace Safety Perception Scale**

| Safety Perception Scale                  | High POS |           | Low POS  |           | <i>p</i>  |
|------------------------------------------|----------|-----------|----------|-----------|-----------|
|                                          | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |           |
| Work safety                              | 15.52    | 4.82      | 33.66    | 11.24     | ***       |
| Dangerous                                | 1.65     | 1.10      | 3.37     | 1.47      | ***       |
| Safe                                     | 3.95     | 1.43      | 2.32     | 1.44      | ***       |
| Hazardous                                | 1.59     | 1.07      | 3.06     | 1.44      | ***       |
| Risky                                    | 1.45     | 0.62      | 3.33     | 1.44      | ***       |
| Unhealthy                                | 1.51     | 0.65      | 3.29     | 1.41      | ***       |
| Could get hurt                           | 1.45     | 0.69      | 3.36     | 1.41      | ***       |
| Unsafe                                   | 1.55     | 0.69      | 3.51     | 1.37      | ***       |
| Fear for health                          | 1.51     | 0.71      | 3.38     | 1.42      | ***       |
| Chance of death                          | 1.37     | 0.58      | 3.19     | 1.49      | ***       |
| Scary                                    | 1.39     | 0.58      | 3.31     | 1.37      | ***       |
| Coworker safety                          | 37.91    | 3.59      | 27.66    | 7.14      | ***       |
| Ignore safety rules                      | 1.79     | 0.87      | 3.07     | 1.17      | ***       |
| Don't care about other's safety          | 1.68     | 0.87      | 3.08     | 1.32      | ***       |
| Pay attention to safety rules            | 3.74     | 1.00      | 2.76     | 1.24      | ***       |
| Follow safety rules                      | 4.38     | 0.73      | 2.66     | 1.25      | ***       |
| Look out for others' safety              | 4.52     | 0.62      | 2.71     | 1.34      | ***       |
| Encourage others to safe behaviour       | 4.05     | 0.78      | 2.51     | 1.11      | ***       |
| Take chances with safety                 | 3.32     | 1.21      | 2.45     | 1.11      | ***       |
| Keep work area clean                     | 3.97     | 0.78      | 2.49     | 1.10      | ***       |
| Safety-oriented                          | 4.35     | 0.78      | 2.54     | 1.30      | ***       |
| Don't pay attention                      | 2.56     | 1.18      | 2.41     | 1.05      | <i>ns</i> |
| Supervisor safety                        | 41.93    | 4.36      | 24.46    | 9.65      | ***       |
| Praise safe work behaviour               | 3.99     | 0.66      | 2.80     | 0.85      | ***       |
| Encourages safe behaviours               | 4.13     | 0.76      | 2.57     | 1.08      | ***       |
| Keep workers informed of safety rules    | 4.12     | 0.77      | 2.42     | 1.05      | ***       |
| Rewards safe behaviours                  | 3.83     | 0.93      | 2.19     | 1.14      | ***       |
| Involves workers in setting safety goals | 3.99     | 0.82      | 2.29     | 1.23      | ***       |
| Discusses safety issues with others      | 4.15     | 0.77      | 2.35     | 1.18      | ***       |
| Updates safety rules                     | 4.26     | 0.80      | 2.43     | 1.17      | ***       |
| Trains workers to be safe                | 4.33     | 0.65      | 2.43     | 1.23      | ***       |
| Enforces safety rules                    | 4.48     | 0.67      | 2.42     | 1.19      | ***       |
| Acts on safety suggestions               | 4.64     | 0.60      | 2.54     | 1.22      | ***       |
| Management safety                        | 34.50    | 6.86      | 21.40    | 7.63      | ***       |
| Provides enough safety programmes        | 3.40     | 0.89      | 2.49     | 1.09      | ***       |
| Conducts frequent safety inspections     | 2.89     | 1.08      | 2.05     | 1.01      | ***       |
| Investigates safety problems             | 2.87     | 1.05      | 2.01     | 0.94      | ***       |
| Rewards safe workers                     | 2.75     | 1.12      | 1.97     | 0.89      | ***       |
| Provides safe equipment                  | 3.38     | 0.92      | 2.08     | 0.98      | ***       |
| Provides safe working conditions         | 3.58     | 0.89      | 2.08     | 0.93      | ***       |
| Responds quickly to safety concerns      | 3.68     | 0.98      | 2.15     | 1.00      | ***       |
| Helps maintain clean area                | 3.82     | 1.02      | 2.11     | 1.07      | ***       |
| Provides safety information              | 4.06     | 1.03      | 2.27     | 1.05      | ***       |
| Keep workers informed of hazards         | 4.09     | 1.02      | 2.18     | 1.07      | ***       |
| Satisfaction with safety programs        | 39.52    | 3.96      | 26.30    | 6.01      | ***       |
| Worthwhile                               | 4.44     | 0.59      | 2.42     | 1.07      | ***       |
| Helps prevent accidents                  | 4.28     | 0.67      | 2.25     | 1.14      | ***       |
| Useful                                   | 4.51     | 0.56      | 2.08     | 1.19      | ***       |
| Good                                     | 4.44     | 0.68      | 2.11     | 1.29      | ***       |
| First-rate                               | 4.25     | 0.63      | 2.04     | 1.14      | ***       |
| Unclear                                  | 3.14     | 1.19      | 2.41     | 1.19      | ***       |
| Important                                | 4.11     | 0.82      | 2.13     | 1.11      | ***       |
| Effective in reducing injuries           | 4.26     | 0.69      | 2.12     | 1.18      | ***       |
| Do not apply to my workplace             | 2.85     | 1.31      | 2.05     | 1.16      | ***       |
| Do not work                              | 2.60     | 1.39      | 2.32     | 1.06      | <i>ns</i> |

Notes. \*\*\**p* < .001; high POS (*n* = 166), low POS (*n* = 154).



( $t = -15.29$ ,  $df = 289$ ,  $p < .001$ ). In contrast to their counterparts with lower supportive perceptions, they noticed how their work colleagues tended to *pay attention to safety rules* ( $t = -7.55$ ,  $df = 299$ ,  $p < .001$ ), *follow safety rules* ( $t = -14.50$ ,  $df = 300$ ,  $p < .001$ ), *look out for others' safety* ( $t = -14.89$ ,  $df = 299$ ,  $p < .001$ ), *encourage others to safety* ( $t = -14.31$ ,  $df = 297$ ,  $p < .001$ ), *take chance with safety* ( $t = -6.52$ ,  $df = 296$ ,  $p < .001$ ), *keep work area clean* ( $t = -13.22$ ,  $df = 296$ ,  $p < .001$ ), and *be safety-oriented* ( $t = -14.47$ ,  $df = 297$ ,  $p < .001$ ). It was noteworthy that workers with relatively lower supportive perceptions remarked mainly on the negative safety characteristics of their coworkers: that they *ignored safety rules* ( $t = 10.77$ ,  $df = 300$ ,  $p < .001$ ) and *didn't care about others' safety* ( $t = 10.70$ ,  $df = 299$ ,  $p < .001$ ).

Regarding the ratings on *supervisor safety*, workers with higher supportive perceptions significantly perceived their supervisors to be more active and supportive of workplace safety than their counterparts with low supportive perceptions did ( $t = -20.25$ ,  $df = 307$ ,  $p < .001$ ). They indicated how their supervisors *tended to praise safe work behaviour* ( $t = -13.69$ ,  $df = 308$ ,  $p < .001$ ), *encouraged safe behaviours* ( $t = -14.47$ ,  $df = 308$ ,  $p < .001$ ), *kept workers informed about safety* ( $t = -16.37$ ,  $df = 308$ ,  $p < .001$ ), *rewarded safe behaviours* ( $t = -13.88$ ,  $df = 308$ ,  $p < .001$ ), *involved workers in setting safety goals* ( $t = -14.12$ ,  $df = 307$ ,  $p < .001$ ), *discussed safety issues with others* ( $t = -15.78$ ,  $df = 308$ ,  $p < .001$ ), *updated safety rules* ( $t = -16.39$ ,  $df = 308$ ,  $p < .001$ ), *trained workers to be safe* ( $t = -16.65$ ,  $df = 308$ ,  $p < .001$ ), *enforced safety rules* ( $t = -18.54$ ,  $df = 308$ ,  $p < .001$ ), and *acted on safety suggestions* ( $t = -18.93$ ,  $df = 308$ ,  $p < .001$ ).

Scores on the *management's commitment and attitude to safety* subscale followed the same trend: workers with higher supportive perceptions expressed more satisfaction with management's contribution and commitment to their safety than their low-supportive counterparts ( $t = -15.78$ ,  $df = 305$ ,  $p < .001$ ). They indicated how management *provided enough safety programmes* ( $t = -7.92$ ,  $df = 308$ ,  $p < .001$ ), *conducted frequent safety inspections* ( $t = -7.01$ ,  $df = 307$ ,  $p < .001$ ), *investigated safety problems* ( $t = -7.52$ ,  $df = 307$ ,  $p < .001$ ), *rewarded safe*

*workers* ( $t = -6.61$ ,  $df = 305$ ,  $p < .001$ ), *provided safe equipment* ( $t = -11.93$ ,  $df = 306$ ,  $p < .001$ ), *provided safe working conditions* ( $t = -14.41$ ,  $df = 306$ ,  $p < .001$ ), *responded quickly to safety concerns* ( $t = -13.46$ ,  $df = 306$ ,  $p < .001$ ), *helped maintain a clean area* ( $t = -14.39$ ,  $df = 306$ ,  $p < .001$ ), *provided safety information* ( $t = -15.08$ ,  $df = 306$ ,  $p < .001$ ), and *kept workers informed of hazards* ( $t = -16.04$ ,  $df = 306$ ,  $p < .001$ ).

On the *safety practices* subscale, workers with relatively higher POS perspectives were significantly satisfied with their organizations' safety procedures than were their counterparts with lower perceptions ( $t = -20.74$ ,  $df = 260$ ,  $p < .001$ ). They considered their safety programs to be *worthwhile* ( $t = -20.38$ ,  $df = 306$ ,  $p < .001$ ), *useful* ( $t = -22.64$ ,  $df = 305$ ,  $p < .001$ ), *good* ( $t = -19.59$ ,  $df = 305$ ,  $p < .001$ ), *first-rate* ( $t = -20.77$ ,  $df = 305$ ,  $p < .001$ ), *important* ( $t = -17.50$ ,  $df = 304$ ,  $p < .001$ ), *effective in reducing accidents* ( $t = -19.13$ ,  $df = 302$ ,  $p < .001$ ), *to help prevent accidents* ( $t = -18.96$ ,  $df = 305$ ,  $p < .001$ ). Ratings on *do not work* were not of statistical significance ( $t = -1.84$ ,  $df = 272$ ,  $ns$ ).

The original five-factor structure of WSS was checked with a confirmatory factor analysis. Each of the five scales had 10 independent items ( $v32-v83$ ) with error terms ( $e1-e50$ ). Though the last items of the scale had rather low squared multiple correlations, the five factors correlated with other factors. This model thus suited our data set, as the coefficient  $\chi^2/df = 2.80$  indicated a reasonable fit (required values between 2 and 5) [42]. Root Mean Square Error of Approximation (RMSEA) for confirmatory factor analysis was 0.076, which was under the limit value of 0.5. The results are displayed in Figure 1.

In addition to the confirmatory factor analysis, a regression analysis was conducted to assess the degree to which the five WSS could be used to predict POS. A linear regression analysis indicated WSS to be a very good predictor  $F(1, 233) = 806.21$ ,  $p < .001$  ( $R^2 = .776$ ). *Work safety* was the best predictor ( $B = -1.08$ ,  $p < .001$ ). *Supervisor safety* ( $B = 1.07$ ,  $p < .001$ ), *safety program* ( $B = 1.00$ ,  $p < .001$ ), *management safety practices* ( $B = 0.82$ ,  $p < .001$ ), and *coworker safety* ( $B = 0.65$ ,  $p < 0.01$ ) were all significant predictors.

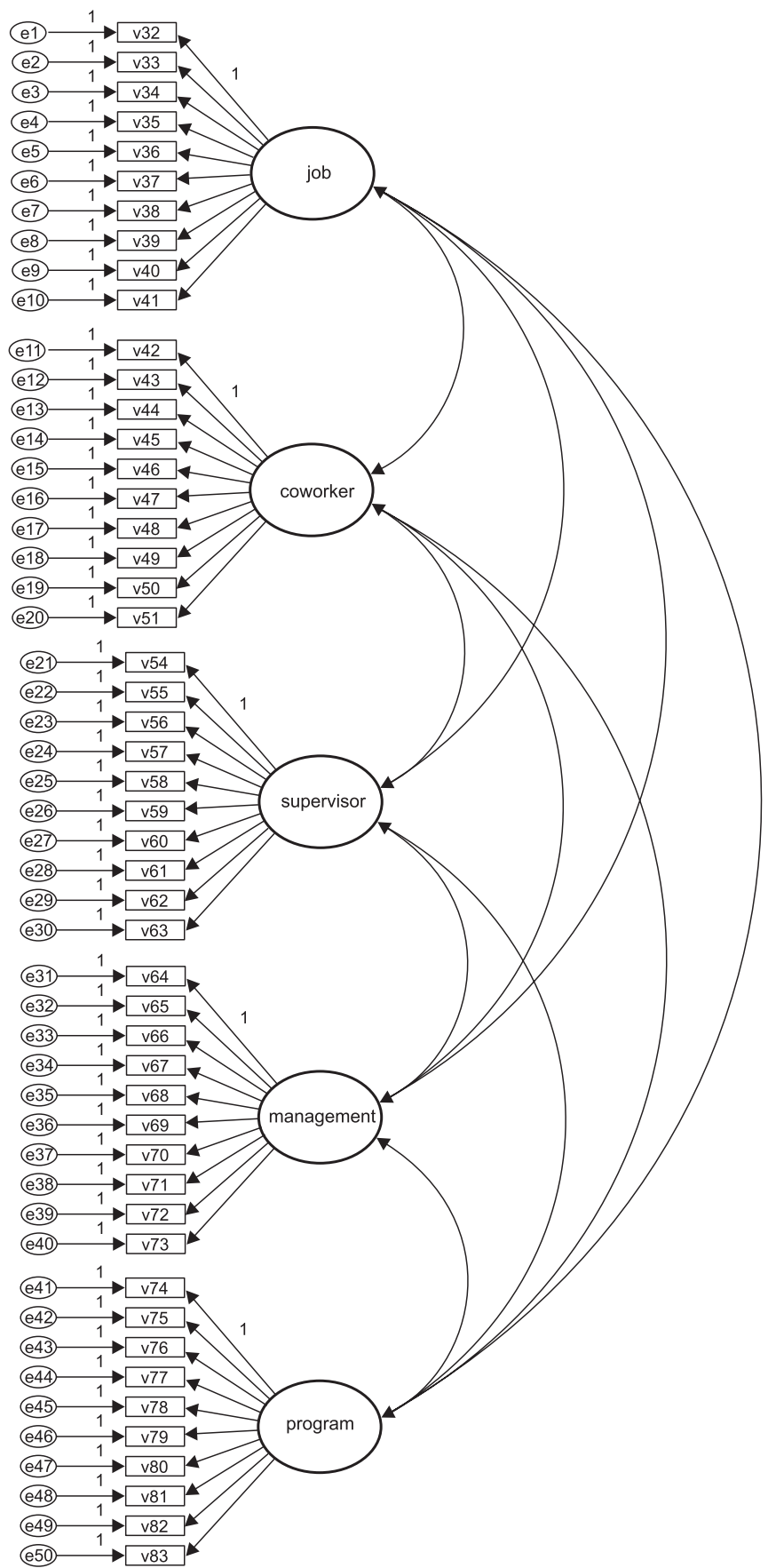


Figure 1. Confirmatory factor analysis on the work safety scale (WSS).

### 3.2. Hypothesis 2

Interesting observations concerning job satisfaction, compliance with safety management policies, and accident frequency were also made. The comparison on job satisfaction indicated a difference of statistical significance ( $t = 3.71$ ,  $df = 147$ ,  $p < .001$ ). As anticipated, workers with relatively higher supportive perceptions expressed more job satisfaction ( $M = 4.20$ ,  $SD = 0.85$ ) than their counterparts with lower perceptions ( $M = 2.45$ ,  $SD = 1.32$ ).

### 3.3. Hypothesis 3

As anticipated, workers with relatively higher supportive perceptions were more committed to work safe practices ( $M = 34.50$ ,  $SD = 6.86$ ) than were their counterparts with lower perceptions ( $M = 21.40$ ,  $SD = 7.63$ ,  $t = 3.34$ ,  $df = 141$ ,  $p < .001$ ).

### 3.4. Hypothesis 4

Workers with relatively higher supportive perceptions had lower accident rates ( $M = 1.01$ ,  $SD = 0.16$ ) than their counterparts with lower perceptions ( $M = 2.65$ ,  $SD = 1.00$ ,  $t = 3.41$ ,  $df = 148$ ,  $p < .001$ ).

## 4. DISCUSSION

This study explored the link between POS and safety perceptions. The major finding was an association between supportive perceptions and safety perception. As predicted, workers with high perceptions regarding POS also had positive perspectives regarding safety climate. In effect, when workers perceive that their organizations are supportive, concerned, and interested in their general well-being, they are more likely to perceive that their organizations value their safety as well. This observation reinforces previous findings on POS as a context-related phenomenon influenced by a variety of contextual factors such as the prevailing safety climate (e.g. [24, 26, 27, 44]). From the current report, the degree of workers' perceptions on organizational support could also originate from

the organizational structures that are in operation for workers' safety.

A positive association was observed between POS, job satisfaction, and compliance with safety procedures. Workers with relatively higher supportive perceptions expressed more job satisfaction and were more compliant with safety procedures. This observation is in accordance with the norms of reciprocity and the social exchange theory. Ostensibly, compliance with safety management policies seemed to be an avenue for high POS workers to reciprocate the implied obligation resulting from their positive perceptions concerning management's concern and support and their high levels of job satisfaction. This finding corroborates suggestions that have regarded the Social Exchange Theory and the Norms of Reciprocity as a basis of workers' safety-related behaviours [32, 44]. This line of argumentation, plausibly explains why researchers have consistently found strong and positive relationships between POS and job satisfaction [45, 46], workers' active engagement in pro-organizational behaviours [33, 47], and extra-role commitments [48, 49].

Results regarding accident frequency are also consistent with previous studies that have found a positive association between safety perception and accident involvement [50, 51]. A paramount reason for this observation could be the role social support plays in the accident process. Social support has been linked with decreases in accident frequency, where task and informational support from supervisors and coworkers have reduced the incidence of injuries (e.g., [52]). It is worth noting that the current observation could also suggest that the degree of the workers' perceptions on organizational safety might have originated from their perceptions on organizational support.

From the current findings, it seems that WSS [36] and POS [24] could be universal diagnostic tools for assessing the perceptions of workers' safety and organizational support, and for predicting their responses to safety management policies and accident frequencies. As this study is among the initial steps in attempts to replicate and extend workers' perception on safety climate in a



developing and a non-Western nation, additional investigations in this direction will be in order.

#### 4.1. Implications of the Findings in the Work Environment

The current findings are important because they identify a mechanism through which safety climate influences safety performance through workers' perceptions on organizational support. A significant practical implication in the work environment would be that interventions aimed at demonstrating organizational support and concern for workers' well-being should be intensified in work environments. The literature on POS is satiated with such organizational structures: increasing worker's level of job satisfaction [53], implementing fairness perception measures [25, 54], providing support, and showing commitment to workers beyond what is formally stated in the contractual agreement [25, 50].

It is worth noting that efforts to influence the beliefs and attitudes of workers and thus motivate them to engage in safe work behaviours may fail if the environment is not supportive. The observed higher accident frequency for workers' with lower supportive perceptions could be remedied if management openly and convincingly demonstrates concern for workers' well-being and safety. This they could do by providing the right job equipment, job enrichment programmes, skill-training opportunities, visiting workplaces to alert workers of dangerous work practices, and explicitly expressing concern for their safety. Bonus and incentive schemes could be instituted as interventions to motivate work safety. Workers who respond positively could be openly rewarded and trained as frontline workers and supervisors to serve as models to motivate other workers [55, 56].

#### 4.2. Limitations

The major limitation of this research was the use of self-reported measures. Responses might be affected by intentional distortions and misinformation. To counter this threat, participants were promised anonymity and confidentiality. Self-reported measures have

however been commonly and successfully used in accident and safety analyses [3, 21, 57]. Besides, while epidemiologic reports have been found to be faulty, biased, and deficient because of poor documentation [58, 59] research reports have found self-reported accident rates to be closely related to documented accident rates. Notwithstanding the aforementioned limitations, the current study reveals the influential bearing of organizational climate as predictors of job satisfaction and determinants of safety performance in work environments. It thus adds to our understanding of the influence of organizational climate on workers' perceptions of safety and organizational behaviour.

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