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OWNERSHIP AND SUPPORT: BOOSTING PERFORMANCE AND WELL-BEING IN SAFETY

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ABSTRACT

Aim/Purpose	The aim of this study is to examine the role of psychological ownership for safety in boosting employee performance and the impact of Perceived Organizational Support for Safety (POSS) on workers' well-being, considering the psychological aspects associated with workplace safety and exploring the mediating effect of employees' commitment.
Background	It is widely recognized that promoting workplace safety goes beyond purely physical measures and must also consider the psychological aspects associated with safety management. However, while some studies have shown the

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	direct effect of POSS and Safety Ownership on safety outcomes, very few studies have explored the underlying mediating mechanism, as well as their impact on distal outcomes, such as well-being and performance.
Methodology	The cross-sectional study was conducted on a convenience sample of a metal mechanic enterprise's employees through an online self-assessment questionnaire.
Contribution	This study contributes to understanding the mechanisms through which psychological ownership for safety, organizational support for safety, and psychological factors related to safety collectively influence organizational outcomes.
Findings	Two indirect significant effects are described. The first is between POSS and well-being, and the second significant relation is between psychological ownership for safety and job performance. When employees perceive that their organization cares about safety, they will experience a stronger sense of commitment and, in turn, they will be more satisfied in the work context, and they will improve their job performance.
Recommendations for Practitioners	The findings may provide practical insights for organizations in developing effective strategies to promote performance and well-being while considering the psychological dimensions associated with safety.
Recommendations for Researchers	Researchers should take a transdisciplinary approach to enable the integration of knowledge and perspectives from different fields that are essential to understanding the full range of implications and applications of safety management.
Impact on Society	There is a relevant impact on society that derives from the potential decrease in workplace accidents. As workers experience stronger job satisfaction and better job performance, they would probably be less likely to incur accidents or errors. In addition, providing safe and healthy working conditions can lead to increased productivity and efficiency in the workplace.
Future Research	It could be interesting to investigate a different point of view on safety (e.g., top management or health and safety officers) and explore concerns about how to successfully communicate and transfer safety climate during remote working activities.
Keywords	safety climate, psychological ownership for safety, organizational support for safety, affective commitment, job performance, well-being

INTRODUCTION

In recent years, workplace safety has become a highly relevant topic for organizations, both from a legal and a human perspective. Efforts to ensure a safe and efficient work environment are increasingly focused on identifying factors that positively influence workplace safety (Cheung et al., 2021; Christian et al., 2009; Dadoo & Al-Samarraie, 2019). Furthermore, the global emergency caused by the COVID-19 pandemic has further highlighted the importance of promoting employee safety and well-being (Guidetti et al., 2022; Ingram et al., 2021; Saurin, 2021). In particular, the highly contagious nature of the virus has forced employers to implement various safety measures to protect their employees and minimize the risk of transmission in the workplace. These measures include social distancing, the use of Personal Protective Equipment (PPE), screening protocols, communication and training, flexible sick leave policies, vaccination programs, and ongoing monitoring and adaptation.

Additionally, organizations have adopted remote work to reduce the number of employees present in the workplace, thus minimizing the risk of exposure and transmission (Toscano & Zappalà, 2020).

However, it is widely recognized that promoting workplace safety goes beyond purely physical measures and must also consider the psychological aspects associated with safety (Galanti, 2021; Galanti & Cortini, 2019; S. Kim et al., 2020; Ming et al., 2015; Turner, 2019). In fact, these variables play a crucial role in shaping individuals' behavior and attitudes toward safety in the workplace. Consider, for example, employees' perception of risk (Kouabenan et al., 2015), their motivation to comply with safety protocols (Guidetti et al., 2022; X. Hu et al., 2020), and their willingness to report hazards or incidents (Hewitt & Chreim, 2015) – these are all aspects that could be influenced by psychological ownership-related beliefs. Therefore, understanding and addressing these psychological aspects are essential for fostering a culture of safety.

In the last two decades, two concepts have attracted researchers' attention in this context: psychological ownership for safety (Pierce et al., 2001) and perceived organizational support for safety (Hofmann & Morgeson, 1999). Psychological ownership for safety refers to the sense of belonging and responsibility that employees develop toward workplace safety. It encompasses feelings of control, accountability, and investment in safety procedures. On the other hand, organizational support for safety pertains to the support provided by organizations to ensure a safe work environment, including resources, training, communication, and management practices that prioritize safety.

Despite the importance of both concepts, research on the interaction between these variables remains limited (Hameed et al., 2019). In particular, while some studies have shown the direct effect of POSS and Safety Ownership on safety outcomes (Curcuruto & Griffin, 2018; J. Liu et al., 2012), very few studies have explored the underlying mediating mechanism, as well as their impact on distal outcomes, such as well-being and performance (Akhimien & Kadiri, 2022; T. Chen et al., 2021; Gu et al., 2022). For instance, individuals with a strong sense of psychological ownership for safety are more likely to engage in proactive safety behaviors (Curcuruto & Griffin, 2018; Wang et al., 2020), exhibit greater safety compliance, and actively contribute to safety initiatives. Similarly, when organizations provide robust support for safety, employees experience increased job satisfaction, reduced stress levels, and enhanced overall well-being (Bunner et al., 2021; S. Liu et al., 2021). Moreover, a recent study (Sartori et al., 2023) underlined that the perception of organizational support plays a key role in reducing turnover intention, creating a sense of obligation to return the favor, and leading to high commitment. Therefore, this study aims to examine the role of these two factors in employee performance and well-being, considering the psychological aspects associated with workplace safety. We want to fill a critical void in the existing literature by investigating the mediating roles of employees' affective commitment and safety climate in two distinct relationships. First, we aim to explore the mediating role of safety climate in the relationship between Perceived Organizational Support for Safety (POSS) and employee well-being. In fact, while some studies have previously explored the impact of perceived organizational support on job performance and well-being (Sartori et al., 2023), the role of safety climate as the mediator in this context remains underexplored. Understanding how organizational support is related to safety climate, and subsequently, to well-being, can provide practical insights for organizations to create a more supportive and safe work environment. Simultaneously, we seek to elucidate the mediating function of employees' affective commitment in the link between psychological ownership for safety and job performance. While prior research has examined the individual impacts of psychological ownership and job performance (Akhimien & Kadiri, 2022; T. Chen et al., 2021; Gu et al., 2022; Hameed et al., 2019), a comprehensive understanding of how affective commitment bridges the gap between these two constructs remain an uncharted territory. Affective commitment consists of an emotional attachment and identification with one's organization, and it is known to influence an employee's willingness to go above and beyond their job requirements. By delving into its mediating role, we aim to uncover the underlying mechanisms by which psychological ownership for safety, which pertains to an individual's sense of control and responsibility for safety in the workplace, influences job

performance. By investigating these relationships, we can gain valuable insights into how psychological ownership and organizational support can contribute to fostering a safer and healthier work environment. So, based on current knowledge, this study aims to contribute to understanding the mechanisms through which psychological ownership for safety, organizational support for safety, and psychological factors related to safety collectively influence organizational outcomes. Furthermore, the findings may provide practical insights and valuable information for organizations in developing effective strategies to promote workplace safety while considering the psychological dimensions associated with safety.

LITERATURE REVIEW

PERCEIVED ORGANIZATIONAL SUPPORT FOR SAFETY, SAFETY CLIMATE, AND WELL-BEING

An important proximal factor that influences workplace safety is the concept of safety climate (Zohar, 1980), a specific form of organizational climate based on the subjective evaluation of safety experience in the workplace. It constitutes a sort of guide to organizational behaviors and influences collective decisions, such as the adoption or not of protective measures, rules violations, and the respect or not of instructions for the use of specific safety equipment (Zohar, 2010). In other words, a positive safety climate is characterized by open communication, trust, and a shared commitment to safety. Research consistently demonstrates that organizations with a strong safety climate have higher levels of safety compliance among their employees (Barbaranelli et al., 2015; Kvalheim & Dahl, 2016), who are more likely to follow safety rules and procedures, actively report incidents and hazards, and engage in safety-related initiatives. Furthermore, a study by Kundu et al. (2016) emphasized the broader implications of safety climate beyond safety management boundaries, including well-being and performance outcomes.

Closely related to the safety climate, we can find the construct of Perceived Organizational Support for Safety (POSS). Generally, Organizational Support for Safety (OSS) refers to the resources, practices, and policies that organizations provide to ensure a safe work environment and support employees' safety-related needs (Tucker et al., 2008). It encompasses various components, including the allocation of safety resources, clear communication of safety guidelines, training programs, leadership commitment to safety, and the establishment of safety committees or teams. It plays a crucial role in promoting a culture of safety, as it provides employees with the necessary tools and guidance to prioritize and engage in safety practices (Bunner et al., 2021; Cheung & Zhang, 2020). Several studies have shown that organizations that provide strong support for safety experience can improve safety performance (Bunner et al., 2021; S. Liu et al., 2021) and reduce the occurrence of accidents and incidents in the workplace (Puah et al., 2016). However, in the realm of workplace safety, the concept of OSS transcends mere organizational policies and procedures. In fact, while conventional definitions often underscore the tangible measures of actual support, POSS is essential to delve deeper into the inherently subjective and intimately personal dimension. At its core, POSS embodies the distinct perceptions and experiences of employees within an organization. These perceptions are not solely shaped by overt safety provisions but are profoundly influenced by an employee's sense of belonging, trust, and alignment with the organization's safety values. As such, a more nuanced understanding of POSS must embrace the intricate interplay between an employee's cognitive appraisal and emotional connection with the safety culture, thus shedding light on the intricate tapestry of individual perspectives that collectively form the mosaic of organizational safety consciousness (Khan et al., 2018; Wong et al., 2021). A recent meta-analysis examined the effects of POSS on employees' safety behavior, confirming positive and strong effects (S. Liu et al., 2021). Results of the meta-analysis also provided a specific framework for POSS dividing it into supervisor and co-worker support. The broader theoretical perspective known as Organizational Support Theory (Eisenberger et al., 1986), postulates that receiving favorable treatment significantly enhances employees' perception of organi-

zational support. The source of the treatment can be individual or collective, but it would always embody the organization. Therefore, when employees receive favorable treatment from their supervisors or colleagues, they attribute it to the support provided by their overall work organization (Eisenberger et al., 2020). In this perspective, some studies (Clarke, 2013; Du & Zhao, 2011; Guidetti et al., 2022) demonstrated that safety leadership could promote a safe climate. In line with this assumption, we intend to confirm and expand this relationship, including both supervisor and colleague support. Thus, the first hypothesis is formulated as follows.

H1: POSS has a positive impact on the perceived safety climate.

POSS AND WELL-BEING

POSS is also strictly related to employees' perception of their organization's orientation toward workers' safety and well-being (Y.-J. Lee et al., 2014). Well-being is often represented as a multifaceted construct embracing physical, mental, and emotional dimensions, acting in a systemic way to affect individuals (Grawitch et al., 2006). In this study, according to Jaber and Al-Zoubi (2012), we adopt the construct of General Mental Health (Goldberg & Williams, 2000), as a measure of psychological distress. In the theoretical framework of Workplace Safety, several studies adopted this construct as a measure of job strain, psychological manifestation of stress, and predictor of accident frequency (Bridger et al., 2012), as well as a measure of occupational stress (W.-Q. Chen et al., 2009) and wellbeing (B. E. Hayes et al., 1998; Jain, 2021; Thomson et al., 2023). Moreover, according to Giorgi et al. (2014), measuring mental health appears useful for promoting healthy organizations and planning a complete intervention on well-being at work. This evidence suggests that, in promoting well-being, organizations are creating a key factor able to prevent stress and work-related accidents. Indeed, past studies confirmed that when employees can experience strong support for safety, they are more likely to increase their well-being (S. Liu et al., 2021; Shen et al., 2023). At the same time, some scholars investigated the opposite relation and defined that well-being can predict individual safety behavior (Fernandes et al., 2018). This perspective, suggests that an individual's overall sense of well-being, encompassing their mental and emotional state, can play a significant role in shaping how they engage in safety-related behavior. According to our literature review, there has been limited exploration of the effects of POSS on distal outcomes, such as mental health and well-being. This research void signifies a significant opportunity to bridge the existing gap in our understanding of how perceived organizational support and safety practices can contribute to reducing distress and promoting mental health and well-being. Thus, our second hypothesis is:

H2: Perceived psychological support for safety (POSS) has a positive impact on general well-being.

Workplace-related well-being can be predicted by several antecedents. From the literature, there is much evidence of predictors such as a sense of community, transformational leadership, safety climate, and positive human resource management (Boyd et al., 2018; Gruman & Budworth, 2022; Silla & Gamero, 2018; Suleman et al., 2021). Employees' overall well-being can be enhanced also by a positive safety climate, from a psychological, physical, and organizational dimension (Y. Chen et al., 2017; Tamakloe et al., 2022). We are interested in investigating the relationship between safety climate and employees' well-being in order to in-depth explore processes and mechanisms able to raise employees' well-being so that organizations would have more empirical support to create targeted interventions that not only enhance safety but also contribute to workers' holistic well-being. Such processes and mechanisms represent valuable insights for organizations to create safer and healthier work environments.

H3: Perceived safety climate has a positive impact on general well-being.

When talking about workplace safety and workers' well-being, it is evident that POSS and safety climate both can have a determinant role, but it is not yet clear whether these two dimensions can have

a synergistic effect on well-being. Existing literature, such as the work by Guidetti et al. (2022), suggests a connection between perceived safety climate, POSS, and well-being. It is plausible to hypothesize that perceived safety climate mediates the relationship between psychological factors and safety-related outcomes, as seen in studies like Zohar (2010) and Ghasemi et al. (2022). When we omit the mediating role of perceived safety climate, the direct link between POSS and well-being might lack a complete explanation. In such a case, the perceived safety climate can be seen as a catalyst, translating and amplifying organizational support provided into tangible enhancements in employees' overall well-being.

To deepen and comprehensively explain the relationship between these three constructs, we hypothesize that a positive safety climate can amplify the effects of POSS on well-being. This hypothesis is rooted in the notion that the organizational safety climate sets the stage for employees' experiences, shaping their perceptions of safety, support, and trust within the workplace. According to the above-mentioned literature, when individuals experience high levels of POSS, they are more likely to feel a sense of emotional and psychological well-being, which can positively influence their job satisfaction and motivation. However, what makes our hypothesis compelling is the belief that a positive safety climate can act as a catalyst, magnifying the impact of POSS; in other words, when employees perceive that their psychological well-being is not only valued but actively supported within the organizations, their overall well-being can be significantly boosted. So, the fourth hypothesis is formulated:

H4: Perceived psychological support for safety (POSS) has a positive impact on general well-being through the effect of perceived safety climate.

SAFETY OWNERSHIP, AFFECTIVE COMMITMENT AND PERFORMANCE

Several studies have investigated the link between safety climate and individual proactivity in safety issues (Curcuruto & Griffin, 2018; Curcuruto et al., 2019). According to these studies, organizations that demonstrate a commitment to safety can foster a sense of trust and psychological ownership among employees, encouraging proactivity in safety management. Improving psychological ownership of safety means fostering a sense of personal attachment, responsibility, and investment toward workplace safety (Curcuruto et al., 2019). Employees with a high level of psychological ownership for safety perceive themselves as active participants in ensuring a safe work environment (Galanti et al., 2021), taking ownership of their own safety and that of their colleagues.

Several factors can contribute to the development of safety ownership, both organizational and individual. From an organizational perspective, in addition to the role of organizational support for safety (already mentioned), a supportive safety climate, leadership behaviors that promote employee involvement, and opportunities for meaningful participation in safety-related decision-making, are all factors able to promote safety ownership. The relationship between organizational factors and workplace safety is in fact crucial for creating and maintaining a safe work environment. From an individual point of view, instead, a sense of autonomy, competence, and personal belief in the importance of safety also play a role in fostering psychological ownership for safety (Curcuruto et al., 2020). Several studies have shown that employees with a strong sense of psychological ownership for safety are more likely to engage in safety-related behaviors, due to the belief that their actions can make a difference in maintaining a safe work environment (Novieto, 2023; Y. Zhang et al., 2021; Z. Zhang et al., 2023). Both safety ownership and organizational commitment were interpreted and analyzed with different perspectives across recent studies. Psychological safety ownership has been a mediator impacting change-oriented citizenship behaviors (Curcuruto & Griffin, 2018) and it has been considered as an outcome derived from organizational support for safety through the mediation effect of safety citizenship behavior (Galanti et al., 2021). Regarding organizational commitment with a specific focus on safety and health studies, it has been framed both as a mediator impacting safety citizenship behavior (Curcuruto & Griffin, 2018) and as an outcome derived from the organizational support for safety via the collective dimension of organizational mindfulness (Galanti et al., 2021).

Organizational commitment can be described as the emotional attachment and identification with the organization, as well as with the organization's values and goals (Al-Jabari & Ghazzawi, 2019). Higher levels of commitment lead to increased motivation to contribute to the organization's goals and success, creating a positive context for safety behaviors (S. Liu et al., 2021). There is empirical evidence that highlights how psychological ownership for safety positively correlates with organizational commitment (Atatsi et al., 2021), providing the ground for the argument that a psychological connection to safety contributes to commitment.

As far as our study is concerned, we are interested in amplifying the role of psychological ownership as a proximal variable in safety behaviors. In other words, while psychological ownership is often studied as an outcome or mediator variable, we defined it as a predictor. By considering it as a predictor, we want to suggest that psychological ownership may have a direct impact on safety behaviors and other outcomes, opening several practical implications for interventions and strategies aimed at improving workplace safety and performance. Starting from this premise, the fifth hypothesis is formulated as follows:

H5: Psychological ownership for safety has a positive impact on organizational commitment.

Following this assumption, psychological ownership for safety as an affective and motivational cognitive process could be also an individual antecedent positively related to job performance. There is contrasting evidence in the literature about this relationship. A recent study explored the role of psychological safety on job performance, finding this relation nonsignificant (J. Y. Lee, 2022); on the other hand, a study by Atatsi et al. (2021) found that employees who felt a sense of ownership were more likely to have better job performance outcomes. Moreover, it has been found that psychological ownership has effects on organizational citizenship behaviors and those can indirectly contribute to better job performance (A. J. Kim & Chung, 2023). It can be hypothesized that employees experiencing a sense of psychological ownership, aligning their individual goals with those of the organization, are more likely to improve their job performance. Narrowing the predictor to a more individual dimension, there would be cognitive, emotional, and behavioral aspects that could guide specific behavior; thus the sixth hypothesis is as follows:

H6: Psychological ownership for safety has a positive impact on job performance.

Beyond the specific safety issue, there have been studies confirming how job performance can be positively affected by organizational commitment through the mediation of several dimensions: leadership style, perceived support, organizational culture, and organizational climate (Berberoglu, 2018; Ridwan et al., 2020; Sungu et al., 2019). Affective commitment could serve as a driving force to elevate employees' performance levels. Indeed, when employees are emotionally invested in their organization, they are more likely to channel energies, skills, and efforts toward accomplishing tasks in an effective and efficient way (Hendri, 2019). We aim to contribute to the literature surrounding the relationship between employees' internal commitments and their external contributions, which has the potential to affect both individual and collective success.

H7: Affective commitment toward the organization has a positive impact on job performance.

The feeling of responsibility for safety contributes to the creation of a psychologically safe environment, which in turn can lead to engaging in safe behaviors. We may wonder if the psychological ownership of safety can positively influence effective behaviors in organizations, useful in terms of organizational performance, thanks to the impact generated by the affective commitment as well. In this light, psychological ownership for safety might emerge as a pivotal factor able to shape an organization's safety culture and employees' behaviors, with the potential to drive organizational performance. So, we are hypothesizing a sort of cascade effect from the proximal factors to a more objective dimension, such as performance. When employees perceive themselves as strictly involved in organizational safety, their affective commitment goes beyond task-oriented performance and leads to an overall enhanced job performance

H8: Psychological ownership for safety has an impact on job performance through the effect of organizational commitment.

MATERIALS AND METHODS

SAMPLE AND DATA COLLECTION

The data were collected between September and December 2022, in a convenience sample of employees working in a leading multinational metal mechanic company in Italy. Convenience sampling was chosen because it provides efficient access to a specific group of employees within a particular organization. So, given the practical constraints of conducting research in a corporate setting, this choice allowed for relatively quick and cost-effective data collection. However, this sampling method has limitations, particularly in terms of generalizability and potential bias, which we will better explain when discussing results. The online survey was filled in voluntarily by 185 workers, which was administered on the Qualtrics platform and disseminated by management via corporate email. Of the 185 respondents, 154 were men. The ages of the participants ranged from 20 to 61 years, with an average age of 39.83 years ($SD=9.300$).

Of the sample, 70.3% were blue-collar workers, and 29.7% were administrative employees. There was also a majority with a high school diploma (80.5%), 3.2% with a bachelor's degree, and 13% with a master's degree. Only 6 (3.3%) participants had postgraduate education.

Ethics approval was not deemed necessary for this study, even though it involved human participants. This decision was based on the fact that the research did not involve any special procedures or treatments that could potentially cause stress or harm to the participants, and thus, no ethical concerns arose. The research conforms with the Declaration of Helsinki (World Medical Association, 2013). Participants were also informed about the processing of personal data and anonymity in compliance with EU regulation 2016/679.

MEASURES

Besides socio-demographic data (gender, age, education, tenure), the questionnaire included the measures described below. For each of these scales, a 5-point Likert scale (1 = strongly disagree, to 5 = strongly agree) was used. Except for the Safety Climate scale by Hahn and Murphy (2008), which we translated into Italian, the validated Italian version was used for all other scales adopted in this study.

Job performance (JP) was self-assessed using a 2-item scale proposed by Chirumbolo and Areni (2005). The first item was "In the last six months, your job performance was ..." (from 1 = low to 5 = high), while the second item was "I achieved all my job goals in the last six months" (from 1 = strongly disagree to 5 = strongly agree). Psychological ownership for safety (or safety ownership) was assessed using the Italian validation (Mariani et al., 2015) of Pierce et al.'s (1992) 4-item scale. An example of an item is: "I am personally engaged in the promotion of safety." POSS was measured with the 3-item scale proposed by Tucker et al. (2008). An example of an item is "The company is quick to respond to the safety concerns of their employees."

The Safety Climate was assessed using a 6-item scale adapted from Hahn and Murphy (2008), which is a shortened version of DeJoy et al.'s (2000) Safety Climate scale. The scale was initially translated into Italian, with a focus on preserving item meanings and cultural relevance. To validate the translations, we independently back-translated the Italian version into the original language. The Italian version of the Allen and Meyer (1990) organizational commitment scale was used to measure organizational commitment (Pierro et al., 1992). The scale consists of three dimensions: affective commitment (5 items, e.g., "I do not feel 'emotionally attached' to this organization"), normative commitment (5 items, e.g., "If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization"), and continuance commitment (5 items, e.g., "Right now, staying with my

organization is a matter of necessity as much as desire”), and it is based on the perception of costs, both economic and social, that would result from leaving the organization. According to the literature (Gabay-Mariani & Adam, 2020; Galanti et al., 2021; Sonarita et al., 2019), we introduced in our research model only the subscale “affective commitment.” By focusing exclusively on this subscale, we aimed to streamline our investigation and create a clear lens through which to examine its specific implications on safety management. Finally, we measured general well-being using the Italian version (Piccinelli et al., 1993) of the 12-item General Health Questionnaire scale (GHQ-12) (Goldberg & Hillier, 1979). The scale was originally designed as a screen for risk for common mental disorders but has also been used for a measure of positive mental health (Y. Hu et al., 2007) and minor psychological problems (Nordmo et al., 2020). Despite the debate on the factor structure of GHQ-12 present in the literature, the Italian version of the scale has shown satisfactory test-retest reliability (Piccinelli et al., 1993); an example of an item is “Felt capable of making decisions about things.”

RESULTS

DESCRIPTIVE STATISTICS AND CORRELATIONS

First of all, we assessed the psychometric properties of the scales before conducting the analyses. All scales used in the study satisfy the distributive characteristics in terms of normality, skewness, and kurtosis indices, allowing us to proceed with parametric analyses. We also verified the expected correlations between the constructs under investigation, all of which were statistically significant. Descriptive statistics, correlation, and Cronbach’s alpha for all variables examined in the study are presented in Table 1.

Table 1. Means, standard deviation (SD), internal consistencies (on the diagonal) and correlations among the variables

	M(SD)	1	2	3	4	5	6
1. Safety Ownership	3.77(1.02)	(.820)	.223**	.398**	.134	.375**	.328**
2. Job Performance	4.01(.82)		(.701)	.186*	.350**	.281**	.318**
3. POSS	3.87(1.05)			(.853)	.370**	.824**	.563**
4. GHQ-12	2.78(.48)				(.871)	.419**	.522**
5. Safety Climate	4.08(.84)					(.829)	.609**
6. Commitment	3.42(.73)						(0.83)

Note: * $p < 0.05$ (2-tailed); ** $p < 0.01$ (2-tailed); POSS: Perceived Organizational Support for Safety; M: mean SD: standard deviation; Cronbach Alpha

In order to verify our hypothesis, we performed two path analyses with the SPSS macro PROCESS (Version 3.5), using the A. F. Hayes (2013) model 4. The graphical representations of the two mediation models used to test our hypotheses are illustrated in Figures 1 and 2. As reported in Figure 1, POSS was significantly related to Safety Climate ($B = 0.66$; $p < 0.01$), thus confirming Hypothesis 1. POSS was not related to Well-being ($B = 0.03$; $p = 0.49$), disconfirming Hypothesis 2. Furthermore, Safety Climate was positively related to Well-being ($B = 0.22$; $p < 0.01$), thus confirming Hypothesis 3. Finally, POSS was significantly related to Well-being via Safety Climate ($B = 0.17$, $p < 0.001$), confirming Hypothesis 4.

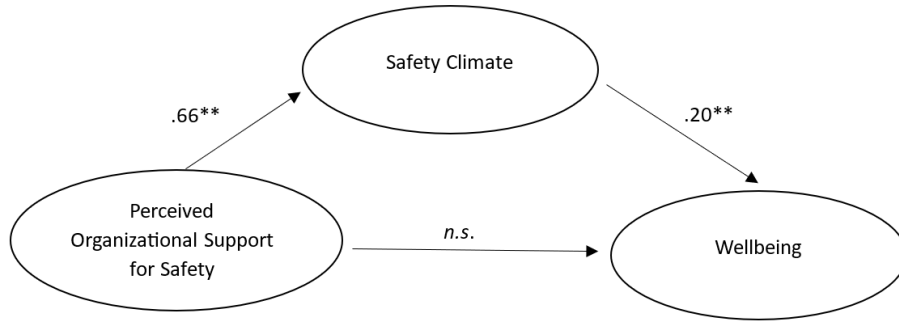


Figure 1. Path model – Perceived Organizational Support for Safety, Safety Climate, Wellbeing

As reported in Figure 2, Safety Ownership was significantly related to Affective Commitment toward the organization ($B = 0.23$; $p < 0.001$), thus confirming Hypothesis 5. Safety Ownership was not significantly related to Performance ($B = 0.10$; $p = 0.17$), disconfirming Hypothesis 6. Affective Commitment was significantly positively related to performance ($B = 0.35$; $p < 0.01$), confirming Hypothesis 7. Finally, Safety Ownership was significantly related to Performance via Affective Commitment ($B = 0.17$, $p < 0.001$), confirming Hypothesis 8.

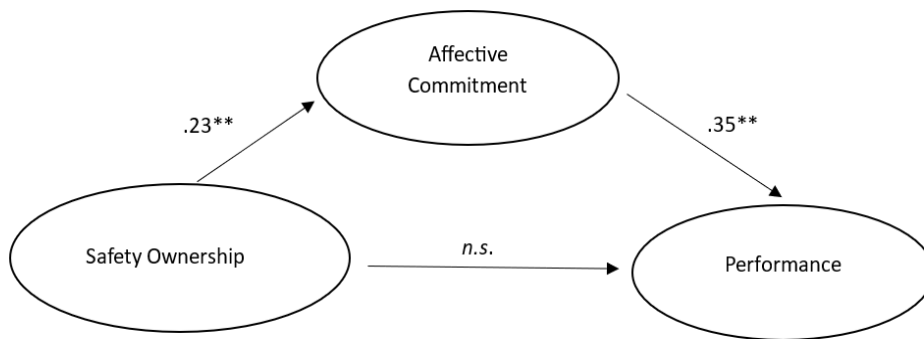


Figure 2. Path model – Safety Ownership, Affective Commitment, Job Performance

Tables 2 and 4 report the results observed in relation to the mediating effects (H4 and H8). Tables 3 and 5 report the path estimates of the two models tested. POSS turned out to be significantly and positively associated with well-being through the simple mediation of Safety Climate. Moreover, Safety Ownership turned out to be significantly and positively associated with Self-Perceived Performance through the simple mediation of affective commitment.

Table 2. Mediation Estimates 95% Confidence Interval of the first model

Mediation Estimates	B	BootSE	Z	p	BootLLCI	BootULCI
1. POSS -> Safety Climate	0.1352	0.0443	2.80	0.005	0.226	0.140
2. POSS -> Well-being	0.0358	0.0733	0.65	0.510	0.145	0.233
3. POSS -> Safety Climate -> Well-being	0.1710	0.1077	4.28	<.001	0.234	0.301

Note: B = Mediation Estimates; BootSE = Bootstrap Standard Error; Z = standardized Z-scores; p = p-value; BootLLCI (Bootstrap Inferior Limit of the Confidence Interval; BootULCI = bootstrap Upper Limit of the Confidence Interval)

Table 3. Path Estimates 95% Confidence Interval of the first model

Path Estimates	B	BootSE	Z	p	BootILLCI	BootULCI
1. POSS -> Safety Climate	0.6616	0.0388	17.043	<.001	0.58866	0.738
2. POSS -> Well-being	0.2044	0.0544	2.885	0.004	0.0659	0.350
3. POSS -> Safety Climate -> Well-being	0.0358	0.0544	0.658	.501	-0.0728	0.141

Note: B = Path Estimates; BootSE = Bootstrap Standard Error; Z = standardized Z-scores; p = p-value; BootILLCI (Bootstrap Inferior Limit of the Confidence Interval; BootULCI = bootstrap Upper Limit of the Confidence Interval)

Table 4. Mediation Estimates 95% Confidence Interval of the second model

Mediation Estimates	B	BootSE	Z	p	BootILLCI	BootULCI
1. Safety Ownership -> Affective Commitment	0.0817	0.0272	3.03	.0028	0.0339	0.140
2. Safety Ownership -> Performance	0.1003	0.0699	1.64	.101	- 0.0435	0.233
3. Safety Ownership -> Affective Commitment -> Performance	0.1820	0.0626	2.92	0.003	0.0556	0.301

Note: B = Mediation Estimates; BootSE = Bootstrap Standard Error; Z = standardized Z-scores; p= p-value; BootILLCI (Bootstrap Inferior Limit of the Confidence Interval; BootULCI = bootstrap Upper Limit of the Confidence Interval)

Table 5. Path Estimates 95% Confidence Interval of the second model

Path Estimates	B	BootSE	Z	p	BootILLCI	BootULCI
1. Safety Ownership -> Affective Commitment	0.233	0.0421	5.52	<.001	0.1477	0.314
2. Safety Ownership -> Performance	0.351	0.1106	3.17	0.002	0.1453	0.566
3. Safety Ownership -> Affective Commitment -> Performance	0.100	0.0717	1.40	0.162	-0.0728	0.141

Note: B = Path Estimates; BootSE = Bootstrap Standard Error; Z = standardized Z-scores; p= p value; BootILLCI (Bootstrap Inferior Limit of the Confidence Interval; BootULCI = bootstrap Upper Limit of the Confidence Interval)

DISCUSSION

This study addressed organizational safety from an individual perspective, analyzing the role of two antecedents of safety behaviors: the POSS and the Safety Ownership. The results of our study demonstrate that investing in these two aspects of safety management can have an impact on employee well-being and job performance. Regarding well-being, the study highlights an indirect significant link between POSS and well-being: a positive perception of organizational support related to safety management can foster a sense of psychological safety, where employees feel confident that

their well-being is prioritized. As a result, employees experience reduced stress and anxiety related to work-related risks and hazards.

Moreover, feeling safe and secure at work can lead to improved mental health, decreased absenteeism due to work-related stress, and overall higher job satisfaction. In addition, when employees perceive that their organization genuinely cares about their safety, it can strengthen their sense of loyalty and commitment to the organization, further contributing to their well-being. According to this last sentence, the second result of this study suggested that investing in proactivity toward safety could foster organizational commitment and, finally, have a positive impact on job performance. In fact, when employees perceive that their organization prioritizes safety and actively supports safety initiatives, it fosters a sense of trust and commitment. Furthermore, employees feel valued and cared for, which enhances their emotional attachment to the organization (Galanti et al., 2021). According to the literature, this increased organizational commitment can lead to higher levels of job satisfaction, motivation, and loyalty among employees (S. Liu et al., 2021).

Moreover, the concept of safety ownership plays a crucial role in driving proactivity towards safety. When employees take personal responsibility for safety and see themselves as active participants in creating a safe work environment, they are more likely to engage in safety-conscious behaviors. This proactive attitude towards safety not only reduces the likelihood of accidents and incidents but also contributes to a more efficient and productive work environment. So, by promoting a safety-oriented culture and encouraging employees to take ownership of safety, organizations can instill a sense of shared responsibility for each other's well-being. This collective commitment to safety creates a positive ripple effect, leading to better job performance. Furthermore, investing in safety proactivity can also result in tangible benefits for the organizations, such as reduced absenteeism, lower healthcare costs, and improved employee retention rates. So, when employees feel safe and supported, they are more likely to stay with the organization for the long term, reducing turnover and associated recruitment and training expenses.

Although the cross-sectional research design does not exclude the reverse correlation, our result suggests that the perception of organizational support related to safety can be a reason for a positive safety climate in an organization, which in turn can promote employees' well-being at work. In a similar way, this study suggests that the promotion of safety ownership can have a positive impact on employees' commitment to the organization, with positive effects in terms of job performance.

The key contribution of this study is the identification of a proximal variable, POSS, able to impact distal factors such as Safety Climate at different levels. At the first level, when employees perceive strong organizational support for safety, it enhances their trust and confidence in the organization's commitment to safety. This fosters a positive safety climate, as employees feel more secure in their work environment and are more likely to actively engage in work activities. At the second level, POSS often translates into the implementation of robust safety policies, procedures, and practices, which reinforces a positive safety climate. Finally, at the third level, supportive organizations encourage open communication channels where employees can freely report safety concerns and incidents without fear of retaliation. This open communication helps identify potential hazards and allows for timely corrective actions, contributing to a safer working environment.

Furthermore, a safety climate can be strategically used to improve employee well-being, which is fundamental for both personal and organizational success. Organizational factors have been linked to well-being in several studies. In particular, positive psychological states such as hope and employee resilience have been highlighted (Luthans, 2002; Luthans & Youssef, 2004, 2007), but also the positive organizational scholarship, which represents the study of what is positive and thriving in organizations (Cameron & Caza, 2004; Cameron et al., 2003). From this point of view, support can be considered as a positive dimension of the organization, capable of influencing employee well-being. The importance of Organization Support for Safety was highlighted in another study (Galanti et al., 2021), where it was considered as a predictor of two different individual variables – commitment and

safety ownership – assuming two different mediated relationships respectively by Organizational Mindfulness and Organizational Citizenship Behaviors for Safety. In our study, starting from the consideration that promoting and preserving employees' mental health has also a positive impact on organizational health in terms of performance and turnover (Page & Vella-Brodrick, 2009), we wanted to stress the growing recognition of the crucial role that mental well-being plays in the overall functioning and success of an organization.

Like any other research, however, this study has limitations. The first one refers to the sampling procedures used. In particular, the small sample size is a convenience sample, and it is therefore not representative of the population and is affected by some biases, such as a strong gender imbalance (154 men/180 respondents). This gender balance may limit the generalizability of our findings. In addition, data has been collected in one specific organization, which does not allow a generalization of results. The cross-sectional nature of the study represents another limit since it makes it impossible to explore potential causal effects between variables. Furthermore, some concerns related to the measures should be highlighted. We used English-validated scales to measure Safety Climate (Hahn & Murphy, 2008) and POSS (Tucker et al., 2008), which have not yet been validated in Italian. With regard to the measurement of job performance, it has been chosen as a self-report measurement; several authors have highlighted problems regarding measurements of this type (Sverke & Hellgren, 2002) due to the tendency of individuals to overestimate their own performance, which can be different from that provided by managers or even by colleagues (Ford & Noe, 1987). Future research could measure job performance through more objective indicators such as, for example, increases in sales profit, the number of customers, market share, and sales volume; these indicators were suggested by Antari and Widagda (2022), Yasa et al. (2016), and Muna et al. (2022).

Finally, another limitation of our study concerns the potential presence of common method bias, which might result from the fact that all data were gathered through self-reported surveys. Despite taking precautions during the design and execution of the study, such as ensuring clear instructions for participants, we recognize that this limitation could have impacted the obtained results.

Beyond these limits, however, there are also several positive outcomes from this study. As far as our results are concerned, some practical implications can be theorized both for practitioners and researchers. First, these results suggest the importance of promoting a safety-conscious culture, encouraging open communication about safety concerns, and actively involving employees in safety-related decision-making processes. Secondly, our results emphasize the need for training and education programs for employees and leaders, who should actively demonstrate their commitment to safety and their support to employees. To design effective strategies to promote workplace safety, practitioners should consider and invest in organizational support for safety because it is the key to boosting individual well-being when there is an effective risk perception. Indeed, results confirm a top-down process that from an organizational dimension, such as organizational support for safety, can have an impact on individual variables, such as personal health and well-being (Galanti et al., 2021). Regarding the researchers' perspective, they should explore and validate what are the most frequent or effective ways to promote a safe climate among organizational management. Given that researchers play a pivotal role in fostering a more robust synergy between practitioners and scientific inquiry, a practical avenue could involve developing targeted training and educational programs for health and safety officers. These initiatives would equip them with practical tools and competencies essential for enhancing safety protocols and communication strategies within construction settings. This proactive approach underscores how researchers can directly contribute to enhancing workplace safety practices through hands-on training initiatives tailored to practitioners' needs.

Moreover, there is a relevant impact on society that derives from the potential decrease in workplace accidents. As workers experience a stronger feeling of job satisfaction or they are high-performing employees, they will tend to engage in safer behavior and, as a result, they are less prone to accidents or mistakes (Colley et al., 2013; De Sio et al., 2021). The incidence of workplace accidents has a sig-

nificant impact on economic sustainability and the competitiveness of a country. In addition, providing safe and healthy working conditions can lead to increased productivity and efficiency in the workplace.

There is certainly space for future research on this topic. It could be interesting to investigate a different point of view on safety. For example, what are the perceptions and behaviors of top management or health and safety officers? Another possible perspective concerns how to successfully communicate a safe climate during remote working activities.

CONCLUSION

In conclusion, this study sheds some light on the critical role of POSS and safety ownership in fostering a positive safety climate and enhancing employees' well-being and job performance. By investing in these two dimensions of safety management, organizations can create a workplace culture that prioritizes employee safety, instills trust, and encourages proactivity towards safety. The findings underscore the importance of a top-down approach, where organizational commitment to safety positively influences individual perceptions and behaviors. The results suggest that promoting a safety-oriented culture and empowering employees to take ownership of safety have far-reaching implications. According to our results, a positive safety climate not only reduces the likelihood of workplace accidents but also contributes to improved mental health, reduced stress, and higher job satisfaction among employees. Additionally, organizations benefit from enhanced employee commitment and loyalty, leading to increased performance and decreased turnover. Then, organizations should prioritize safety as a core value and provide the necessary tools and competencies to effectively manage safety construction and communication procedures. In conclusion, this research highlights the significance of psychological dimensions associated with safety in shaping organizational outcomes. By continuing to explore and validate effective strategies for promoting a safe climate, researchers and practitioners can work together to create safer, more productive, and more fulfilling work environments for employees.

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