

Affective Commitment and Safety Climate: Mediating Role of Self-Efficacy

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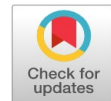
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Abstract: This study explores the mediating role of self-efficacy on the relationship between affective commitment and safety climate in the construction industry. This research is purely quantitative because all the data related to this research study was primary, and data is collected from employees working in the construction industry in Afghanistan through questionnaires. In this study, the researcher connected safety climate with affective commitment. More specifically, the researcher introduced self-efficacy as mediator for the relationships between affective commitment and safety climate. This study verified the relationship between affective commitment and safety climate with mediating role of self-efficacy. This study will fill the existing gap by investigating the mediating role of self-efficacy on the relationship between affective commitment and safety climate. This study will provide practical and empirical evidence from the construction industry working in Afghanistan. This research will be beneficial for all employees who are working in the different construction industries in Afghanistan.

Keywords: Commitment, Safety, Climate, Self-efficacy, Mediation analysis

Received: 19 September 2020 / Accepted: 02 December 2020 / Published: 28 December 2020



INTRODUCTION

Workplace safety has emerged as a prime concern for construction workers, since they are at high risk of accidents leading to serious injuries or even death. Workplace accidents yearn harmful ramifications for both the employee as well as the employer. For instance, research highlights that when employees face any sort of accident at their workplace then they tend to be less satisfied with their work which affects their overall performance (Parker, Axtell, & Turner, 2001; Pekrun, Lichtenfeld, Marsh, Murayama, & Goetz, 2017; Raditya, 2018). On the other hand, when employees perceive the organization climate safe then they tend to be more committed, satisfied and loyal to their work (Cooper & Phillips, 2004). Safety climate not only ensures long-term positive engagement of employees it also enhances their moral and renders profits for the organizations in long-run.

The present research aims at enhancing the knowledge regarding the antecedents of safety climate and how it can be improving through employee commitment level and self-efficacy can be used as a mechanism through which this relationship can be enriched (Bilal & Zia-ur Rehman, 2017; Marsh et al., 2019). Lack of proper safety measures could lead to fatal accidents, thus, firm safety practitioners and researchers have highlighted the significance and need of safety trainings which equip employees with the necessary skills required to handle such issues in work-settings (Pekrun et al., 2017).

It has been witnessed in the past literature that affective commitment is a great source of safety climate, several research studies found positive relation between variables. Previous research has investigated the safety climate in industrial sector and not many studies are conducted in construction sector. Despite of being a high risk sector, construction sector has largely been overlooked while discussing safety climate and its importance in literature. Research on safety climate and the factors that promote such

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climate is sparse; specifically, only few studies have investigated the safety climate and commitment relationship. This study aims at extending the research on safety climate and corresponding factors.

This study shows that self-efficacy is one of the most unexplored area in the field of engineering management and health management and call for further research that self-efficacy can be used as a mediating mechanism and the findings will contribute in different areas (Djourova, Rodriguez, & Lorente-Prieto, 2019; Kozak, 2018).

He further suggested incorporating the variable of self-efficacy, which mediates the relationship. In light of the above recommendations and directions, the current research is leading for the effect of affective commitment and safety climate actions through the intervening function of self-efficacy. until, so such study has been conducted in Afghanistan. So, this will be the first study in Afghani context to fill the gap and will open new direction for scholars as well for practitioners in constructions industry.

Problem statement

In past so many studies have been conducted on the relationship between affective commitment and safety climate. However, the mediating role of self-efficacy on the relationship between affective commitment and safety climate has been ignored and scant researcher conducted on this mechanism. Organization now a day facing serious issues related to safety climate, if there is no proper safety climate within the organization then it leads to different problems which are harmful for organization. Such as different injuries, fractures, death and employees loss the parts of body related to employee health. Therefore, the aim of this study is to explore the mediating role of self-efficacy on the relationship between affective commitment and safety climate in the construction industry.

Research questions

1. How does affective commitment influence safety climate?
2. What is the impact of affective commitment on self-efficacy?
3. What is the role of self-efficacy over safety climate?
4. How does self-efficacy influence the relationship between affective commitment and safety climate?

Research objectives

The research objectives of this study are to analyze:

1. The relationship between affective commitment and safety climate.
2. The relationship between affective commitment and self-efficacy.
3. The relationship between self-efficacy and safety climate.
4. The mediating role of self-efficacy between affective commitment and safety climate.

Significance of the study

Construction industry supposed to play an important role for the development of the society. There are two types of projects short term projects and long-term projects i.e., short-term projects completes in three months to one year, while on the other hand long term projects completes in two to five years. The existing study enhance the importance of affective commitment, safety climate and self-efficacy. This study will focus on the effectiveness of affective commitment on safety climate through their dimension and to find the level of self-efficacy as it plays the role of mediator.

This study will fill the existing gap by investigating the mediating role of self-efficacy on the relationship between affective commitment and safety climate. This study will provide practical and empirical evidence from construction industry working in Afghanistan. The findings of this research will be beneficial for all employees who working in different construction industry in Afghanistan. This study will build and open new discussion for scholar in future and this study will also add novelty in literature.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Affective commitment and safety climate

Affective commitment addresses the "level of faithfulness an individual has for an association". It accentuates an individual's recognizable proof and contribution in the association (Mearns, Hope, Ford, & Tetrick, 2010). Geisler, Berthelsen, and Muhonen (2019) focused on what he named the 'side-bet-hypothesis', which endeavored to clarify the cycle by which representatives connect themselves to associations through speculations like time, exertion and prizes. These ventures, in any case, have costs which lessen somewhat a worker's opportunity in their future action.

In light of prior research, and the theoretical structure of the work requests assets model the current examination explores how two novel work ecological elements, security environment and saw nature of work could foresee pointers of maintenance among social specialists: work commitment, work fulfillment, and hierarchical responsibility (Geisler et al., 2019). At the point when representatives feel great and fulfill then they become more dedicated to their association and they feel that association have great environment where they can remain for long haul, a vital for fabricate authenticity is the limit of measures to get differentially what they should tap (Baumgärtner, Dwertmann, Boehm, & Bruch, 2015). A couple of conflicts contend for the eccentricity of to the affiliation, successful responsibility director, and the work gathering.

At the point when people inside an association accept they have the right stuff and information required, it builds their self-appreciation adequacy (Sitzmann, Ely, Brown, & Bauer, 2010). Though studies have investigated the ramifications of commitment on authoritative results, a striking perception is that couple of studies have connected affective commitment with security execution or potentially wellbeing environment. At whatever point a connection is found, as a rule this was not the focal point of the paper. The main investigation revealing the presence of a constructive outcome of affective responsibility on mishaps was by Farh, Hackett, and Liang (2007). Parker et al. (2001) was the primary examination whose attention was on the part of authoritative responsibility in molding security consistence:

H1: There is a relationship between affective commitment and safety climate.

Affective commitment and self-efficacy

Self-efficacy is the conviction we have in our own capacities, explicitly our capacity to address the difficulties in front of us and complete an undertaking effectively (Arens et al., 2017). General self-efficacy alludes to our general faith in our capacity to succeed, yet there are a lot more explicit types of self-efficacy too (e.g., scholastic, nurturing, sports). Sundborg (2019) noted obligation to change results from a feeling of availability that is Demonstrated through asset and limit building (for example preparing and schooling) just as the executives support. Taking note of that commitment goes before and predicts conduct change, specialists have attempted to comprehend the mentalities and purposefulness caught by this build (Hakanen, Ropponen, Schaufeli, & De Witte, 2019).

Gillen, Baltz, Gassel, Kirsch, and Vaccaro (2002) proposed a three-segment model (TCM) of obligation to change that incorporates affective responsibility, continuation responsibility and regularizing responsibility Normative and duration responsibility will in general address consistence and the commitment to submit, though affective responsibility addresses a craving and eagerness for change. As Meyer, Stanley, Herscovitch, and Topolnytsky (2002) noted when people show affective responsibility, they will do an amazing job to guarantee the change is fruitful. Affective responsibility has been concentrated as an indicator, go between, and a result variable (Brown & Holmes, 1986).

Consequently, this investigation assumed that there are altogether sure relationships between's self-efficacy and maintenance responsibility. Lingard, Cooke, and Blismas (2009) exactly found from an example investigation of deals people that there are fundamentally sure connections self-efficacy and selling exertion. It infers that there are altogether sure relationships between's self-efficacy and exertion responsibility:

H2: There is relationship between affective commitment and self-efficacy.

Self-efficacy and safety climate

Safety climate is a build that alludes to authoritative climate regarding the degree the representatives see that hierarchical arrangements, just as the executives practices and methods, focus on and guarantee the insurance of their mental wellbeing and safety (Dembe, Erickson, & Delbos, 2004). For instance, H.-T. Huang, Tsai, and Wang (2019) characterized climate as impression of the occasions, practices, and strategies, just as the sort of practices that get compensated, upheld, and expected in a specific hierarchical setting. This incorporates the conduct schedules (i.e., practices and methodology) just as the awards of the setting.

Chen and Chen (2014) directed investigation on Pilot safety conduct are seen as a basic determinant of aircraft safety execution, and hence it is essential to recognize the components which may improve such practices. This investigation receives an incorporated point of view and thinks about three forerunners of this conduct, including hierarchical, gathering and individual elements. In particular, this exploration all the while analyzes the impacts of pilots' view of Safety Management System (SMS) rehearses, armada directors' ethical quality administration and pilots' self-efficacy on flight groups' safety practices through the intervention of safety inspiration.

As per Maddux and Galinsky (2009), safety climate could be seen to react a particular and quantifiable mental climate that gives a persuasive predecessor to key components of safe conduct: (a) determinants of safe execution (for example safety information and safety inspiration); (b) safe execution (for example following safety conventions); and (c) safe results (for example event or non-event of wounds):H3: There is relationship between self-efficacy and safety climate.

Mediating role of self-efficacy between affective commitment and safety climate

Study by Kivimäki, Kalimo, and Salminen (1995) tried the presence of different intercession impacts between mental climate and safety results, including safety conduct (i.e., consistence and investment). In the meta-examination the creator contemplated both safety climate, which should be affected by mental climate, and authoritative responsibility, which should intercede the connection among safety and mental climates and safety execution.

Two ongoing papers Ford and Tetrick (2011), Mearns et al. (2010), which concentrated individually the impacts of interest in labor force wellbeing and the relations among word related dangers, mentalities, and safety execution, detailed a positive connection between safety climate and both authoritative responsibility and safety conduct (either safety consistence or safety cooperation). Self-efficacy is an all around contemplated develop, both by its own doing, and as it identifies with obligation to change. Armenakis, Brown, and Mehta (2011) contended that having faith in one's capacity to complete a change is a significant advance in the change cycle.

At the point when people inside an association accept they have the right stuff and information required, it builds their self-appreciation efficacy Sitzmann et al. (2010), and they are bound to help the change (Solomons & Spross, 2011). Notwithstanding, in one of the solitary investigations straightforwardly investigating obligation to TIC Griffiths, Royse, Culver, Piescher, and Zhang (2017), discovered impression of authoritative responsibility was anticipated by help from pioneers and friends (chief help), yet not without anyone else efficacy:

H3: Self-efficacy will mediate the relationship between affective commitment and safety climate.

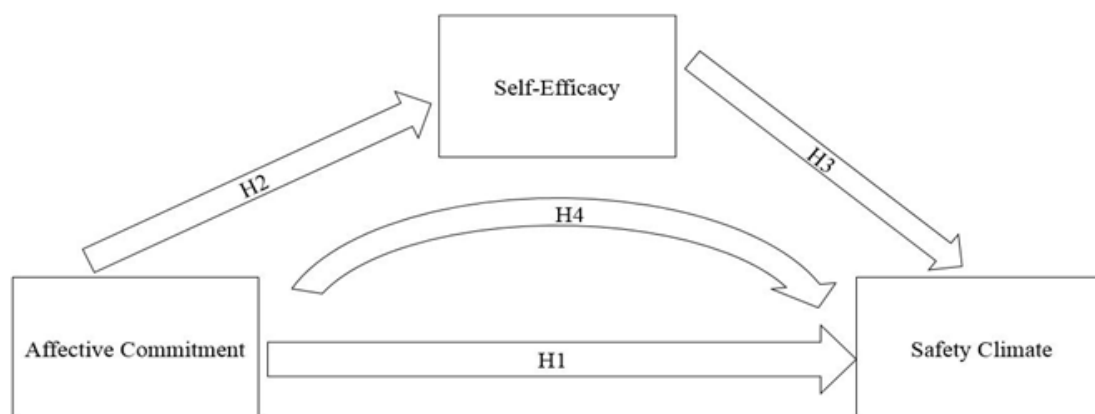


Figure 1. Conceptual framework

RESEARCH METHODOLOGY

This research is purely quantitative in nature because all the data related to this research study was primary data and through questionnaires data collected from different employees who working in construction industry in Afghanistan. Gillen et al. (2002) study also use the same style and this study was also in construction industry.

The unit of analysis for this study was employees who working in construction industry in Afghanistan. Reason behind this sector are all safety related study in past mostly has been conducted in construction sectors in different countries.

Time horizon for the study was simple cross-sectional in nature, due to shortage of time.

This study finds out descriptive statics, Alpha reliability and mean value of each variable analysis was found through SPSS.

Population and sampling

Those employees who working in construction industry in Afghanistan were the population of the study. There are more than 1500 construction industry working in Afghanistan our targeted population were only 25 construction industry.

Sampling technique

For the current study the selected sector for investigation are scattered in the populated construction industry. It is not very easy to obtain accurate data from respondents of this sector due to its busy field work schedule. Thats why for the sake of convenient and easily accessible to the respondents the convenience sampling technique was applied for the study.

Measurement and instrumentation

To measure Affective commitment eight items developed by (Meyer & Allen, 1991) were used. Self-efficacy was measured by a 10-items scale developed by (Soraperra, Savadori, Mittone, Fraccaroli, et al., 2015).

Safety climate was measured seven items scale developed by Zohar (1980) were used.

DATA ANALYSIS AND RESULTS

Demographic statistics

The results show that more than 50% of the respondents in the age of group of 20-29, while 23% were 30-39 years and remaining were above 40 years. More than 27% respondents have 12 years of education 69% have bachelor degree and 4% respondents is employed having Master as the highest qualification.

Results highlight that 0-5 years experience of the respondents were 163 in numbers with 54%, 5-10 years of experience participants were 65 with 22%, 10-15 years of experience were 15 in numbers with 5%,

15-20 years were 33 with 11%, and 21 years and above of experience were 24 in numbers with 8%.

Reliability analysis

The results of the reliability analysis revealed that all variables included in this study are reliable. The value of the reliability is above the standard i.e. 0.70 (Cronbach, 1951).

Table 1: Reliability statistics

Variable	Cronbach's Alpha	N of Items	Remark
Affective Commitment	.752	8	Reliable
Self-Efficacy	.711	10	Reliable
Safety Climate	.719	7	Reliable

Correlations

After confirming the data is normality distributed, this time the scholar checks how the variables are correlated with. According to the correlation matrix, all variables of the model of analysis was positively and significantly associated with each other (AC-SE ($r = .215; p < .01$)/AC- SC ($r = .374; p < .01$)/SC-SE ($r = .325; p < .01$)).

Table 2: Reliability statistics

V	Affective Commitment	Self-Efficacy	Safety Climate
Affective Commitment		.	
Self-Efficacy	.215		
Safety Climate	.374	.325	

Testing of hypotheses

H1 to evaluate whether affective commitment (AC) has a significantly impact on safety climate (SC). The results show that affective commitment (AC) has a significantly impact on safety climate (SC). ($\beta = 0.274, t = 4.917, p < .001$).

H2 indicates that whether affective commitment (AC) has positively impact on self-efficacy (SE). the results show that affective commitment has a positively associated with self-efficacy (SE). ($\beta = 0.215, t = 3.797, p < .001$).

H3 indicates that affective commitment (AC) has positively impact on self-efficacy (SE). the results show that affective commitment has a positively associated with (SE). ($\beta = 0.325, t = 5.927, p < .001$). It is projected that the variable of self-efficacy mediates between the affective commitment and safety climate.

The indirect effects are specified and also examined the total and direct effects of the predictor or criterion variable in presence of the mediating variable.H4: self-efficacy (SE) mediates between affective commitment (AC) and safety climate (SC).

AC > SE > SC >, ($\beta = 0.279, t = 5.086, p < .001$).it show that self-efficacy (SE) play mediating role between affective commitment (AC) and safety climate (SC). the detailed explanation of the variable revealed in the following table.

Table 3: Testing hypotheses

	Std Beta	Std Err	t-Value	Decision	95% LL	95% UL
H1: AC > SC	.274	.038	4.917	Supported	.114	.267
H2: AC > SE	.215	.047	3.797	Supported	.086	.272
H3:SE > SC	.325	.046	5.927	Supported	.181	.361
H3:AC > SE > SC	.279	.046	5.086	Supported	.143	.323

DISCUSSION

In this study, the researcher connected safety climate with affective commitment. More specifically, the researcher introduced self-efficacy as mediators for the relationships between affective commitment

and safety climate.

These results indicate to confirm our first, second and third hypotheses, foreseeing that Affective commitment is significantly and positively related with self-efficacy, and safety climate, as well as self-efficacy with safety climate. The study suggests that the affective commitment is an important factor to promote employees self-efficacy and safety climate. In addition to these first results, our fourth hypothesis proposes a mediational effect of Self-efficacy in the relation between affective commitment and safety climate.

To analyses this hypothesis, we have followed [Brooks, Wallace, and Williams \(2006\)](#) linear regression method, and accordingly, three regression equations were tested: (first step) the predictor variable should be affected by the dependent variable (SC); (second step) the predictor variable (AC) should affect the mediator variable (SE); (third step) the mediator variable should affect the dependent variable. Steady with the researcher influences, affective commitment was positively connected to safety climate, which was in line with previous studies ([C.-C. Huang, You, & Tsai, 2012](#)) their study shows that affective commitment is a strong predictor of safety climate. The outcomes maintenance the conception that safety climate is a forebear variable of affective commitment, which prolongs the current literature on affective commitment and safety climate ([Brooks et al., 2006](#); [Griffiths et al., 2017](#)). Consequently, the second hypothesis of the current study was related to association of affective commitment and self-efficacy. The result shows a positive impact of affective commitment over self-efficacy. The positive relationship between affective commitment and self-efficacy to change is well-documented in the literature ([Hofmann, Morgeson, & Gerras, 2003](#)).

[Katz-Navon, Naveh, and Stern \(2007\)](#) who prioritized safety as a treatment error planation, we suggest that safety climate as self-efcacy is an antecedent. The prediction that self-efficacy mediates the relationship between affective commitment and safety climate was also supported. It also extends prior studies that place safety climate as a direct antecedent variable of affective commitment ([Soraperra et al., 2015](#)).

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The existing research study has a few delimitations in data collection process and methodology as well, which enable the opportunities for researcher and scholars for future investigation and validation of the prescribed model. Some of these are followers:

Data was collected from employees who working in construction industry in Afghanistan due shortage of time the E-mail responses was very poor collecting questionnaire. Therefore, most of the data was collected in written form and one on one meetings, conducting several visits of targeted audience as the majority of the project staff was busy on their routine field visits. The future research can consider applying the following suggestion. A comprehensive items scale is modified for variables i.e. affective commitment, safety climate and self-efficacy.

This study also has so many future directions such as normative commitment, continuous commitment can be used as independent variables. Selecting other services sectors such as telecommunications companies or pharmaceutical industries for more informative results.

CONCLUSION

This study discussed about a model between affective commitment impact on safety climate with mediating role of self-efficacy for which then through literature four hypotheses were generated to answer all of these designed questions like in first hypotheses of the study was examine the impact of affective commitment on safety climate.

After performing liner regression, result revealed a positive and significant impact of affective commitment on safety climate. While the second hypotheses it is indicates a positive and significant influence of the affective commitment on self-efficacy. And while the third hypothesis also determine and result show the significant and positive association of self-efficacy on safety climate.

The last hypothesis of the mediating role of self-efficacy in between affective commitment and safety climate have determined and the result show that indirect association of affective commitment and safety

climate through self-efficacy the results show the significant beta value both in direct and indirect effect that concludes as partial mediation. Now according to hypothesis, the impact of affective commitment on self-efficacy which is hence proved now that in organization if affective commitment promotes so it will definitely increase efficacy level of employees to work with full effort.

And if safety climate measures have completely defined its concept in organization then it would increase better working environments as well while the employees will then work in better safe area on behalf of which they would be committed with their organization as well. The employees' efficacy would also increase because of their commitment with their organization as a result of which the organization can be able to complete with the best one by enhancing their technology and safety as well.

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