

Influencing Factors of Construction Workers' Safety Behavior

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1 Research background

The construction industry always plays a pivotal role in the economic development of any country or region in the world (Sekar et al 2021). As one of the five pillar industries driving my country's economic development, the annual total output value of the construction industry continues to rise. Table 1. 1 is the summary of the output value of my country's construction industry in the past ten years. Statistics show that the total output of construction has increased from 96.31 in 2010. 1.3 billion yuan, rising to 2,484,450,000 yuan in 2019. 7.7 billion yuan; the proportion of the added value of the construction industry in GDP also showed an increasing trend year by year, and in 2019 the proportion of the added value of the construction industry in GDP reached 7.16%, the highest level in the past ten years; the proportion of construction industry employees in the national employment has been above 5% in the past ten years, and it has exceeded 7% in the past five years. The changes in the data in the table reflect the important position and development history of the construction industry, not only reflected in the increase in the proportion of the added value of the construction industry in the total GDP, but also in the proportion of the number of employees in the construction industry in the national employed population, which has made great contributions to preventing employment and improving people's living standards.

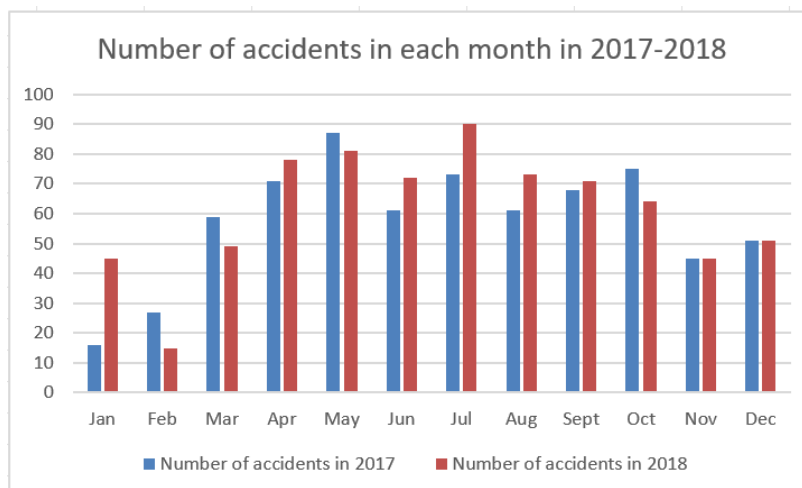
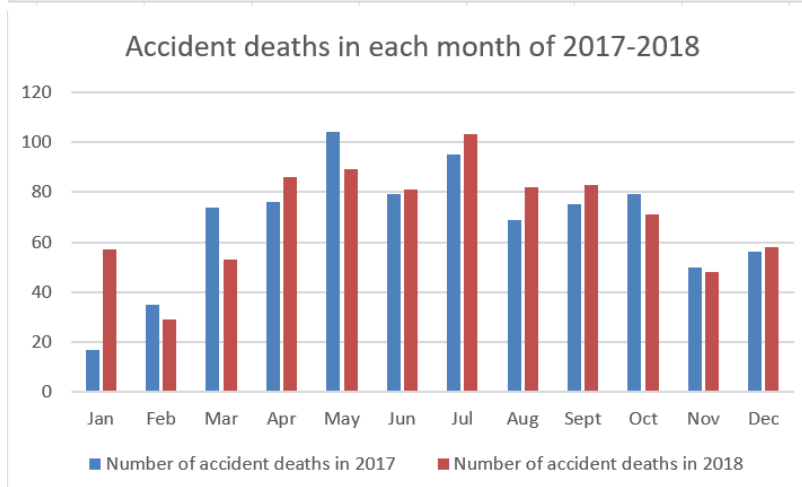
In order to promote the upgrading and development of the construction industry, the country has made a decision to strengthen the construction of new infrastructure and new urbanization, and implement policies according to the city, which will help the balanced and healthy development of the real estate market and the upgrading of the construction industry.

age	Total output value of construction industry (100 million yuan)	added value of construction industry (100 million yuan)	GDP (one billion yuan)	proportion (%)	Construction industry employees (ten thousand people)	Nationwide employed personnel (ten thousand people)	proportion (%)
2010	96031.13	27259.3	412119.3	6.61	4160.44	76105	5.47
2011	116463.32	32926.5	487940.2	6.75	3852.47	76420	5.04
2012	137217.86	36896.1	538580	6.85	4267.24	76704	5.56
2013	160366.06	40896.8	592963.2	6.9	4528.36	76977	5.88
2014	176713.42	45401.7	643563.1	7.05	4536.97	77253	5.87
2015	180757.47	47761.3	688858.2	6.93	5093.67	77451	6.58
2016	193566.78	51498.9	746395.1	6.9	5184.5	77603	6.68
2017	213943.56	57905	832035.9	6.96	5529.63	77640	7.12
2018	225816.86	65493	919281.1	7.12	5305.23	77586	6.84
2019	248445.77	70904.3	990865.1	7.16	5427.37	77471	7.00

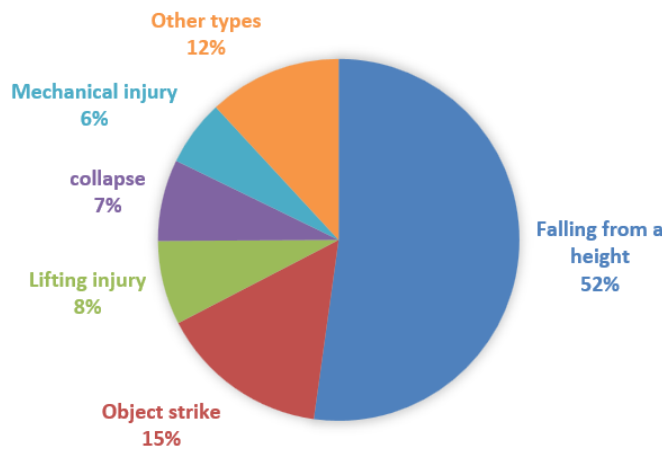
Source: Data compiled from the website of the National Bureau of Statistics

Through the above data, it can be noticed that the construction industry is developing rapidly, but the safety accidents it brings cannot be ignored.

Some countries even include the construction industry as a high-risk industry. In my country, the construction industry has the characteristics of long construction period, various types, harsh conditions, and uneven quality of personnel, so safety accidents may occur throughout the construction process, and the number of safety accidents has increased in recent years. The frequency is also getting faster and faster. The General Office of the Ministry of Housing and Urban-Rural Development's "Notice on the 2018 Housing and Municipal Engineering Production Safety Accidents and Construction Safety Special Control Actions" (hereinafter referred to as the "Notice") pointed out that in 2018, there were a total of 734 safety accidents such as municipal road collapses, falls from heights, fires and electric shocks, resulting in a total of 840 deaths. Compared with 2017, the two have increased by 42 cases and 33 people respectively, a year-on-year increase of 6.1% and 4.1%. As shown below. With the increase in the number of accidents and death toll, relevant government departments and construction companies have taken effective measures to face this problem, but such problems still occur every year. It can be seen that solving construction safety accidents in our country is still imminent.



IN 2018, THE PROPORTION OF NATIONAL HOUSING
MUNICIPAL ENGINEERING PRODUCTION SAFETY
ACCIDENTS



The "Notice" shows that in 2018, the national housing and municipal engineering production safety accidents are divided according to the type as shown in the figure. From the analysis of the causative factors of safety accidents, most of these accidents are caused by unsafe behaviors of people, passive state of objects, bad environment and improper management. Human unsafe behavior is the most significant among these factors. Many scholars have paid attention to the fact that people's unsafe behaviors come from people's cognition, safety education, corporate culture construction, and psychological capital. For example, Ye Gui, Zhang Wei, Liu Shunji, and Zhan Zijian [Ye Gui, Li Jing, Duan Shuailiang. 2016, Zhang Wei 2020, Liu Shunji 2019, Zhan Zijian 2021] found that safety cognition, safety education, corporate culture construction, and psychological capital have an impact on construction workers' unsafe behaviors from the mechanism of unsafe behaviors of construction workers. significantly. Therefore, starting from the root causes of unsafe behaviors, it is related to the differences in cognition of safety among construction workers, differences in safety education, construction of construction safety management culture, and psychological differences in the process of building construction. In order to clarify the different mechanisms of unsafe behaviors, and provide effective reference suggestions for improving the status of building safety management and improving the level of safety management.

Therefore, this study aims to explore the correlation between respondents' safety education, corporate culture construction, psychological capital and construction workers' safety behavior.

1.1 Problem statement

In order to improve the safety management problems of construction enterprises, reduce the frequency of safety accidents and improve safety performance, scholars have conducted research on the root causes of accidents. The process of accidents is complex. To do a good job in accident prevention requires a very comprehensive and systematic understanding of this complex process. Heinrich first proposed the accident causal chain theory [Heinrich H W. 1931], pointing out that the unsafe behavior or state of people or things affected by environmental factors or human defects will lead to accidents. It can be seen from the above theories that in safety

management, the human factor is inevitable, let alone avoidable. Compared with the improvement of the unsafe state of things, the reduction of human unsafe behavior is the focus of safety management research.

Although the government and enterprise safety managers have repeatedly emphasized safety issues during the construction process, on the one hand, most of the construction workers are migrant workers from remote areas with low education levels and have not received formal and systematic professional training, resulting in insufficient safety awareness. On the other hand, when a safety accident does not happen to them, most of the construction workers have a fluke mentality, do not take safety production requirements to heart, and hold a perfunctory attitude when conducting safety training. In the process of construction and operation, he is bold but careless, trying to save trouble and operate regardless of the consequences. For example, not wearing a safety helmet or fastening a safety rope for the convenience of movement, and illegal operations such as placing an electric welding machine on the steel bar will lead to serious safety accidents.

Due to the low entry threshold for construction workers in the construction industry, most workers have an education level of primary school or junior high school and have received less safety education. Therefore, their construction safety awareness is generally weak, and there are also some bad construction habits. At present, more than 95% of front-line production workers in the construction industry are migrant workers, so construction workers, mainly migrant workers, have become the most direct victims of safety production accidents in construction projects [Tang Guixiang. 2016]. The "Opinions of the General Office of the State Council on Promoting the Sustainable and Healthy Development of the Construction Industry" issued by the State Council in 2017 pointed out that it is necessary to promote the transformation of migrant workers in the construction industry into skilled workers, establish and improve a full-coverage, multi-level, and regular safety production training system, and improve the safety quality of employees and the intrinsic safety level of all parties. (Zhang Wei 2020) In addition, domestic and foreign researchers and industry departments have begun to initially explore the research work on the construction of safety culture in construction enterprises.

The construction of enterprise safety culture is closely related to safety production management activities, which plays a key role in promoting. As safety guardians, construction management personnel play a pivotal role in the construction of safety culture in construction enterprises. The level of their work quality directly affects construction safety and efficiency, which is the safety guarantee of construction operation. Cultivating the safety awareness and sense of responsibility of managers is the core competitiveness of construction enterprises. However, with the rapid development of the construction industry, the large mobility of personnel, complex procedures, reduced intervals, and harsh engineering environments. Building diversification and unpredictability. Due to these series of characteristics, the construction of safety culture in engineering projects is facing more and more severe tests. (Liu Shunji 2019) Finally, the mental health problems of employees in construction enterprises are mainly manifested in negative emotions such as anxiety, tension, depression, paranoia, and general mental illness. The mental health problems of employees in construction enterprises have a direct impact on the safe production of the company. If the psychological problems of employees are ignored, it will not

only reduce their work ability, but also keep employees in negative emotions of depression and depression for a long time, which will easily lead to safety risks. (Shanshan Yan 2019)

Therefore, how to evaluate the safety behavior of construction workers from the perspective of psychological state, safety education, and corporate culture construction has certain academic value and application value.

1.2 Objectives and significance of this study

In order to ensure the safety behavior of construction workers in the construction industry in Guangdong Province in China.

Quantitative research is carried out on the status of safety culture construction in construction enterprises, safety education, and the impact of individual psychological states on the behavioral safety of construction workers. Through the study of safety education on the habitual safety behavior of construction workers, the content of construction company safety culture on the safety behavior of construction workers, and the impact of psychological capital on the safety behavior of construction workers, no one in my country has combined safety education, construction company culture and psychological capital to study its impact on the safety behavior of construction workers.

The safety behavior of construction workers in the construction industry plays a very important role in reducing the occurrence of safety accidents. According to the relationship between stakeholders at different levels, the company's safety culture, safety education differences, and psychological capital levels have an effect on the safety behavior of construction workers. Corresponding intervention countermeasures and programs are proposed to achieve the purpose of strengthening the safety behavior of construction workers.

1) From the enterprise level, study the human environment of construction construction—safety atmosphere, formulate highly targeted and effective safety education measures, provide tools for measuring the level of psychological capital and unsafe behavior of construction workers, build a psychological capital-based safety management system that can carry out extended training in advance, psychological counseling can timely correct deviations, grasp and deal with factors that affect the safety behavior of construction workers, discover potential dangers and hidden dangers in advance, avoid accidents, improve the safety management level of construction enterprises, and provide reference for construction enterprises to take effective measures to continuously improve the safety behavior of construction personnel.

2) From the perspective of employees, construction personnel have an in-depth understanding of the safety atmosphere of the company they are in, the psychological capital level of construction personnel, and the willingness of construction personnel to improve their own safety behaviors. Managers can clarify the key links and weak links in the construction management of the unit, understand the safety status of the unit, and carry out targeted safety production activities.

In short, safe production is the most important topic for the protection of the life rights and interests of construction workers. It is believed that this topic and the research results can play a

certain practical guiding role in improving the safety management level of construction enterprises.

2 Literature review

This chapter presents some relevant literature and models related to this topic. This chapter will be divided into several sub-themes, namely: behavioral safety management in the construction industry, safety education, corporate culture construction atmosphere, psychological capital and other issues.

2.1 Safety Management in Construction Industry

The construction industry itself is a high-risk industry. In many places, irregular construction and inadequate safety protection have existed for a long time. Frequent production accidents threaten the safety of producers. For the construction industry, safety management is particularly important. Safety management in the project can not only effectively protect the lives and safety of workers, overcome various short-term profit-seeking behaviors, but also ensure the smooth progress of construction. However, due to the particularity of construction projects and the particularity of the working environment, it is relatively difficult and complicated to carry out construction safety management. In order to implement safety management, a variety of measures must be taken to effectively control and manage the behavior of people, objects, and the environment in production, so as to ensure the smooth progress of the project and protect the physical and mental safety of employees. (Wang Kai, Chai Ronghui, Zhu Ying, Chang Xiaorong, Zhou Shicheng, Ling Jixiang, 2019)

In the construction process of construction projects, a perfect safety supervision system is conducive to construction enterprises to avoid safety accidents caused by human errors and eliminate safety hazards in time. At the same time, construction companies can also carry out safety education and training activities to further enhance the safety awareness of construction personnel, thereby ensuring construction quality and construction efficiency. In short, construction enterprises can adopt a variety of construction safety management methods at the same time to effectively avoid safety accidents during the construction process, which will adversely affect the construction progress, personnel safety and enterprise benefits. [Fuxing.2019]

Safety management is to use scientific methods to study human and safety issues. The main purpose of the research is to reveal the behavior rules in the production environment, and to analyze, predict and control human behavior from the perspective of safety. At present, research data shows that the implementation of behavioral safety management only takes 2% of the time of employees, but the improvement of employee safety can reach 10%. It is mainly through repeated observation and correction of people's behavior and attitudes, so as to improve employees' safety awareness, urge employees to implement relevant safety operations, and effectively avoid the emergence of various safety hazards. Based on the significant role of behavioral safety management in safety control, it is of great significance to apply it to construction projects. This paper mainly focuses on this to carry out specific analysis. (Wang Zhe 2020)

With the acceleration of urbanization, resettlement housing construction has received widespread attention as a key livelihood project, and safety issues have also become prominent. This paper analyzes the unsafe behavior of personnel in advance, establishes a system of risk identification, assessment, control, and review, and at the same time supervises and controls the process to establish a set of practical safety management methods. (Duan Ya Zhang Zechao Jia Yunpeng 2022)

2.2 Safety Education

Safety education programs play a vital role in promoting safe behavior among construction workers. Smith et al. (2018) conducted a study on the effects of safety training on safety attitudes, risk perceptions and safety behaviors of construction workers in Saudi Arabia. Their findings suggest that comprehensive safety training has a positive impact on workers' safety knowledge, attitudes, and practices. Gong et al. (2020) conducted a meta-analytic review and found that safety training programs had a significant impact on improving safety performance and outcomes. However, the effectiveness of safety education programs may be affected by factors such as language barriers, educational background, and training methods (Gong et al., 2020). Therefore, it is important to study the impact of safety education programs on blue-collar workers in China's construction industry and identify areas for improvement.

According to Mohamed (2019), construction accidents result in a large number of avoidable fatalities, demoralize employees, cause damage to construction sites, slow down the progress of projects, and negatively impact the overall cost, productivity, and reputation of the industry. Organizations are forced to improve their safety performance due to deteriorating health and safety conditions in the workplace, as well as new regulations and international standards. Those that have developed and those that are still developing have recognized the need to improve occupational safety and health management on construction sites, in particular to limit the number of accidents at work. As a direct consequence, firms shifted somewhat from a reactive to a proactive stance on security issues (Weibye, 1996; Candola, 1997; Crowley, 2019). Many different building sectors around the world are increasingly interested in building safety management as a method of reducing the likelihood of large-scale disasters and accidents related to common operations. This could be seen as a positive step towards improving overall workplace safety. Accidents are not always caused by the negligence of employees; rather, there are times when accidents occur due to a lack of control, which is the responsibility of management. Because of this, the emphasis on accidents has shifted, a shift driven by the recognition that organizational, managerial, and human factors, not just technical failures, are the main causes of accidents (Weiek et al., 2019).

Governments around the world have reaffirmed their commitment to making the working environment safe and harmless. This dedication is evident in the establishment of performance-based workplace health and safety legislation that establishes universal performance targets and provides a clear system of clear obligations to promote a level of self-regulation in the construction industry (Mohamed, 2019).

Conducted research on the inefficiency of safety training and gave solutions such as carrying out hierarchical training according to enterprise needs and job requirements, strengthening training teachers and government department supervision; Liu Jinchan et al [Liu Jinchan, Jiang Fuliang,

Huang Yilong, Ning Shunyun, Huang Fang, Xiong Shuo. Empirical research has been carried out on the effectiveness of construction workers' safety training on the three factors of self, institution and training system.

Wang Dan, Gong Jingjing et al. found that construction workers have the characteristics of low quality and low employability due to their low education level, which leads to workers' numbness to the leadership authority of managers. Therefore, the behavior style of managers will have an impact on workers' behavior. (Wang Dan, Gong Jingjing, Guan Ying. 2019)

2.3 Enterprise culture construction

The corporate cultural environment that permeates a construction organization has a considerable impact on the way employees behave safely. Cheng et al. (2019) conducted a study to determine the impact of company culture on its employees' safety behaviors. They found that management commitment, strong leadership and clear communication are critical to developing a healthy safety culture. Yuan et al. (2017) examined the link between psychological empowerment, safety management approaches, safety behaviors, and safety climate. Their findings reveal the importance of safety regulations, procedures, and incentives in influencing employees' ability to behave safely. Understanding the influence of corporate culture factors on safety behaviors in the Chinese construction industry is essential in order to create successful interventions.

Both the concept of security environment and the concept of corporate culture have received a great deal of attention in the field of security research. Coyle et al. (1995) considered both concepts to be subsets of organizational climate and corporate culture. Safety culture is thoroughly defined by the Advisory Committee on the Safety of Nuclear Installations (ACSNI, 1993). According to their explanation, "Safety culture is the product of individual and group values, attitudes, cognitions, competencies, and behavioral patterns that determine commitment to safety, as well as an organization's lifestyle and proficiency in health and safety management" (p. 23).

Creating a safety climate and culture within a company is crucial because it creates an environment in which personal safety attitudes grow and persist, as well as an environment in which safe behavior is encouraged (Zohar, 1980). It is worth noting that the idea of a safe environment and corporate culture was established as a response to large organizational incidents. However, the concept is currently being used more broadly to explain accidents at the individual level (Mearns et al., 2003). According to Cox and Flin (1998), a company's safety culture is reflected in the behavior and attitude of its personnel. This is known as the safety environment and corporate culture. Coyle et al. (1995) mean an objective assessment of their attitudes and perceptions towards health and safety issues when they speak of 'safety climate' and 'corporate culture'.

Indeed, the safety environment and corporate culture, as well as organizational climate and corporate culture, can be viewed as superficial elements of culture that emerge from attitude and cognitive samples at a given moment (Flin et al., 2020). This is true for both organizational climate and corporate culture. According to the findings of Neil and Griffin (2020), safety climate and corporate culture play a mediating role in the differences between organizational climate,

corporate culture and safety performance. Safety performance represents an individual's judgment of the importance of safety in the workplace environment.

2.4 Psychological capital

Xu Heng used in-depth interviews and grounded theory research methods to conclude that the influencing factors of individual unsafe behavior include work experience, self-efficacy, safety risk perception, unsafe psychology, and safety awareness. (Xu Heng. 2021)

Linlin Wang, Qinggui Cao et al. constructed a factor system of unsafe behavior from organizational management, team leadership, front-line workers, safety culture, mechanical equipment, and working environment. The research results have certain reference value for the study of factors affecting unsafe behavior of construction workers. (WANG L, CAO Q, ZHOU L.2018)

Houtan Jebelli et al measured the EEG data of different workers to analyze the impact of workload and working environment on unsafe behaviors of construction workers and believed that heavy workload and harsh working environment would lead to an increase in the probability of unsafe behaviors of workers. (JEBELLI H, HWANG S, LEE S H.2018)

Shakerian et al. took the individual cognitive factors of Iranian workers' unsafe behavior and the hierarchical relationship among the influencing factors as the research object, extracted and integrated the factors affecting workers' unsafe behavior, constructed a model of the extracted results by interpretive structural modeling method, and explored the relationship between the influencing factors. (SHAKERIAN M, JAHANGIRI M, ALIMOHAMMADLOU M, et al.2019)

Goh et al. evaluated the relative importance of different cognitive factors on safety behavior in Theory of Rational Action (TRA) and showed that social safety norms and workers' safety intentions have a great influence on workers' safety behavior.

When employees have psychological problems, it will not only reduce their work efficiency and increase the construction cost of the company, but also lead to frequent safety accidents and affect the healthy development of the enterprise. Therefore, alleviating the psychological pressure of employees and promoting their mental health have become an important topic in the ideological and political work of construction enterprises. The mental health of employees is related to the survival and development of enterprises. (Shanshan Yan 2019)

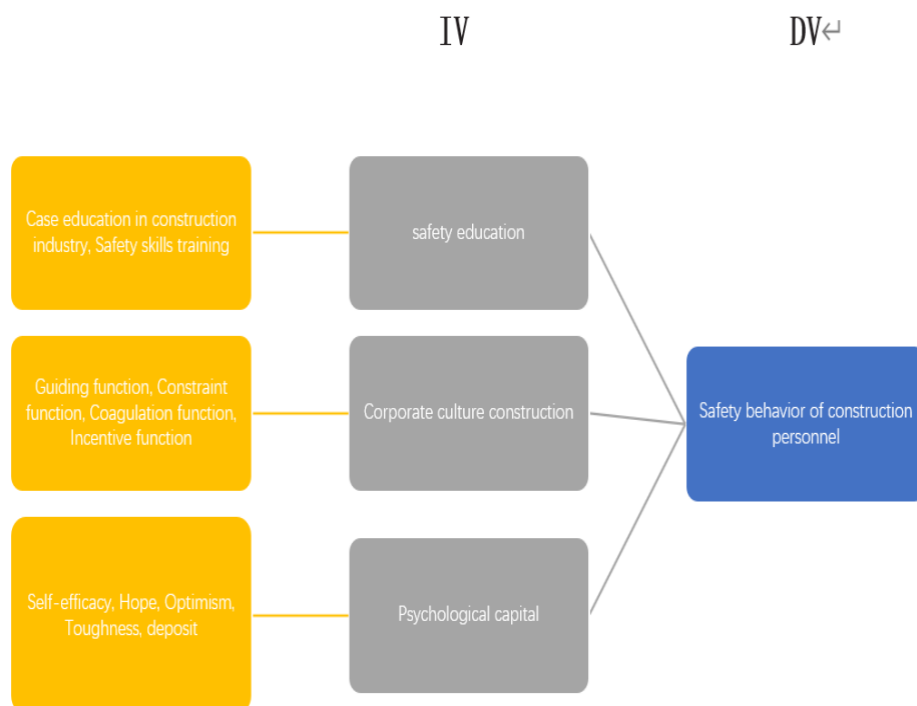
3 Theoretical framework

Huang Haipeng believes that inadequate safety education and training is the biggest safety hazard. Among the various factors that cause safety accidents, human factors account for a high proportion, especially people's habitual violations of rules and regulations lead to accidents are not uncommon. Therefore, it is an important content of safety management to improve the safety awareness of construction workers and realize the transformation of construction workers from "I want to be safe" to "I want to be safe". (Huang Haipeng 2021)

From the perspective of safety management, Jian Jun analyzed that safety culture is the glue that binds the gaps in safety management and is the soul of safety management; from the perspective of safety culture, safety management is a form of expression of safety culture, and it is the

embodiment of certain empirical and rational development and optimization of safety culture in safety management. Scientific safety management belongs to the category of safety culture construction, and the atmosphere and background of safety culture or specific safety culture and cultural environment will also form or create a special safety management model. (Jian Jun 2008)

Empirical studies such as Cheng Yong zhou have shown that there is a significant negative correlation between the level of psychological capital and the probability of occurrence of unsafe behaviors. Psychological capital mainly affects employees' unsafe behavior through five dimensions: self-efficacy, hope, optimism, resilience and composure. Self-efficacy is an individual's subjective evaluation of one's ability to complete a certain aspect of work. The quality of the evaluation result will directly affect a person's behavior motivation. The initiation and continuation of a behavior mainly depends on the individual's expectations and beliefs about his related behavior. At the same time, relevant surveys have found that human behavior and work performance are also affected by resilience, optimism, and hope in personal psychological capital. As one of the important dimensions of psychological capital, composure plays a vital role in whether employees can make appropriate decisions in the face of unexpected situations. (Cheng Yongzhou, Cao Lingrui, Zhan Zijian 2023) Zhao Haiying and others conducted a questionnaire test on 81 teams in 4 coal mining enterprises in Shanxi Province and found that group psychological capital has a greater impact on individual anxiety. All behaviors have significant negative effects. (Zhao Haiying, Li Enping. 2020)



4 Conclusion

The main conclusion of this study is the recognition of the key roles of construction worker safety education, corporate culture building, and psychological capital on behavioral safety, the effects of which are moderated by work conditions, not safety leadership. This conclusion helps to optimize the allocation of resources to improve the safety performance of companies, namely

through safety education, corporate safety culture and psychological capital, which is especially relevant in the context of the current international crisis. Therefore, top management leaders and mid-level leaders must pay more attention to the importance of safety education, corporate safety culture and psychological capital to ensure the reduction of occupational construction accidents. Top management leaders need to strengthen organizational safety education, corporate safety culture and psychological capital, middle leaders need to support it, and participate more in safety education, corporate safety culture and psychological capital to learn together with construction workers. Another important conclusion is the recognition of the relative roles of safety education, corporate culture building, and psychological capital on behavioral safety predictions, which suggests that managers should pay more attention to the indicators of safety education, corporate culture building, and psychological capital, whether by controlling the safety behavioral needs of construction workers that may lead to work.

This study has some limitations, and after completing this analysis, there is room for improvement in each research area and more discussion on the field of construction industry performance. The following are limitations and recommendations for future research in this area:

Body of Knowledge: Selecting Building Construction Personnel Due to Time Constraints. Increase the length of the study and the scope of the respondents, add managers to the survey, or ask managers to participate during their free time to make the results more reliable.

Research Method: The current study adopted a quantitative approach, so in future studies, this approach should be extended to a qualitative or mixed approach. To better understand changes in construction worker safety behavior, it is important to analyze longitudinal data rather than cross-sectional data. The novelty of the research may identify a new body of method and knowledge. Expanding the measurement program could highlight the novelty of the study and address any methodological gaps where the study may have been flawed.

Background: In order to generalize the findings of the study, it is necessary to expand the scope of the study, not limited to one province like China, and collect data from other parts of the world. Teams of enumerators from all regions of the country will be selected and trained to collect primary data, which will be collected through face-to-face interviews.

Today, with the rapid development of economy and technology, construction safety management is the basic premise of effective management and rapid development of enterprises. The concept and method of "people-oriented" construction safety management is to break through the traditional management thinking of enterprises and overcome short-term profit-seeking behaviors of enterprises, so as to achieve advanced management and turn accident management into accident prevention. Through the correct application of the concept and method of safety management in the project, the unsafe factors in the production process are analyzed, and various management methods are adopted to implement the safety culture, give full play to the subjective initiative, eliminate hidden dangers in advance and take preventive measures, so as to achieve the purpose of protecting the safety of workers in production.

References

Application Analysis of Wang Zhe 2020 Behavioral Safety Management in Construction Engineering

Fu Xing. 2019 Building Construction Safety Management Methods and Technology Construction

Gong, Y., et al. (2020). The effects of safety training on safety knowledge, safety performance, and safety outcomes: A meta-analytic review. *Journal of Safety Research*, 75, 8-17.

JEBELLI H, HWANG S, LEE S H.2018 EEG-based workers' stress recognition at construction sites

Liu Shunji 2019 Research on the Influence of Safety Culture of Construction Enterprises on the Behavior of Construction Managers

Mohamed, S. (2019) "Empirical Investigation of Construction Safety Management Activities and Performance in Australia". *Safety Science*, 33, pp. 129-142

SHAKERIAN M, JAHANGIRI M, ALIMOHAMMADLOU M, et al.2019 Individual cognitive factors affecting unsafe acts among Iranian industrial workers: An integrative meta-synthesis interpretive structural modeling (ISM) approach

Sekar , G, Sambasivan , M, Viswanathan ,K , 2021 does Size of Construction Firms Matter? Impact of Project-Factors and Organization-Factors on Project Performance ,Built Environment Project and Asset Management

Wang Kai, Chai Ronghui, Zhu Ying, Chang Xiaorong, Zhou Shicheng, Ling Jixiang 2019 Application Analysis of Safety Management in Housing Construction Project Construction

WANG L, CAO Q, ZHOU L.2018 Research on the influencing factors in coal mine production safety based on the combination of DEMATEL and ISM

Ye Gui, Li Jing, Duan Shuailiang. 2016 Research on the Mechanism of Unsafe Behaviors of Construction Workers[J]. *China Safety Production Science and Technology*

Yan Shanshan 2019 Talking about how to do a good job of psychological counseling for construction enterprise employees in the new era

Zhang Wei 2020 Study on the Influence of Safety Education on Construction Workers' Habitual Safety Behavior Willingness

Zhan Zijian 2021 Research on the Influence of Psychological Capital on Unsafe Behaviors of Water Conservancy Project Construction Workers