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*Article*

# Negotiating the Meaning of Proactive Safety Behavior among The Young Malaysian Workers: A Qualitative Analysis

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**Abstract:** Young workers, aged between 18 to 29 years old, make up over 18 percent of the Malaysian working-age population. Poor workplace safety is a major concern for these young Malaysian workers, with relatively high levels of workplace accidents and injuries being recorded. This study investigates young workers' proactive safety behavior practices, defined as anticipatory, change-oriented, and self-initiated behavior in sustaining workplace safety in situations where management safety controls are often neglected. This ethnomethodological qualitative research involved interview sessions with 33 young Malaysian workers with Critical Incident Technique (CIT). The findings were analysed with NVIVO. Altogether, four themes were extracted; proactive ability, proactive motivation and proactive opportunity and also proactive safety behavior as the outcome. In conclusion, young Malaysian workers' proactive safety behavior is driven by a complex interaction of ability, motivation, and opportunity. Formal and informal safety training and knowledge shape workers' proactive safety measures. Motivational drivers include inherent elements like safety and responsibility and external reasons like caring for others and career progress. Workplace environment, social support, and safety protocols might permit or limit proactive behavior. Although formal safety training and support are lacking, many young workers identify and manage risks based on experience, media, and personal observation. These findings underline the necessity for employers to foster a safety culture, provide frequent training, and empower young workers to promote workplace safety. Malaysia, where young people make up a large part of the workforce and are sensitive to occupational dangers, needs such measures.

**Keywords:** Proactive safety behavior; proactivity; personality; motivation; young workers

## Introduction

The global workforce is expanding in accordance with the swift advancement of the global economy, primarily in developing nations (International Labour Office, 2020). 80% of the global labor force resides in emerging nations (Desai & Rudra, 2019). The majority consists of young individuals, with around 90 percent residing in developing nations and 60 percent in Asia (ILO, 2022). It is estimated that about 340 million workplace accidents and 160 million instances of work-related diseases are reported annually (Cioni & Savioli, 2016).

In developing countries, there is increasing apprehension regarding the safety and health of young workers specifically. Research indicates that younger employees are more prone to work-related injuries than

their older counterparts (V. Shankar et al., 2021). The personality of young workers contributes to this, including risk-taking (Westaby & Lee, 2003), physical and psychological growth (Sudhinaraset & Blum, 2010), and hazardous work situations (Lewko et al., 2014).

## Literature Review

Young workers are more susceptible to adverse health and safety outcomes due to their necessity to seek employment in the 'Gig' economy, which predominantly provides temporary contracts and independent contracting, thereby undermining the formal employment relationship that entails employer responsibility for ensuring a safe working environment (Tran & Sokas, 2017). Despite the extensive research on the formation of safety behavior from the safety climate perspective, including factors such as safety policy, management commitment (S. Shankar & Rusyda, 2023), and safety communication, the studies regarding proactive safety behavior and its predictors remain ambiguous. Prior study frequently elucidated that safety behavior is predominantly shaped by external factors rather than internal motivations (Liu et al., 2019). Research on safety behavior in Malaysia has sought to elucidate the employers' involvement in enhancing and sustaining workplace safety through the oversight of employees' safety compliance (Lyu et al., 2018). This method is traditional, wherein staff are anticipated to adhere to established safety protocols and is notably prevalent in a high power distance nation like as Malaysia (Arifin et al., 2019).

Recent findings indicate that young employees are distinctive, more innovative, and possess superior skills, attributed to their relationship with technology (Arifin et al., 2013). They possess enhanced access to information, fostering empowerment, creativity, and confidence to improve performance at work (Rusyda et al., 2021).Consequently, it is essential to examine how these qualities can foster self-regulated and internalized proactive safety behavior, as opposed to the environmentally induced traditional safety compliance. The overall employed population in Malaysia has almost doubled in the last two decades, rising to 15.1 million in 2019 from 8.1 million in 2000, while the percentage of the working-age population (aged 15-64 years) increased to 68.5 percent in 2019 from 67.3 percent in 2010 (Awang et al., 2015). The Social Security Organization (SOCSO) Annual Report 2017 indicated an increase in the number of accidents, rising to 69,980 in 2017 from 66,618 in 2016 (SOCSO, 2017). The ILO estimates that young workers face a 40% greater risk of workplace accidents compared to senior workers (ILO, 2018)

This study is important because proactive safety behavior is increasingly becoming a focal point of investigation for safety academics and practitioners. Proactive safety behavior denotes employees taking initiative to enhance safety outcomes for themselves and their colleagues. Research on proactive safety behavior has developed from a body of literature concerning discretionary work behaviors sometimes referred to as safety participation or safety citizenship behaviors (Bazzoli & Curcuruto, 2021; Fugas & Silva, 2014). This research has demonstrated that corporate safety climate and social norms around safety behavior significantly affect the degree to which employees participate in proactive safety behavior. Secondly, perceived behavioral control and favorable attitudes towards safety are additional elements that influence proactivity in the safety domain. Third, proactive safety behavior can be understood as a variable at both the individual and group levels.

Multiple implications can be inferred from the limited studies conducted on proactive safety behavior thus far (Li & Griffin, 2022). From a theoretical standpoint, a disjuncture persists between the conceptualization of proactive behavior, its antecedents, and consequences in mainstream proactivity literature and in the literature concerning proactive safety behavior. Therefore, this research will comprehensively address the antecedents deemed essential for proactive work behavior.

## Theoretical framework

Based on Figure 1, the main framework of this research is the Ability-Motivation-Opportunity franework (Boxall & MacKy, 2009) that translated into Proactive Ability, Proactive Motivation and Proactive Opportunity to predict Proactive Safety Behaviour. The Ability-Motivation-Opportunity model is looking at the element of motivation is revolving around the importance of extrinsic and intrinsic motivation in determining performance (Kim et al., 2019) especially in understanding the effects of Ability-Motivation-Opportunity on human resources performance and safety behavior.

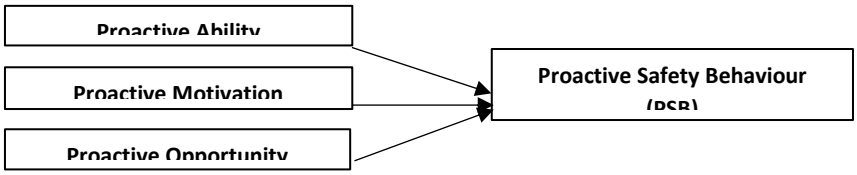


Figure 1. Proactive safety behaviour: a research framework

## Methodology

1. Research Design

In this paper we report the results of an ethnomethodology qualitative study of proactive safety behavior amongst young Malaysian workers. Young workers (aged between 18-34) dominate the labor market participation in Malaysia (Koen et al., 2017; Malaysia, 2017), and are at heightened risk of workplace accidents (Awang et al., 2015). This study was designed to identify other factors that might affect proactive behavior amongst young Malaysian workers in a safety context. This research also aims at identifying the young workers understanding of and engagement in proactive safety behavior and also its key determining factors.

2. Sampling Procedure

The sample consisted of 33 young Malaysian workers from a variety of industries aged between 21 and 28 years old, and with an average working experience of 2.84 years. The inclusion criteria for the participants were that they had to be 18 to 28 years old, currently employed and only in entry level position, not managerial position. The age range of 18 to 28 is a pivotal phase for young workers, signifying a critical era in their career and personal growth. Throughout these years, individuals frequently shift from college to employment, gaining vital skills (Park et al., 2024), knowledge, and experiences that will influence their future paths. This phase is marked by exploration and adaptability, as young professionals engage with varied work settings, enhance practical skills, and foster habits essential for sustained success (Turner et al., 2020).

Interviewees were recruited through a letter that was sent out to approximately forty Human Resources (HR) departments of Small Medium Enterprises (SME) in the Klang Valley, Kuala Lumpur, using a list of addresses that were provided by the SME Corporation Malaysia. The HR managers in those companies were then asked to forward the invitation to young employees. All of the managers agreed to do so. Furthermore, we have approached other government sectors to extend the invitation. This is to strengthen the research into understanding the proactive safety behavior among the young employees from both private and public sector. The invitation indicated that participation in the research was voluntary and that participation could be made by contacting us through mobile phone or email. A total of 15 male informants and 18 female respondents contacted me and agreed to be interviewed. Details of the respondents are presented in Table 1 below. There were six informants from the education industry, five informants from the manufacturing industry, four informants represented retail and business industry, three informants each from the transportation, healthcare and construction, two from the entertainment industry and one informant each representing the hotel and tourism, news reporting, local authority, telecommunication, mining, consumerism and government agency. The pseudonym procedure was adopted as a systematic method used in this research to safeguard the privacy and confidentiality of participants by replacing identifiable information with fictitious names (Heaton, 2021). It begins with identifying sensitive details such as personal names, workplaces, specific locations, or unique characteristics that could reveal an individual's identity. Researchers then assign appropriate pseudonyms, which may take the form of realistic names or coded labels, and document the link between real identities and pseudonyms in a secure, restricted-access file (Wong et al., 2025).

Table 1. The demographic information for respondents of study 1

| Informant | Job tenure (years) | Age | Gender | Formal Education | Occupation | Industry | Sector |
|---|---|---|---|---|---|---|---|
| Respondent 1 | 3 | 25 | Male | Diploma | Retail | Retail | Private |
| Respondent 2 | 3 | 23 | Male | School leaver | Musician | Entertainment | Private |
| Respondent 3 | 2 | 25 | Male | Bachelor Degree | Salesperson | Hotel/Tourism | Private |
| Respondent 4 | 2 | 26 | Male | Bachelor Degree | Trainer | Government Agency | Public |
| Respondent 5 | 2 | 26 | Male | Master's Degree | Lecturer | Education | Public |
| Respondent 6 | 5 | 28 | Female | Bachelor Degree | Teacher | Education | Public |
| Respondent 7 | 4 | 27 | Female | School Leaver | Supervisor | Business | Private |
| Respondent 8 | 3 | 24 | Female | School leaver | Skincare saleswoman | Retail/Business | Private |
| Respondent 9 | 1 | 22 | Female | School Leaver | Kindergarten teacher | Education | Private |
| Respondent 10 | 4 | 28 | Female | Bachelor degree | Accountant | Business | Private |
| Respondent 11 | 4 | 28 | Female | Master's Degree | Lecturer | Education | Public |
| Respondent 12 | 4 | 28 | Male | Master's Degree | Lecturer | Education | Public |
| Respondent 13 | 3 | 26 | Male | School Leaver | Sound technician | Entertainment | Private |
| Respondent 14 | 3 | 24 | Male | School leaver | Craftsman | Construction | Private |
| Respondent 15 | 3 | 25 | Female | Diploma | Nurse | Medical/Healthcare | Semi-government |
| Respondent 16 | 1 | 24 | Male | Bachelor Degree | Engineer | Manufacturing | Private |
| Respondent 17 | 1 | 24 | Male | Bachelor Degree | Engineer | Mining/petroleum | Private |
| Respondent 18 | 3 | 26 | Female | School leaver | Law Enforcer | Transportation | Agency |
| Respondent 19 | 3 | 28 | Female | Bachelor Degree | Architect | Construction | Private |
| Respondent 20 | 2 | 26 | Female | Diploma | Designer | Manufacturing | Private |
| Respondent 21 | 3 | 24 | Female | Diploma | Factory operator | Manufacturing | Private |
| Respondent 22 | 3 | 25 | Female | Diploma | Customs officer | Transportation | Government |
| Respondent 23 | 3 | 28 | Female | Bachelor Degree | Medical officer | Healthcare | Government |
| Respondent 24 | 4 | 28 | Male | Aviation cert | Pilot | Transportation | Private |
| Respondent 25 | 2 | 25 | Male | Bachelor Degree | Law enforcer | Consumerism | Government |
| Respondent 26 | 3 | 28 | Female | Bachelor Degree | Medical officer | Healthcare | Government |
| Respondent 27 | 3 | 28 | Female | Bachelor Degree | Engineer | Manufacturing | Private |
| Respondent 28 | 5 | 28 | Female | Bachelor Degree | Criminal reporter | News reporting | Private |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Respondent 29 | 2 | 24 | Male | Certificate holder | Law enforcer | Local authority | Government |
| Respondent 30 | 5 | 28 | Female | Bachelor Degree | Finance executive | Higher education | Government |
| Respondent 31 | 2 | 24 | Female | Bachelor Degree | Accountant | Manufacturing | Private |
| Respondent 32 | 1 | 21 | Male | Diploma | IT programmer | Telecommunication | Private |
| Respondent 33 | 2 | 23 | Male | Diploma | Senior technician | Construction | Private |

3. Data Collection Method

The interviews were conducted face to face in various locations in the Klang Valley, from July to Sept 2015. The interviews were transcribed, translated, and then analyzed using Nvivo. The interview questions were based on the Critical Incident Technique (CIT) (Flanagan, 1954) and the CIT is a procedure used to gather and identify data, analyze, and to organize human behavioral patterns (Flanagan, 1954; Gremler, 2004).

4. Analysis

Seven interview questions were used to identify incidents of proactive safety behavior engagement amongst those interviewed. The questions were initially pilot-tested with five informants. To start the interview, we asked basic demographic questions such as name, age, length of service, working industry, and job title. Informants were then asked to identify incidents where they had acted proactively to prevent accidents, to describe the actions taken, and also the outcomes of their activities. The interviews, which were conducted both in English and Malay language, were recorded with a voice recorder, consented to by the informants. The strength of NVIVO is important as it highlighted the researchers' role in poviding the feasible themes induced by his/her understanding of the whole research concept (Wilk et al., 2019). We successfully extracted four categories of membership using the Nvivo analysis. Four major categories were consistent with the research framework, namely, proactive ability, proactive motivation, proactive opportunity, and proactive safety behavior

5. Ethics Approval

The study protocol and procedures received ethics approval from The University of Western Australia Human Research Ethics Committee, Approval No. RA/4/1/7473 and No. RA/4/1/8491.

## The Findings and Discussion

1. Proactive Ability

There was a consistency amongst respondents from the medical field, manufacturing, oil and gas industry, and aviation industries in identifying safety training as being associated with the ability to engage in proactive safety behavior. Safety training (e.g., college training and safety training) emerged as a strong catalyst for knowledge in understanding risk and preventing workplace accidents.

> *"We have what we call standard operating procedures (SOP). So….this SOP is to prevent actions that can cause accidents. We have to memorize everything.....we can't be careless." [R29].*

> *"Oil and gas industry... Like my company.... we have a strict safety training program. Everybody has to attend (safety training). After being appointed as staff in my company, I have attended a seven-day safety training program to learn about safety. Also, if I am selected for offshore jobs, I have to complete a Basic Offshore Safety Induction and Emergency Training (BOSIET), a compulsory training program for individuals undertaking offshore tasks ." [R17]*

> *"We have a refresher training every year.....it is a requirement from the Aviation Department". [R29].*

*"I think my employers are providing a lot of safety training to us, and we have flight simulator and other safety training programs" [R24].*

*"We have mentors to remind us of safety and also continuous reminders from the safety team [R13].*

*"They are monitoring our safety conducts....they will make sure we follow the safety procedures." [R23].*

*"We have to attend all safety training provided by the company.....sometimes if they discovered that we have yet to receive sufficient safety training they would consider us as 'unfit' to work." [R17].*

Not all respondents were exposed to safety training or aware that it existed, for example:

*"My company is a small company....the income is small.....a new company.....so to them....safety is not important." [R33]*

*"And I'm not too sure.. I think there must be a complete safety procedure provided." [R2]*

*" No. there is no safety training. And I don't think we are aware of safety." [R18]*

"None. There is no safety training." [R20].

Many of the informants who were not exposed to safety training said that their knowledge of and approach to safety was mainly built from common sense and observation.

*"We have not received any formal safety training. But they told me, my practical training was a form of training, per se. Then, I make an observation. And use my common sense...to understand about safety." [R23].*

*" I did not receive any formal training.....I learned from my mistakes... trial and error." [R30].*

*"They only told us to be careful with sharp objects. And the rest.....we learn(about safety) while we are doing our job..."[R14].*

One significant finding from the analysis was the use of media for developing safety knowledge. Independent information-seeking behavior is a practice of safety knowledge enrichment adopted by the informants. All of the research informants were born between 1980 to 1994, the generation is typically known as Generation Y (Weiler, 2005). Media exposure and gratification have equipped them to be more likely to use media as a reference for safety information compared to the older generation. Informants believed that knowledge of safety is available online and hence accessible anytime and that this media assisted them in safety decision-making.

*"I need to find (safety knowledge) myself. I need to be independent to search for something like safety training [R33].*

*"I have to surf the internet to find the best solution (in safety)." [R18].*

Informants also mentioned receiving safety knowledge from the broadcast media:

*"I learned about safety from experience and awareness, from foreign TV shows like National Geographic, Discovery Channel, and also self awareness." [R16].*

2. Proactive Motivation

The findings of the qualitative analysis identified two distinct motivational mechanisms in operation in respect of choices about whether tor not to act proactively in respect of safety; intrinsic and extrinsic motivation. The intrinsic motivation stemmed from an individual's personal need for safety. For example;

*"We love ourselves. We don't want anything bad to happen [R16]*

*For me, it's about responsibility...it's about choice." [R21].*

*"We love ourselves. We don't want anything bad to happen [R16]*

*" I did that for safety (my safety) reasons……" [R 14].*

The interview also revealed that previous accidents experienced by a co-worker en couraged them to be actively engaged in proactive safety behavior for their good:

*"My colleague accident (workplace accident) before… After that (the accident),I am…more aware… and cautious [R12]met with an*

Informants who were extrinsically motivated agreed that other aspects moved them to engage in proactive safety behavior.

*"Self-conscious, my daughter has a respiratory problem. Therefore, I need to take extra precaution [R27].*

*"Wash my hands thoroughly before I touch or come in contact with the children." [R13].*

Another informant, a secondary school teacher, thought proactive safety behavior is important not only to her but also to people around her, such as her students:

*" Well, because it doesn't only impact me but other people too." [R16].*

Respondent 2 [R2] suggested a slightly different idea when he mentioned a job opportunity. He suggested proactive behavior as a career advancement (self-improvement) mechanism, for example;

*"When people (the employers) know all these things (safety boots), they will be pleased to give us a job.[R2]."*

As a musician and sound engineer, Respondent 3 had to carry heavy musical instruments and facilities such as speakers and audio controller. Upon seeing the risk, he bought a pair of safety boots himself, and the safety boot symbolized autonomy. The proactive opportunity also relates to self-empowerment. Acknowledgment and the feelings of appreciated encouraged the young workers to contribute to proactive safety behavior. The informants believed that continuous safety improvement is essential not only for themselves but also to the co-workers and the organization.

*"I feel proud of.....because I helped people. At least I've done my job (make changes) [R10],*

*For me, it's about responsibility.....I have contributed to the workplace. I have made the office a better place to work." [R21].*

3. Proactive Opportunity

Technology emerged as one potential constraint to engage in proactive safety behavior. One informant, a retail superstore team leader, indicated that most of his employees were exposed to occupational risk and injury by virtue of where they worked. According to him, those who worked at the poultry or seafood department were at significant risk of injury while performing their jobs.

*"I give you an example when cutting fish or meat; we use machines. That is risky……. when we use that machine." [R1].*

In other cases, a lack of social support inhibited proactive safety behavior engagement. When an informant was asked whether talking to her supervisor helped her to improve safety at the workplace, she indicated that the action was useless:

"*I don't think I will benefit from that (supervisory support). Also, other people are not doing anything." [R12].*

The availability of other work opportunities, such as employee involvement schemes, has stimulated proactive safety behavior. This encouraged informants to make positive changes to workplace safety:

*"I want to do more. It makes me feel that I can change the workplace (safety). [R14]"*

*"I know that I can contribute something. I keep trying to make recommendations to improve (safety) because I know I can change the work system." [R25].*

4. Proactive Safety Behavior

Respondent 1, a retail superstore supervisor, explained about his task of transferring and depositing money from his office to the bank. He understood that he exposed himself to danger and that a safety Standard Operation Procedure (SOP) for this task was not available. Therefore, he has taken a proactive measure.

*"I understand that transporting a lot amount of money to the bank every day is very risky. I might probably get robbed ....so I ask a policeman at a mobile police station in front of my office to escort me to the bank" [R1].*

Sometimes adverse working environment trigger actions to rectify the situation. The concern was raised due to the informant's safety awareness. R3 explained the way he attempted to initiate and take extra precautions for safety:

*"Over there (the location), the installation is permanent. So we try to copy (create) cable installation which is almost the same (to the permanent cable installation); for example, the installation is called 'Half Moon' (Installation Technique). (This is) To cover the wire and prevent leakages, when it is placed on a rod (steel bar). We need to do our best to create that (cable installation) as secure as possible; even it is not as secure as the permanent installation." [R3].*

Incidents that happened in the past can play an important role in shaping a person's proactive safety behavior. An informant who was previously hospitalized due to Dengue Fever had to escalate initiatives to avoid any unfortunate future events. Dengue Fever caused by Aedes Mosquitoes was one of the most considerable health problems in Malaysia. Contaminated and unkempt surroundings exacerbated it.

*"I was hospitalized due to dengue fever. On that day, I felt feverish. I think I might have Dengue Fever. So I told them I need to leave because I am not feeling well……I was not the first person affected (with Dengue Fever)……Now, I bought Shieldtox (aerosol spray to kill the mosquitoes) with my money. My boss (the manager) didn't know about that [R18].*

Another informant met an accident while performing his job and caused him to lose a part of his thumb. The incident happened after six months since he started his job.

*Yes. I experienced an accident. I was injured.. because of a machine.. that is a manual CNC machine (A machine used to cut steels and boards). The manual CNC machine is not automatic, So we need to adjust it ourselves; we have to push and pull it manually. We moved it based on three axes; X, Y, and Z axes. (It will go) Either up or down (and), we need to handle it.. or else it might be affecting (the product). The machine will make a lot of loud noise. So, when we handle the machine, we are not…our attention (lacking). Yes, I did not give much attention; I was distracted. I didn't realize that I slightly pushed that machine, and it hit my fingers……I cut my fingers. I learned my lesson from the accidents... Since then, I will place the items on the machines and then monitor the process from afar." [R33].*

An informant who worked as a law enforcer for a government Ministry determined to write a proposal to purchase group insurance after an unusual hit and run accident, and threats that had been made with weapons such as machetes and knives. The incident happened due to a disagreement between his team and fish market retailers.

> *"Firstly it all started when we got splashed (with a bucket of filthy water), chased away or threatened with a chopping knife and many more, so we do not want that to happen again. We are traumatized…… To be honest, every month, I will give at least one (proposal to purchase group insurance). Or at least once in two months. It's like whenever there's a meeting, I will bring it up for the suggestion. In 12 proposals, not even one was accepted. So sometimes I can't figure out why and it's a dead-end [R25].*

However, he also mentioned that other than proposing to purchase group insurance, he came up with a strategy to avoid future risk.

> *When my suggestion (to purchase group insurance) was never considered, I come out with a new action. For high-risk markets like, for example, in Klang Valley, if I heard any information about them (the market retailers) knowing we are coming, I will change (the operation) to another market. Or if the situation is quite hastened at the market, we will focus on monitoring the supermarkets. Because, if there's a problem or incidents that happened at the supermarket, we will complain straight to their headquarters. So the risk is slightly lower. I instructed my colleagues who are pregnant, to stay at the office for data entry and clerical works. That was some drastic action that I took on my own." [R25].*

An electrical short circuit is a condition that can cause future loss, such as fire or even lost lives. One informant, a secondary school teacher, described proactive behavior that she had engaged in to prevent accidents due to electrical faults:

> *There's one instance when a plug is switched on, causing a short circuit. It is in the examination room. It's only a short circuit, not to the extent of unattended exposed cables. Ok, in that particular room, there's this main switchboard. I went to the board and switched it on repeatedly. I recognized the faulty plug or switch so that the particular plug will not be used until repaired. I went and told the person in charge of the room about the problem, and that person informed the Deputy Director who will then instructed the school's technician to check on which part that caused the short circuit before repairing it. If it involves faulty appliances, then it will be replaced…… Oh, one major thing that has happened in my school is that the library has been on fire once. It was not during school days, and it was at 5 am. A short circuit happened in an audio-visual room. It exploded and started a fire……It happened because of the school condition….old buildings." [R6].*

An informant also revealed that although he could see serious safety issues at his workplace and took some action to bring this to the attention of management, he carried on with work as usual:

> *"There is one incident at the camp. The camp was built in the year 2000 ….. but there are some soil movements. Up to this point, we received no eviction notice. I know that this can cause problems.....I've talked to the manager of this camp about the condition. However, we continue (to work) as usual……, although we can see some serious soil movement." [R5].*

Another informant, a public institution employee, described her initiative in responding to a hazardous condition at her workplace.

> *"Open ceiling or maybe incomplete (construction) works. It was the contractor, he came to fix something, but once (the job) completed, he left the ceiling wide open. When I saw the gap between the ceiling.....I made a complaint through the system... The university system... A person in charge will respond to us within a few working days. However, the response was quite prompt. The contractor came and fixed the ceiling within three hours. I think it also has something to do with audits. And we have audits....every year. Whenever they see that (irregularities)...they will give us a warning... We can be reprimanded with OFI, NCR (Auditing Standard)." [R30].*

## Discussion

The present study explored factors influencing proactive safety behavior among workers across diverse industries including medical, manufacturing, oil and gas, aviation, and education sectors. The findings reveal important insights into how safety training, motivation, opportunity, and individual agency interact to shape safety-related actions in the workplace.

A consistent theme among respondents from established sectors such as medical, manufacturing, oil and gas, and aviation was the critical role of formal safety training in fostering proactive safety behavior. Participants emphasized mandatory training programs, refresher courses, and adherence to standard operating procedures (SOPs) as key contributors to their knowledge of risk assessment and accident prevention (Zainuri & Rusyda, 2023). These findings align with existing literature underscoring the efficacy of structured training in enhancing safety competence and vigilance (e.g., Burke et al., 2006). For instance, the requirement of a seven-day safety induction and offshore-specific BOSIET training in the oil and gas sector illustrates industry best practice in risk mitigation.

However, not all respondents had access to such formal training, particularly those from smaller companies with limited resources. These workers relied more heavily on experiential learning, common sense, and observation. This disparity highlights equity issues in occupational safety and suggests the need for extending accessible safety education to all workers regardless of organizational size or sector.

An intriguing discovery was the generational influence on safety knowledge acquisition. Workers identified as Generation Y reported leveraging digital and broadcast media as supplementary sources of safety information, independently seeking knowledge online or through educational TV programs. This behavior reflects the media-rich environment of younger workers and suggests that digital platforms can be valuable tools for safety communication and training, complementing formal programs.

Intrinsic and extrinsic motivations emerged as distinct but interrelated mechanisms underpinning proactive safety actions. Intrinsically, respondents expressed personal responsibility, self-preservation, and concern for colleagues as compelling reasons to engage in safety behaviors. Extrinsically, factors such as family health considerations, career advancement prospects, and social recognition motivated proactive engagement. This dual motivational framework is consistent with Self-Determination Theory, which posits that both autonomous and controlled motivations can drive behavior change (Deci & Ryan, 2000).

Notably, past experiences of workplace accidents or health scares strongly influenced heightened safety awareness and action among participants, supporting the notion that personal or vicarious trauma prompts behavior modification.

The study also uncovered factors that either facilitated or constrained opportunities to enact safety behaviors. Technological hazards, such as operating dangerous machinery without adequate safeguards, posed significant risks. Perceptions of limited supervisory support or organizational inaction hindered some workers' willingness or ability to advocate for safety improvements. Conversely, the presence of employee involvement schemes and responsive safety teams empowered workers to suggest and implement safety enhancements. These findings reinforce the importance of organizational culture and support systems in enabling proactive safety engagement.

The young workers recounted numerous instances of self-initiated safety interventions, such as requesting police escorts during cash transfers, improvising safer equipment installation methods, purchasing personal protective equipment independently, and formally reporting hazards like electrical faults or unsafe construction. These narratives illustrate how individual vigilance and agency can mitigate risks even in contexts lacking formal support.

Nonetheless, some workers faced systemic barriers, as exemplified by repeated unheeded safety insurance proposals or management ignoring serious workplace hazards. Such cases underscore the limitations of individual efforts without institutional commitment and resource allocation
toward safety.

## Limitations

While the rich qualitative data provide valuable insights, the study's reliance on self-reported experiences may introduce bias such as social desirability or recall inaccuracies. The sample, predominately young workers,

might limit generalizability to older cohorts with different attitudes and access to technology. Additionally, industry representation was uneven, with some sectors like small-scale enterprises less studied.

**Implications and Future Research**

These findings suggest that promoting proactive safety behavior requires a multifaceted approach. Organizations must ensure equitable access to formal safety training and foster supportive cultures that value employee input. Leveraging digital media and generational preferences could enhance safety education reach and effectiveness.

Further research could explore longitudinal impacts of safety training across different generations and industries, and quantitatively measure how intrinsic and extrinsic motivations predict actual safety behaviors. Investigating organizational barriers to safety proposals and mechanisms to overcome them would also be beneficial.

**Conclusion**

In conclusion, this qualitative study highlights that proactive safety behavior among young Malaysian workers is influenced by a complex interplay of ability, motivation, and opportunity factors. Safety training and knowledge—whether formal or informal—play a critical role in shaping workers' ability to engage proactively in safety measures. Motivational drivers include both intrinsic factors, like personal safety concerns and responsibility, and extrinsic factors, such as concern for others and career advancement (Abdul Kadir & Rusyda, 2022). Opportunities to act proactively can be enabled or constrained by workplace environment, social support, and available safety resources or procedures. The findings demonstrate that despite some gaps in formal safety training or support, many young workers take initiative to identify and mitigate risks, often informed by experience, media, and personal observation. These insights emphasize the need for organizations to cultivate comprehensive safety culture, provide consistent training, and empower young employees to take an active role in maintaining workplace safety. Such efforts are especially crucial in Malaysia, where young workers form a significant portion of the labor force and are vulnerable to occupational hazards.

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