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A Step by Step of Content ValidityAssessment Process on Approach Towards Safety Knowledge, Safety Climate and SMEs Safety Performance Framework.

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Abstract

This article examines the issues and the conceptual basis in the operationalized definition of safety knowledge. The importance of safety knowledgeemphasizes the mediation role of safety knowledge in the indirect link between safety climate and safety performance assessment in small and medium enterprises and the functional nature of content validity by applying a step-by-stepcontent validity assessment. A content validation assessment process aims to increase representativeness, relevancy, clarity, comprehensiveness of the measurement's validitybesides to ensure the instrument answers the research question. In business, social science, and management science, many variables of interest and research outcomes are abstract concepts and

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its function by robust theoretical and conceptual explanation. Thus, a step-by-stepcontent validity assessment offered a bridge to achieve a valid and reliable measurement, and it was an essential element of quality research.

Keywords: Content Validity, Reliability, Safety Climate, Safety Knowledge, Safety Performance,

1. Background of the Study

A series of occupational accident tragedies such as Beirut Lebanon explosion (2020), Fukushima (Silva, Ishiwatari and Takahara, 2014), and the Chernobyl catastrophe (López de Castro *et al.*, 2013)led to the emergence of 'safety performance index' as a new concept in most of the hazardous industries and the manufacturing industry in particular. Safety experts investigated the disaster and concluded that the incidences were attributed to recognized factors like technology (Vierendeels *et al.*, 2018), socio-technical, or even human system error(Kim and Kristoffer, 2021). The pinpoint factor was management factors and organizational and labelled as safety climate(Beus, McCord and Zohar, 2016). Since the first appearance of safety climate term in 1980by Zohar, all of the hazard industries have adopted it as their tremendous in the long haul to promote safety in their workplace.

On the one hand, safety knowledge receives a primary concern in safety studies, leading to successful employment of safety performance measures, equipment, or behavior to protect themselves and promote safety performance a decade ago. Under the knowledge domain, many safety researchers have to dig the role of knowledge in safety management from the various industries to increase safety performance and decrease adverse safety outcomes such as accidents and injuries. This facet of knowledge construct have explored in a variety of interest consist of safety knowledge (Agüeria, Terni, Baldovino, & Civit, 2018; Baser, Ture, Abubakirova, Sanlier, & Cil, 2017; Guerin, Toland, Okun, Rojas-Guyler, & Bernard, 2019; Guo, Yiu, & González, 2016; Jubayer et al., 2020; Laurent, Chmiel, & Hansez, 2020; Saedi, Majid, & Isa, 2020; Yang, Tao, Chen, Ge, & Reniers, 2020), knowledge transfer (Kwon and Kim, 2013; Chittaro *et al.*, 2018; Haynes *et al.*, 2018; Huang and Yang, 2019; Duryan *et al.*, 2020), knowledge (Chang et al., 2020; Dong, 2015; Reber & Wallin, 1984; Subramanian, Arip, & Saraswathy Subramaniam, 2017), knowledge management (Boxenbaum & Rouleau, 2018; Haynes et al., 2018; Zhang, Boukamp, & Teizer, 2015), and knowledge sharing (Guerin et al., 2019; Lee, Lu, Chia, & Chang, 2019; Trianni, Cagno, & De Donatis, 2014; Zhang, Fang, Wei, & Chen, 2010). As a result, the knowledge construct has become widely used in a number of industries as the principal guide to safety performance in safety research.

Despite the relevance of the knowledge factor to indicate safety performance out-comes, its validity has never been empirically tested in the context of Malaysian small-medium enterprise

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from the author's knowledge. On the other hand, a thematic mapping analysis on safety knowledge management found several issues exist, such as inconsistency in work safety culture and the lack of a systematic approach to knowledge lead to unsafe behavior outcomes(Duryan *et al.*, 2020). Based on previous studies, researchers believe that improving employees' safety performance concerning safety knowledge will improve an organization's safety performance. Therefore, this present study aims to provide a step-by-step of content validity assessment and contribute to advancing the behavior-based safety performance index in a particular industry.

2. Literature Review

2.1 Safety Knowledge

Knowledge is interrelated with individual beliefs and social interaction. Knowledge is information that has been converted from acceptance into a belief system. The information contains three elements: belief, justification, and personalization, to be transformed into knowledge (Floyde, Lawson, Shalloe, Eastgate, & D'Cruz, 2013). Knowledge certainly has two characteristics, 1) cannot be fully documented, and 2) a degree of tacitness (Duryan *et al.*, 2020). On the other hand, safety researchers have referred to the belief that enhances an entity's capabilities for effective action (Dong et al., 2018). The researcher also defined safety as the control of accepted hazards to achieve an adequate level of risk. Thus, it can be accepted that knowledge plays a central role in implementing a significant occupational health and safety management system. There are several definitions of knowledge and safety from the safety discipline. The next paragraph will show various definitions of safety knowledge.

There are several existing definitions of safety knowledge that can be referred to in safety studies. An early study by Griffin and Neal (2000)has defined safety knowledge is an employee knowledge about safety practices and procedures. After a few decades, it had been studied, the definition of safety knowledge has gone through several innovations, and research has come out are several definitions of safety knowledge(Dong, Wang, Li, Ding, & Luo, 2018).Safety knowledge is illustrated as the high level of employee knowledge of correct procedures, safety processes, and safety behaviors in the workplace(Braunger *et al.*, 2013). Some researchers have defined safety knowledge consisting of education related to safety, employee education background, facts, and information, the awareness gained by experience helps to elucidate, practice, and understand safety (Fruhen *et al.*, 2014). In one study, Dong et al. (2018) had operationalized safety knowledge as a "justified belief that increases an entity's capability to effectively control the recognized hazard to attain an acceptable level of risk." This paragraph shows different definitions of safety knowledge to explain the same concept of safety knowledge.

Several reasons lie behind the previous throng of various definitions of safety knowledge and the lack of agreement between researchers regarding the operationalization of the construct. First, it could be due to diverse researchers' backgrounds, such as sociology, psychology, economics,

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engineering, etc. The researcher's background could influence their work paradigms and writing styles. Second, the use of divergent statistical approaches leaves researchers with considerable freedom to label their dimensions under study. Third, the researcher focuses on different industries, such as manufacturing, healthcare, nuclear, aviation, petrochemical, mining, construction, etc. Out of these, researchers highlighted organizational and management aspects as impacting safety outcomes on industry-specific.

As previously mention, knowledge characteristics are not fully documented and tacitness. Several researchers noted that employee participation is a process of the relational character of knowledge and its view (Addo and Dartey-Baah, 2019). Hence, social interaction between employees based on appropriate conditions in the organization is vital to hand over their operational knowledge stored inthe individuals head(Duryan *et al.*, 2020).Tacit knowledge can help shape suitable habits and safety skills at work, besides eliminating potential unsafe behaviors. Moreover, researchers clarified that knowledge could be transmitted via narratives and stories, for example, pictures, videos, and texts (Duryan *et al.*, 2020).Safety experience only valuable to employees when it same situation and similar work setting. In this regard, by accumulated tacit knowledge save by employees during working, risk management and accidents' prevention, particularly in enterprise, and its critical factor for increasing overall organizational performance (Podgórski, 2010).

After considering the work environment in the study setting, the issues discussed above, and the meaning of safety knowledge intended to be measured, researchers have selected the definition of safety knowledge provided by Griffin and Neal (2000). Thus, the operational definition of safety knowledge is an employee knowledge about safety practices and procedures in the small and medium manufacturing setting

In the organization, knowledge transfer is reflected in human and social factors. Knowledge has been divided into individual, organizational, and structural(Duryan *et al.*, 2020).Besides that, Khastgir, Birrell, Dhadyalla and Jennings (2018)have classified knowledge into three categories: static knowledge, real-time knowledge, and internal mental knowledge. In this context, safety knowledge can combine documented and tacit knowledge, which allows adopting a top-down approach. Safety knowledge obtainable through mandated safety rules and regulations (Zhang et al., 2015). There are governmental regulations, norms, and guidelines, documented in explicit (passive) forms of knowledge, that need to be followed. Rule and regulation from the government consider incomplete knowledge to attaining safety in a specific industry. Those regulations do not include all possible safety issues that are specific to different working environments. In Malaysia, the government, via the Occupational Safety and Health Act (OSHA) 1994, has enforced self-regulation to strengthen workplace safety and reduce the number of accidents in the workplace. On the other hand, this effort toward specific working environments and tied to work contexts from various industries.

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Safety knowledge was an additional factor to take into account to have a significant influence on safety performance. There is a shared understanding amongst academics and practitioners on the importance of training on safety knowledge. Low safety knowledge is revealing the unsuccessfulness safety training activities conducted by the company.Because the primary aim of having such training activities is to escalate employees' safety knowledge about the possible occurrence of hazards in the working environment and advantages of using PPEs, complying with safe work practices, et cetera (Mohammadfam *et al.*, 2017).Consequently, an effort to increase the safety knowledge of employees need to accompany by comprehensive training courses. Empirical evidence has revealed that appropriate safety training effectively enlightens employees' safety knowledge and has positively decreased unsafe behaviors and, subsequently, decreased occupational accidents(Mohammadfam *et al.*, 2017).

Regardless of the significant effect of safety knowledge as a predictor of safety performance, many scholars agreed that leadership has a crucial role in enhancing safety knowledge. The workplace leader has developed tacit knowledge from personal experience, perception, cognitive skills in dealing with unsafe conditions at the workplace, intuition, rules of thumb, and synthesis of facts from the work environment. To ensure successful circulation of safety knowledge from leader to subordinate, the leader must have good leadership skills such as communication and good social interaction skills. According to Duryan et al. (2020),social interaction is vital in the networks of practice to transfer specific context knowledge from a safety view. Interestingly, the relationship between a core dimension of safety climate and safety knowledge was mediated by social support (Guo, Yiu and González, 2018). However, the workplace's implementation of safety activities is not easy to maintain at an acceptable safety performance index.Dong et al.(2018)have indicated that safety knowledge barriers comprise of 1) senior engineers may be unwilling to share their safety knowledge because of inadequate rewards or fear of weakening their competitive advantages, 2) workers with insufficient education may have difficulty in absorbing and transforming some safety knowledge, 3) the uncertainties of the geotechnical condition can produce ambiguity of the knowledge, workers are not adequately trained and high staffs turn over.

Furthermore, extra efforts are required to improve knowledge transfer because they did not automatically occur in the workplace. All actors in the organization are suggested to be more social-friendly oriented approaches. Organization members are required for transparency regarding sharing responsibility for the communicated information related to safety and knowledge for occupational health and safety towards promoting safety at the workplace(Duryan *et al.*, 2020). Other than that, the positive impact of a proactive safety approach on employees' safety knowledge consists of developing the competence to comply with safety procedures and be more concerned with safe working practices (Oah, Na and Moon, 2018). Besides that, Lee et al. (2019)stated that employees' comprehensive learning and continuously obtaining safety knowledge result in increased safety participation and willingness. These pieces of evidence

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revealed that safety knowledge would have a significant linkage with the safety performance index since knowledge of safety is a requirement to enacting safe behaviors.

2.2 Antecedent of Safety Knowledge, Safety Knowledge and Consequences

This section pointed out the importance of safety knowledge on safety performance. Information in Table 1 demonstrated that safety knowledge is commonly related to reducing malicious work behavior and positively related to safety behavior and also increase safety performance. Safety knowledge is a preventive factor against accidents that may happen in this environment, resulting from the effect of antecedent factors mentioned in Table 1.

Table 1 Safety Knowledge, Antecedents and Consequences

No	Author	Safety knowledge dimension	Antecedent	Consequences
1	Mohammadfam et al. (2017)	Safety knowledge	management commitment, supporting environment, safety management system, employees' participation, safety attitude, motivation, resource allocation, and	Perceive work pressure
2	Baser et al. (2017)	Safety knowledge	Attitude	behavior
3	Huang and Yang, (2019)	Safety knowledge transfer	Safety knowledge transfer environment, - Safety training Safety leadership Self-learning Safety knowledge communication	Safety behavior, safety knowledge acceptance, safety concern, safety awareness
4	Lee et al. (2019)	Knowledge sharing	Empowering leadership, safety climate	Safety behavior
5	Mariani, Curcuruto, Matic, Sciacovelli,	Safety knowledge	Safety climate, safety leadership	Safety performance

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	and Toderi(2017)			(safety compliance, safety participation)
6	Vinodkumar and Bhasi, (2010)	Safety knowledge	Safety management practices	Safety performance (safety compliance, safety participation)
7	Lim, Chye, Sulaiman, Suki, and Lee(2016)	Food safety knowledge	Food safety attitude	
8	S. Zhang et al. (2015)	Safety knowledge	-	Modelling Safety knowledge
9	Chang et al.(2020)	Safety knowledge	Environment, Management, Equipment, Passenger	Safety performance
10	Lu, Taksa, and Jia(2020)	Safety knowledge	Management commitment, Promotion of employee involvement, Safety training, Compensation Method	Safety performance (safety compliance, safety participation)
11	Guo et al.(2018)	Safety knowledge	Management commitment Social support, production pressure	Safety performance (safety compliance, safety participation)
12	Fang, Chen, Louisa Wong, and Wong (2006)	Safety knowledge	Personal factors	Injuries, Break the rule, safety climate
13	Chen, McCabe, and Hyatt (2017)	Safety knowledge	-	Unsafe act
14	Krauesslar, Avery,	Safety knowledge	-	Safety outcome

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	and Passmore (2015)			
15	Sharif and Obaidat(2013)	Food hygiene knowledge	Attitude	Safety practices
16	Bronkhorst, Tummers, and Steijn, (2018)	Safety knowledge	Safety climate	Safety behavior, safety motivation
17	Nor Kamilah, Balakrishnan, Mohad Nazri, Ahmad Rasdan, and Aryana(2019)	Safety knowledge	-	Safety culture
18	Toppazzini & Wiener(2017)	Safety knowledge	Safety climate	Safety behavior
19	Chee, Ramayah, and Subramaniam(2018)	Safety knowledge	Management commitment, Social support, Employee involvement, Internal control, Government regulation, Safety training	Safety performance
20	Neal, Griffin, and Hart(2000)	Safety knowledge	Safety climate	Safety performance, Safety motivation

3.0 Hypothesis Development

3.1Safety Climate and Safety Knowledge

Safety climate was derived from the broader concept of organizational climate. An intensive literature review tabulated in Table 1 demonstrated that safety climate is one of the most common factors of safety performance, and many studies have tested the influence of safety climate on safety knowledge. For instance, several researchers confirmed that a critical factor of safety climate, namely safety commitment is related to safety knowledge (Fruhen *et al.*, 2014). Corroborate with the above arguments, Vinodkumar and Bhasi (2010)found that the safety climate influences safety knowledge. Several researchers verified that a critical dimension of safety climate directly affects safety knowledge (Guo, Yiu and González, 2018).

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Noted that the safety climate as attitude-based perception links to behavior-based. This article includes some attitude and safety knowledge connections into the discussion to support the relationship between safety climate and safety knowledge. A study on safety knowledge, attitude, and self-reported practices among employees in the Bangladesh food industry found safety knowledge above satisfactory. Indeed, the researcher found that food safety knowledge and attitude regarding food are significantly related (Jubayer *et al.*, 2020).Empirical studies also support that attitude is positively linked to safety knowledge(Lim *et al.*, 2016). Likewise, Shafique, Kalyar and Rani(2020)advocated that safety, safety, and other factors are essential to achieve adequate safety outcomes.

On another way around, several researchers indicated safety knowledge is influencing safety climate. For example, Lee et al.(2019) showed that organizations facilitating knowledge sharing among the employees could improve employees' attitudes and safety behaviors. Numerous scholars have argued that sufficient safety commitment should always accompany knowledgeable senior managers to act correctly with safety-related issues and communicate safety matters or facts to the employee. Moreover, the researcher explained that safety knowledge helps a senior manager understand safety at the workplace and show their safety concern via demonstrations of excellence safety commitment (Fruhen *et al.*, 2014).This evidence highlighted the role of safety commitment in safety climate and safety knowledge in the workplace from a different perspective. This information formulated that safety knowledge and safety climate are interrelated. Based on the above, the following hypothesis is advanced.

Hypothesis1: The safety climate has a positive effect on safety knowledge

3.2 Safety Knowledge and Safety Performance

The relationship between safety knowledge and safety performance is evident worldwide. An empirical study in the Bangladesh food industry has revealed that good safety knowledge does not guaranty good safety practice behavior(Jubayer *et al.*, 2020). A study in Sweden on the effect of specific safety knowledge and self-reported food safety behavior among university students found that the relationship is significant(Marklinder *et al.*, 2020). Researchers have also advised that a more systematic requirement for specific safety knowledge education from younger ages. A qualitative study conducted in Australia on knowledge and most identical safety outcomes such as hazard recognition, risk control, and safety information concerning safety machinery construction and design was clarified that the relatively minor roles of the country's regulatory sources and the specialist body of knowledge (human factors/ergonomic) (Bluff, 2015). Indeed, the researcher compared that individual factors likely safety knowledge also played more vital than safety law and regulation for decision-makers on good safety practices and continuous reducing issues related to safety outcomes. The researcher also found that knowledge is constructed on various vocational trades, practices, and professional experiences, and personal backgrounds. The previous study on the transportation industry in United Stated indicated that

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providing knowledge to the drivers about the proficiencies and limitation helps drivers estimate the safety limitsof automated system and develop trust in the system to a significant level(Khastgir *et al.*, 2018).

A key researcher in a safety study found that enhancing employees' safety knowledge contributes to improving employee safety performance (Neal et al., 2000). Similar findings indicated by Mariani et al. (2017), knowledge was directly affected by safety performance. In the same array of knowledge, a group of researchers revealed that safety knowledge comprised 66.02 percent of safety performance variance and the most influencing safety performance(Mohammadfam *et al.*, 2017). The effectiveness of safety knowledge is closely related to knowledge transfer. An empirical study on knowledge-related safety confirmed that an incredible safety knowledge transfer environment drives several advantages: increased safety performance, better safety knowledge application, and an employee's inspiration(Huang and Yang, 2019).

In contrast, consumers have the chance to choose how to act regarding safety actions. It is because knowledge does not directly lead to safe food safety behaviour(Baser *et al.*, 2017). Several researchers found a negative and significant relationship between food safety knowledge and behaviour(Lim *et al.*, 2016). From this point of view, aspects of safety knowledge may vary industrially, and there is an exact value in assessing the safety knowledge in a different type of industry. Here, the assumption on safety knowledge's effect on safety performance needs to be carefully drawn since the findings are not consistent. Therefore, the hypothesis of this section develops as follow;

Hypothesis 2: Safety knowledge has a positive effect on safety performance.

3.3 Safety Climate and Safety Performance

Another crucial factor influencing safety performance is the safety climate. Safety performance in this study has been defined as safety compliance and safety participation. Safety performance in this study defined as employee safety compliance and safety participation (Neal & Griffin, 2000).

Many researchers have found that safety climate is positively related to safety performance.

A series of studies by group researchers reveal safety climate is essential to promote safety performance (Nor Azma, Abdul Halim and Munauwar, 2016; Awang, Rahlin and Afthanorhan, 2019; Rahlin *et al.*, 2019a, 2019b, 2020b, 2020a). He, Wang, and Payne (2019)claimed that organizations applied for different requirements and safety roles at work. Thus safety climate components might vary by organization. However, several scholars agreed that some components are commonly recognized, such as management commitment to safety(Alfayez, Subramaniama and Mohd Zin, 2017; Lu, Taksa and Jia, 2020). The researcher believes that empowering a safety climate helps employees to visualize the organization's safety behavior and improve safety knowledge requirements. Safety climate and safety knowledge also encourage members to individually resolve safety issues and problems at work, improve their safety skills,

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and actively care for members to create a satisfactory safety climate. Therefore, the researcher believes that safety climate affects safety performance through safety knowledge. Based on the preceding discussion, the following hypothesis was formed:

Hypothesis 3: Safety climate has a positive effect on safety performance

Hypothesis 4: Safety knowledge mediates the relationship between safety climate and safety performance

4. Framework of the study

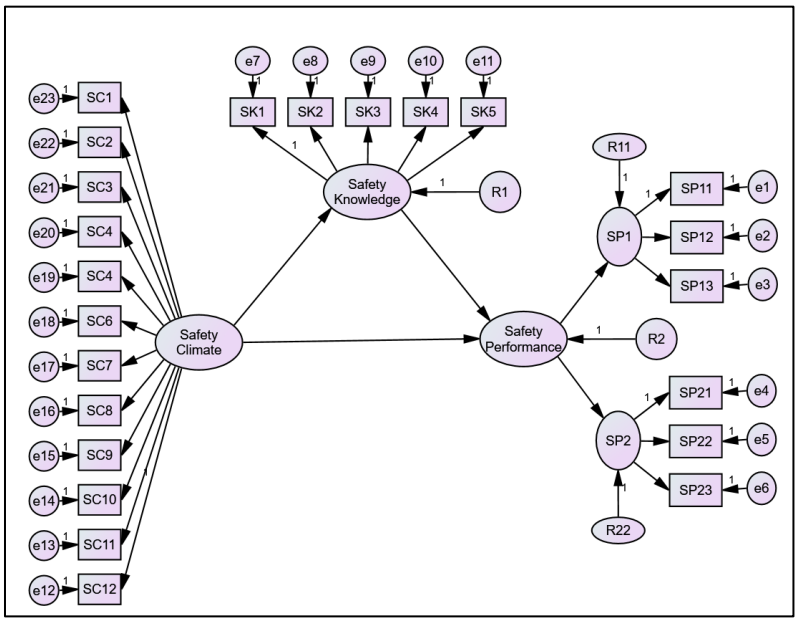

Figure 1: Framework Linkage Safety Climate, Safety Knowledge and Safety Performance

Figure 1 shows the framework of the proposed model. This framework comprises safety knowledge as an independent construct, safety knowledge is a mediation construct, and safety performance is a dependent construct. Safety climate and safety knowledge are a predictor of safety performance. The researcher postulated that safety knowledge would have a stronger effect than safety knowledge on safety performance.

5. Research Method

An intensive search of safety literature related safety climate, safety knowledge and safety performance from the 1980s to 2021 has been carried out. The electronic search covered Science Direct, Scopus, Emerald, Springer, Taylor and Francis, and Ebscohost. Boolean logic keyword searching technique was applied in each database. Initially, this review was approached by the eligible reviewers' inclusive agreements under the following criteria: (1) content measurements

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associated safety climate, safety knowledge and safety performance, 2) operational definition, 3) relationship of study constructs within a nomological network.

Step	Method	Content
1. Item review	Literature review	1.1 Safety knowledge construct 1.2 Identify the dimensions of safety knowledge, antecedents, and consequences
2. Item generation	Table specification	Determine the content of safety knowledge and domain suitable with context of study
3. Item refine	3.1 Expert judge 3.2 Sample from population judge (psychometrics)	3.1 Establish subject matter expert panel who are familiar with construct of interest 3.2 Get the respondent feedback on the important of the items
4. Finalized the items		Organized at suitable format

Figure 2 Step by Step Content Validity Assessment

Figure 2 illustrated a step by step of content validity assessment process on approach towards safety knowledge, safety climate andSMEs safety performance framework. The detail explanation of each step in this procedure provided at the following sections.

Step 1: Item review

The first step of content validity assessment is defining the content domain of a safety knowledge construct that the instrument intended to be measured as suggested by Kim and Kristoffer (2021). The content domain is referred to as the content measurements associated with the variables measured (Beus, Payne, Arthur, & Muñoz, 2017; Chan, 1998). It can be identified by a literature review on the topic being measured. The operational definition of safety knowledge is made according toNeal, Griffin and Hart, (2000)definition to provide an accurate definition of the attributes and characteristics of the safety knowledge intended to be measured. The operational definition creates a scope of the study, a clear of its boundaries or limitation, dimensions, and components is of the construct. On the one hand, safety knowledge concepts are partly defined by their relationships with safety climate and safety performance within a nomological network. Accordingly, safety climate and safety knowledge, safety knowledge and

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safety performance, and safety climate and safety performance are discovered. To ensure a system of law-like relationships discovered over time and anchor(Henseler, Ringle and Sarstedt, 2014),safety knowledge and other concepts. On the other hand, other qualitative research methods likely interview practice to determine the applicable construct's dimensions and concepts. Researcher to enrich and develop what has been identified by the provided conceptual and operational definition.

Steps 2: Item generation

In this step, the researcher used the extraction of the information from the first step into a specifications table. The table of specifications reviews the alignment of items from selected research or a combination of items from several studies, in the context of this study researcher selected one set of research items from a single researcher. In this part, that is important to ensure that items are reflected in and relevant to research questions. Start from placed construct on one column and all items in the next columns and rows as presented in Table 2.

Table 2Table of Specifications

	Construct	Items		Relevancy	Clarity	
1	Safety knowledge	1	I know how to perform my job in a safe manner.			
		2	I know how to use safety equipment and standard work procedures.			
		3	I know how to maintain or improve workplace health and safety.			
		4	I know how to reduce the risk of accidents and incidents in the workplace			
		5	I know what the hazards associated with my jobs and the necessary precautions to be taken while doing my job are			

Step 3: Item Refinement

i) Expert judge

Several experts are required to refine items in the instrument of the study. There is no clear cut on the required number; most comprehensive studies used five experts or more but not more than 10. Indeed, the researcher specified that degree of agreement probably decreases with the number of experts. Five experts in this study consist of academicians and industrial experts similar toCheng, Chen, and Hong (2016). A cover letter was issued to each expert to explain a scoring method for item refinement. Experts are needed to indicate each item's score for

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relevancy and clarity using a specific Likert scale. The degree of relevancy of every item determined by 1 is not relevant, 2 is items need some revision, 3 is relevant but needs a minor revision and 4 very relevant. For clarity of the items,the expert will ask to rate every item according to 1 is not clear, 2 is items needs some revision, 3 is clear but need minor revision, and 4 is very clear. The higher score always specifies panel experts' agreement on the essential of an item in an instrument.

ii) Sample from population judge

Samples from the population of the study are those who have experience or work in the field. This step ensures that the population for whom the instrument is being developed is represented. A few samples are involved in this step to reconfirm and guide the researcher on the importance of items that represent safety knowledge that is potentially needed in that particular industry. Additionally, these steps were employed to ascertain whether they could easily understand the items of the questionnaire.

The outcome from expert assessments and sample from population assessments in the items refinement process able to assist the researcher in improving representativeness, relevancy, or clarity and comprehensiveness of the items to be measured(Rahlin *et al.*, 2019b). Additionally, all of these steps allowed the researcher to merge qualitative inputs (viewpoints of panel experts) and quantitative input.

Sept 4: Finalized the items

In the last step of the content validity assessment, as Figure 2 is finalized, the items represent the safety knowledge construct. The final version of instrument safety knowledge only can be obtainable after amendments and change the items as expert comments. To make sure this instrument is respondent friendly, the researcher has organized it in a suitable format and sequence to collect the finalized items in a usable form.

5. Conclusion

In business, social science, and management science, many variables of interest and research outcomes are abstract concepts and function by robust theoretical and conceptual explanation. This article demonstratesappropriate steps for content validity assessment of asafety knowledge instrument in the Safety Knowledge, Safety Climate and SMEs Safety Performance Framework. Thus, a step-by-stepcontent validity assessment offered a bridge to achieve a valid and reliable measurement, and it was an essential element of quality research.

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