Journal of Safety Research 82 (2022) 57–67

Contents lists available at ScienceDirect

Journal of Safety Research

journal homepage: www.elsevier.com/locate/jsr

Toward an effective occupational health and safety culture: A multiple stakeholder perspective

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ARTICLE INFO

Article history:
Received 23 January 2021
Received in revised form 3 December 2021
Accepted 21 April 2022
Available online 2 May 2022

Keywords:
Culture
Occupational health and safety
Proactive
Stakeholders

ABSTRACT

Introduction: This paper uses an extensive review of the safety culture literature to identify three key themes (a) role of new employees, (b) absence of a pro-active approach, and (c) need for a 'No-blame' culture, and explores their impact on the occupational health and safety culture (OHS). *Method:* We use a qualitative study with a *constructivist phenomenological* approach consisting of 55 in-depth interviews with a diverse range of participants, including business owners, line managers and supervisors, OHS advisors, workers, and union representatives in Western Australia. A workplace vignette was used to elicit cultural norms derived from the participants' attitudes and beliefs, which were analyzed using NVivo software to conduct a thematic analysis to classify the interview text into specific concepts and phrases. *Results:* Findings confirm the three themes identified from our literature review and provide useful insights into the challenges faced by the participants in the implementation of safety policies. *Practical Applications:* Besides extending the occupational health and safety literature, these findings have important managerial implications in view of the evolving nature of work and workplaces.

1. Introduction

"Safety culture" is defined as "shared attitudes, values, and perceptions toward safety held by organizational groups" that is assumed to be "both a product and driver of risk-related practices" (Tear et al., 2020, p. 550), which draws upon the seminal work by Cooper (2000) and Zohar (2002) in this area. Safety culture also represents and operationalizes psychological and behavioral characteristics of organizations, which may result in the success or failure of occupational health and safety (OHS) practices (Tear et al., 2020). Safety culture is identified as a critical factor that sets the tone for the recognition of importance of safety within an organization (Fernández-Muñiz et al., 2007). With growing acceptance of safety culture as a key driver of organizational safety outcomes, regulators in different industries have increasingly started to focus on safety culture in their audits and in their contact with companies (Nævestad et al., 2019). Hence, it is not surprising to see growing efforts to establish an evidence-based approach to develop OHS interventions to address a broad range of safety issues across multiple sectors (Cunningham et al., 2020).

Gunningham (1999a, 1999b; 2005) argues that government regulation may not be enough to control workplace hazards and raises an important question about what can guarantee a hazard free work environment if statutory regulation alone cannot accomplish this outcome. He also suggests that successful implementation of workplace safety practice needs the support of those who have the greatest interest in reducing the hazards of work, namely the potential victims (i.e., the workers) themselves. In this context, early research explored the use of a 'top-down' leadership approach to develop an effective safety culture (Roughton & Mercurio, 2002). However, more recent studies highlight the importance of other effective interventions to create and maintain positive safety cultures, such as social processes (Pedersen, 2020), peer feedback, continuous improvement, and safety leadership (Zuschlag, Ranney, & Coplen, 2016), regulation, incentives and information (Hasle, Limborg, & Nielsen, 2014), and effective leadership (Kessler et al., 2020; Yanar et al., 2019).

Notwithstanding the useful contribution made by all these studies, there is relatively less research on the impact of organizational culture on workers' attitudes toward safety, which may be used to improve or intervene in safety issues (Antonsen, 2017). This is particularly important in the case of new employees who may not share the same knowledge, attitudes, commitment, and behaviors as the existing employees in any organization due to lack

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https://doi.org/10.1016/j.jsr.2022.04.006
0022-4375/

of proper training or prior experience (O'Kelley, 2019). However, there is little research on the impact of new employees on the established safety culture. This is particularly relevant for the new 'short-term employment' relationships that may become a major impediment to establishing a workplace culture (Anyfantis & Boustras, 2020).

Similarly, researchers have called for a proactive approach in creating and managing a safety culture that looks beyond mere policies and procedures (e.g., Curcuruto et al., 2019, 2020; Tear et al., 2020). For example, Silla et al. (2017) recommend that employees should be enabled to report safety issues without any fear, while Zuschlag et al. (2016) introduced peer-to-peer feedback, continuous safety improvements, and safety-leadership as means to improve the effectiveness of safety culture. Mackenzie et al. (2019) also highlight worker engagement and participation as the key elements of an effective safety culture. Thus, it is clear that we need a more proactive approach to improve workplace safety outcomes as an alternative to the traditional approaches that seem to rely mainly on rules and regulations.

Finally, researchers also identify 'blame culture' and poor leadership that are prevalent in many organizations as barriers that prevent employees from speaking up against poor safety practices (Walker, 2013). Dekker (2009) reinforces this point by arguing that rather than finding scapegoats for any safety failures, organizations may find it more useful to focus on continuous improvement of their safety culture. Similarly, Mayhew (2007, p. 145) highlights that an over-emphasis on assigning blame for any safety failure may make employees more defensive, which may jeopardize efforts to improve safety outcomes.

This paper extends the growing research on safety culture by addressing these three issues (a) the role of new employees, (b) absence of a pro-active approach, and (c) the need for a 'No-blame' culture, and exploring their impact on OHS culture. We use a qualitative approach consisting of 55 in-depth interviews with participants in a diverse range of roles (e.g., business owners, line managers and supervisors, OHS advisors, workers, and union representatives), to uncover what works and does not work in OHS cultural systems in relation to these three issues. We adopted a workplace vignette from a legal case (Barker v Rand Transport, 1986) to elicit cultural norms derived from participants' attitudes and beliefs, and used thematic analysis to classify interview text into repeated concepts and phrases. This approach helped gain descriptive insights into the challenges faced in the implementation of safety policies, which confirmed the three themes identified from our literature review (including new employees, proactive approach, and 'No-blame' culture). We discuss the conceptual contribution of these findings to the OHS literature and practical implications for safety managers along with some limitations of our study and directions for future research.

2. Literature review

2.1. Occupational health and safety culture – origin

Vogus, Sutcliffe, and Weick (2010) define safety culture as a facet of organizational culture, which is an emergent ordered system of meaning and symbols that shapes how an organization's members interpret their experience and act on an ongoing basis. Reiman and Oedewald (2004) relate safety culture to a company's espousal of safety-related values and norms demonstrated by its policies and procedures, while others refers to the employees' perceptions of those values and norms on an actual job site (Goldenhar, 2016). In this context, Cameron and Quinn (2011) remind us that managerial commitment to safety culture may suffer due to the daily challenge of being torn between the demands of production deadlines and workplace safety (Poell et al., 2000).

According to Schulman (2020), despite a great deal of research on 'safety culture,' there is still a lack of clarity about how it is influenced by specific elements of organizational structure, such as positions and roles, rules and regulations, accountability and authority, and communication channels. For example, a formal organization chart may suggest a certain hierarchy and ordered flow of information and authority, however, the real picture could be very different. As a result, the link between organizational structure and safety culture can be quite complex depending on the stage of their relationship with each other. Specifically, the initial change in the culture or sub-culture itself may jeopardize safety in an organization, which may be followed by the development of a safety culture coupled with comprehensive structural changes in leadership and strategy (Schulman, 2020). These changes could pose challenges to maintain and update safety culture over time, such as job descriptions, procedures and rules, accountability standards, rewards and punishments (Schulman, 2020) coupled with coercive pressure on the relationship between organizational structure and risk management (Tagod, Adeleke, & Moshood, 2021). In fact, it may take a whole generation to change entrenched attitudes and assumptions, which makes it necessary to create and reinforce specific safety management structures. This may help create and maintain a safety culture that cuts across the entire organization and consists of all the activities and processes that are required for a reliable and sustainable safety performance (Schulman, 2020).

Aburumman, Newnam, and Fildes (2019) use a systematic literature review to identify and evaluate the effectiveness of workplace interventions in improving safety culture, and support calls for the translation of theoretical research on safety culture into intervention efforts that can guide organizations in improving their workplace safety culture. Others have also highlighted the importance of the quality of overall organizational culture as it can mean the difference between the organization's success and failure (Taylor, 2005). However, it is not easy to create or change organizational culture and organizational leaders play a major role in creating a certain culture (Taylor, 2005). In the context of safety culture, it is even more important that a leader must be prepared to 'walk-the-talk' because it is not simply a matter of espousing safety, but a leader in this discipline must proactively promote safety while encouraging the workforce to contribute (Van Dyck et al., 2013). An organization's safety culture provides grounds to create proactive safety management by yielding "predictive measures. . .which may reduce the need to wait for the system to fail in order to identify weaknesses and to take remedial actions" (Flin et al., 2000, p. 178).

Considerable evidence exists to indicate that individual safety compliance is associated with fewer adverse events, accidents, and injuries (Zohar, 2002). Safety behavior research focuses on individual safety compliance that requires individuals carrying out their work activities in accordance with policies, procedures, and rules (Christian et al., 2009). However, it is not clear if safety compliance may be less about individual-level compliance and more about organizational observance of workplace safety practices. In this context, Turner et al. (2012) propose assisting and cooperating with co-workers via voluntary behaviors to make the workplace safer beyond prescribed safety precautions.

2.2. Occupational health and safety culture – challenges

2.2.1. New employees

The changing nature of contemporary work arrangements from full-time positions to less permanent forms of employment, combined with and a large turnover of staff, can often have a detrimen-

tal effect on an organization's aspirational OHS culture. Masi and Cagno (2015) highlight the 'regulations, resources, and information' related to contractors, part-time staff and temporary workers as barriers to the successful implementation and continuance of the OHS management system. Specific examples of these barriers may include: bureaucracy, lack of technical support, inadequate skills, misbehavior of trade unions, reactive management, and so forth. This can result in poor OHS culture that the OHS management systems are seeking to foster. Some aspects of workplace practices have been the subject of research in OHS (Gunningham, 1999a, 1999b). First is the focus on the capacity of contracting and supply chain practices to influence OHS outcomes in the workplace (McDermott & Hayes, 2018). A second area of investigation focuses on the capacity for approaches to 'blame' to adversely affect, or enhance, workplace culture and therefore OHS outcomes (Gunningham, 1999a, 1999b). These studies highlight the use of supply chain pressure as a means of informal market control over the OHS practices of entities within the supply chain.

The use of the Occupational Health and Safety Management System (OHSMS) and safety culture has prompted many large organizations to contemplate extending these to the other stakeholders besides employees, such as suppliers, contractors, and sub-contractors. Further, Gunningham (1999a, 1999b) argues that it has been possible to use the substantial advantage larger enterprises have over their smaller suppliers and contractors to insist that those suppliers and contractors (including the employees of such) conform to their OHSMS and safety cultural requirements. If smaller contractors are regularly monitored and audited, and if the consequence of persistent non-compliance with the OHSMS is losing the opportunity to tender for future work, then economic disadvantage will follow. From a cultural perspective, smaller enterprises must be willing to culturally adapt to the OHSMS requirements of their business masters or even perish as an economic entity (Gunningham, 2005).

Hopkins (2005) put the supply-chain OHS improvement strategy into perspective by suggesting that efforts to change safety cultures should be focused not on changing individual values but on changing organizational practices (Hopkins, 2005, p. 9). This advice is supplemented by Choudhry, Fang and Mohamed (2007) when they suggest that a major shortcoming with most safety cultural models, is the lack of integration into general models of organizational culture (Choudhry et al., 2007, p. 994). This observation is particularly compelling when contractors work on the principals' work site. As evidenced in the study, the principal often has an expectation the contractor will adopt the safety culture of the principal; rarely do the safety cultures naturally integrate. However, often the principals' cultural approach to safety is superior to the contractors (Mohamed, 1999). Before allowing a contractor on site, the principal has to be satisfied that the contractor will commit to the OHS rules and procedures of the site including a vibrant safety culture, as per International Organization for Standardization (ISO 45001).

Contractor prequalification and selection can be ascertained by principal organizations by looking at their safety record, an approach that has been studied by many researchers (e.g., Trethewy, 2003; El-Sawalhi, Eaton, & Rustom, 2007; Thommesen & Andersen, 2012). According to them, small contracting companies with proven capabilities related to OHS, accompanied by a solid OHS cultural foundation, may often be preferred bidders. Principal contractors are looking to avoid disasters and work-related accidents or incidents that may tarnish their brand and potentially cause them various forms of financial pain (El-Sawalhi et al., 2007). Contractual bids by sub-contractors may also include safety measures resulting in those with above average safety measures being more likely to be rewarded over their competitors (Thommesen & Andersen, 2012).

Ostensibly, requirements for evidence of a safe workplace, a safe system of work, and a proven OHS safety culture may encourage smaller operators to rise to the challenge the principal contractor's requirements, or alternatively, potentially lose future business opportunities. Adjekum and Tous (2020) advocate assessment and continuous improvement in a safety culture with more focus placed on resilient safety practices. This leads to the question as to what component is integral to generate a resilient safety practice. An OHS safety culture has various components that either meet, or fail to meet, a principal's requirements. Corrigan et al. (2019) suggest there is an increasing awareness of human factors and a move towards a positive safety culture that facilitates an open and resilient approach to all safety practices. Dekker (2009) offers a specific and necessary component of an OHS culture. He points out that an OHS culture should be 'just' (equitable and fair). This means OHS culture ought to encourage a balance between learning from incidents with accountability and the consequences of failing to maintain this balance (Dekker, 2009). One example of an equitable and fair OHS culture would be a safety culture premised on a pro-active approach to safety by all beneficiaries and a 'No-blame' ethos.

2.2.2. Pro-active approach

Silla et al. (2017) suggests that a safety-conscious work environment allows organizations to be proactive regarding safety and enables employees to feel free to report any concern without fear of retaliation. Hasle et al. (2014) combine institutional theory with basic policy, practices, and instruments (e.g., regulation, incentives, and information) to provide a realistic analysis of various mechanisms and contexts, using coercive, normative, and mimetic mechanisms as explanations for organizational responses to safety regulations. Zuschlag et al. (2016) extend this research by showing that 'pro-active' safety interventions, such as peer-to-peer feedback, continuous improvement, and safety-leadership development, help improve safety outcomes, operations, safety culture, and labor-management relations. For example, a multi-year pilot project at a Union Pacific (UP) service unit in the United States showed an 80% drop in at-risk behaviors, a 79% decrease in engineer decertification rates, an 81% decline in the derailments and other incidents, and better overall labor–management relations (Zuschlag et al. (2016)). Thus, it seems clear that worker engagement and participation is crucial for the development of an effective safety culture and successful implementation of safety strategies (Mackenzie et al., 2019). Perhaps these approaches have reached the limits of what can be achieved using traditional approaches based on compliance using rules and regulations.

Griffin and Curcuruto (2016) note that disturbing levels of accidents and injury in the workplace continue to highlight the importance of safety-related behavior and the need to understand their antecedents. Bradbury (2019) makes the point that the support of workers in the pursuit of a safe workplace requires a culture of engagement. This engagement requires the vision to be communicated via team training, setting organizational goals, and building a foundation for sustainment at every phase of implementation (Thomas & Galla, 2013). Similarly, Curcuruto, Parker, and Griffin (2019) investigate the motivational drivers and organizational outcomes of the proactivity toward workplace safety improvement.

Past research on safety compliance acknowledges the statutory requirement that it is an employer's duty to provide a safe system of work and a safe workplace, which requires a commitment from all parties, employees and employer (Liu, 2019). According to Bradbury (2019), companies with a strong safety culture see employees driving the reporting and investigation process on their own because it is the employees that have ownership of their safety system and the culture that drives it. Bradbury (2019) fur-

ther suggests that in the evaluation of a safety culture, it is critical to look at the system, interactions within the system, and behaviors resulting from those interactions in a pro-active manner.

Past research highlights the positive role of safety practices and improvements in saving lives and preventing workplace injuries (e.g., Gunningham 1999a, 1999b; MacKenzie et al., 2019), but it is alarming to note that many of these workplace safety practices continue to fail and result in frequent workplace accidents around the world (e.g., Jilcha & Kitaw, 2016; Palali & van Ours, 2017). For example, Kessler et al. (2020) combine social learning theory and social information processing theory to highlight the immediate social environments that influence employee behavior. They reveal 260 million annual workplace-related injuries and illnesses are due to accidents in workplaces resulting in three or more days of absence and nearly 350,000 work related fatalities worldwide. However, it is not clear if all these safety failures are due to improper design, implementation, and/or compliance of safety practices (He et al., 2020; Kessler et al., 2020; Petitta et al., 2019; Richardsen et al., 2019).

2.2.3. 'No-blame' safety culture – A solution?

Past research also explores issues of culture and 'blame' within organizations. For example, Dekker (2009) emphasizes that the intent of safety culture should be to facilitate continual improvement of the OHS endeavor; and only when necessary, culpability be identified and pursued through the court process. Dekker (2009) adds that the importance of accountability with respect to OHS and suggests that a 'No-blame' safety culture is neither feasible nor desirable but emphasizes that a just safety culture should be more concerned with the sustainability of learning from failure. In this context, Mayhew (2007) suggests that the key objective of incident reporting and investigation should not allocate blame for the incident under investigation. If attempts are made to apportion blame, people who might otherwise provide useful information will become defensive (Mayhew, 2007, p. 145).

Mayhew (2007) also identifies the dangers in prematurely apportioning blame, namely: (a) witnesses may not reveal all the circumstances and events surrounding the incident, (b) deliberate obstruction or provision of false information, and (c) removal of relevant information, documents or evidence. Reason (2000) discusses the necessity to accept the difficulties in trying to change the human condition. Organizations need to focus on changing the conditions under which people work, to mitigate the tendency followers of the approach…of naming, blaming and shaming tend to treat errors as moral issues…the important issue is not who blundered but how did the defenses fail? (Reason, 2000, p. 768). Based on this review of the OHS culture literature, this paper uses a qualitative approach to explore the issues related to the failure of safety culture, including the role of new employees, absence of a proactive safety culture, and perceptions about blame during incident/accident investigations, as described in the following section.

3. Methodology

3.1. Research design and sampling

This paper uses a qualitative research design with a *constructivist phenomenological* approach comprising 55 semi-structured interviews with key stakeholders across multiple industries in Western Australia, to gather their perspectives about safety culture. This allowed the participants to articulate their stories (Yates, 2010) and provide rich descriptions (Guba & Lincoln, 2005; Lincoln, Lynham, & Guba, 2011). This was part of a collective narrative about their motivation for complying with OHS regulations as well as the constraints and enablers of their everyday lives in dealing with the OHS issues. Table 1 shows the participant profiles, divided into two groups based on their individual occupations, with the owners of small and medium sized businesses, business managers, and supervisors in one group (O&M), and OHS professionals, OHS educators, workers and their representatives in another group (PWR). Invitations were sent by letter and email to 125 employees and employers in an eclectic mix of 94 organizations across Western Australia, including the participants in a safety training course run by the Industrial Foundation for Accident Prevention (IFAP – https://www.ifap.asn.au) and their contacts using a snowballing approach. To be eligible, a participant must have worked for, represented those who worked for, managed, or owned an organization subject to OHS regulations at the time of the data collection.

The general interview approach was chosen for this research because the process allowed access to more in-depth experiences of the participants. The researcher had a paper-based set of questions that were followed. The questions had already been provided to the participants by letter or email about two weeks in advance on average. The interviews were digitally recorded using an MP3 recorder and later transcribed for analysis. The interview process was facilitated through a variety of settings; the relaxed and informal setting of the researcher's office or the participant's own office via telephone link or face to face. Five of a total of 60 participants chose to respond to the questions with written answers. In keeping with the semi-structured interview approach, the five respondents who chose to answer the questions in writing were not included in the data set. Each interview transcript was checked by the researcher by replaying the recording and confirming that the transcript was accurate. This was verified independently by a senior academic who was not involved in data collection. Field notes were also taken by the researcher during the interview noting specific and salient points, along with summaries of the interviews. An example of this was when a participant answered a question and then added some specific point that, while not directly applicable to the question, the participant clearly perceived some connection.

Table 1
Participants profiles (N = 55).

Occupation	**Code**	**Number of Participants**
Owners of small and medium sized businesses	SME	3
Business managers and supervisors	BMS	18
OHS professionals	OHSP	21
OHS educators	OHSE	6
Workers and their representatives	W&R	7
Participant group	**Group code**	**Number of participants**
Employer Group - Business owners, business managers and supervisors	O&M	22
Worker Group - OHS professionals, OHS trainers and workers and their representatives	PWR	33
Industry	**ANZSIC Division**	**Number of Participants**
OHS and vocational training (non-mining and non-public service)	P	19
Mining industry	B	12
Agriculture	A	6
Science	M	2
Public service	O	9
Union organizer	N	1
Manufacturing industry	C	3
Hire industry	L	1
Miscellaneous	S	2

3.2. Questionnaire design and coding

Probing open-ended and predetermined questions were developed by the authors and used to follow up on issues and ideas raised by participants. Open-ended questions helped draw full and meaningful answers from the participants and these were tested with a small sample drawn from the same population as for the main study. All the participants received the same questions to enable a comparison of their responses. The responses were later refined into relevant sub-categories and where applicable, into elements. Table 2 lists all these questions.

3.3. Vignette

A vignette based on a legal case related to OHS (Barker v Rand Transport, 1986) was provided to participants to trigger their thinking about safety in general and 'No-blame' safety culture in particular (Appendix I). Following the vignette, the participants answered the following questions, which helped the researchers harness the extremely complex relationship between reports of behaviors and the behaviors themselves. The researcher also probed the participants to explain their answers for all the questions to glean deeper insights. For example, if blame is apportioned during the investigation after a workplace incident to contributing individuals, will the truth about a matter ever be told so that an accident of a similar nature can be avoided?

1. Was the employer at fault for not checking the worker's past safety record before employing them?
2. Should the employer have been any more specific in the induction regarding speed limits for forklifts?
3. It was identified during the accident investigation that there was no speed limit sign located at or near where the accident happened. Should this have been an important consideration in determining the worker's future with Protus (fictious name)?
4. If the worker's employment with Protus was terminated, would you expect any tribunal to find in favor of the worker?
5. Should the regulator be contacted to investigate this accident?
6. In your opinion, is there anything else that the employer could or should have done to avoid the accident?
7. Would your opinion be different if prior to the accident, the worker's supervisor had insisted the worker "get a move on because things are going to be busy today?"

Table 2
Themes, categories and sub-categories.

Theme	Category	Sub-Category
OHS Laws	Encouraging compliance	Simplicity
OHS Laws	Legal consequence	Higher penalties Responsibility
OHS Laws	OHS compliance	Exceed legal requirements Legislative compliance Consultation Duty of care
Management Commitment	OHS leadership	Setting an example Clear instructions Consultation Duty of care
Management Commitment	Workplace culture	New employees Proactive approach
Management Commitment	Successful OHS strategies	Education and training Site specific OHS compliance strategies
Management Deficiencies	Practices that hinder OHS compliance	(no) due diligence Production pressures Insufficient OHS resourcing (Limited) consultation (Limited) duty of care
Management Deficiencies	Incident investigation	Induction process Competency and high risk Investigative fairness

4. Data analysis and results

Interview data were transcribed, inductively coded and thematically analyzed using NVivo tool. A thematic analysis was used to classify interview text into repeated concepts and phrases using an inductive approach. Codes are derived from the data. Participants' words were used to code the data. These codes are built and modified throughout the coding process. The inductive process preceded the coding of the text without identifying categories in advance. Qualitative analysis software was used to develop categories, themes, and elements. Procedures were taken to ensure reliability of the data analysis. Audits of the data and consistency checks were conducted by a research supervisor who was not involved in the actual data collection to ensure independence and reduction of bias. Data saturation was reached after 55 interviews based on the emergence of similar themes and observations.

Participants provided descriptive insights into key cultural challenges and recommendations for policy and practice. The research confirmed three subcategories, *New Employees*, *Proactive Approach, and the 'No-blame' Safety Culture*. However, inductive analysis revealed divergent opinions on the issues related to the safety cultural paradigm between the two participant groups (O&M and PWR). Both the participant groups (O&M and PWR) shared varied perceptions about *New Employees*, which ranged from the failure of government to give OHS more visibility, to an organization's capacity to apply more checks on backgrounds of prospective employees. Such checks are arguably required to ensure that *New Employees* are risk aware and not risk takers in the workplace. The data suggest that new employees, in their eagerness to make a good impression, were prepared to take risks to get their task done quickly.

4.1. New employees

The data show that many *New Employees* are hired, and the employing company often has no idea of how committed to workplace safety the new employee is. *New Employees* appear to encompass the extended definition of employee that can also include contractors or sub-contractors and seasonal workers. Participants suggest that there is often a well-established level of OHS cultural commitment in the workplace by those already working there; however, this may not be the case with a *new employee's* level of commitment to the OHS culture. Interestingly, both the participant groups (O&M and PWR) provide congruent perceptions in this subcategory and perceive *New Employees* to be problematic to the established level of OHS commitment. Three key elements within this sub-category are:

- Health and safety awareness
- Quality of employees
- Casual and seasonal workers

The first element reflects data relevant to an expressed desire to employ people with a 'health and safety awareness.' In addition, there is a requirement to get the OHS message out to all employees so that employers can be sure of employing people who are OHS risk informed. Whether the message is one of OHS law or safety culture awareness does not matter as both are affiliated within the OHS paradigm. To have one without the other would arguably not provide evidence an organization's commitment to the OHS endeavor. For example, [PWR1] refer to 'coming across people,'

which suggests that some *new employees* are not OHS aware. The reference to 'a sad reflection' suggests there is evidence that OHS legal requirements have failed to reach some people in the workplace. Similarly, participant [PWR54] is keen to ensure that *new employees* have an acceptable level of knowledge of OHS culture; at least enough to warrant that the new employee is not going to be a risk. [PWR54] suggests that access to workers' compensation records is a way to ensure this.

> *"There needs to be much more focus on getting the message out, not just to employers but to all people. . .we come across people who have never heard of the Occupational Safety and Health Act and that's a sad reflection when the law has now been in place since 1984."* [PWR1].
> *"I'm fairly keen on ensuring right from the start when we employ someone who has a reasonable level of health and safety culture and they're not going to be a risk. . .so if I could see an improvement it could be that the potential employer has access to safety and workers' compensation records."* [PWR54].

A slightly different element within the sub-category of *New Employees* relates to participants' perceptions that 'quality employees' have some acceptable levels of OHS education and training, possibly provided by a previous employer, which may determine their level of commitment to OHS in any new organization. This argument suggests that someone other than the new employer is responsible for ensuring OHS commitment and competency training are present, although in this case it lies with another employer:

> *"It's the quality of the people and the amount of safety education and training that they have had in previous roles and the competencies of those people to apply for new roles."* [O&M34].

Other approaches to ensure 'quality employees' were offered by participants, and included contractor vetting and recruitment and selection criteria:

> *"We have a fairly active contractor vetting and approval process so we don't aim to have them on site unless they have been vetted and can demonstrate. . .safety performance."* [O&M47].
> *"Getting good safety trades and operators is the key issue for us."* [O&M13].

Two participants working in the agriculture industry provided a distinctive perspective. This industry has peak employment levels, particularly when it is time for seeding or harvest. Harvest often requires a raft of *New (Seasonal) Employees*. Ostensibly, there is an eagerness for *New Employees* to prove themselves as valuable employees. However, this eagerness is not always conducive to good OHS practice.

The first participant, a senior manager for a company whose core business revolves around the grain harvesting seasons, highlights the eagerness by some *New Employees* to get the job done by whatever means, possibly to ensure a potential continuing employment relationship. Participant [PWR14] was a training coordinator who also referred to harvest time. They must ensure that 1500 new seasonal employees are safety and risk aware. Clearly, some of the casual staff and seasonal workers will be working in remote areas that inherently appear to attract extra OHS concerns:

> *"When the harvest is on people just want to serve and part of serving means I'll get it done right now which is not always the best way to do it."* [O&M24].
> *"We go through harvest whereby we employ 1500 seasonal staff on a casual basis. . .to train them on occupational health and safety and also allow them to be on our sites where they are quite isolated is fraught with problems."* [PWR14].

Some participants introduced the concept of 'blame/no-blame safety cultures.' This is where after a workplace adverse event the employer is looking to investigate with the primary purpose of apportioning blame. While there appears to be some limited research in the 'blame' area of OHS, it is generally limited to the perceptions of management. Research to date is not entirely congruent with the findings of this research.

4.2. Proactive approach

The second sub-category is that of a Proactive Approach. This sub-category contains three relatively complementary elements. The first contains perceptions about the 'proactive' OHS influence of bigger companies. Perceptions were linked to an element of negative perceptions about the 'regressive influence of OHS non-compliant smaller contractors.' The third element is a 'proactive initiative.' Several participants suggest there is a causal relationship between working for big companies and a greater commitment to OHS compliance. Principal companies like those listed by participants set an OHS example and expect adherence by contractors accessing their sites. Participant [O&M21] begins the Proactive Approach element by referencing two large mining organizations and their drive to ensure contracting organizations possess a high degree of commitment to OHS before working at their sites. Participant [PWR23] informs that a large mining company that they work with ensures that safety is paramount in the minds of all contractors. They achieve this end by using various communication techniques:

> *"I'd say that the companies that we do business with like two large mining organizations are very proactive in OHS and that drives us to become more proactive."* [O&M21].
> *"On a mining contract with a large mining company at the start of every meeting you have what's called a safety moment. . .somebody will talk about something that they have noticed in the preceding couple of days. . .I think this keeps health and safety in people's minds."* [PWR23].

Linked with the relatively positive perceptions of OHS for large organizations, some participants also appear to credit a safety commitment as inherited from customer organizations via an expectation by the customer that there is a commitment to OHS compliance. As a group, these perceptions suggest that organizations committed to OHS can and do have a positive influence on other organizations that work for or with them. The four previous participants highlighted the role of OHS encouragement as a factor driven by the principal organization. Alternatively, provided below is a different perspective of the principal organization. This perspective appears to evolve from an alternative view of how the principal/contractor relationship can also hinder OHS practice.

> *"We are fundamentally an IT outsource business. . .typically that involves our staff working on site in our customers' organizations and we therefore inherit their safety systems where our staff have to comply."* [O&M26].
> *"We have a huge demand from our clients to prove health and safety compliance. . .and it's a big work load on us."* [PWR54].

The following two participants clearly perceive that external influences like small business contractors, third party contractors, and visitors who are not proactive in OHS can adversely affect their organizational approach to OHS. It is difficult to identify this negative view of the *status quo* as opposed to the more positive view previously expressed above. It is evident that some organizations did not scrutinize who is coming onto their sites to work or visit. If the necessary scrutiny applied to such visitation then a lack of OHS commitment could be determined before workers get

on-site. Non-compliant organizations would not be permitted to adversely threaten, influence, or hinder a culture of OHS compliance:

> *"Having to work with other small businesses who don't have the same commitment. . .when you have different levels of commitment it can cause conflict in your own approach to OHS."* [O&M12].

> *"Because we have such high compliance to OHS standards. . .the main issue is that we have third party contractors or visitors not as compliant."* [PWR30].

Finally, participant [PWR2] suggests that OHS vision and creativity if *proactively* progressed will lead to natural outcomes. The reference to natural outcomes suggests that if you take a *Proactive Approach* using a 'basic' technique that does not set out to stifle or extinguish people's OHS vision, integrity, or creativity then a natural outcome, which appears to be an outcome that naturally evolves without external influence or manipulation, occurs:

> *"I suppose it's bringing OHS back down to basics. . .that we are not there to stifle people's integrity, vision or creativity. . .we're there to help things progress and come out naturally."* [PWR2].

Several management participants offered perceptions embracing a variance of organizational *proactive* initiatives. These ranged from winning the hearts and minds of employees to the cause, as opposed to dogmatically enforcing OHS rules or regulation. There is a link between the previous perception and the following three views. This link is evident but contextually different; participant [PWR2] informs what behaviors to avoid so a natural OHS outcome can result.

The next three participants recommend proactively developing relationships at all levels of the organization with the essential OHS cultural engagement between management and staff. Participant [O&M29] offers a top down safety transformation as an example of proactive OHS. Winning over the senior managers to the importance of OHS and then *proactively* direct accountability down the line is a perception of [O&M29]. The 'proactive initiative' element consisted of the following perceptions: each perception offers a contextually different initiative:

> *"Winning hearts and minds through consultation has probably been more successful over and above any added rules or regulations."* [O&M26].

> *"What we have done in order to encourage an OHS culture is develop good working relationships between managers and supervisors and staff. . .it has taken a lot of time and effort to get them engaged."* [O&M28].

> *"We embarked on our safety transformation programmer in August 2009 the focus at that point was around leadership. . .getting the commitment of our senior managers at the top of the organization. . .driving cultural accountability down the line."* [O&M29].

Perceptions of OHS cultural pro-activity were not just restricted to the management group. The following perception comes from a safety advisor. This participant appears to suggest that there are site managers and operators within his organization who are *proactive* in their commitment to OHS and there are those who are not.

> *"We have strong operators in our business who drive safety at their sites. . .the stronger managers and operators help to run sites better than others in terms of cultural compliance."* [PWR52].

Increasingly, it became clear from the above participant perceptions that *proactively* pursuing the OHS cultural paradigm within an organization might involve one person or more than one person. However, it is abundantly clear that proactivity by one person, or many, in the pursuit of a valued OHS system will eventually require everyone's involvement.

4.3. The 'No-blame' safety culture

The data collected in response to a vignette that provided a forklift accident scenario that was purposely vague (See Appendix A). The intentional vagueness would generally not enable the participant to come to any fair judgement without first afforded the opportunity to investigate further. However, the resulting perceptions did not always reflect this expectation. Blame without the added components of investigative fairness where several participants considered Just and fair sanctions important from an OHS cultural perspective. Grey et al. (2011, p. 1) viewed the concept of a just culture as drawn from the broader idea of 'safety culture' now common in modern thinking about system safety.

The 'blame' approach is distinguished from its earlier incarnation, the 'No-blame' approach, as it requires people to be held responsible for their actions, but only in circumstances where sanctions are 'just' and equitable. (Grey et al., 2011, p. 1). Moreover, the blame approach is dissimilar to the 'No-blame' approach because under a 'just' cultural approach blame is apportioned when appropriate. One such appropriate event would be where blame becomes a factor when the violation is willful of OHS policy or relevant destructive acts. Data collected related to 'a fair investigative process.' This involved perceptions and arguments about various methods to ensure a fair process before any determination could apportion blame. This included suggestions for involving the Regulator in any subsequent investigation with the presumption that the inclusion of an OHS Regulator would encourage a fair and independent investigation.

A second area of comment focused on the desire for more information before concluding with a procedurally based fair decision. Fairness is reinforced by a desire for an open and transparent investigation as perceived by participant [O&M13]. The fairness factor mentioned by both contributing PWR group members was the lack of information enough to make a decision. All three approaches from the O&M group and two from the PWR group culminate in the desire for 'a fair investigative process:'

> *"Forklifts are a high-risk license; I think giving WorkSafe WA the opportunity to come in and investigate an accident around a high-risk license is a benefit to the employer and the employee."* [O&M10].

> *"There are so many factors I would want to know more about."* [O&M12].

> *"My view is the whole investigation is to be open and transparent and once you've undertaken that properly then make a decision on fair treatment."* [O&M13].

> *"If the employer had the case to dismiss the worker, they would have to ensure first that a case was open and shut and there was no real avenue for rebuttal."* [PWR16].

> *"I don't believe there is sufficient information to make a judgement. . .on the information given he should not have been sacked."* [PWR17].

The second data set evolved from the O&M group, was 'a willingness to pre-judge.' These opinions illustrate suggestions of reckless behavior [O&M21] and a preparedness to assume that even if a relevant speed limit sign were in position, the worker would have ignored it. For example, participant [O&M29] had an expectation that the worker would embrace safety holistically. This participant appears to be suggesting that fault would lie with the worker because of their perception that the worker did not embrace safety

holistically. Possibly the participant is indicating that there would be no need for an investigation, given all necessary safety behaviors have not been adhered to.

Similarly, participant [O&M41] also finds fault lies with the worker because people do inane things to get the job done as [O&M26] who perceives that there is doubt on who was at fault. After making certain assumptions [O&M45] suggests that no decision would favor the worker. These stakeholder participants appear to draw on experience to suggest that even if there are safety signs available people will undertake risky behavior to get the job done. All participants contributing to this element appear to attribute initial blame to the worker and not consider whether a procedurally fair investigation is necessary:

> *"I think the worker was reckless and had there been a speed limit sign there I think he would have done exactly the same thing."* [O&M21].
>
> *"I would say there would be an expectation that the employee should adopt all relevant protocols and embrace safety holistically by adopting all necessary behaviors."* [O&M29].
>
> *"I really feel it would be entirely the fault of the driver. . .there are signs up but people will, to get the job done, do silly things or travel fast."* [O&M41].
>
> *". . .there's no doubt that the worker's own behavior contributed towards the incident."* [O&M26].
>
> *"On the assumption that the forklift has been properly maintained and is working in an orderly fashion then no a decision would not favor the worker."* [O&M45].

5. Discussion, contribution and implications

This research adds to the proliferation of safety literature by focusing on the opinions of employees at the front end of safety to describe their day-to-day experiences, the efficacy of the changing nature of work, and the disadvantages the new employment paradigms bring to workplace safety. Next, the impact on the three broad themes is discussed.

5.1. New employees

> *"If culture in general is to be understood in terms of collective practices, what are the collective practices that make up a safety culture?"* (Hopkins, 2005, p. 12).

The above question is seemingly a very important consideration when attempting to identify a robust safety culture. A particular challenge in building a robust and sustained safety culture is the fragmentation of work life due to outsourcing, the downsizing of production, and fixed, short term and precarious employment contracts, which is a contemporary development (Hopkins, 2005). Both the participant groups (O&M and PWR) refer to the adverse effects of casual, temporary, labor hire, and new staff on collective group dynamics. Cooperative approaches to safety become problematic when temporary, casual, seasonal, or new staff, enter an established work group. Both the participant groups (O&M and PWR) also expressed concerns about the negative effect of temporary staff on a positive OHS culture. It appears that the OHS culture of an organization suffers because of the influx of temporary or new staff who can be less adherent, or not as committed to, health and safety.

Underhill and Quinlan (2011) also find that temporary workers (often from agencies) are more likely to suffer injuries at work than other types of employees. However, explanations for their greater vulnerability have been constrained by the difficulties researchers face in accessing temporary or agency workers. Participants from the worker group attributes a poor level of OHS training, and little or no commitment to an OHS culture to temporary staff. Some participants view casual staff as being overly eager to please and seen as performing work quickly and not always adopting the safest way to do a job. Underhill and Quinlan (2011) suggest that agencies are compelled to place workers quickly or risk losing the client host to another agency and this eagerness to get agency staff in place may lead to mismatched placements, which in turn may increase the workers' risk of injuries (Underhill & Quinlan, 2011, p. 414). Often, this is attributed to poor induction and/or OHS training that precludes the development of knowledge about safe work practices. Participant perceptions is this study appeared congruent with elements of Underhill and Quinlan's (2011) findings.

Other participants from the management group wanted access to the temporary worker's compensation records to become aware of any workplace injuries or OHS prosecutions. This level of access to safety records would provide for a better-informed decision as to whether a worker is sufficiently committed to OHS before employing them. While privacy laws may not permit this level of access, it is also not clear if the employers' ability to access a worker's previous health and safety records would encourage the workers to view a personal commitment to health and safety as potentially being career enhancing or a record showing no such commitment could have an adverse impact on their careers. It was clear that a proactive approach to identifying a potential employee's level of commitment to OHS before employment was a favored approach for some participants. This was just one of several proactive OHS measures participants desired. There is a scarcity of research in this area and it has the potential to be an emerging issue in OHS. A 'proactive approach' contains two relatively complementary elements, as discussed in the next section.

5.2. Proactive approach

The first element refers to the proactive OHS influence evident in larger principal contracting organizations compared to smaller sub-contractors. Several participants perceived a causal relationship exists between sub-contractors and principal organizations. The larger principal organization often requires a high level of OHS commitment from sub-contractors. The literature review covered key research in this area. For example, people are becoming more able to adapt to these new working conditions and learn to value their knowledge in other work situations (Moraru & Băbuț, 2012, p. 106).

Participants from both the groups (O&M and PWR) agreed that the huge demands by principal clients for sub-contracting organizations to prove OHS compliance in the field at the risk of sanction. Clearly, a form of co-production was designed to reduce OHS risk. As the study developed, it became clear that a proactive approach to building or maintaining an OHS culture encourages employees to become active participants in the OHS system, which resonates with Hopkins (2005, p. 18) who state that *"To have an effective approach to OHS, risk awareness must operate at both the organizational and individual level,"* Hocking (2007) confirms that risk awareness among individuals is crucially dependent on the organizational context. Gunningham (2005) makes it clear that the assumption of common interest between workers and managers is flawed. Although workers and managers may agree in principle on the desirability of reducing workplace injury, they often hold very different positions on the best means to achieve this outcome (Gunningham, 2005, p. 340). This study detected a different outcome from that identified as 'flawed' by Gunningham (2005).

Generally, the common perception identified in this research was that workers want to work with management to improve OHS outcomes. Participants perceived a productive relationship between managers and employees working together to accomplish the same desired result indicated success. Gallagher, Underhill and

Rimmer (2003) agree that a proactive synergy of management and workers is crucial to OHS success. In this situation, worker participation and senior management commitment are not merely interlinked, they are critical to the success of such endeavors (Gallagher et al. 2003, p. 71).

Cooper (2000) articulates the factors that have an unfavorable influence on the development of a proactive approach to safety management by linking poor organizational culture with a lack of proactivity in safety management. This research and prior safety culture literature support the view that well-run businesses will integrate OHS into their strategies and policies to encourage workforce participation in the implementation process. Management commitment and employee participation in the safety system can enhance the organization's safety culture. When all parties in an organization become more aware of their responsibilities for their own and everyone else's safety there is a greater probability more people will go home, after their day or shift, to their families, safe and well.

5.3. The 'No-blame' safety culture

Most of the O&M group embraced 'a willingness to pre-judge' where they quickly apportion blame to the forklift operator. As mentioned previously, pre-judgement with minimal evidence prejudices the benefit of a thorough and credible accident investigation. If we contrast the two participants from the PWR group a more careful approach emerges that identifies an unwillingness to pre-judge a safety matter without a comprehensive investigation. The emerging conclusion is that the desire for investigative fairness rests with the PWR group and a minority of the O&M group. A salient point emerged in the second data set in relation to the willingness to pre-judge the dominate O&M group members. Such a prejudice can be detrimental to a safety culture.

6. Managerial implications

Many organizations around the world are beginning to show an interest in the concept of safety culture as a means to reduce the potential for harm in workplaces (Tear et al., 2020). Participants came from several industries, including agriculture, mining industry, public services, manufacturing industry, and OHS and vocational training in non-mining and non-public services sectors, as described in the methodology section and listed in Table 1. The purpose of the large representative cohort was to acquire a broad representative view of what works and what does not in workplace OHS cultures. This study adds to the safety culture literature, by not only providing a broad base of stakeholder opinions but also evidence of the link between safety culture and the future of work, the effectiveness of a 'No-blame' safety culture, and pro-active strategies to developing a safety culture. In addition, hiring new employees in casual positions is fraught with the danger that these workers would not be committed to the established OHS culture of the organization. The stakeholder participants also suggested that better interviewing techniques and more background checks are required to ensure potential new employees are risk aware and not risk takers. The study went on to identify that those principal organizations that require high standards of OHS management from sub-contractors appeared to have a positive influence on those sub-contractors thus achieving an overall higher OHS standard; a standard that would not ordinarily be practiced if a principal's directive were not present.

According to Hopkins (2005, p. 3), the attention now being paid to the cultural approach to safety stems from a recognition of the limitations of safety management systems as a means of achieving safety." Hopkins (2005) explains that the successful workplace safety culture requires indicators that build prevailing attitudes, behaviors, values, practices, and beliefs to develop and implement safe systems of work. While in theory, an employer that is committed to the regulatory compliance requirements of the provisions of an OHS or WHS statute expects that employees will be safe at work. The practical implication is that an employer who only relies on the requirements of OHS and related regulation, without a solid foundation (that is called a cultural approach to workplace safety) is taking a risk.

Several PWR participants expressed concern that safety investigations should not afford blame to employees participating in the investigation process. There were additional perceptions that highlighted the requirement of not pre-judging outcomes of investigations or make assumptions without a factual base. The practical implications to come out of this research are important because safe systems of work require more than just legislative requirements to ensure all workplaces remain committed to a zero-harm journey. Finally, as recommended by an expert anonymous reviewer, it would be useful to assess drug screening reports, training, and safety records, prior to employment and conduct site-specific training to ensure the job-specific norms are conveyed prior to employment. Similarly, investigations by neutral third parties may be used to ensure a 'No-blame' safety culture.

7. Limitations and future research

This study has a few limitations that future research may address. For example, we interviewed participants from a cross-section of industries, including agriculture, mining industry, public services, manufacturing industry, and OHS and vocational training in non-mining and non-public services sectors. Hence, our findings may not be generalizable to other industries, which may be addressed by future research. Moreover, this paper focuses on the three themes identified by us from our literature review. However, there may be other factors that may influence individual differences in the employees' attitudes and behaviors toward safety culture, which may be studied in future research. Finally, this research was conducted before the ongoing Covid-19 pandemic, which has highlighted the importance of occupational health and safety (WorkSafe Victoria, 2020). Future research may explore the various ways in which this pandemic has impacted the employee's attitudes and behaviors toward not only their personal health and safety but also the organizational safety policies.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix I. Vignette

A licensed forklift driver commenced work with Protus Industries (Protus) on 6 September 2011 as a level 4 forklift operator. The worker was inducted at the time of his employment and his induction was specific to the site he was to work at. The worker was informed at his induction that under no circumstances would Protus accept working in an unsafe manner. A safety booklet was also provided to the worker with the final page of the booklet containing an acknowledgment that was signed by the worker that he would at all times work in a safe manner and would adhere to all safety policies and practices. On 14 September 2011, the worker was injured when his forklift tipped over due to what was later identified as travelling at excessive speed around a corner causing the forklift to tip over on its side. There were four witnesses to the

accident and CCTV footage that all suggested excessive speed was an issue. It was later identified that the worker had been terminated from his previous employment for a serious safety breach.

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