

Perceptions on Workplace Safety – Traditional or New View Paradigm

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Abstract

The approach to workplace safety has remained consistent for decades, this traditional paradigm is one based on compliance and bureaucracy (Dekker, 2014). New Zealand is not creating safer outcomes for our workforce under this current framework. This past decade our work-related fatalities have remained consistent; 2019 experienced the second highest fatality rate for the period, with 110 inexcusable workplace deaths (WorkSafe, 2021).

An alternative approach has emerged, termed the “new view.” With this paradigm, safety is considered an emergent system property, which is improved by improving the system, frontline workers are enabled and considered the key resource to channel and facilitate meaningful improvements (Dekker, 2014). The new view provides organisations the opportunity to change how they manage workplace safety.

Through a review of the literature, it is clear organisations are extremely passive in making the shift into the new view paradigm, possibly due to a lack of research and knowledge available to base an implementation strategy on, this preliminary research now serves as a foundation to this issue. This pragmatic research sought answers within the “white spaces” illustrated by Cherry (2010) as research which seeks to explore limited data or knowledge, engaging with the unfamiliar to learn from the unknown in the prospect of advancing practice development. This research has broken ground in the inception of examining perceptions on workplace safety, by those on the frontline compared to management and linking these perceptions to the traditional or new view safety paradigms within the New Zealand context.

This preliminary search for answers has uncovered that while similarities can be drawn, more disparities exist. Key themes discovered within the traditional paradigm comprised of documentation/compliance and the work as imagined (WAI) vs work as done (WAD) scenario, perceptions on these concepts related predominantly to the manager segment. Key themes ascertained within the new view paradigm embraced decluttering safety, worker engagement and autonomy, perceptions on these notions related primarily to the frontline segment. This research can confirm manager perceptions are linked to the traditional paradigm and frontline worker perceptions, the new view model.

This knowledge will assist any health and safety professional when tailoring their approach to coaching, mentoring, and practicing workplace health and safety in New Zealand and beyond. This understanding will also significantly support an organisation with the design of a new view implementation strategy.

Another key theme which transpired was a frontline desire for practically to be applied to safety initiatives which ascribes to the WAI theory, as uncovered that when a practical approach to safety lacks, the risk of the safety directive being dismissed increases.

This novel research also discovered all the key themes uncovered are intertwined, with one often leading to the next.

The research also unearthed the ethical implications of action research. A pragmatic from the practice problem arose, possibly never encountered in New Zealand, however the health and safety community need to be aware of this novel existence.

This research sought to unearth enquiry within the white spaces, where limited knowledge surrounded the pragmatic questions.... How is workplace safety perceived by those on the frontline compared to management and which of these perceptions align with the traditional or the new view paradigm? This preliminary examination has now uncovered the answers and is the foundation to this exploration, providing many further research opportunities for the future. This research now provides a knowledge base which will support and encourage organisations in their transition into the new view safety paradigm and will serve fundamentally in endorsing this evolution.

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Abbreviations used and glossary

Autonomy	Independence or freedom, as of the will or one's actions: the autonomy of the individual. https://www.dictionary.com/browse/autonomy
Documentation	Policy, procedures, processes
FL	Frontline worker
Frontline	Workers who perform daily task where there is risk of harm
HSWA	Health and Safety at Work Act 2015
HOP	Human Organisational Performance
HV	High voltage
ICAM	Incident Cause Analysis Method
JSA	Job Safety Analysis
M	Manager
Manager	Office based workers who have direct reports whom they have direct control over and are in a position which dictate decisions
P&E	Plant and equipment
PCBU	Person conducting a business or undertaking
PPE	Personal protective equipment
RE	Resilience Engineering
SWMS	Safe Working Method Statement
WAD	Work as done
WAI	Work as imagined

1 Introduction

1.1 Background

As a practicing health and safety professional in Aotearoa - New Zealand, this researcher is always looking to develop their understanding of workplace health and safety. Of pragmatic interest is how workers view health and safety in this country and what they think is the best approach to deliver optimum safety of work, throughout their working day.

Working within the highly hazardous electricity industry for a large, well-established organisation which held three sites throughout New Zealand, one large city-based depot consisting of the head office, where most workers in management roles are based, along with two smaller depots which consist mainly of frontline workers. Frontline workers over all three sites predominantly work from temporary worksites.

The role of the researcher within this organisation involved interaction with both managers and frontline workers, engaging on safety matters, initiatives and company safety policy and procedures. Over this time the researcher worked out in the field on temporary worksites, from one of the smaller depots and the city-based head office depot.

Through interaction with the two groups of workers; managers and those on the frontline, the researcher started to observe subtle differences in the approach to workplace safety between the two groups. Over time curiosity heightened, as the researcher began to consciously wonder was there a difference in how the two groups viewed workplace health and safety?

1.2 Impetus for this research

The researcher was now faced with a conundrum.... Do workers in management roles and workers in frontline roles possibly hold varying safety viewpoints? The pragmatic question being, is there a difference in this county? As a health and safety professional there is an expectation to hold knowledge in this space. A comprehensive understanding on how workers in different roles view safety would assist any health and safety professional when establishing their approach to coaching, mentoring, and practicing workplace health and safety in New Zealand and beyond.

Furthermore, through academic leanings and professional practice the researcher had been exposed to two very different safety frameworks; the "traditional" and the "new view". The traditional approach is a well utilised framework in New Zealand, based on compliance, rules, procedures and legislation (Hollnagel, 2012; Dekker, 2014). Whereby work forces are viewed as potential safety liabilities requiring policies and procedures to stay safe (Dekker, 2014). Under this current framework workplace safety is not improving in New Zealand as over the last 10 years our work-related fatalities have remained consistent. In 2019, New Zealand experienced the second highest fatality rate for the period, with 110 inexcusable workplace deaths (WorkSafe, 2021). This traditional approach to workplace safety is not creating safer outcomes for our workforce. Emerging over the last decade an alternative approach to workplace safety has materialised, while not applied as often as its predecessor this innovative concept, is highly respected by the researcher and is termed the new view in safety. The new view model sees workplace safety as the presence of safe systems and controls, which can fail safely. It recognises the huge importance of those on the frontline as the best resource for improving safety and therefore performance variability is not something to be controlled (Frederick et al., 2018). Simplified, under this regime safety is an emergent system property which is improved by improving the system and the frontline is the key resource to be channelled to facilitate meaningful safety improvements (Dekker, 2014). Organisations now have an opportunity to change how they manage the safety of their people. The new view is indorsed by leading world-renowned safety experts including Hollnagel and Dekker along with national safety institutions. In 2018 "Safety II", which is entrenched within the new view approach headlined the Health and Safety Association of New Zealand (HASANZ) conference.

These two available safety frameworks now posed an additional conundrum.... If viewpoints do vary between managers and those on the frontline do either align with the traditional or new view frameworks? Obtaining this knowledge would significantly support any organisation when designing their new view implementation strategy. With this initial implementation component identified, it could allow for greater ease for the organisation to move into the new view landscape and the researcher is

keen to see organisations shift into this space to achieve better safety outcomes for New Zealand workers.

To unearth answers to these pragmatic questions.... Do managers and frontline workers hold varying safety views? If so, does either viewpoint naturally align with either the traditional or new view approach to safety? A review of the literature was commenced. Upon completion and to the researchers surprise it became apparent there were gaps in knowledge when comparing safety viewpoints between the two groups and linking these perceptions to either safety paradigm. These questions had not been addressed in New Zealand as no literature was discovered whereby research had taken place within the New Zealand context.

This study concerns itself with this dilemma, the researcher seeks to uncover viewpoints on workplace safety and make a comparison between managers and those on the frontline, it also seeks to explore the possibility of linking these viewpoints to either the traditional or new view approach to safety. It will do so working within the "white spaces" described by Cherry (2010) as research that seeks to explore limited data or knowledge providing possibilities for learning and practice development by engaging with the unfamiliar and learning from the unknown.

2 Literature Review

2.1 Overview

This research seeks to uncover the serendipity question, do managers and frontline workers hold varying safety views? If so, does either viewpoint naturally align with either the traditional or new view approach to safety? The pragmatic question; is there a difference?

Literature was explored in two parts using the search engines Dimensions, Google Scholar and Web of Science. Part one focused on the principles of the two paradigms on offer; the “traditional” and the “new view” approach to safety. This allowed the researcher to clearly establish the framework each of the models operates within. Part one also searched for examples of implementation of the new view model. Part two focused on workplace safety perceptions; how perceptions differed between roles and if these perceptions could be linked to either safety paradigm.

Key words used in this search included: traditional safety, new view safety, Safety Differently, Safety II, safety perceptions; workers; frontline; management.

After a review of the literature, it became apparent there was very little evidence which supports the implementation of the new view safety approach and there were gaps in knowledge when comparing perceptions between roles and linking these perceptions to either safety paradigm. Surprisingly no literature was discovered whereby research had taken place within the New Zealand context. Cherry (2010) describes research that seeks to explore limited data or knowledge as enquiry within the “white spaces” providing possibilities for learning and practice development by engaging with the unfamiliar and learning from the unknown.

2.2 The two paradigms on offer

The traditional approach to workplace safety as described by Dekker (2014), is one built on compliance and bureaucracy, workforces are viewed as potential safety liabilities who require policies and procedures to stay safe. This model serves as the basis for operational safety in most organisations today, defined as the “traditional” or “Safety I” paradigm. In New Zealand legislation the Health and Safety at Work Act (HSWA) 2015, section 36 (3)(f) states a PCBU (person conducting a business or undertaking) must ensure, so far as is reasonably practicable, the provision of any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety, arising from work carried out as part of the conduct of the business or undertaking. This is supported by the HSWA (General Risk and Workplace Management) Regulations 2016, regulation 9 (1) a PCBU must ensure, so far as is reasonably practicable, that every worker who carries out work of any kind, uses plant of any kind, or deals with a substance of any kind that is capable of causing a risk in a workplace (a) either (i) has adequate knowledge and experience or (ii) is adequately supervised by a person who has that knowledge and experience; and (b) is adequately trained. This legislation stems back to British common law from the 1850s. Is this system 1 thinking? This legal requirement for organisations to provide on the aspects “information” “training” “instruction” and “supervision” could contribute to holding organisations in the traditional space.

The new view approach to safety is a relatively new concept, it combines aspects of innovative safety models including “Safety II”, “Safety Differently”, “Human Organisational Performance (HOP)” and “Resilience Engineering (RE)”. The new view according to Frederick et al. (2018) tends to interpret safety as the presence of safe systems and controls which can fail safely, and it regards the workforce as the key resource which must be channelled to facilitate meaningful improvement.

2.2.1 Traditional safety paradigm

Safety in the traditional sense has been determined “as a condition where nothing goes wrong” (Hollnagel, 2012, p.1). As we know, it is hopeless to ensure nothing goes wrong therefore Hollnagel (2012) elaborates on his definition as a condition where “the number of things that go wrong is acceptably small” (p.1). This is a paradoxical definition as it is defined by its reverse, the outcome when it is missing. The effect of this definition is safety has traditionally been measured indirectly, not by its existence but by the consequences of its absence. When Hollnagel (2012) considered the purpose of safety management from the traditional approach it was to ensure the number of adverse outcomes are

as few as possible. Describing that this traditional approach assumes that a system will work because it is well designed with policies and procedures and the humans working within the system will behave as trained and expected. So long as performance does not deviate from what the system has determined as compliant, failures can be avoided. Havinga et al. (2019) expands on this traditional safety approach, explaining risk reduction is therefore achieved by limiting variability and a focus on meeting the set standards will keep the system working as intended. However, “humans as fallible machines are clearly a liability and their performance variability can be seen as a threat” (Havinga et al., 2012, p. 6) therefore, according to the traditional logic, safety is achieved if this variability is blocked.

With such a strong focus on confining human performance variability, when things do go wrong the traditional approach provides a well-used explanation. According to Vijayen (2018) “Safety 1 says that human error is the cause of accidents” (p. 7) while there needs to be some variation to this statement it’s hard to deny the “human error” causation factor is frequently in play. Besnard and Hollnagel (2012) refer to the Intersec Trade Fair and Conference claim that “human error is involved in over 90% of all accidents and injuries in a workplace” (p. 3). It is understandable that Weber and Dekker (2017) describe the traditional view as “reactive in nature” (p. 67), while Robson et al. (2006) expands upon this narrative, describing the traditional approach whereby action gravitates towards responding to incidents, legislation, and enforcement.

Traditional safety is reliant on providing those on the frontline, who ironically are the experts in their work, steps to achieving safety through following protocols, procedures, and guidelines, McNab et al. (2016) describe this as “work as imagined (WAI)” (p. 443).

2.2.2 New view safety paradigm

The alternative approach is the new view, this safety paradigm instead focuses on “ensuring that everything goes right” (Hollnagel, 2012, p. 8). Hollnagel (2012), describes safety operating within this model as the people’s ability to succeed under varying conditions, so the number of everyday activities is as high as possible. The purpose of safety management under the new view paradigm according to Hollnagel (2012) is understanding why things go right, therefore understanding everyday activities and ensuring normal work unfolds as intended as often as possible. It assumes that a system will work because its people are enabled to adjust their performance to the conditions of their work, and this includes when something is about to go wrong or does go wrong. In this paradigm Hollnagel (2012) describes performance variability as the basis for safety and humans are now seen as an asset and their ability to adjust a strength. This proactive approach works to enable adjustments to occur before things go wrong through understanding the system, the developing and ever-changing environment and how functions can depend on and affect one another. It focuses on understanding normal work rather than on fighting fires. Havinga et al. (2019) describes the key components of the new view as valuing expertise, understanding how adjustments to operations is necessary to withstand varying conditions and removing the expectation that systems do not allow people to work merely as planned but adapt to their circumstances.

The approach to accident causation within this paradigm moves beyond “human error”. Vijayen (2018) articulates that within the safety II model “human error is a symptom of other problems in the entire sociotechnical system” and in the event of an accident “don’t assume it’s the people that caused it but look beyond, because many factors would have contributed to the person’s actions” (p. 7). The new view in its innovative approach is not concerned with human error or rule or procedure violation but that of the “mechanisms that generate behaviour in the context of a particular situation” (Weber & Dekker, 2016, p. 68). Finally, there is valid approach which no longer focuses on defining failure. Weber and Dekker (2016), explain the new view approach to investigations as one which must reveal why certain assessments and actions made sense to those involved given the circumstances at the time. Understanding how work usually goes right being the basis for determining how work can occasionally go wrong.

This approach focuses on maximising events with successful outcomes and according to McNab et al. (2016) results from exploring everyday work or “work as done (WAD)” (p. 443).

2.2.3 Evidence of the new view in practice

Through a review of literature, it was discovered that while the new view paradigm to safety has been building momentum for almost a decade, there are very few examples of research based on its

implementation. Unfortunately, the small number that were identified touched only on one element of implementation, this was the approach to accident investigations.

One study undertaken by Karanikas et al. (2019) identified key aspects that represented the new view approach pertinent to safety event investigations. Their study examined the approach of investigators and whether their approach embraced this new view thinking, looking for examples where investigators stood in the shoes of those involved in safety events and explored reasons behind the respective decisions and deeds. This refreshing approach moves beyond “human error” as an acceptable explanation as why events occur, instead it is considered an “effect of a process failure” (p. 2). It does not constitute a conclusion but rather that of further investigation, requiring full contextual information. The results of this study uncovered that on average investigators partially embraced the new view approach. It was uplifting to identify a study which engages in the new view perspective however Karanikas et al. (2019) warned the study sample was not large, therefore, to avoid generalising the findings, and encouraged further research. This study serves as reinforcement that further research on perceptions which are aligned to the new view are necessary, one that extends beyond the single element of investigation approaches.

The identification of required factors which enable successful new view investigations to take place was identified through the research of Meeuwis et al. (2020). The study did not question the maturity in adopting the new view approach to accident investigations but rather highlighted considerations when implementing. Mainly the additional time and resources which are required when investigators move beyond human error for causation. This results in bringing the explanation back into the organisation, creating additional considerations to be addressed and requires commitment from the organisation to support the approach. Although this study did not engage with that of perceptions it did serve useful as an extension to Karanikas et al. (2019) findings.

Table 1. Safety defined

	Traditional paradigm	New view paradigm
Definition of safety	As few things as possible go wrong. Measured by the consequence of its absence.	As many things as possible go right by exploring everyday work
Safety management principle	Reactive; responds when something happens.	Proactive; aims to anticipate developments and events.
View of human factor	Liability to be controlled.	Resource to be empowered.
Human error	Acceptable final or primary cause of safety event.	Result of underlying problem/a symptom of deeper causes. Systematically connected to tools, tasks, and operating environment.
Consideration of work	Work as imagined (WAI).	Work as done (WAD).

Source: Dekker (2014); Havinga et al. (2019); Hollnagel (2012); McNab et al. (2016); Vijayen (2018); Weber & Dekker (2017)

2.3 Perceptions on workplace safety

The term perception in a general sense refers to how a person understands or interprets something. Perception is psychological in nature, being a person’s awareness or comprehension of something which could be conceptual or physical. This research is interested in uncovering perceptions on safety and if these perceptions vary among different roles within the organisation. Also do these perceptions transfer to one of the two safety paradigms. Several studies were identified which had already incorporated some of these elements into their research, however none addressed all elements within the one study, none directly linked their findings with either the traditional or new view paradigm.

Key themes which formed the basis of safety perception, uncovered through the study of Scott et al. (2012) were communication, avoidance of risks, responsiveness, and trust. This research also revealed how these perceptions can vary, identifying in a medical setting that patient perceptions of safety were broader than those of clinicians. This serves as a platform that perceptions could vary dependant on the role of the individual.

This variation was established through the research of Jones (2016) whereby perceptions of safety were compared between different groups of the organisation, themes identified included risk reduction and compliance with best practice. Risk and safety were perceived as interchangeable by the more senior group within the organisation, for whom “to reduce risk is to improve safety” (Jones, 2016, p. 2541). Those in the less senior roles still identified with risk reduction but their perception also included a “component of preparedness to reduced risk at a later date”, this group also linked safety with “the meeting of needs” to both themselves and their customers. What was interesting from the Jones study, is those in the less senior group also identified with engagement and taking responsibility for their own safety of work to deliver optimum outcomes, concepts loosely aligned to the new view safety paradigm. What is also relevant from the work of Jones (2016) is those in the senior group, identified with a compliance-based approach to safety, falling within the traditional paradigm. This research sets the stage to align safety perceptions to safety paradigms, possibly unknowingly to the author. However, the comparison is made by two groups who are both working on the frontline, one group being more senior to the other and therefore was not a direct comparison between frontline workers and those in management positions.

Research which did directly address safety perceptions between management and the frontline was conducted by Singer et al. (2008). This study uncovered the perception of safety to frontline workers being more problematic than those of their supervisors and this increased further when compared to management. This research described the possible rational contributing to this variation being those on the frontline are directly experiencing the exposure to the risk. Whereas management rely on reported information which is often filtered and can be interpreted with bias or misbeliefs. This can result in managements perception lacking the true understanding of the problems encountered by frontline workers, this lack in knowledge then prevents management implementing meaningful change to enhance the safety climate. This correlation can be linked back to “work as imagined” identified with the traditional paradigm. This study also highlighted the possibility that management, due to a vested interest in a positive organisational image could adjust their responses in aid to enhance this image. The study supports there is interest in uncovering safety perceptions between those in varying roles within an organisation, however the study tailored its approach by surveying perceptions around safety climate; one element of safety taken from a snapshot in time. Using survey data, perceptions were then identified on a scale basis from positive to negative which omits the detail surrounding individual perception. While it was pleasing to identify a study which directly compared perceptions in safety between roles, it did not frame the data to directly correlate to safety paradigms.

One study also determined influences on safety perceptions, positive safety perception according to Ayim Gyekye (2005), can be linked back to the level of job satisfaction a worker holds. When workers are satisfied in their work their perception of safety was noticeably more positive and constructive than those who were less satisfied, who then perceived an increase in the potential to suffer harm while performing their work. This knowledge would serve helpful when designing deeper studies on the topic, warranting an avenue to identify any biases which may exist due to job satisfaction. This study also explored worker perceptions on safety interventions, while there was little detail surrounding the type of intervention, Ayim Gyekye (2005) again linked job satisfaction with a positive or negative perception surrounding the intervention. While this study serves beneficial to gain an understanding of influences on safety perceptions it did not identify any detail within these perceptions, instead focused solely if perceptions were positive or negative and negated to compare perceptions between roles.

2.4 Chapter summary

Literature which constitutes the definitions of both the traditional and new view was plentiful. The traditional paradigm leans towards compliance, rules, procedures, and legislation to base its foundation. Focusing on freedom from unacceptable events, constraining human variability and continuing a war on error (Hollnagel, 2012; Dekker, 2014). This model has been the basis for safety for decades and its framework is entrenched throughout organisations on a global level and even features in New Zealand legislation. Proven et al. (2019) explains the new view shifts its focus to that of work which goes as planned, it recognises variation in work is unavoidable therefore facilitates safe variation and understands that people are designed to adapt to complexities and their ever-changing environments. It is people who can bridge gaps in information, process, and technology to sustain safety and it supports these adaptations. Karanikas et al. (2019) clarifies the key differentiation between the two paradigms is dependent on whether the approach to safety views people as safety problems, linked to the traditional approach or safety achievers, linked to the new view method. Treating those who are doing the work as the experts in how to best manage the work risks is an approach which seems logical

and one which will add true value to improving the safety of work. Although literature discussing the two paradigms were abundant, there was very little evidence which supports the implementation of the new view safety approach, those that were located were restricted to applying the model solely to accident investigation. Karanikas et al. (2019) uncovered that on average investigators partially embraced the new view approach by moving beyond human error as causation. Meeuwis et al. (2020) extended on these finding highlighting this approach requires additional time, resource, and support from the organisation to implement.

Through the identification of various studies key ideas surrounding perceptions on safety emerged. Scott et al. (2012) identified communication, avoidance of risks, responsiveness and trust as key components which kept people safe. However, this study only considered the view of clinicians and their patients not frontline workers and managers within an organisation. The study of Jones (2016) also identified risk reduction as a factor to both groups of frontline workers, it uncovered the less senior frontline workers perceived achieving safety through meeting their own needs, engagement and being responsible for one's own safety and work, these are considered new view concepts. While the more senior group perceived safety to be compliance based, a strong traditional facet. This research served as the most relevant, however both groups were frontline based, one being more senior to the other, again lacking a direct comparison between frontline workers and managers. Through the research of Singer et al. (2008) frontline worker perceptions were deemed more problematic than those in management roles possibly due to the frontline directly encountering the risks whereas management were relying on filtered second-hand information, creating a "work as done" vs "work as imagined" situation. While this study serves useful as it did directly compare between frontline workers and management it used survey data from positive to negative, omitting the detail surrounding individual perception. Finally, Ayim Gyekye (2005) revealed how worker perceptions on safety can be influenced by the level of job satisfaction a worker holds. This work also using survey data, again only established a positive or negative perception, lacking any detail and negated to compare perceptions between roles.

While prior research was uncovered on workplace safety perceptions, no study was found where these perceptions were directly compared between frontline workers and management, where specific detail could establish and immediately relate which of these perceptions can or do align with the traditional or the new view safety paradigm. No studies were identified in the New Zealand context, this discovery was unforeseen. Safety perceptions within the New Zealand landscape is not a new concept and although the new view is a relatively new paradigm it has been in discussed for almost a decade, therefore literature in these domains were expected to be retrieved. This research now seeks to uncover this gap in knowledge, as described by Cherry (2010) exploring enquiry among the "white spaces" where current information is limited or vague. A review of the literature has led this study to two structured research questions: "*How is workplace safety perceived by those on the frontline compared to management?*" and "*which of these perceptions align with traditional safety or the new view safety paradigm?*". The current researcher will pursue this white space knowledge by interviewing both frontline workers and managers within their own organisation to unearth the answers.

3 Overall Research Design/Methodology

3.1 Research question

As a result of the literature review learnings and the study to date two definitive research question have emerged:

Question one: How is workplace safety perceived by those on the frontline compared to management?

Question two: Which of these perceptions align with traditional safety or the new view safety paradigm?

3.2 Research focus

This research focuses on understanding worker perceptions on workplace safety in a single case study. It will then compare these perceptions between frontline workers and managers to establish if there is a difference in their perceptions. Finally, the research looks to link either of these two groups perceptions to the traditional or new view safety paradigms.

3.3 Research rationale

A review of the literature determined that while there are studies on workplace safety perceptions a gap of knowledge exists. The gap is directly comparing workplace safety perceptions between frontline workers and management and linking these perceptions to either the traditional or new view safety paradigms. No research was found which explored the workplace safety perceptions between these two groups and immediately related these perceptions to either safety paradigm in a qualitative setting. The literature review also determined there is little research on the new view implementation. No research was found within the New Zealand context. Therefore, this research provides as a foundation in closing this gap of knowledge. A comprehensive understanding on how workers in different roles, particularly frontline workers compared to managers perceive safety is being sore. This understanding would assist any health and safety professional when establishing their approach to coaching, mentoring, and practicing workplace health and safety in New Zealand and beyond, this research will provide that knowledge.

It is also clear the current traditional approach to workplace safety is not creating safer outcomes to our workforce. A new view safety paradigm has recently emerged, indorsed by international safety leaders and institutions. However, organisations are extremely passive in implementing the new view, this is possibly through a lack of research and knowledge to base an implementation strategy. This research will serve as a foundation for this issue, it seeks to uncover which roles within an organisation naturally perceive safety within which safety paradigm. Obtaining this knowledge will significantly support an organisation with the design of their implementation strategy, with this initial implementation component identified it will allow for greater ease for organisations to move into the new view landscape. This research aims to provide a knowledge base which will support and encourage organisations in their transition to the new view safety paradigm and serve fundamental in endorsing this evolution.

3.4 Methodological approach

The ontological position this research will take is that of the relativism approach. This research project is looking to uncover perceptions on safety; the individual's reality surrounding safety, the relativist approach according to Moon and Blackman (2014) holds that the human mind constructs reality, that there is no one true reality which exists. Rather reality is relative according to the individual who experiences it at any given place and time. This research seeks to uncover an individual's perception, what the individual perceives as their reality of safety, the research accepts there is not only one true existing reality and seeks to uncover the multiple realities which will exist dependant on experiences and other factors. Moon and Blackman (2014) describe the relativist approach to research being characteristically person-centred, drawing upon the human mind to reveal knowledge, beliefs, and values of the individual which in turn determine how the individual views the world. The relativist framework aligns with the aim of this research, to uncover perceptions which the researcher acknowledges is relative to the participant and what they view as their reality.

The epistemological stance the research will take is that of the constructivist view. According to Creswell (2014) this approach trusts that an individual seeks understanding of their world in which they live and work, developing subjective meanings of their experiences, these meanings are varied and multiple. The purpose of taking a constructivist approach as the process of inquiry, is this research seeks to uncover understanding and perception on workplace safety. Creswell (2014) describes the nature of constructivist research as one which relies heavily on the views of those being studied, elaborating on an approach which is semi-structured around open-ended questions allowing participants to construct meaning of their situation, forged by discussion with the researcher. It is this constructivist stance this research intends to follow, this will allow an effective process of inquiry to expose workplace safety perceptions over the two groups, frontline workers, and managers. The constructivist concept portrayed by Creswell (2014) recognises that the researchers background shapes their interpretation of the data, researchers identify their position as one which acknowledges how their interpretation extends from their own personal, historical, and cultural experiences. Under this framework, the intent of this research is to interpret the meanings the participants articulate. This style of inquiry supports the overall design of the proposed research as it seeks to inductively develop a pattern of meaning through participant's perceptions surrounding safety and which paradigm these naturally align.

This methodological framework sits within a qualitative approach to research, qualitative research as conveyed by Creswell (2014) looks to explore and understand meaning, participants ascribe. This approach aligns with this research, as it too will involve the use of semi-structured open-ended interview questions to uncover meaning held by participants. This research also aligns with Creswell's description of inquiry, being one that honours inductive character focusing on uncovering individual meaning.

3.5 Research design

The following research design was employed in order to answer the definitive and structured research questions:

3.5.1 Method

It was established the most appropriate research method given the restricted timeframe was the interview technique. Therefore, the research method employed to collect the data was nine face-to-face, semi-structured in-depth interviews. Conducted with managers (N=4) and frontline workers (N=5) across two of the organisation's sites using the same 18 questions. These 18 questions are used in the results, other data collected during the interviews will be reported separately. All interviews took place at either the organisation's provincial depot or in proximity at a mutually agreed location. The interviews were conducted on an individual basis using predominantly open-ended questions. Although questions were definitively established, they were structured to evolve as the interviews progress and allowed participants to tell stories, give examples and explore concepts. This method enabled the participants to share their perceptions and ensured fluidity to allow for the necessary data to be obtained. All interviews were audio recorded and transcribed later by the researcher.

Table 2. Interview questions

Q. Number	Question
1	What do you think keeps people from being harmed in a workplace?
2	What do you think are the most important aspects or effective ways of ensuring harm is prevented or minimised in the workplace?
3	Do you feel empowered to manage your own safety and prevention of harm in the workplace?
4	What do you think the organisation does to prevent harm to the workers?
5	Is safety/prevention of harm managed out in the field as described by the organisation?
6	How do you think the organisation should approach safety/prevention of harm?
7	What does it mean to you when you hear safety is an ethical responsibility, not a bureaucratic activity?

8	If you could design your own workplace approach to safety/prevention of harm, what would this look like?
9	What are you most dependent on to be successful in your work?
10	Do you feel the organisation takes a balanced approach to compliance/documentation and autonomy?
11	Which approach adds the most value to safety?
12	If you were going to rate the value of compliance and documentation to your safety out of 10, what would you give it?
13	If you were going to rate the value of autonomy to your safety out of 10, what would you give it?
14	If you could remove a portion of the current safety/prevention of harm approach, what would it be?
15	If you could add to the current safety or prevention of harm approach, what would it be?
16	Can you provide a short summary of what the term safety or prevention of harm means to you?
17	Who or what is the best resource within an organisation to improve safety and the safety system?
18	Any other comments you would like to add?

3.5.2 Setting

The setting was a large New Zealand organisation operating within the high hazard electricity industry, with a core business of the design, construction, and maintenance of overhead and underground high voltage power lines. Employing approximately 350 staff over three sites, this included one large city-based depot which consisted of the head office, where most workers in management roles were based, along with two smaller depots, one also city based, and one located within a provincial town. These smaller depots consisted mainly of frontline workers, frontline workers over all three sites predominantly work from temporary worksites. The study was conducted from the provincial town depot, established in 2019, being the location, the researcher had greatest access. Additionally, the study overlapped into the large city-based depot which consisted of the head office, established over 30 years ago. This limited the project to two sites in its exploratory search. The researcher was granted access to the workers by the organisation.

3.5.3 Participants

The Researcher sought volunteers to participate in this research project. The total sample size was nine with all managers (N=4) participating, based out of the city depot/head office being the location where most manager roles are based. All frontline workers (N=5) were based out of the provincial town depot.

3.5.4 Analysis

Data was analysed using the thematic analysis method, this approach was deemed most appropriate being a method for “identifying, analysing, and reporting patterns (themes) within data” (Braun et al., 2006, p. 79). Themes were identified in this research when two or more participants within a group (M=manager) or (FL=frontline worker) shared the same idea. These became overlapping themes when the idea was also shared over both groups. Employing thematic analysis, as described by Woods (2020) code words or phrases can be developed that serve as labels for data sections, from here themes develop, leading to main themes. This method was appropriate for the project as it allowed the researcher to use code words such as “documentation” “paperwork” and “compliance” to link to the traditional safety paradigm and new view code words including “reduce documentation”, “autonomy”, “engagement” and “simplify”, these code words led to key themes. Thematic analysis supports research

that seeks to uncover people's views, opinions, knowledge, or experiences. Described as a "useful method for examining the perspectives of different research participants, highlighting similarities and differences" (Nowell et al., 2017, p. 2). This research project was looking to identify the participant's views on what safety means to them. Employing the thematic analysis approach allowed the researcher to link these perceptions using themes to either one of two safety paradigms, supporting the project favourably by enabling the collected data to deliver on the research question.

3.6 Ethical issues

Ethical approval was granted by the Victoria University of Wellington's Human Ethics Committee (HEC), approval #29210, to undertake this study. The following ethical principles were applied and must be maintained:

Criteria: The research did not engage with participants under the age of 18 or those considered vulnerable.

Voluntary participation: All participants who took part in the research did so on a voluntary basis, expression of interest was circulated throughout the organisation and those who were interested to partake approached the researcher. All participants gave informed consent.

Autonomy: Participants had the right to autonomy by the supply of sufficient information about the study, their questions answered until satisfied, not influencing their decision, being made aware of their right to withdraw from the study without prejudice and being allowed sufficient time for discussion with their family or significant others.

Confidentiality and anonymity: This research will ensure all participants remain anonymous, throughout the study and in the future. To maintain confidentiality and anonymity the identities of participants have not been linked to the information they provided. Names were not recorded, rather participants received a unique identifier in the form of a code letter and number and any references have been made to this unique identifier.

3.7 Treaty of Waitangi considerations & obligations:

An important aspect when undertaking research in Aotearoa is respectfulness of Treaty of Waitangi considerations and obligations. "Researchers, when engaging with Māori communities, are in a process of relationship building and this process can be guided by the principles of the Treaty of Waitangi, partnership, participation and protection" (Hudson et al., 2009, p. 61). This research considered the views expressed by Hudson et al. in conjunction with the Victoria University of Wellington Te Tiriti o Waitangi Statute. While the researcher was mindful of these concepts and identifies with these views this piece of research did not specifically recruit from groups including Māori during the research nor did the study embed tikanga Māori into the academic research practices.

3.8 Chapter summary

This research focuses on understanding worker perceptions on workplace safety in a single case study. It is clear the current traditional approach to workplace safety is not creating safer outcomes to our workforce, the innovative new view safety paradigm has emerged which has the potential in making meaningful change to the safety of work.

A review of the literature determined that while there are studies on workplace safety perceptions, a gap of knowledge exists, being the direct comparison between frontline workers and management and linking these perceptions to either safety paradigms. No research was found which explored this concept, or within the New Zealand context. Understanding which roles within an organisation naturally perceive safety within which paradigm will significantly support an organisation with the design of their new view safety implementation strategy. This research aims to provide a knowledge base which will support and encourage organisations in their transition into the new view safety paradigm and serve fundamental in endorsing this evolution.

Utilising a relativist ontological position in conjunction with the epistemological constructivist view, this research will uncover which roles within an organisation naturally perceive safety within which safety paradigm. The setting, a large New Zealand organisation operating within the high hazard electricity industry over three sites. The data will be collected through nine face-to-face, semi-structured in-depth

interviews. Conducted with managers (N=4) and frontline workers (N=5) across two sites using the same 18 questions and analysed through a thematic analysis framework. Ethical approval was granted by the Victoria University of Wellington's Human Ethics Committee (HEC) to undertake this study and ethical principles will be applied and maintained.

It is now time to commence the empirical journey, in answering; How is workplace safety perceived by those on the frontline compared to management? Which of these perceptions align with traditional safety or the new view safety paradigm? Enquiring within the "white spaces" this research will be foundational in closing the current gap of knowledge surrounding these pragmatic questions.

4 Results

4.1 Introduction

Nine face-to-face interviews were conducted with managers (N=4) and frontline workers (N=5) across the two sites using the same 18 questions. Quotes are coded M=manager and FL=frontline worker, followed by their unique number.

4.2 Prevention of harm in the workplace

Interview question 1 asked: What do you think keeps people from being harmed in a workplace?

Managers:

Three themes emerged from the management segment, when keeping people from being harmed in a workplace, all were equally weighted (50%).

Theme one being documentation, consisting of policies and procedures. Dekker (2014) refers to the traditional paradigm being one where workforces require policies and procedures to stay safe. It is interesting 50% of managers identify with this aspect as key components in workplace safety and aligns with the findings of Jones (2016) who uncovered those in management positions associated positive safety outcomes with a compliance-based approach. In New Zealand legislation, the Health and Safety at Work Act (HSWA) 2015, section 36 (3)(f) states a PCBU must ensure, so far as is reasonably practicable, the provision of any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety arising from work, carried out as part of the conduct of the business or undertaking. This is supported by the HSWA (General Risk and Workplace Management) Regulations 2016, regulation 9 (1)(a)(i) a PCBU must ensure, so far as is reasonably practicable, that every worker who carries out work of any kind, uses plant of any kind, or deals with a substance of any kind, that is capable of causing a risk in a workplace, has adequate knowledge. Is it a possibility this legal requirement on organisations to provide on the three aspects "information", "instruction" and "knowledge" could contribute to holding organisations in the traditional space?

"Robust procedures and processes" (M3).

"Good policy, good procedures" (M4).

Training and education also featured in the prevention of harm for managers. As highlighted above the Health and Safety at Work Act (HSWA) 2015, section 36 (3)(f) stipulates training is one of the four aspects a PCBU must ensure the provision to workers. Again, this is maintained in the HSWA (General Risk and Workplace Management) Regulations 2016, regulation 9 (1)(b) whereby every worker is adequately trained, this manager segment related to this requirement.

"Education and training is quite fundamental to helping people keep safe" (M1).

"Well trained people, so people who are educated on how to do things properly" (M4).

The final theme was the individuals' attitude to their safety of work.

"Their attitude to how they want to go about doing tasks. If they approach it in the right manner, then that should, by all means keep them safe" (M1).

"Even if the rules are in place if their attitude is wrong or inappropriate, you're not going to get the appropriate outcome" (M2).

No reference to any new view concepts were made by the manager segment.

Frontline:

Five themes materialised within the frontline segment, which they perceive keep workers from being harmed.

Autonomy was one aspect cited by the frontline (60%) which prevents harm in the workplace, this being a key new view concept. Dekker (2020) often refers to the importance of worker autonomy and discretion, emphasising decision making needs to sit with the workers who have the expertise, those undertaking the work. Some of the comments made by the frontline link back to the study of Jones (2016) where frontline workers also perceive effective safety taking form by seizing responsibility for their own safety of work to deliver optimum outcomes.

"Well number one to me, is safety to myself" (FL1).

"Without people thinking about what they're doing, then it doesn't really matter. You're not made of steel" (FL3).

"It's like chess really, if you can think ahead and you can see what you're doing, you can avoid all those things" (FL5).

The planning of the work (60%) emerged in the prevention of harm. This aspect is predominantly controlled by office workers/management, the frontline is reliant on a separate group of workers to perform tasks to a certain standard, believing this facet contributes to their prevention of harm. Management made no reference to this aspect.

"Proper planning and scoping of work" (FL3).

It was also identified the frontline (60%) considered PPE [personal protection equipment] a key aspect.

"There are the odd incidents or near misses where you're glad you had your hard hat on or glad you had your steel capped boots on, PPE is definitely part of it" (FL3).

The frontline (60%) also acknowledged documentation in the prevention of harm. It is interesting the frontline state documentation in this question, frontline perceptions move away from this thinking as interviews progressed. It could be questioned if initially they felt an expectation to refer to this concept, then relax as interviews developed?

"Policies and procedures, that gives you an outline and a baseline on what to do" (FL5).

Team communication was described by a smaller frontline segment (40%) in keeping people from being harmed in a workplace, this aspect a theme also identified in the Scott et al. (2012) study.

Table 3. Prevention of harm in the workplace

Question 1: What do you think keeps people from being harmed in a workplace		
Theme:	Managers:	Frontline:
Documentation	2	3
Training/Education	2	
Attitude	2	
Autonomy		3
Planning of work		3
PPE		3
Communication		2

4.2.1 Overlapping themes, question 1

Only one overlapping theme emerged from the two groups from question one, documentation. This aspect was perceived to keep people from being harmed in a workplace by 50% of managers and 60% of frontline workers.

4.3 Effective methods to prevent harm

Interview question 2 asked: What do you think are the most important aspects or effective ways of ensuring harm is prevented or minimised in the workplace?

Managers:

From the management group 50% perceived training as one of the most effective ways of preventing or minimising harm in the workplace, this is in accordance with question 1 and again can be linked to HSWA (2015) section 36 (3)(f) and the HSWA (General Risk and Workplace Management) Regulations 2016, regulation 9.

"You can put every document in front of the individuals to tell them what they're supposed to do to keep them safe, but if you don't train them and educate them as to why they're doing all these things, you can't expect them to understand fully why their doing it" (M1).

Organisational culture was also considered one of the most effective aspects by 50% of managers.

"People's attitudes to start with then it needs to be followed through with the culture of the environment in which they're in" (M2).

"Most important aspects are probably around culture and leadership" (M4).

Frontline:

All (100%) of frontline workers perceive communication an effective method of ensuring harm is prevented. Again, this was identified in the Scott et al. (2012) study and seems logical when working within a team environment undertaking highly hazardous work, without communication serious issues could occur.

"Team meeting before we do the job" (FL1).

"When you're having your normal tailgate meeting in the morning with the boys and you take everyone's opinion" (FL2).

"A tailgate, that we have before we start work. It's a good chance to have a yarn and go, oh, that's right, I need to watch out for that and that. You might have a lot of experience but ultimately if your mind is not on the job at that time, then all that prior experience doesn't really matter" (FL3).

"Communication would be the best one. If I've got a trainee, it's don't do this, do this. Stop what you're doing, think what you're doing, so communication is a massive factor" (FL5).

The planning of the work was an important aspect to frontline workers (80%). This is consistent with results from question 1 (whereby 60% perceived planning kept people from being harmed). Interestingly this aspect increased in value in this question, clearly an important consideration to frontline workers.

"It goes down to the planning" (FL2).

"By designing the work that can be done safely through good planning, discussion, and implementation" (FL4).

Risk assessment was perceived an important aspect to the frontline (60%), avoidance of risk was established through the work of Scott et al. (2012) and risk reduction the study of Jones (2016). The assessment of risk being a critical component to conducting highly hazardous work safety.

"Suss out any hazards" (FL1).

"Identify all the risks and hazards included in today's task or job that you're doing and making the plan to do the job safely so everyone goes home" (FL2).

Although this question was very similar to question 1 it produced additional themes. Training featured in both questions for the mangment segment however culture also emerge in question 2. The planning of work and communication was an important aspect for the frontline over the two questions with risk assessment transpiring in question 2. Documentaion was not refered to in question 2 by either group.

Table 4. Effective methods to prevent harm

Question 2: What do you think are the most important aspects or effective ways of ensuring harm is prevented or minimised in the workplace		
Theme:	Managers:	Frontline:
Training	2	
Culture	2	
Communication		5
Planning		4
Risk assessment		3

4.3.1 Overlapping themes, question 2

No overlapping themes where identified.

4.4 Empowerment of one's own safety

Interview question 3 asked: Do you feel empowered to manage your own safety and prevention of harm in the workplace?

Managers:

All (100%) of managers felt empowered to manage their own safety and the prevention of harm in the workplace. This empowerment possibly stems from holding a management position, in such position you would expect a strong element of empowerment.

"Yeah you're still empowered to make those decisions, to get a safe outcome" (M2).

"I feel empowered, from a safety perspective but I guess in general, yes I definitely do" (M3).

Frontline:

Frontline workers also felt empowered with 80% answering yes to this question, the remainder stating sometimes. However, some frontline workers made comments this empowerment was not a directive from the organisation but from a personal notion. This theme also emerged in the study of Jones (2016) where workers perceived positive safety outcomes resulted from taking responsibility of their own safety of work.

"We have a chat amongst ourselves and say, well we're not going to do that. We're not going to dig around a pole if we don't know how deep it is, it could fall on top of us. Yeah, so definitely but that's a team decision when it comes to the hierarchy that's a different story" (FL1).

"I look after myself. Yeah, not necessarily by my employer. That empowerment is from my own experience and my own self-awareness" (FL3).

Table 5. Empowerment of one's own safety

Question 3: Do you feel empowered to manage your own safety and prevention of harm in the workplace		
Theme:	Managers:	Frontline:
Yes	4	4

4.4.1 Overlapping themes, question 3

Empowerment to manage one's own safety in the workplace was confirmed by 100% of managers and 80% of the frontline. Empowerment is a key new view concept, Dekker (2014) encourages organisations to move away from a culture of control and constraint into one of empowerment, diversity, and human opportunity. This researcher agrees with Dekker and is hopeful this will be the future for safety management.

4.5 Organisational safety methods

Interview question 4 asked: What do you think the organisation does to prevent harm to the workers?

Managers:

The organisation provides documentation to prevent harm to workers as stated by 100% of managers. Documentation can be linked to the work as imagined (WAI) theory, as described by Proven et al. (2019) and is reflected in plans, processes, systems, and metrics which do not always align with the true representation out in the field, this being traditional safety thinking.

"Having good procedures that are following best practice for the industry" (M4).

"Developing the documents to support safety. (The organisation) is very much involved in engaging the workforce to help write the document" (M1).

While one manager cited workers are involved in the creation of documents, this a key aspect which could transform the document sitting in the work as imagined (WAI) space into that of work as done (WAD), two managers signalled this engagement could improve.

"Our organisation tries to put systems in place. We provide procedures. We provide what is the best way of doing things, where we could do better is to convey and educate people along the journey" (M2).

"It's about how we train people in those systems and how we buy people into that process" (M3).

The manager segment (75%) also states the organisation trains workers in aid to prevent harm. Along with 50% considering communication an organisational tool in the prevention of harm.

Frontline:

From the frontline sector (80%) stated the organisation provides PPE and P&E [plant and equipment] to prevent harm to workers. PPE is the last line of defence when considering the hierarchy of controls,

could the organisation move into a better proactive position through elimination, isolation, or engineering?

Documentation and training were highlighted by frontline workers (60%) both identified in HSWA (2015) section 36 (3)(f) as an organisational requirement to provide to workers, highlighted in the below citation.

"Well their (organisation) strategy is to follow set procedures, set out in the industry standards. So that would be classified as adequate (procedures, equipment, tools and training), but the actual implementation of safety planning is minimal." (FL4).

Communication was stated by 40% of the frontline as an organisational means in the prevention of harm.

Table 6. Organisational safety methods

Question 4: What do you think the organisation does, to prevent harm to the workers		
Theme:	Managers:	Frontline:
Documentation	4	3
Training	3	3
Communication	2	2
PPE		4
Plant & equipment		4

4.5.1 Overlapping themes, question 4

Overlapping themes included documentation, with 100% of managers and 60% of the frontline stating this is provided by the organisation in aid to prevent harm to workers. Clearly documentation is perceived as a key organisational control to risk. Does documentation really play such a critical role in worker safety? Dekker and Pitzer (2016) refer to "fantasy documents", mere pieces of paper often underspecified to the actual work or situation they denote which become obsolete or tick-box exercises in place to manage an organisations liability if something does go wrong rather than preventing harm. Is this the approach this organisation takes?

Training also emerged as 75% of managers and 60% of frontline workers disclosed this aspect. Documentation and training are both identified in HSWA (2015) section 36 (3)(f) as a requirement for organisation to provide to workers, is this where the importance of these elements originate.... legislation?

Communication was also seen as an organisational tool in the prevention of harm by 50% of managers and 40% of frontline workers.

4.6 Work as imagined (WAI) vs work as done (WAD)

Interview question 5 asked: Is safety/prevention of harm managed out in the field as described by the organisation, can you provide examples?

Managers:

From the management group 50% did not think safety was managed out in the field as described by the organisation. The researcher was pleased not all managers viewed this concept wearing rose coloured glasses and are realistic with their thinking.

"I know staff look at procedures and do their best to follow the documentation but sometimes they start to deviate and go that doesn't quite work. Rather than stopping and saying, well let's continue for now but next time readdress it, they address it at the time and it's not necessarily the best solution to change it on the fly because if something goes wrong without proper due consideration as to the risk, then bigger ramifications could come in" (M1).

Although realistic M1 viewed the adaptation as a negative contributor to safety.

"There will always be variations to how we think it's done, we get to a site they're not always black and white. I think we have to adapt to that, on the run. In general, I think our processes have been developed over a number of years of doing things, so I think they're genuinely robust but I think we also rely on skilled people to make the right decisions when they are there" (M3).

In contrast, M3 portrays the adaptation as a positive contributor to safety. The most senior manager interviewed was adamant that safety was indeed managed out in the field as described.

"When I went to the Oxford site, that was really, really safe. They had asbestos workers, they had live electricity, they had a whole lot of hazards that they were working around and the team were definitely doing it as per the methodology".

You're pretty adamant that is the case?

"Yes" (M4).

The researcher was perplexed this senior manager was so adamant WAI scenarios do not exist, pondering if the more senior the role, the less engaged a manager can become? Proven et al (2019) describes a gap between WAI and WAD always exists in all organisations, as procedures, plans and requirements are inherently flawed and not always able to cater for the complexity of WAD. The final manager could not answer this question as his current role provided no opportunity for field interactions.

Frontline:

The frontline was very honest and gave detail when answering this question, with 100% of frontline workers stating work is not undertaken out in the field as described by the organisation. Proven et al. (2019) provides reasoning why this adaptation often results, being the pressure exerted on frontline workers to conform, which create adaptive responses driving a greater distance between WAI and WAD and states WAI signals a breakdown in the coordination of the system as whole.

"No we don't" (FL1).

"No, it's not true reflection" (FL2).

"It's not black and white, it's a fairly grey area" (FL3).

"No" (FL4).

"You'd be lying to say 100%" (FL5).

A common theme emerged from this group, with 60% acknowledging they felt there was a lack of practicality regarding two items of compulsory PPE; high voltage (HV) gloves and dielectric gumboots, therefore they were not always worn by workers.

"Like PPE. Wearing HV gloves, I think they are not designed for that purpose, those gloves. They are supposed to protect against power, electricity, shock, electrocution mostly, it's not a working glove" (FL3).

"We might not 100% wear [HV] gloves or 100% wear the gumboots" (FL5).

"I guess it's the same with the gumboots you know they don't always make things safer, they're more of a hindrance" (FL3).

Although frontline workers have validity with their reasoning, this does bring into question the HSWA (2015), section 45 duties of workers, while at work, a worker must (b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons. There were also comments from this group which indicated other organisational safety policies and procedures were not practical for the work they must undertake.

"Some of the things that we do are very risky, but just to get the job done sometimes we have to close one eye and do the job. So, it's not always the case where we follow all the safety procedures that is given to us by the office".

Is that because they are not practical?

"Yes. So, it looks good on paper but when you get out to the real job site it doesn't work out that way. So, sometimes we do have to bend some rules to get the job done" (FL2).

"It's too dictated and too hard to implement because of the amount of it. And the way they go about the distribution of safety design" (safety planning) (FL4).

According to Besnard and Hollnagel (2012) "myths" exist in industrial safety practice, one being the system will be safe if workers comply with the procedures instructed by the organisation. Instead arguing actual work situations often differ to the dictation of procedure and that strict compliance could be detrimental to worker safety, therefore suggesting procedures to be used intelligently by workers. As demonstrated above, workers do not always follow the organisational transcript, creating a WAI vs WAD scenario, prevalent within this organisation.

It also emerged there was a lack of understanding from the frontline why certain organisational safety policies and procedures were in place.

"I don't understand fully their company policy. I don't know if there's a lot of thinking that goes into procedures and policies, I don't understand the thinking that goes into those sorts of applications." (FL3).

"They probably don't understand the actual company's procedures, because it's too long winded, complicated and not relevant in some cases" (FL4).

These comments conflicting with M1 comments in question 4.

"Developing the documents to support safety. (The organisation) is very much involved in engaging the workforce to help write the document" (M1).

The honesty of the frontline when answering this question was somewhat surprising. Not wearing PPE items dictated through company policy is a serious breach of misconduct and could result in severe consequences for frontline workers. It was obvious how frustrated some of this segment had become with certain company policies. Frontline workers could not see the value in these policies nor thought they were practical solutions for the work they undertake, resulting in omissions to various policies.

Table 7. WAI vs WAD

Question 5: Is safety/prevention of harm managed out in the field as described by the organisation		
Theme:	Managers:	Frontline:
Yes	1	
No	2	5
Unsure	1	

4.6.1 Overlapping themes, question 5

From the management group 50% believed safety or the prevention of harm was not managed out in the field as described by the organisation, 100% of frontline workers openly confirmed this was the case.

4.7 Suggested organisational approach

Interview question 6 asked: How do you think the organisation should approach safety/prevention of harm?

Managers:

From the management segment 50% think the organisation should approach safety by increasing worker engagement. This is a key new view concept, Dekker (2020) describes moving into this space by embracing those on the frontline, valuing their expertise and professional judgment. Gantt (2017) supports this claim encouraging organisations to view their people as the solution and should be enabled.

"The workers have not been engaged in making a decision, the new JSA [job safety analysis], it's been imposed on them and there is going to be backlash, that's already been talked about. So it's not a great thing, (the organisation) says one thing and fractions are going against that" (M1).

"Anything we've put in place, has to be field based driven, they are the guys doing the work, we have to listen to what they have to say" (M3).

Frontline:

A theme which emerged from the frontline (40%) was the need to reduce documentation. This links to previous new view comments made whereby documentation is not necessarily the answer to safer outcomes of work.

"There's a lot of paperwork for the team leaders and they get a bit bogged down with it and frustrated" (FL1).

"Well, it's all about paper now, paperwork, so whatever is in black and white. Whatever the regulations say, whatever the procedures say, the SWIMS [safe work method statement]. Accordingly, if we do our job according to that, then, yeah. But if we start doing that, then probably 99% of the jobs won't get done" (FL2).

The frontline (40%) also suggested simplifying the approach to safety with a suggestion to incorporate technology to achieve this.

"As far as health and safety goes we need to get rid of all the paperwork, all our SWMS should be on a tablet. Our JSA should be two pages long (currently 11 pages and must be completed for every job). This risk matrix bullshit should be thrown out. You know catastrophic, you're going to get killed doing this, no one wants to hear that. Tick boxes, your main hazards, you're working at heights, your testing, that all comes under SWMS and the SWMS are this big" (FL1).

"The boys get bogged down (with documentation) and pretty much now the team leader sits in the truck, he does his JSA, he comes out it's the same shit different day, sign on here. Yeah" (FL1).

"We need to get into the 21st century with modern technology" (FL1).

"They should use more sites specific or task specific safety plans, which don't have to be so long winded, but specific to what that person's doing".

So simplification?

"Yes, correct" (FL4).

Ensuring the approach to safety is practical for the work the frontline undertake also emerged, with 40% of frontline workers addressing the need for implementing practicality.

"We will follow the rules but some of them are pretty uncomfortable. Wearing HV gloves all the time. We don't actually follow that all the time, it's just a nightmare".

So they have the rule there, but it's not actually practical?

"Not really. No, it just slows you down."

So it slows you down but you say you do it right, because you tick the piece of paper saying you've done it?

"That's correct. So we're telling a few fibs there. Basically we will wear them when we're close to a road and people can see us or we know there's auditors about but if we're out in the middle of nowhere, I don't think our gloves are going to save us because half the time you're actually got your arm on the steel cross arm. It's a waste of time" (FL1).

This links back to responses in question 5 and the WAI issue, again the researcher understands workers have valid reasoning in their defence to wear certain PPE, however under the current legislation HSWA Regulations (2016) section (18)(2) states there is a duty of a worker to wear or use personal protective equipment. The worker must wear or use the personal protective equipment in accordance with any information, training, or reasonable instruction by the PCBU. Will the organisation be receptive to workers concerns in this area and work collaboratively to provide a solution?

So, it's all about paperwork but the paperwork is not practical. Is that what you're saying?

"I'll give you a good example, using a crane truck on less than a five-degree angle. Where in Central Otago will you find a site on less than a five-degree angle, where you can set up your crane to erect and plant your power pole?"

So the documentation, although it may read well, it's not a practical solution for what you're doing?

"Yip"

Do you then end up having to do workarounds to try and get the job done?

"Yes, we do" (FL2).

The honesty from the frontline when answering this question was a continuation from that in question 5. Over question 5 and question 6, a large portion of frontline workers (60%) disclosed breaching company policy which stipulates compulsory PPE to be worn. Providing this information could lead to serious implications to their employment.

Table 8. Suggested organisational approach

Question 6: How do you think the organisation should approach safety/prevention of harm		
Theme:	Managers:	Frontline:
Increase worker engagement	2	
Reduced documentation		2
Simplify – Incorporate technology		2
Practical approach		2

4.7.1 Overlapping themes, question 6

No overlapping themes between the two groups were identified. However, if the management group were to increase their engagement with the frontline, this would allow the group to uncover the above three key approaches the frontline believe would lead to enhanced effective safety management within the organisation.

4.8 Ethical responsibility or bureaucratic activity

Interview question 7 asked: What does it mean to you, when you hear safety is an ethical responsibility not a bureaucratic activity?

Managers:

All (100%) of managers believed safety is an ethical responsibility.

"I think we should be always looking at it ethically, to making sure people go home, not just to tick a box" (M1).

"A lot of people think that safety is just a tick box exercise, which I don't believe. Our world requires us to evidence what we've done and that's the tick box part but safety in and of itself is certainly not" (M2).

Frontline:

All frontline workers believed safety is an ethical responsibility. However, it was clear they perceive management as the bureaucrats pushing the responsibility from the organisation onto the individual worker. Trust between the two groups could be questioned from the frontline's perspective.

"A lot of guys think this paperwork is buck passing. If we don't do it the shit will hit the fan and we'll be in big trouble. Look at that crane thing the other day, "Warning Drivers Responsibility", so it doesn't matter if something goes wrong, they'll come back to us. I've said it before the worker gets it in the ass. Why didn't you do this? Why didn't you do that? We don't set out to hurt ourselves or anybody else, sometimes its human error, its just the way it is" (FL1).

"The guys are very good at their jobs. They get pissed off when something small happens and we get roped over the coals but if someone in the office does something, forget a generator, forget an outage, it's like oh don't worry about it. So there is a us and them, definitely and I don't think you will ever change that, not at (organisation) anyway" (FL1).

"The bureaucrats are the people at the top. Where the safety is more important is for the person on the ground, undertaking the task because at the end of the day its them who will be harmed or maimed, if something goes wrong" (FL4).

Table 9. Ethical responsibility or bureaucratic activity

Question 7: What does it mean to you when you hear safety is an ethical responsibility, not a bureaucratic activity		
Theme:	Managers:	Frontline:
Ethical	4	5
Bureaucratic		

4.8.1 Overlapping themes, question 7

Both groups perceive safety as an ethical responsibility not a bureaucratic activity, organisations and workers have an ethical responsibility to perform work in a manner where harm is prevented. However, it is clear the frontline sees management and the organisation as the bureaucrats. Traditional safety is cemented in a bureaucratic approach, de-bureaucratizing safety has many advantages and would assist moving into the new view space. According to Dekker (2020) de-bureaucratizing would increase innovation through the removal of constraints on workers personal freedom and creativity, increase worker autonomy, increase the value of frontline expertise and professional judgement, assist in the ability to predict unexpected events, and enhance organisational learning by moving away from the current "numbers game" which focuses on incident data as performance indicators.

4.9 Re-design the approach to safety

Interview question 8 asked: If you could design your own workplace approach to safety/prevention of harm, what would this look like?

Managers:

Increasing worker engagement was the theme which emerged from 50% of the manager segment, this mirrored the results from question 6.

"I think my approach wouldn't be too dissimilar from (organisation) approach of worker engagement. In that, why are we doing these things?" (M1).

This comment conflicts with the comment M1 made in question 6 about the lack of engagement the company sought when implementing a new safety document (JSA).

"I would have a group, driven largely by the people that are doing the work that helps to design that approach. We need our formal processes, we need to be able to demonstrate we have a system in place but I think it needs to be driven by the people that actually do the work." (M3).

Although not a theme, it is also interesting to note one comment made by a manager regarding moving into a "Safety II/Safety Differently" organisational space.

"It's having that really good data and the base from Safety I stuff, which is your traditional stuff but also creating that culture and that continuous improvement place where you are living and breathing Safety II, it takes a long time to get there and we're on that journey" (M4).

At no point over the course of their interview did M4 refer to any of the founding principles of this approach, which leads to question if they have any real understanding of the Safety II concept? Perhaps they are just reciting information feed to them? The researcher's question, why should it take a long time to move into a new view space?

Frontline:

Increasing worker engagement also featured in 40% of the frontline's re-design of the approach to safety.

"Being proactive instead of reactive and also still being open minded to what is happening in the real world, what the employees are going through on a day to day basis and how we can constantly improve safety in the workplace, increasing engagement" (FL3).

This comment also links to moving into the WAD landscape, understanding the actual work taking place daily.

"Be more specific and more planned on site with control and buy in from more players in the game, so everybody has to sign on to the agreed way of implementing safety holistically" (FL4).

Increasing worker autonomy was also cited by 40% of the frontline, a key new view theme. Organisations which operate within this model according to Provan et al. (2019) ensure workers have ample autonomy to make decisions about their work in real time. This requires employees to have the psychological safety to apply their assessment without fear of consequences – a 'just culture'.

"Really encouraging people's common sense. That is like a human nana that should be encouraged, you know people aren't dumb. You can't wrap people up in cotton wool" (FL3).

"I'd try and let them make their own decisions" (FL5).

Other singular themes which overlap previous question themes included decrease paperwork and increase the use of technology.

"Less paperwork and more use of technology" (FL1).

Shifting towards a practical approach to safety.

"It's all good giving out all this PPE but if you want to cook them and fatigue them you've created other health issues haven't you. I'd make changes to become more practical and be more relaxed" (FL5).

Table 10. Re-design the approach to safety

Question 8: If you could design your own workplace approach to safety/prevention of harm, what would this look like		
Theme:	Managers:	Frontline:
Worker engagement	2	2
Increase autonomy		2

4.9.1 Overlapping themes, question 8

Worker engagement was the only overlapping theme between management and the frontline when designing their own approach to workplace safety.

4.10 Work success dependability

Interview question 9 asked: What are you most dependent on to be successful in your work?

Managers:

One theme emerged from the manager segment, with 50% most dependant on worker engagement to be successful in their work. This is the third question where managers refer to this concept with a high degree of importance (question 6 and question 8). Worker engagement in safety and work evaluation as described by Dekker and Pitzer (2016) generates one of the highest safety return investments, this links to the new view paradigm and is a critical component for its successful implementation.

"I feel I've succeeded, if I've helped implement a safety rule, that the workers have bought into the why and accepted. Not accepted in front of me and then I leave the room and they say were not doing that, no that to me is I haven't succeeded. They have got to buy into it" (M1).

This statement seems disconnected from the views of the frontline, especially considering the current WAI vs WAD PPE conundrum the organisation, possibly unknowingly, has. How does this manager know if frontline workers buy into their new safety rule? Previous frontline responses depict there is a disregard for policy which is not practical or logical to workers, has this happened here?

"It's about ensuring that our documentation, our procedures, the way we do things from a technical perspective are compliant with industry best practice, regulatory and otherwise and so engagement with people on helping them to understand why we're doing things, is what I need to get that to work" (M2).

This comment demonstrates the importance this manager places on bureaucracy, is this manager expressing a belief that "rules" make a workplace safe?

Frontline:

The strongest theme which emerged from the frontline with 60% in agreeance was dependability on their teammates to be successful in their work. This is a strong contrast to the above manager reference to dependence on the organisation's bureaucratic activity.

"No one has the same way of doing something, tying in a pole someone does it this way, someone does it that way but at the end of the day, as long as you're doing it safely who cares. And yeah, we do rely on our teammates, that's number one for me" (FL1).

"Quality communication with the people you work with" (FL3).

"The crew, the team" (FL5).

Planning was also a factor to 50% of the frontline, this aspect also apparent in question 2, the frontline has very little involvement in the planning of work and are reliant on office staff and management for this portion of the work.

"Planning from the office that I get and the instructions that I'm given because they choose a plan, they choose a design. So, I depend on that information that comes in a work pack to get that job done safely" (FL2).

"Your bosses giving you the right information, giving you the right resources, they all pose a factor" (FL5).

Equally as important as planning was autonomy.

"My own personal knowledge and respect for safety" (FL4).

"Me just making the right decisions and sticking by it, whether it's right or wrong" (FL5).

Autonomy is becoming a key theme emerging from the frontline (questions 1, 3 and 8) and is a fundamental component to the new view paradigm.

Table 11. Work success dependability

Question 9: What are you most dependent on to be successful in your work		
Theme:	Managers:	Frontline:
Worker engagement	2	
Teammates		3
Planning		2
Autonomy		2

4.10.1 Overlapping themes, question 9

No overlapping themes between the two groups were identified, management and the frontline depend on different aspects to be successful in their work.

4.11 Organisational balance between compliance/documentation and autonomy

Interview question 10 asked: Do you feel the organisation takes a balanced approach between compliance/documentation and autonomy?

Managers:

Within the management segment 50% feel the organisation does take a balanced approach of compliance/documentation and autonomy, this included the highest-ranking manager interviewed.

"Yeah, I think it's not bad. You know, earlier days we would have been very much, I suppose a bit more rules based, we've freed up a little bit, acknowledging that in the work out at the coalface things aren't the same as in a lab. So things are different and they need to be able to apply the principles to those environments and I think we allow for that. I think our gap is people aren't familiar with the supporting procedures and things we have put in place to help them achieve a good outcome. So when they don't know, what they don't know, they do the best they can and sometimes come unstuck" (M2).

This comment to a degree undermines the frontlines judgement. They are not the experts in their work? Do they not become "unstuck" due to systemic failures? Adversities according to Dekker and Pitzer (2016) occur from an interaction between the human and organisational measures of the socio-technical systems set up to manage complicated and ill-structured risk problems.

"We do tend to do very good investigations and ICAM's [Incidnet Cause Analysis Method] and learning and we share those learnings" (M4).

The remaining 50% of managers did not feel the organisation takes a balanced approach.

"I think the company tries to take a balanced approach, do they succeed, not necessarily" (M1).

"No. I think we rely too much on the written" (M3).

This last comment identifying the organisation could be entrenched in a traditional safety approach, relying on documentation to keep workers safe. Low-yielding safety management practices as described by Dekker and Pitzer (2016) included written safety policies and record keeping, pronouncing safety management is driven by persistent "myths" one being "compliance is key for safety" (p. 24).

Frontline:

Although 60% of the frontline agreed the organisation does take a balanced approach, from their comments 40% indicated this balance was not necessarily a directive from the organisation but self-empowerment.

"In my crew I feel more empowered to do things by common sense and using my experience, not necessarily by the company" (FL3).

"I suppose it is. I mean, you're always in charge" (FL5).

The remaining 40% of the frontline do not perceive there is a balance between the two approaches.

"It is a compliance approach, most of the time" (FL2).

This question produced mixed results, there is a definite trend showing that the organisation relies on compliance and documentation as a control measure in worker harm, a traditional safety approach. Dekker and Pitzer (2016) maintain that preoccupation with procedures and compliance with paperwork can become a stand-in for real risk assessment. Will the organisation give serious consideration to this viewpoint?

Table 12. Organisational balance between compliance/documentation and autonomy

Question 10: Do you feel the organisation takes a balanced approach of compliance/documentation and autonomy		
Theme:	Managers:	Frontline:
Yes	2	1
Yes (self-directed autonomy not company driven)		2
No	2	2

4.11.1 Overlapping themes, question 10

Although 50% of managers and 60% of the frontline did feel the organisation takes a balanced approach, 40% of this frontline segment were referring to self-directed autonomy, not organisational driven. The remaining 50% of managers and 40% of frontline workers did not perceive the organisation takes a balanced approach between compliance/documentation and autonomy. An organisation which relies on documentation to keep workers safe is one operating within the traditional safety paradigm and as denoted by Besnard and Hollnagel (2012) compliance does not ensure safety.

4.12 Most valuable, compliance/documentation or autonomy

Interview question 10 asked: Which approach adds the most value to safety between compliance/documentation or autonomy.

Managers:

From the manager sector 75% stated autonomy adds the most value to safety.

"Autonomy, to me adds the most value to the guys and their safety because they've got to take ownership of it. The others are good backups and supporting things when they don't take the right approach. The individual has to know what they want to do and want to do it" (M1).

"The people add to it the most. So if they are doing things the right way they are the biggest player here. You can have all the procedures in the world and if these guys choose to ignore or do something different, then it can be completely wrong" (M3).

"The autonomy, adds the most value but only when you get to a point where you've got a really high level of trust and a really strong culture, which you have to build from having more traditional, good data, good practices and good procedures" (M4).

The one manager who felt a combination of all the approaches adds the most value stated.

"If you have just autonomy, people don't know what they don't know, so they will come unstuck. If you just have hard and fast rules, then that will come unstuck because there'll be situations where they don't fit exactly, so you need a balance" (M2).

Frontline:

Predominantly the frontline also agreed with 80% stating autonomy adds the most value.

"Yeah definitely people experienced. I guess that's this side of autonomy, autonomy" (FL3).

"You've got to look after yourself. When you're working for a larger organisation that mandates safety structures, ways and practices then it can get lost in bureaucracy. If you've got any interest in the safety of yourself, you've got to implement your own safety systems to a point" (FL4).

There was also a comment made which aligned with the findings in question 10 regarding autonomy being self-directed not company driven.

"You're not empowered; I think it's just you do it. They (organisation) don't empower you to do anything" (FL4).

Table 13. Most valuable, compliance/documentation or autonomy

Question 11: Which approach adds the most value to safety between compliance/documentation or autonomy		
Theme:	Managers:	Frontline:
Compliance/documentation		
Autonomy	3	4
Combination of all	1	1

4.12.1 Overlapping themes, question 11

Autonomy adds the most value to safety for 75% of managers and 80% of the frontline. This is endorsed by Dekker (2020) who conveys worker autonomy being a strong motivator in high-reliability performance. Freedom under responsibility and motivating workers by empowering them to contribute to their daily work successes, are well established practices for high performing teams and organisations, this approach is far more successful than compliance and discipline.

4.13 Value rating of compliance/documentation

Interview question 12 asked: If you were going to rate the value of compliance/documentation to your safety out of 10, what would you give it?

Managers:

The manager portion gave high ratings to compliance and documentation, answers ranged from 7-10.

"I mean it's really important. You could say it's ten" (M2).

"It's still really important to have that information and have documentation" (M4).

Frontline:

The frontline section gave lower ratings from 4-7.

Table 14. Value rating of compliance/documentation

Question 12: If you were going to rate the value of compliance and documentation to your safety out of 10, what would you give it		
	Managers:	Frontline:
Mean	8.25	5.4
Median	8	5.4
Mode	7	4/7

4.13.1 Overlapping themes, question 12

The manager sector rated the value of compliance/documentation significantly higher (8.25/10) than those on the frontline (5.4/10). Besnard and Hollnagel (2012) convey the safety of work cannot be ensured by compliance and the idea safe and effective performance arises from procedure compliance reflects "Scientific Management" principles and the assumption workers can be considered "machines", this is not the case.

4.14 Value rating of autonomy

Interview question 13 asked: If you were going to rate the value of autonomy to your safety out of 10, what would you give it?

Managers:

The manager segment rated the value of autonomy lower than compliance/documentation, answers ranged from 3.5-9.

"I would rate this a 3-4, our rules exist because somebody did something outside of their training" (M1).

"While autonomy is important to be able to apply the principles, I think at the end of the day it probably comes in less than ten, maybe an eight" (M2).

"Nine. So I think ultimately they are the ones doing the job, we're really reliant on them doing the right thing. You know they should want to do the right thing, it's for them and their mates. Its sounds cliché but really that's the key, they need to want to do it and they need to believe in it" (M3).

Contrasting answers from the manager group, some holding little value in autonomy of workers while others (M3) absolutely see the value in this new view aspect.

Frontline:

The frontline gave higher ratings to autonomy than the manager group, answers ranged from 6-9.

Table 15. Value rating of autonomy

Question 13: If you were going to rate the value of autonomy to your safety out of 10, what would you give it		
	Managers:	Frontline:
Mean	7.3	7.9
Median	8.5	8
Mode	9	9

4.14.1 Overlapping themes, question 13

The frontline rated the value of autonomy slightly higher than management but much higher than their value of compliance/documentation. Safety portrayed by Provan et al. (2020) does not eventuate from preventing or encouraging work variation but from understanding variation is unavoidable, therefore, to facilitate safe variation. It is the workers and only the workers who can adapt to complexities and bridge the gaps in technology, process, and information to maintain the safety of work. This is achieved through the empowerment of autonomy, critical in the new view model.

4.15 Remove a portion of current approach

Interview question 14 asked: If you could remove a portion of the current safety/prevention of harm approach, what would it be?

Managers:

Only one manager answered this question, all other managers did not perceive anything needed to be removed.

"We could remove a lot of documentation, but because we have a workforce that has, I wouldn't like to say it.... has the wrong attitude in some aspects, then we're having to enforce documentation because a lot of guys don't take ownership of the safety" (M1).

Although this manager refers to the removal of documentation, they go on to state due to worker attitude documentation must be enforced and some workers do not take ownership of their safety. This comment vastly contrasts with the many above frontline comments surrounding taking a self-empowered approach to safety, is this a WAI vs WAD situation? Does this manager not recognise the value in worker expertise, knowledge and judgement?

Frontline:

The frontline identified three portions of the currently safety approach they would remove, PPE (dielectric gumboots) was quoted by 40% of this sector.

"I'd probably fill those yellow gumboots up with rocks and thrown them in the Clutha. Mainly because if we're in an insulated bucket, I don't see the point. We are working in Central Otago where it's freezing cold or its stinking hot and there's about a million rabbits out there chewing up the ground, some of the (ankle) rollovers we've had, guys do go down and they're very uncomfortable, summertime you sweat. Yeah definitely those, I'm all for safety but if we can get something just a little bit more comfortable, doesn't matter what sort of socks you wear. If

you actually dropped something (on your foot), there's only about a millimetre protection, if you drop a washer (on your foot) it hurts and you are in a bucket banging around" (FL1).

"The gumboots. It seems a little bit silly to me, it seems a little bit stupid. That's the first thing that comes to mind. Yeah, and not just the boots themselves but the approach to getting people to wear those boots. That whole like, no you have to do it. The fact they have caused so many ankle injuries and they seem to keep saying, no you're going to keep wearing those boots. We had old mate here yesterday saying you must clean those boots (to provide the protection), good luck with that, they're causing all these ankle injuries. Do you think anyone gives a shit about cleaning the bloody things, I don't? I won't be washing them, sorry" (FL3).

This is again in keeping with answers from question 5 and question 6, the WAI issue is a reoccurring theme.

The second theme was decreasing documentation, 40% of frontline workers referred to this aspect.

"The amount of paperwork" (FL4).

"Documenting everything" (FL5).

Finally, the frontline suggested simplifying safety.

"Reduce the amount of words".

Simplification?

"Simplification".

Of documentation?

"Of anything, it doesn't have to be documentation. Simplify safety, basically that's what we're saying, yeah. We all want to work safely" (FL4).

"Like a tailgate on a tablet and a voice recording of you giving the methodology for the job and the hazards that stand. Rather than me sitting out for 10-15 minutes, missing the point while they are working right at the start and I'm just writing with my head down and not soaking it in. I'd rather see it go from a piece of paper to a tablet, where you can photograph it, you can see other power lines, you can see telecommunication hazards, you can see roads, driveways, your crew that's there and you know that that tailgate has taken place. I'd like to see it go to that, like a video recording or an audio".

So making it easier, simplifying things?

"To deliver the message and to communicate, yeah" (FL5).

Rae et al. (2018) describes a solution to the problem of excess documentation and the need to simplify safety, removing the "safety clutter" defined as the accumulation of safety documents, procedures, roles, and activities that are executed in the name of safety but do not add any value to the safety of work.

Table 16. Remove a portion of current approach

Question 14: If you could remove a portion of the current safety/prevention of harm approach, what would it be		
Theme:	Managers:	Frontline:
PPE – Dielectric gumboots		2
Documentation		2
Simplify/Reduce safety clutter		2

4.15.1 Overlapping themes, question 14

As there was only one manager who answered this question, no overlapping themes between the two groups were identified based on two or more interviewees within a group creating a theme, however the one manager who did answer specified removing documentation as did the frontline. The frontline would also remove portions of PPE (as detailed in question 5 and question 6) and simplify safety.

4.16 Add a portion to current approach

Interview question 15 asked: If you could add to the current safety or prevention of harm approach, what would it be?

Managers:

There were no overlapping themes from the management group, singular suggestions to add to the current safety approach from the manager segment included increase training.

"We tend to do a lot of training on the job. I think the approach is to do targeted training off job, so you can focus on things, educated people again" (M1).

Adopt a "Safety Differently/Safety II" approach.

"I know we have talked about "Safely Differently" and those sort of things. I think it needs to be more of a people lead approach is my take. So how do we do that, I think that's bloody hard if I'm honest. How do you do that? And then how do you incorporate that into your system and really make that robust but for me that's what it is, people lead".

So adding a Safety Differently/Safety II approach?

"Absolutely, yeah" (M3).

Increase reporting.

"For me it's trying to get more people doing the lead reporting. So that's what I'd like to see more of, so that would be making the data collection easier for people" (M4).

Frontline:

From the frontline 60% suggested increasing management interaction either onsite, through communication or engaging with frontline activities.

"I'd like to see some other people (management) come out and on a cold day bring us some pizza, I tell you what guys do remember that. If it's a stinking hot day, like we had trouble getting water on site, if they bought out a box of Poweraid guys would remember that. Just little things like that" (FL1).

"Communication, between the team, within the team and also the office (management), from the top to the bottom" (FL2).

"I would introduce a scheme where all safety documents have to be cited regularly. At the start, during and end of jobs then filled. They should be tested, you should be tested you're doing them and doing them correctly for the right purpose. So once you start getting monitored and checked then you'll be more keen to do them regularly and correctly. Currently, at the moment I just chuck mine in the bin at the end of the job because nobody has ever asked me for them, nobody ever looks at them. It's just a practice you're got to do at this stage, it's got nothing to do with safety, it's got to do with company requirements but if people (management) looked at your safety documents, how you're doing them and then maybe be able to improve or simplify them or make them appropriate for what you're doing" (FL4).

Other suggestions from the frontline included increasing autonomy.

"Increasing people's, giving people the space to use the common sense, because that's where it starts, you know, there's no safety without thinking, if you don't think about it, well you know" (FL3).

Again, the theme of autonomy has been highlighted by the frontline, a consistent reoccurring theme throughout the interviews and a key new view concept.

Also, to use technology/digitalise safety documentation to simplify the process.

So you're saying we need to start using technology to make things easier?

"Definitely, it would be faster, simpler, the message would be delivered better. Imagine if we're just taking a picture or scanning a video onto a tablet and everyone signs-on or gives their tick in a tick box".

So technology?

"Pretty much." (FL5).

Table 17. Add to the current approach

Question 15: If you could add to the current safety or prevention of harm approach, what would it be		
Theme:	Managers:	Frontline:
Increase management interaction		3

4.16.1 Overlapping themes, question 15

No overlapping themes between the two groups were identified.

4.17 Summary of the term “safety”

Interview question 16 asked: Can you provide a short summary of what the term safety or prevention of harm means to you?

Managers:

All manager participants provided similar summaries of the term safety. Generally referring to all those within a worksite not getting hurt.

"Safety means that myself and any of my work colleagues throughout the industry go home in the same state they came to work. They have all their limbs and senses" (M1).

"It's about looking after yourself and others, while you do your daily work" (M3).

"Safety means keeping our workers safe, keeping all the customers or anyone who is connected to our electricity network, members of the public safe, around any of the sites that we're working on. People aren't being hurt basically" (M4).

Frontline:

All frontline workers also provided very comparable summaries of the term safety.

"Not getting hurt at the job site, go home safely" (FL2).

"I guess it's going back home in one piece. You don't go to work to stress yourself or to hurt yourself" (F3).

"Safety, it's the way you work, it's the way you plan your work, it's how you do your work and it's how you get home" (FL4).

"To get home at the end of the day, really isn't it and go and do the things you like. It's just a job at the end of the day" (FL5).

Table 18. Summary of the term “safety”

Question 16: Can you provide a short summary of what the term safety or prevention of harm means to you		
Theme:	Managers:	Frontline:
Not getting hurt, returning home safely	4	5

4.17.1 Overlapping themes, question 16

Both groups provided affiliated summaries of the term safety. Generally, all workers and others on a work site not being compromised in any way, not getting hurt and returning home at the end of day safely.

4.18 Best organisational resource to improve safety & safety system

Interview question 17 asked: Who or what is the best resource within an organisation to improve safety and the safety system?

Managers:

All managers agreed the frontline is the best resource within an organisation to improve safety.

"A combination of people that have actually done the job (past and present) and people that have been trained in systems. Finding the balance between “work is done” and “work as imagined” is the key" (M1).

"The improvement of safety is the people who do the work, they're the ones engaged, they're the ones involved with it. They are the ones who are going to benefit the most and have the greatest impact on whether something's going to go wrong or not" (M2).

It's about the people we have and how we actually get them to design systems that they are going to use" (M3).

"The people on the frontline" (M4).

Two of the managers referred to management being the best resource to improve the safety system.

"In terms of a system, the leadership of the business needs to set the tone and the system, whereas the individuals need to apply it" (M2).

Frontline:

All frontline workers were united, stating the frontline are best resource to improve safety.

"The workers as we are the ones undertaking all the tasks in the field" (FL2).

"The employees, the field staff" (FL3).

"The people undertaking the task because they're the ones that understand the risks" (FL4).

Also, two frontline workers discussed management being the best resource to improve the safety system.

"There's two ways, there is the workers who do the actual work and do their reporting of safety. There's the person who implements the company's safety standards and procedures, they should blend the two together and review them. Make them into one well-oiled machine" (FL4).

"Obviously if you need rules or policies changed or added or procedures, then managers" (FL5).

Table 19. Best organisational resource to improve safety & safety system

Question 17: Who or what is the best resource within an organisation to improve safety and the safety system		
Theme:	Managers:	Frontline:
Frontline - safety	4	5
Management - system	2	2

4.18.1 Overlapping themes, question 17

Both managers and frontline workers concurred the frontline is the best resource within an organisation to improve safety. Those over the two groups that referred to the best resource for improving the system stated this resource was management. The new view is based on the principle that those undertaking the work are the experts in the work, this including safety. Fredrick et al. (2018) conveys the new view is founded on the organisation recognising workers as a key resource to improve safety. The difference between the traditional and new view safety paradigm according to Karanikas et al. (2020) principally lies on whether the organisation views its workers as key safety achievers or potential safety problems.

4.19 Closing comments

Interview question 18 asked: Any other comments you would like to add?

Managers:

Only one closing comment was made in the manager group.

"I still think we talk the talk and there's room to move in terms of actually walking the walk here, in terms of our people being more empowered" (M3).

Frontline:

Closing comments from the frontline included

"Well you could start implementing the kiss theory; keep it simple stupid and start getting people's attention by making them buy into safety. It's about looking them in the eyeballs and saying "are you're working safely"? Conscience, it's a great thing to have".

So are you suggesting, more direct discussion with people?

"It works, I've experience it at other companies. We all get together and somebody is in charge and you tell them you are going to work safety and you sign a bit of paper saying you're going to work safety and he's wondering around looking at you saying "are you working safety?" You're going to work safety because you have given him your assurance" (FL4).

“Move away from the paper side of things, not just, here's a tick box, sign on, that's boring and dull. Instead what's going to be good here? What can harm here? Ask those questions, not your stock standard drilled, looking good on paper. If I could change things that's what I'd be doing. I'd like to see the paperwork decrease, more focus on the actual task and not taking foremen and other key personnel away and spending 15 minutes just writing the same monotonous hazards down. Paperwork sucks decrease it” (FL5).

4.20 Results summary

The results of the 18 interview questions are summarised in Table 20. including key group and overlapping themes.

- Themes which have emerged are listed near the top of the table.
- Themes which have been grouped into traditional paradigm aspects include:
 - Documentation
 - WAI
- Themes which have been grouped into new view paradigm aspects include:
 - Reduce documentation
 - WAD
 - Autonomy
 - Worker engagement
 - Simplify safety
- Themes which emerged but do not directly link to either paradigm have been grouped “other” and include:
 - Practicality
 - Communication
 - Training
 - Attitude
 - Work planning
 - PPE/P&E
 - Team
- Manager (M) and frontline worker (FL) themes are displayed for each question.
- Overlapping themes between managers (M) and frontline workers (FL) are highlighted for each question.

4.20.1 Key themes

Many similarities surrounding perceptions on safety exist between the two groups, however this research uncovered more contrasts are present. This study has clearly established links to safety paradigms for each of the groups. Table 20. summarised these findings and key themes include:

- **Documentation:** The management group place a higher value rating to this component than the frontline and the organisation relies on this traditional method as a key control in the prevention of harm.
- **Work as imagined (WAI) vs Work as done (WAD):** This scenario exists within this organisation as the research established safety is not managed out in the field as described.
- **Reduce documentation/declutter safety:** The frontline has a strong desire for the reduction in safety documentation with only initiatives which add value to their safety, present within the system.

-
- **Simplifying safety:** Drawing on the above, the idea to simply safety using technology emerged from the frontline segment.
 - **Worker engagement:** An important aspect to safety perceived by both managers and frontline workers.
 - **Autonomy:** A critical factor in safety for frontline workers, not organisational driven but through self-direction.
 - **Practicality:** The frontline desire practicality to be entrenched into organisational safety. When practicality lacks the risk of safety initiatives being dismissed by the frontline increase and can revert into a WAI vs WAD situation.

Table 20. Results summary, key group & overlapping themes

Question	Description	Group	Traditional		New View					Other						
			Doc	WAI	Reduce Doc	WAD	Autonomy	Worker Engagement	Simplify Safety	Practicality	Communication	Training	Attitude	Work Planning	PPE P&E	Team
#1	Prevention of harm in the workplace	M	✓									✓	✓			
		FL	✓				✓					✓		✓	✓	
#2	Effective methods to prevent harm	M										✓				
		FL									✓			✓		
#3	Empowerment of one's own safety	M					✓									
		FL					✓									
#4	Organisational safety methods	M	✓								✓	✓				
		FL	✓								✓	✓			✓	
#5	WAI vs WAD	M		✓												
		FL		✓												
#6	Suggested organisational approach	M						✓								
		FL			✓				✓	✓						
#7	Ethical responsibility or bureaucratic activity	M	✓ Ethical													
		FL	✓ Ethical													
#8	Re-design the approach to safety	M						✓								
		FL					✓	✓								
#9	Work success dependability	M						✓								
		FL					✓						✓		✓	
#10	Organisational balance between doc & autonomy	M	✓ Yes ✓ No													
		FL	✓ Yes ✓ No													

Question	Description	Group	Traditional		New View					Other						
			Doc	WAI	Reduce Doc	WAD	Autonomy	Worker Engagement	Simplify Safety	Practicality	Communication	Training	Attitude	Work Planning	PPE P&E	Team
#11	Most valuable, compliance documentation or autonomy	M					✓									
		FL					✓									
#12	Value rating of compliance documentation out of 10	M	8.2													
		FL	5.4													
#13	Value rating autonomy out of 10	M					7.3									
		FL					7.9									
#14	Remove a portion of current approach	M														
		FL	✓						✓						✓	
#15	Add to current approach	M														
		FL						✓								
#16	Summary of term "safety"	M	✓ Not getting hurt, returning home safely													
		FL	✓ Not getting hurt, returning home safely													
#17	Best organisational resource to improve safety	M	✓ Frontline					✓								
		FL	✓ Frontline					✓								
#18	Closing comment themes	M						✓								
		FL			✓		✓		✓							

4.20.2 Honesty of frontline creates ethical dilemma

The honesty of frontline workers was surprising and although appreciated by the researcher this has led to the discovery of safety related problems due to omissions on the part of some frontline workers regarding PPE items, revealed through question 5 and question 6. These omissions by workers also relate to New Zealand legislation, the Health and Safety at Work Act (HSWA) 2015, section 45 duties of workers, (b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons. An emerging problem has resulted, the researcher also needs to comply with section 45(b) by informing management this problem is present, however is also bound to the ethical principles that confidentiality and anonymity will be maintained for participants. This being the basis, that initial permission was granted to undertake the study by Human Ethics Committee approval.

This discovery and emerging conundrum were unexpected, the questions were framed around safety perceptions and paradigms however through the course of exploring these concepts this issue was exposed. This research was initiated through pragmatic observation but has now led to an ethical dilemma for the researcher.

4.21 Chapter summary

From the nine interviews which took place with managers (N=4) and frontline workers (N=5) many findings were uncovered. It was established similarities in perceptions between the two groups do exist, however it is now clear there are vast differences in what each group perceive adds value to workplace safety and how the approach to safety would ideally take shape. Strong links to both the traditional and new view paradigms have been identified.

Key themes which emerged, linked to the traditional approach to safety comprised of documentation/compliance and the WAI scenario which exists, possibly unknowingly to the organisation. Key themes which transpired coupled to the new view model consisted of reducing documentation/removing the safety clutter, simplification, worker engagement and autonomy. The other theme which materialised, being the frontline workers desire for a practical approach to safety. This study has also created an ethical dilemma for the researcher through the omissions by some frontline workers regarding certain PPE items, uncovered through the trust and honesty of the frontline workers. All key findings merit further discussion in the following chapter.

5 Discussion

As a result of the literature review learnings, the research posed two definitive research questions:

Question one: How is workplace safety perceived by those on the frontline compared to management?

Question two: Which of these perceptions align with traditional safety or the new view safety paradigm?

5.1 Similarities in safety perception

Key similarities between managers and frontline workers which emerged include:

Paradigm: New view

- Empowerment to manage one's own safety in the workplace was confirmed by both groups. However, it's important to note managers portrayed their empowerment derives from the organisation while half of the frontline who stated they felt empowered, indicated their empowerment was not a directive from the organisation but from a personal notion.
- Safety was described as an ethical responsibility not a bureaucratic activity by all managers and frontline.
- When re-designing the approach to safety, both groups specified increasing worker engagement.
- Autonomy adds more value to safety then compliance/documentation for both the groups.
- The frontline was identified by both groups being the best resource within an organisation to improve safety.

Paradigm: Traditional

- The prevention of harm for both groups consisted of documentation.
- The organisational approach to safety was described by both groups taking the form of documentation.

Paradigm: None

- The organisational approach to safety was described by both groups taking the form of training and communication.
- The term safety was summarised by both groups as no parties getting hurt and returning home safely.

5.2 Contrasts in safety perception

Key contrasts between managers and frontline workers which emerged include:

Paradigm: New view

- The frontline consider autonomy a critical factor in the prevention of harm in the workplace.
- The organisational approach to safety should consist of increasing worker engagement for the management segment, while the frontline voiced reducing documentation, simplifying safety, and taking a practical approach.
- When re-designing the approach to safety, frontline workers stipulated increasing autonomy.
- Work success for managers depends on worker engagement, work success for the frontline depends on autonomy.
- Managers would not remove any portion of the organisations current approach, the frontline would remove PPE, documentation and reduce the safety clutter.
- Adding to the current organisational approach, the frontline indicated increasing management/worker engagement.

Paradigm: Traditional

- The value of compliance and documentation was rated considerably higher to managers (8.25) than frontline workers (5.4).

Paradigm: None

- The frontline cited planning of work, PPE and communication prevents harm in the workplace while managers described training and attitude.
- The most effective methods in the prevention of harm to managers were training and culture while the frontline stipulated communication, planning and risk assessment.
- The frontline stated the organisation prevents harm through PPE and plant and equipment.
- Work success for the frontline depends on teammates and planning.

5.3 Key themes within the traditional paradigm

5.3.1 Documentation/compliance

Documentation was identified as a component in the prevention of harm (question 1) to 50% of managers, this aligns with the study of Jones (2016) who uncovered those in management positions associated positive safety outcomes with a compliance-based approach.

Documentation also emerged when asked what the organisation does to prevent workplace harm (question 4), whereby all managers (100%) and a high portion of frontline workers (60%) stated providing documentation as a key organisational control to the prevention of harm. Literature could not be located on this aspect; therefore, this exploratory question (4) reveals the organisation having a strong reliance on documentation for safety management. In New Zealand legislation, the Health and Safety at Work Act (HSWA) 2015, section 36 (3)(f) states a PCBU must ensure, so far as is reasonably practicable, the provision of any information or instruction that is necessary to protect all persons from risks to their health and safety. This is supported by the HSWA (General Risk and Workplace Management) Regulations 2016, regulation 9. Is it a possibility this legal requirement for organisations to provide on these aspects could contribute to holding organisations in the traditional space?

When asked to rate the value of compliance/documentation to the safety of work the manager sector gave a significantly higher rating (8.25/10) compared to the frontline (5.4/10). Dekker (2014) refers to the traditional paradigm being one where workforces require documentation using policies and procedures to stay safe. This higher rating by managers indicate they relate to the importance the traditional paradigm places on compliance/documentation. Does this thinking by managers also contribute to holding organisations to the traditional approach? Literature has not explored valuing ratings between the groups of managers and frontline, this preliminary result could portray to organisations those elevated in the organisational structure, naturally place a high value rating on this traditional component.

But does compliance/documentation result in a safety? Besnard and Hollnagel (2012) convey the safety of work cannot be ensured by compliance and the idea safe and effective performance arises from procedure compliance reflects “Scientific Management” principles and the assumption workers can be considered “machines”. Can we shift this thinking in New Zealand?

5.3.2 Work as imagined (WAI) vs work as done (WAD)

This research has uncovered a work as imagined (WAI) vs work as done (WAD) scenario exists within the organisation. The results of question 5 depict 50% of the management group acknowledged safety is not managed out in the field as described by the organisation, one manager unsure but alarmingly the most senior manager was adamant this is not the case. The literature disagrees, Proven et al (2019) explains in all organisations a gap will exist between WAI and WAD, as procedures, plans and requirements are fundamentally flawed and not always able to cater for the complexity of WAD. Overwhelmingly 100% of frontline workers concur with the literature, confirming safety is not managed in the field as described.

Understanding the work and accepting adaptations exist, allow organisations proactive learning while embracing and monitoring adaptive work, this is new view thinking. Although the literature provides vast explanations on the WAI vs WAD concept, no literature was located directly asking the two segments

if this concept exist within the New Zealand context. This preparatory research confirms its existence and could support organisations embracing the concept and allowing their system to support their people on the frontline in their adaptations and success of work.

Data collected through question 6 also highlighted the WAI vs WAD problem, prevalent within the organisation. The literature suggests documentation can be linked to the WAI theory, illustrated by Proven et al. (2019) and is reflected in plans, processes, systems, and metrics which do not always align with the true representation out in the field. Documentation as describe above has a stronghold within this organisation, if the organisation put its efforts into addressing these two traditional aspects would this allow the new view model to flourish? Possibly that would be all it takes.

5.4 Key themes within the new view paradigm:

5.4.1 Decluttering safety

The significant theme to declutter safety through the reduction of documentation and implementing a simplified approach to safety, transpired by frontline workers. This emerged through frontline answers to question 6, how should the organisation approach safety, with 80% of frontline workers stating either reducing documentation or simplify the approach. This theme also materialised when asked what portion of the current organisational safety approach you would remove (question 14), again 80% of the frontline stating documentation or safety clutter. Decluttering the approach to safety also surfaced by the frontline throughout other interview questions. Safety clutter as described by Rae et al. (2018) consists of the accumulation of safety documents, procedures, activities, and roles which do not actually contribute to the safety of work but rather results in “surface compliance”, hindering innovation and the completion of work.

Removing the clutter assists organisations moving into the new view landscape. Some managers touched on the idea, however throughout the course of investigation this aspect did not transpire to a manager theme, it seems this concept holding true to just frontline workers. The idea to increase the use of technology to achieve simplification also emerged, with a frontline desire for a work environment whereby safety activities focus solely on adding value to their safety of work not merely ticking boxes for bureaucratic purposes. This clearly is not the case, frontline workers are currently working within a system which relies on bureaucratic process, does it assist safe work?

"The boys get bogged down (with documentation) and pretty much now the team leader sits in the truck, he does his JSA, he comes out it's the same shit different day, sign on here. Yeah" (FL1).

"Move away from the paper side of things, not just, here's a tick box, sign on, that's boring and dull. Instead what's going to be good here? What can harm here? Ask those questions, not your stock standard drilled, looking good on paper. If I could change things that's what I'd be doing. I'd like to see the paperwork decrease, more focus on the actual task and not taking foremen and other key personnel away and spending 15 minutes just writing the same monotonous hazards down. Paperwork sucks decrease it" (FL5).

The problem with safety clutter as Rae et al. (2018) illustrates, is both work and safety suffer, as an unnecessary burden is placed on the performance of everyday activities, performed in the name of safety however not actually contributing to the safety of work. The above comments show a clear desire for safety activities to be meaningful and add value to everyday work activities. How can the organisation achieve this? Although literature was plentiful on the concept of safety clutter, no literature explored this as a living and breathing problem within an organisation in the New Zealand context. This preliminary examination of clutter existing within an organisation could be the foundation to its removal. Could the organisation review its systems, remove obsolete processes, simplify, and reduce documentation and take a less is more approach? All this while engaging the worker, what do they need, what don't they need? This would certainly assist when moving into the new view space and leads to the next key finding....

5.4.2 Worker engagement

Worker engagement emerged as a substantial theme, frequently referenced by both groups. Initially surfacing when asked how the organisation should approach safety (question 6), 50% of managers cited increasing worker engagement. When given the opportunity to design their own approach to safety (question 8) again 50% of managers referred to the importance of engaging with workers. Do

managers embrace this concept however are bound by organisational restraints to apply? Possibly so, as increasing worker engagement was a concept voiced by the frontline (40%) when also answering this question. When asked about work success factors (question 9), worker engagement was the only theme to emerge from the management (40%) segment. If frontline workers could add to current organisational approach to safety (question 15), 60% stated increasing manager/worker engagement. Reviewing this data suggests managers value the concept of worker engagement, however the frontline is depicting engagement needs to increase. This could occur by increasing the involvement of frontline workers in the safety decision making process, in turn this would also reduce the current gap between work as imagined (WAI) and work as done (WAD).

There are real opportunities for this concept to eventuate out in the field opposed to the possible “lab” condition which may exist. This is a key new view concept, Dekker (2020) describes moving into this space by embracing those on the frontline, valuing their expertise and professional judgment. Both managers and frontline workers recognise the value this concept could create, managers voicing importance and reliance on this aspect, the frontline petitioning for its inception. There is a golden opportunity to bridge the current gap and increase worker engagement within this organisation. After all, as Gantt (2017) elucidates the new view paradigm, models people being a solution to everyday work problems which need to be enabled and facilitated. It is those on the frontline who are in a unique position to recognise innovative solutions and through worker engagement this concept can emerge.

While no literature within the New Zealand context was located on the implementation of this new view aspect, this introductory enquiry illustrates both groups see value in worker engagement, both want the aspect cemented into everyday work, it seems the challenge is moving the organisation into this protectory.

5.4.3 Autonomy

Autonomy emerged as a key component to safety as perceived by the frontline. Autonomy was cited by 60% of the frontline as an element which keeps people from being harmed in the workplace (question 1). The literature also suggests autonomy is a factor to safety as seen in the study of Jones (2016) whereby seizing responsibility for one’s own safety was identified. When frontline workers were asked how they would redesign the workplace approach to safety (question 8), 40% indicated increasing autonomy. Autonomy also featured in the frontline segment when asked what you are most dependant on to be successful in your work (question 9), again 40% citing this aspect.

Autonomy is a fundamental new view concept, Dekker (2020) often refers to the importance of worker autonomy and discretion, emphasising decision making needs to sit with the workers who have the expertise, those undertaking the work. The frontline clearly agrees with the literature; however, this was not a theme which emerged from the manager segment. Is this because they are not sure if they can trust workers to make their own decisions and direct the safety of work for themselves? Dekker (2014) encourages organisations to move away from a culture of control and constraint into one of empowerment, diversity, and human opportunity. Operating within this space provides an environment for worker led solutions, often innovative in nature and practical for the work.

When asked if workers felt empowered to manage their own safety (question 3), 100% of managers stated yes, 80% of the frontline also replied yes, however, half of this portion did not necessarily perceive this empowerment was an organisational directive but rather perceived it came from their own personal notion.

“Yeah, so definitely but that’s a team decision when it comes to the hierarchy that’s a different story” (FL1).

“I look after myself. Yeah, not necessarily by my employer. That empowerment is from my own experience and my own self-awareness” (FL3).

The remaining 20% of the frontline did not feel empowered to manage their own safety.

Can the organisation move into a space where workers feel supported by their employer to direct their own safety decisions? The literature suggests this will create practical and innovative solutions for the safety of work which this researcher believes would benefit any organisation.

Workers were asked if they feel the organisation takes a balanced approach between compliance/documentation and autonomy (Question 10), 50% of managers and 20% of the frontline

agreed it does, a further 40% of the frontline also answered yes, however, indicated this was due to self-directed autonomy not company driven.

"You're not empowered; I think it's just you do it. They (organisation) don't empower you to do anything" (FL4).

The final 40% of frontline workers and 50% of managers responded it does not take a balanced approach. The literature suggests, through the work of Besnard and Hollnagel (2012) safety is not ensured through fixed compliance and that workers need the opportunity to interpret and adapt work. Could this organisation take the lead to provide this opportunity? When asked which approach between compliance/documentation and autonomy adds the most value to safety, 75% of managers and 80% of frontline works cited autonomy, with the remainder citing both. Managers giving autonomy a mean value rating of 7.3/10 and the frontline giving autonomy a mean value rating of 7.9/10.

No literature could be located where a direct value rating between compliance/documentation and autonomy between managers and the frontline took place. This novel research clearly shows autonomy is a critical safety component to those on the sharp end, where the actual risk lies, the frontline. It also demonstrates almost half of workers within this organisation do not perceive a balanced approach between compliance/documentation and autonomy.

Could this organisation see the value in shifting into a balanced space? The literature as described by Dekker (2014) suggests finding this balance between controlled safety and the practical expertise of the frontline worker is the most useful prescription to the safety of work. There is an opportunity for any organisation to embrace this approach and strike this balance. This preliminary examination of autonomy illustrates not only how those on frontline value this concept to the prevention of harm and success factors to work but it also demonstrates both managers and the frontline perceive this concept adds the most value to safety.

Autonomy is an essential aspect to the new view framework and through this exploratory examination there is now research which validates its importance to safety management.

5.5 Other key themes

5.5.1 Practical approach to safety

A practical approach to safety transpired as a key theme, solely referred to by the frontline. When asked how the organisation should approach safety (question 6) practicality was cited by 40% of the frontline. Although not a defined new view aspect in the literature, this does link to the WAI vs WAD concept and transpired when workers were asked if safety was managed out in the field as described by the organisation (question 5). Due to the process not being practical, one frontline worker explained

"Sometimes we do have to bend some rules to get the job done"

It emerged if the approach to safety is not one that is practical, the risk of the safety directive being ignored increases. This was also highlighted through the omission of some frontline workers in the use of PPE items.

This reiterates the importance of all safety initiatives being practical to those on the sharp end and could be achieved by engaging with the workforce and basing decisions on their feedback and suggestions, otherwise organisations face the possibility the initiative is ignored.

5.5.2 Ethics as action researcher

For this section only I have moved from third person reporting and discussion of results to first person reporting because of the legal and ethical considerations I discovered.

I am a health and safety professional who undertook this research in my own organisation. Initially it was not foreseen this approach would create any ethical implications, however, during the study, due to the openness and honesty of frontline worker participants, as a researcher I since discovered safety related problems due to omissions on the part of frontline workers. This discovery has created ethical implications from a practice perspective, my role within the organisation working as a health and safety professional. I set out on this study for personal academic purposes, I then took on the role of an action researcher, conducting research within the organisation I too am an employee.

Through my academic role as researcher, I uncovered the serious issue of frontline workers disregarding policy which states high voltage (HV) gloves must be worn once a worker leaves the ground and dielectric gumboots must always be worn when on a power outage worksite, these being company control measures to reduce the risk of electrocution.

The unearthing of this problem in the role of action researcher has created ethical implications for the role of health and safety professional within the organisation. Can I ignore the serious issue of workers disregarding company policy which has been implemented to protect workers from electrocution if they encounter electricity, because I made this discovery in the role of researcher not organisational health and safety professional? No, I cannot.

Simultaneously this discovery in the role of health and safety professional within the organisation has created ethical implications for the role of researcher, this being the confidentiality and anonymity principles this study must sustain. Victoria University of Wellington, Human Ethics Committee approval was granted to conduct this study based on these principles. Can I ignore these principles which this study is bound to and breach confidentiality and anonymity because of the discovery in the role of organisational health and safety professional not researcher? No, I cannot. I now find myself with a double conundrum, ethics as researcher verses ethics as professional within the organisation....

The PPE company policy is in place as a control measure to reduce the risk of electrocution to workers, however as discovered it is not being upheld by some frontline workers. In New Zealand legislation there are duties placed on workers, the legislation which relates to my conundrum being the HSWA 2015, section 45 - duties of workers, while at work, a worker must: (b) take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons.

There are two issues to contend with in relation to this legislation:

Issue one: Some frontline workers do not wear HV gloves when they leave the ground, or wear dielectric gumboots on work sites which could potentially become electrified. These PPE items are company control measures in the event a worksite does electrify. The frontline workers reasoning for their omission, items are unpractical and inhibit work. The gloves are thick and cumbersome, they do not allow for dexterity when screwing bolts and the likes. The gumboots are uncomfortable, hot in Central Otago summers and cold in winters freezing conditions, which are sometimes snow covered. The gumboots provide workers little ankle support when working on undulating terrain, often laden with rabbit holes or climbing ladders. They are not steel capped so provide no protection when dropping something on your foot, this far more frequent than an electrified worksite. Workers are often touching steel i.e., power pole crossarms, bolts or work trucks, with non-protected body parts, which then significantly reduce the PPE items control capabilities. Workers have pleaded with management for alternative solutions but to no avail. Where too from here for the workers? As discovered, ignore the direction of company policy, as this directive simply does not provide efficient working conditions. Workers are now in breach of HSAW, 2015 section 45(b) in their omission to wear PPE.

Issue two: I have become aware of the omission to HSWA, 2015 section 45(b) of some frontline workers through my role as researcher. In turn in my role of health and safety professional for the organisation I too am now in breach of HSWA, 2015 section 45(b) in my omission not telling management they have an issue with the disregard for the PPE items. Why have I not told them? Ethically, if I inform management of the breach I envision the first response, a request for the names of the individuals involved. Informing management of the problem, could potentially lead to a breach in confidentiality and anonymity this study is bound to through the Human Ethics Committee approval process.

The solution? I cannot omit informing management this problem exists as it is my job to inform management however, under no circumstances will confidentiality or anonymity to participants be breached. The solution to my conundrum.... I will provide the organisation a copy of this research report however, I will not engage with any further details, it will be at management's discretion how they proceed with this discovery based solely on this report's contents.

A pragmatic from the practice problem has been discovered.... Conducting action research within one's own organisation and the conflict between HSWA, 2015 section 45(b) and Human Ethics Committee requirements will be an emerging problem for other health and safety professionals conducting research in New Zealand. This research has unearthed an ethical problem from undertaking action research and the health and safety community need to be aware of this novel existence.

5.6 Interview assessment

The research was well informed with 18 questions, however in a project of this scale there were possibly too many questions, with other data emerging which will be reported separately.

Frontline workers were surprisingly honest with their answers. Manager answers were sometimes perceived as polished, possibly responding with what they thought they should say, not necessarily true beliefs, M4 an example through their referral to Safety II.

5.7 Validity of results

This research seeks to contribute to the body of safety knowledge and enhance the quality of workplace safety practice in New Zealand and beyond. Through the establishment of themes, applied when a proportion of interviewees gave the same answer validity of results can be claimed, this is represented throughout the results chapter and has allowed in accurate data findings, establishing trustworthiness within the research.

5.8 Further research

This research explored knowledge as described by Cherry (2010) within the “white spaces” whereby limited data or enquiry exist. This research has broken ground exploring safety perceptions between managers and frontline workers, linking to safety paradigms within the New Zealand context.

This study was time bound and only explored perceptions within one organisation within one industry. There is an opportunity for further research to take place, to continue in the exploration of safety perceptions over multiple organisations and industries.

This research unearthed issues between managers and frontline workers, it now raises questions whether officers (i.e., directors and chief executives) understand these problems. Are they aware of such differences in safety perceptions? This research provides an opening to explore this further.

There is an opportunity for further research to utilise this study as its baseline, structuring an approach around the already established key themes and findings. This would allow for the development of key aspects, further reducing the gap in knowledge through supporting research.

5.9 Chapter summary

Through this preliminary examination on perceptions on workplace safety – traditional or new view paradigm, similarities in perceptions between managers and frontline workers have been uncovered, however, it has also relieved more contrasts exists between the two groups.

Traditional paradigm key themes revealed included documentation/compliance. It was discovered the manager group place a higher value rating to this component than the frontline, and the organisation as whole relies on this traditional method as a key control in the prevention of harm, possibly a reflection on current legislation restraints. This research also unearthed a prevalent work as imagined (WAI) vs work as done (WAD) scenario exists. These findings could be the central influences on organisations persisting to operating within the traditional space.

New view key themes which emerged included the desire by frontline workers for the organisation to declutter the safety system, with only those initiatives which add value to workplace safety being present. Worker engagement also transpired, as managers described the importance of engagement and workers appealed for this initiative to expand. Finally, autonomy developed as a critical component in workplace safety for frontline workers.

Another theme to arise but not directly linked to either paradigm was practicality. Frontline workers yearn for safety to be practical to their work, however, what the research has correlated is when practicality is lacking to a safety initiative, this can lead to an omission by workers to implement, resulting in a WAI situation.

This novel research also discovered, all the key themes uncovered are intertwined, with one often leading to the next.

The research also unearthed the ethical implications of action research. A pragmatic from the practice problem arose, possibly never encountered in New Zealand, however, the health and safety community need to be aware of this novel existence.

This research sought to unearth enquiry within the white spaces, where limited knowledge surrounded the pragmatic questions.... How is workplace safety perceived by those on the frontline compared to management and which of these perceptions align with the traditional or the new view paradigm? This preliminary examination has done just that; however, this is just the foundation to this exploration and provides many further research opportunities.

6 Conclusions

This research has broken ground in the inception of examining perceptions on workplace safety, by those on the frontline compared to management and linking these perceptions to the traditional or new view safety paradigms within the New Zealand context.

This preliminary search for answers has uncovered that while similarities can be drawn, more disparities exist.

Key themes discovered within the traditional paradigm comprised of documentation/compliance and the work as imagined (WAI) vs work as done (WAD) scenario. Perceptions on these concepts related predominantly to the manager segment. It was established documentation/compliance is considered a valuable control measure in the prevention of harm to managers and there is fierce organisational reliance on this traditional method, possibly related to the current legislation requirements. Placing such a high value on this method by both managers and the organisation could be a key factor to operating within the traditional space. The research uncovered this organisation is functioning within a WAI vs WAD landscape, while some managers acknowledged the existence of this scenario the most senior manager was certain WAI did not exist, however, the frontline confirmed this is the reality. The literature described by Proven et al. (2020) suggests WIA can be linked to documentation through plans, processes, systems, and metrics which do not align with the true reflection out in the field. If this organisation focused its efforts on rectifying these two entwined traditional symptoms, could this be a fundamental step towards shifting the safety of work into the new view paradigm?

Key themes ascertained within the new view paradigm embraced decluttering safety, worker engagement and autonomy. Perceptions on these notions related primarily to the frontline segment. Frontline workers yearn a decluttered safety system, achieved through the reduction of documentation and bureaucratic activities which do not contribute to safety but are possibly only in place for the purposes of “surface compliance”. Alternatively, the frontline desire a simplified safety of work approach, one which focuses solely on adding value to the safety of their work and suggested this could be achieved through incorporating technology into the system. The literature suggests through the work of Dekker (2014) organisations need to find a balance between a controlled and managed system, between over-prescribed procedure and practical frontline expertise. Organisations operating within this environment are well in reach of a new view culture. Could this organisation take the lead in the removal of its safety clutter? Would they be receptive to involve those on the frontline to partake in this process, to gain a clear understanding of the work and requirements of its workers? This leads to the second key new view theme of worker engagement. Worker engagement surfaced as an overlapping theme, it emerged managers recognise the importance of this element while frontline workers have a craving for the concept of engagement to expand. Could this organisation embrace its workforce and engage with those on the sharp end to deliver a collaborative approach to safety? This would assist in bridging the current WAI vs WAD conundrum the organisation needs to face. The final key new view theme to emerge was autonomy, with frontline workers perceiving this aspect a critical factor in the prevention of harm and strongly appeal the organisation to allow them greater autonomy to their safety of work. This theme notably the most predominant theme to transpire from the frontline. Could the organisation recognise the skills, experience, and expertise those who perform the work every day possess and grant them the autonomy to deliver on their safety of work? Embracing these three key concepts, endorsed by frontline workers would advance this organisation into the new view landscape, a landscape which would accelerate the safety of work.

Another key theme to transpire was a frontline desire for practicality to be applied to safety initiatives, this ascribes to the WAI theory, as the research uncovered when a practical approach to safety lacks the risk of the safety directive being dismissed increases. Practicality would almost be guaranteed when the above three key new view themes are applied to the safety of work.

Finally, this preliminary examination of workplace safety perceptions unearthed an ethical conundrum unforeseen to the researcher, being the ethical implications of undertaking action research. Possibly never encountered in New Zealand, however, the health and safety community need to be aware of this novel existence.

This pragmatic research sought answers within the “white spaces” illustrated by Cherry (2010) as research which seeks to explore limited data or knowledge, engaging with the unfamiliar to learn from the unknown in the prospect of advancing practice development. This research has broken ground in the preliminary examination of perception on workplace safety – traditional or new view paradigm. The

gap in knowledge comparing workplace safety perceptions between frontline workers and management and linking these to either paradigm no longer exists. This research can confirm manager perceptions are linked to the traditional paradigm and the frontline perceptions are linked to the new view model.

This knowledge will assist any health and safety professional when establishing their approach to coaching, mentoring, and practicing workplace health and safety in New Zealand and afar. This research will also significantly support an organisation with the design of a new view implementation strategy. This research has prospered in providing a knowledge base to support and encourage organisations in their transition into the new view safety paradigm.

There is still a need for further research in this area, within other setting in New Zealand. It also opens possibilities of further research into due diligent factors surrounding officers (i.e., directors and chief executives) in that they understand the problems this research uncovered, exists within the New Zealand context. It also provides opportunity for further investigation into the ethical implications of action research in New Zealand. This exploratory research now provides the foundation to further research opportunities in New Zealand and beyond.

"Safety, it's the way you work, it's the way you plan your work, it's how you do your work and it's how you get home" (FL4).

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