A Construction Industries View on Accountability in a No-Blame Culture

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Abstract

Construction is one of the most dangerous industries in the United States. Job sites are controlled by the General Contractor who may perform their own work and will have Subcontractors perform other scopes of work. Work is performed by a mix of union and non-union workers. Frontline workers are often "held accountable" and blamed for mishaps that happen on a job site which often leads to disciplinary action. Recently, the researcher's organization attempted to adopt a no-blame culture. While upper management embraced the values that come from a no-blame culture, middle management has struggled to accept a no-blame culture due to the lack of accountability.

The aim of this research is to identify if a no-blame culture would be accepted in the construction industry. Additionally, assessing if accountability is needed in a no-blame culture. This study will evaluate a blame culture, no-blame culture, retrospective and prospective forms of accountability, and restorative justice in the safety science literature. Also, fifteen semi-structured case studies were conducted with Safety Professionals currently employed in the construction industry. When the information was obtained from the interviewees, thematic analysis was used to identify themes that arose from the interview. The study found that thirteen of the fifteen Safety Professionals in the construction industry would accept a no-blame culture within their organization. Another finding from the interviews found that accountability is predominately seen as retrospective and retributive. Furthermore, due to accountabilities retrospective traits, both retrospective and protective accountability are not needed in a no-blame culture.

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Background

Construction is a high-risk industry and is one of the most hazardous industries in the United States (Ringen et al, 2018). Construction is also one of the most dangerous industries all over the world resulting in workers' deaths and injuries, work-related illness, direct and indirect losses (Fang and Wu, 2013). The construction industry is considered by some to be a unique working environment; the competitive processes of winning work, the use of subcontractors, the continuous work environments, and harsh working conditions can all pose challenges to managing safety (Sherratt, 2016). General Contractors are the controlling entity on a job site. Construction work is often awarded to General Contractors by cutting costs anywhere feasible. Often times, cutting costs have an impact on budgets which impact safety. When General Contractors hire Subcontractors to conduct their work, they are often chosen by being the lowest bidder. Safety issues in the construction industry emerge from the complex characteristics of the work, low educational level of workers, lack of environmental and safety culture, and communication problems (Rosa, et al., 2017).

There are many underlying issues in construction that affects management which leads to blaming the frontline workers: lack of material, unclear designs, wrong equipment (Buckley and Barnes, 2011). A culture of blame is predominant in the construction industry and other concepts are not likely to be accepted (E.J. Harvey, 2019). The Unions supply General Contractors frontline workers to execute the job site for its need. If needed, companies can manipulate various methods for these workers to be replaced. From the researcher's experience, job sites will have 'lay-off' periods to terminate unwanted employees. On the job site, supervisors are responsible for the safety of the frontline workers, frontline workers are often the first to blame from middle management when a negative outcome occurs (Su et al., 2019). This is often to deter the pressure

from upper management. In construction, middle management is usually the leaders on the job site but is often middle management within the organization.

Prior to one year ago, the organization where the researcher is employed utilized retrospective accountability after incidents would occur or if a rule was broken. This accountability would transition to blame and punishing all of the employees involved. When an incident or rule-breaking would occur, the organization's disciplinary policy would be enforced. This would lead to write-ups, suspension, or termination. Dekker points out that these forms of reprimanding employees would often restrict learning (Dekker, 2014). At this time, the organization didn't care about the thoughts or opinions of the frontline workers. Often times, job sites would refer to the easy option which would be to blame and discipline our frontline workers. Conklin suggests that learning is hard work and often not the easiest choice to choose to move an organization forward (Conklin, 2018). The organization found that their incident rates were stagnant over the years when conducting retrospective accountability. At the time, the organization did not realize that retrospective accountability was being used. Still, frontline workers were simply being punished in some type of manner. One year ago, the organization transitioned to a no-blame culture. During this transition, a no-blame culture simply referred to the realization that blame was common when a negative outcome occurred, but blame doesn't fix anything. A no-blame culture is unique in the construction industry and there are not many companies that have attempted to adopt a no-blame culture. Working in the construction industry as a General Contractor, we have numerous companies that work on our job sites. These companies that come work on our job sites are termed, Subcontractors. Typically, Subcontractors also use retrospective accountability. From the researcher's experience, I have not witnessed a company in construction that does not use blame and punishment after an incident or violation. Due to the organization's realization that using retrospective accountability throughout the

organization was not making a difference in the incident rates, they decided to adjust to a no-blame culture to see if this would establish a positive outlook in the incident rates. Due to the recent change to a no-blame culture, it will take a few years to identify if this adjustment reduced the organization's incident rates.

After the transition to a no-blame culture, there was a level of satisfaction for this shift from upper management due to the open engagement from frontline workers. Since our attempt to remove retrospective accountability from our organization, there is a belief that a no-blame culture lacks accountability. The researcher's assessment is that this perception is among middle management. The researcher has two hypotheses on why employees within our organization believe our no-blame culture lacks accountability. First, individuals within our organization question how individual conduct, performance, and responsibility play a role in a no-blame culture (Shojania and Dixon Woods, 2013). Second, prospective accountability appears to be unknown and may not be recognized as accountability. The researcher would like to evaluate whether there is a lack of knowledge of prospective accountability in the construction industry.

Restorative accountability rests on the idea that it is better for victims, society, and the offender (Zehr, 2002). The appealing outlook of restorative justice is allowing the offender to repair the harm. Incorporating this in the construction industry could be allowing the offender to help improve the system. This also aligns with forward-looking accountability where the premise is to allow organizations to learn and move forward (Dekker, 2018). However, is there a need for prospective accountability in a no-blame culture?

Research Focus and Objectives

The aim of this research is to explore how, or even if, a no-blame culture would be accepted in the construction industry? Additionally, is there a need for prospective accountability in a no-blame culture? The fundamentals of a blame culture, no-blame culture, accountability, and restorative justice will be understood by reviewing pertinent literature and by collecting and analysing empirical data. Biggam suggests the following objectives to clearly outline your thesis (Biggam, 2018).

The objectives of this research are to:

1. *Discuss* the effects of a blame and a no-blame culture in the construction industry.
2. *Critically evaluate* backward-looking and forward-looking accountabilities affiliation with a no-blame culture.
3. *Analyse* a no-blame culture, accountability, and their correlation from a Safety Professional's view in the construction industry by using existing literature and empirical data research.
4. *Propose* possible methods to explore the gaps between a no-blame culture and accountability.

Literature Review

Introduction

In this section, the literature review will focus on blame, no-blame culture, retrospective and prospective forms of accountability, and restorative justice. While there is an abundance of literature that explores these topics, there is limited literature that explores these topics in the construction industry. This limitation creates a knowledge gap that will be further explored with the qualitative research method in the next chapter.

The Effects of a Blame and a No-blame Culture in the Construction Industry

Blame in Construction

Construction is an industry where blaming and shaming employees is widely accepted across many variations of construction companies (Oswald et al., 2018). A blame culture has a negative influence which inhibits safety concerns when blame is present (Limb, 2014).

According to Khatri, Brown, and Hicks, a blame culture can be defined as a set of norms and attitudes within an organization characterized by the unwillingness to take risk or accept responsibility for mistakes because of the fear of criticisms or management reprimands (Khatri et al, 2009). Unfortunately, blame is driven by a collection of powerful psychological and organizational processes (Reason, 2008). Below are some of the processes pointed out by James Reason:

- *"Pointing the accusing finger* distances us from the guilty party and endorses our own feelings of righteousness.
- *Fundamental attribution error* occurs when we see or hear of someone performing less than satisfactorily, we attribute this to the person's character or ability. We say

that he or she was careless, silly, stupid, incompetent, irresponsible, reckless or thoughtless.

- *The illusion of free will* is the belief that people place great value in the belief they are free agents, the controllers of their own destinies.
- *Just world hypothesis* is the belief that bad things only happen to bad people.
- *Hindsight Bias* is the universal tendency to perceive past events as somehow more foreseeable and more avoidable than they actually were.
- *The principle of least effort* is usually easy to identify the errors of the people at the sharp end and to regard these as the cause of the event.
- *Principle of administrative convenience* is limiting the search to the unsafe acts of those directly in contact with the system, it is possible to restrict culpability accordingly and minimize any organizational responsibility" (Reason, 2008; pp. 74-75)

Of the processes listed above by Reason, most if not all, can be seen in the construction industry. Hindsight bias allows supervisors to pinpoint what someone missed and shouldn't have missed (Dekker, 2014). As previously mentioned, the principle of least effort focuses blame on the frontline workers. Blame is often associated with negative workplace behaviour which leads to personal and professional attacks (bullying and harassment), led to mental health issues, poor job satisfaction, and burnout (Heaslip and Nadaf, 2019). Not only does blame create a poor working environment but blame also inhibits many of the facets of proactive safety.

According to Dekker, there are many negative effects of blame: defensive posturing, obfuscation of information, protectionism, polarization, and mute reporting systems (Woods et al., 2010). Runciman and colleagues state about healthcare, "Blaming and punishing for errors

that are made by well-intentioned people working in the health care system drives the problem of iatrogenic harm underground and alienates people who are best placed to prevent such problems from recurring" (Runciman et al., 2003; pp. 974). Learning is impacted when blame and punishment are present.

In the healthcare industry, Gorini and colleagues suggest:

> The main consequence of such an organizational culture is a punitive approach that, instead of supporting individuals to learn from their own and other individual's errors, has generated a deep-seated culture of blame and punishment that inhibits error reporting, preventing physicians and nurses to be open and honest about their mistakes because of the strongly held assumption that they will be found to be at fault and held individually responsible or punished for such event".(Gorini et al., 2012; pp. 671-672)

Similar to the healthcare industry, workers in construction are negatively impacted by blame and punishment (Oswald et al., 2018).

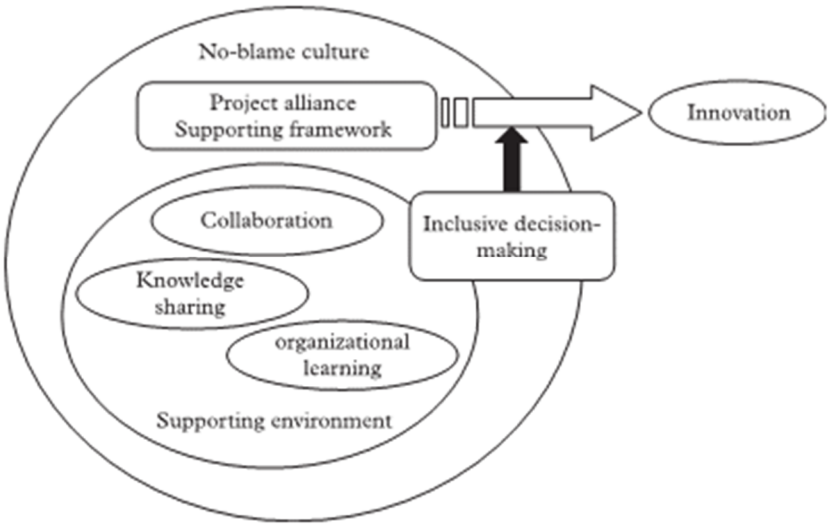
No-Blame Culture in Construction

A no-blame culture was introduced as a method to improve the quality of care by learning from mistakes, putting safeguards in place to ensure the mistakes do not occur again (Elmqvist et al, 2016). Since the implementation of a no-blame culture, various industries attempt to adopt a no-blame culture in the hope to see the results listed above.

The few construction companies who have transitioned to a no-blame culture, hope to seek a proactive approach in planning and accident investigation by open-communication and collaboration before a negative outcome occurs. Lloyd-Walker et al. state, "collaboration, knowledge sharing and organizational learning provide a supportive environment in which a no-

blame culture can flourish" (Lloyd-Walker et al, 2014; pp. 229). Table 1 below shows some of the aspects of a no-blame culture and the output leading to innovation.

Table 1



Conceptual argument (Lloyd-Walker et al, 2014; pp. 230)

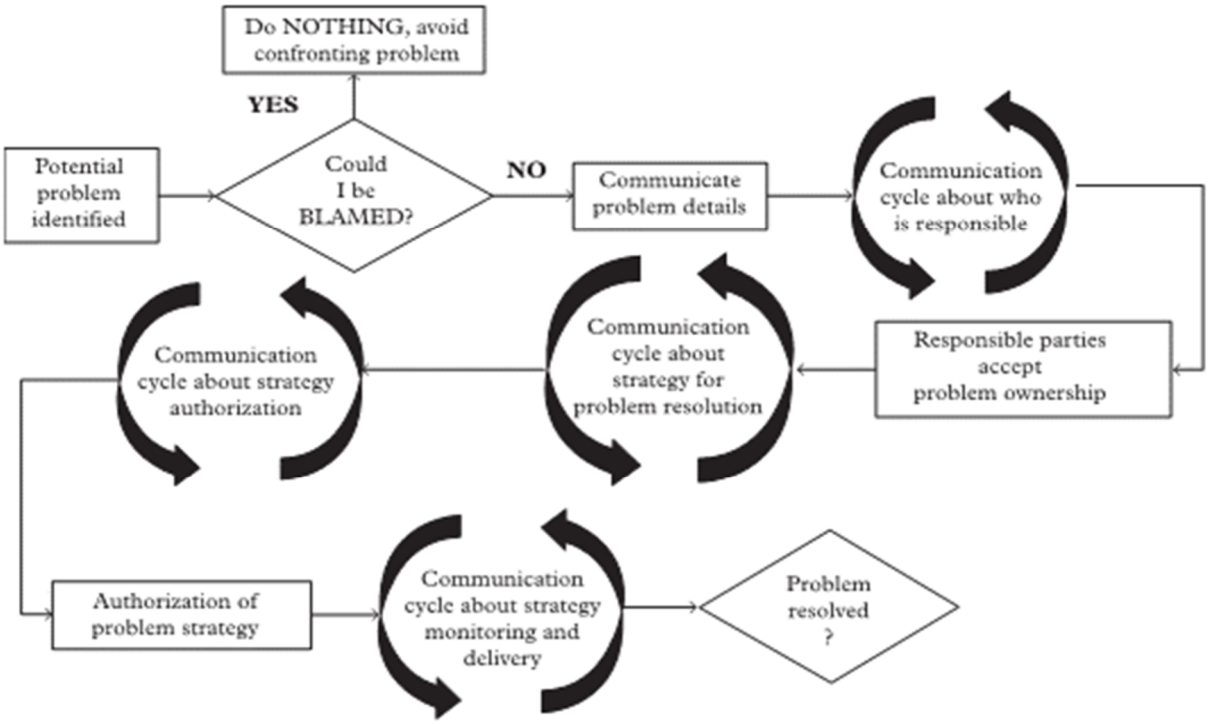
Many essentials of a no-blame culture are illustrated conceptionally above. Drivers in a no-blame culture corresponding with collaboration, knowledge sharing, and organizational learning are rooted in a supportive environment and are embedded in a no-blame culture (Lloyd-Walker et al, 2014).

The insight from Lloyd-Walker entails that a no-blame culture is used as a collaboration driver in the construction industry (Lloyd-Walker et al, 2014). Due to the complexity of the construction industry and all of the intermixing components of the work, the fundamentals in a no-blame culture listed in Table 1 above may provide value over a blame culture. As previously mentioned, construction projects are made up of a General Contractor who hires numerous Subcontractors to conduct the work (Oswald et al., 2018). With that said, the General Contractor or Subcontractors could affect the job site in regard to safety, production or impacting the schedule in a negative way. To that end, a no-blame culture suggests that the partners will sink or

swim together (Lloyd-Walker et al, 2014). This approach may help minimize the pressures of construction by promoting collaboration between all of the trade partners.

Another essential aspect of a no-blame culture is the openness of communication (Lilleyman, 2005). Since there are numerous Subcontractors on a job site that work under a General Contractor, open communication is vital to the job site. Table 2 below shows how communication evolves from a no-blame culture.

Table 2



Communication Model (Lloyd-Walker et al, 2014; pp. 237)

As shown in the table above, open communication develops if the worker feels that they cannot be blamed. Also expressed in the table above, if someone feels that they can be blamed, communication is immediately diminished. The effects of a no-blame culture gather more information and could be more beneficial to planning than a blame culture. As illustrated in Table 2, communication is a leading indicator in the process. By eliminating blame, all parties on a job

site may communicate strategies for problem resolution. Utilizing a no-blame culture may help the communication between the General Contractor, Subcontractors, and frontline workers.

A no-blame culture also promotes learning from accidents to help implement safeguards in a system. Stanley entails, “Organizational long-term success depends on learning from mistakes and improving the product or service” (Stanley, 2011; pp. 3). Contrary to a blame culture, a no-blame culture promotes learning from the sharp end. A blame-free environment promotes frontline workers to report mistakes or near misses (Walton, 2004). Prior to a no-blame culture in construction, near misses and error reporting would be non-existent due to the fear of reprimand caused by a blame culture (Runciman et al., 2003). By frontline workers willing to report mistakes and near misses, organizations are able to learn and make adjustments to create a safer workplace (Lillyman, 2005). A transparent reporting system relies on a no-blame culture (White, 2006). Au suggests that “a blame-free environment promotes learning and openness and that prosecuting such medical mistakes as criminal offenses does not help” (Au, 2018; pp. 330). While criminal offenses in construction are rare, frontline workers fear reprimand and termination. While there are clear benefits of a no-blame culture, there are researchers that suggest that blame-free systems are not ideal.

Blame free cultures arguably lack accountability. Dekker states, “Equating blame-free systems with an absence of personal accountability, as some do, is wrong. Blame-free means blame-free, not accountability-free” (Dekker, 2018; pp. 134). From the researcher’s experience, I have heard the frustration from supervisors about the lack of accountability in a no-blame culture. The benefits that arise from a no-blame culture compared to a blame culture appear to be obvious. However, there are many unclear questions in regard to accountability. These questions are less clear then comparing a blame culture to a no-blame culture.

Accountability's Affiliation in a No-Blame Culture

Retrospective Accountability

Accountability is hard to define and there are various forms of accountability. Lerner and Tetlock mention, "accountability also usually implies that people who do not provide a satisfactory justification for their actions will suffer negative consequences" (Lerner and Tetlock, 1999; pp. 255). Many Supervisors in construction want to hold someone accountable for errors (McCall and Pruchnicki, 2017). Retrospective accountability is the idea of "holding someone accountable and implies some sort of sanction, removal or dismissal (Dekker, 2014). In the construction industry, supervisors resort to retrospective accountability toward frontline worker's infractions since supervisors are directly responsible for the safety on the job site (Su et al., 2019). Retrospective accountability could also be associated with backward-looking accountability or retributive justice.

As previously mentioned, frontline workers in construction are often the first ones to receive punishment after an incident. Retributive Justice is a legal expression that essentially refers to the repair of justice through punishment (Wenzel et al, 2007). Since safe work practices are typically written by Foreman and Superintendents, frontline workers are often punished by means of termination or days off without pay for not following safe work practices. Hermann states, "Retribution involves the imposition of an appropriate sanction or punishment for violation" (Hermann, 2017; pp. 72). The construction industry aligns with retributive justice due to the punishment of frontline workers.

Backward-looking accountability links to retrospective accountability by practices of praise and blame (Sharpe, 2004). This type of accountability may have negative effects on the construction industry. When accountability is used in a retrospective sense on a job site, middle management tries to find someone to blame for messing up. Dekker states, "accountability is

often only backward-looking. This is the kind of accountability in trials or lawsuits, in dismissals, demotions, or suspensions. Such accountability tries to find a bad apple, somebody to blame for the mess" (Dekker, 2018; pp. 134). Catino explains, "The search for who is responsible tends to focus the inquiry towards the identification of one or more people who committed the error. These people who activate the accident are often the frontline operators of the complex human-machine system. It is obviously easier to identify a person who is in close contact with the system who is responsible for the event, rather than the hidden factors of the organizational and managerial aspects which are the product of collective actions diffused in time" (Catino, 2008, pp. 55). This form of accountability subjectively identifies frontline workers as bad apples. Similar to aspects of a blame culture, backward-looking accountability is useless beyond relieving the stress of upper-management (Dekker, 2018). Sharpe states, "In the backward-looking sense, responsibility is linked to practices of praising and blaming and is typically captured in expressions such as "She was responsible for harming the patient," or "He made a mistake and he should be held responsible for it." When we speak of "holding someone accountable," we tend to do so after the fact of some action gone awry" (Sharpe, 2004; pp. 13). Accountability in this sense appears to be retrospective.

These types of retrospective accountability hinder safety rather than promoting safety. Characteristics such as punishment in a blame culture seem to align with retributive justice and backward-looking accountability. Mccall & Pruchnicki state, "retrospective accountability aids in categorizing errors, it leads to blame and fear which deter further voluntary reporting of errors or near misses" (Mccall & Pruchnicki, 2017; pp. 145). A no-blame culture promotes learning and collaboration and is contradicted by retrospective accountability. Restorative justice and prospective forms of accountability correlate well with a no-blame culture.

Restorative Justice

Restorative Justice has brought an awareness of limitations and negative by-products of punishment (Zehr, 2002). Dekker and Breakey entail, "Restorative approaches are open to multiple voices and are willing to see practitioners not as offenders or causes of an incident, but as inheritors of organizational, operational or design issues that could set up others for failure too" (Dekker and Breakey, 2016; pp. 191). Zehr also states, "Real accountability involves facing up to what one has done. It means encouraging offenders to understand the impact of their behaviour-the harms they have done- and urging them to take steps to put things right. (Zehr, 2002; pp. 16).

Table 3

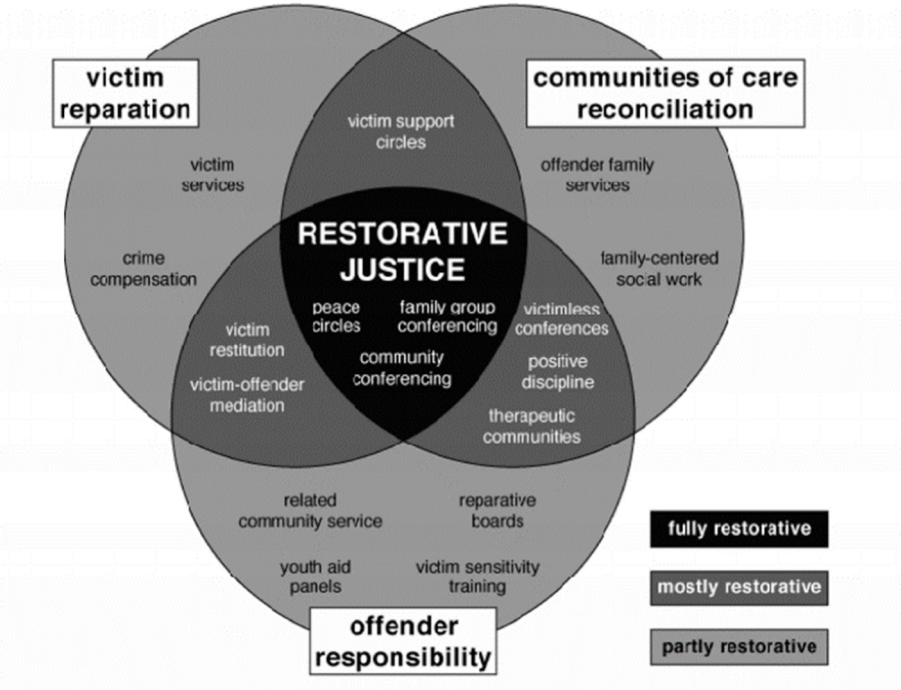


Diagram of Restorative Approaches (Edgar and Cavadino, 2008; pp. 16).

As shown above, there are three parties that not only need to be involved, but they need to be central to the process of building a consensus and to have genuine influence on the agreement. The key elements of this approach are to repair the harm suffered by the victim; encouraging

responsibility in the offender; and finding reconciliation of the program within the community (Edgar and Cavadino, 2008). On a construction site, this would bring in multiple people from the job site to have an influence after an incident occurs.

Construction has many different trades that conduct various types of work. Subcontractors are the professionals that perform their work. After an incident, there should be collaboration between all of the parties involved. This would allow the 'offenders' to tell their stories and come to a consensus about what should be done (Zehr, 2016). Frontline workers are the ones that should be listened to (Dekker, 2014). Fang et al. mention, "A supportive working environment (namely harmonious working relationships, effective communication, and mutual trust and assistance among workers) can make a significant difference in enhancing worker safety behaviour" (Fang et al., 2015; pp. 10). Restorative Justice focuses on the frontline workers to make amends for their actions and focuses on providing assistance and services to help improve the system (Edgar and Cavadino, 2008). Restorative Justice allows the frontline workers who were involved in a mishap to make things right (Zehr, 2016).

Prospective Accountability

Prospective forms of accountability also counter retrospective forms of accountability. Rivard and Carroll state, "accountability is prospective when principles seek to establish agents' accountability for future action" (Rivard and Carroll, 2003; p. 11). Additionally, prospective accountability supports reporting, learning, and planning within safety systems (McCall and Pruchnicki, 2017). Similar to prospective accountability, forward-looking accountability strives to cater to a systems approach. Sharpe states, "A systems approach to error emphasizes responsibility in the prospective sense. It is taken for granted that errors will occur in complex, high-risk environments, and participants in that system are responsible for active, committed

attention to that fact" (Sharpe, 2004; pp. 14). By recognizing that failure will occur, this allows organizations to learn and move forward. Dekker states, "Stories of failure that both respond to calls for accountability and allow people and organizations to learn and move forward, is essentially about looking ahead. In those stories, accountability is something that brings information about needed improvements to people or groups that can do something about it" (Dekker, 2018; pp. 135). Prospective forms of accountability are essential to system safety. Many of the principles that were discussed in the no-blame culture portion align with principles such as learning, collaboration, and improvement are apparent in both restorative justice and prospective accountability. Even though it would appear that restorative justice and prospective forms of accountability correlate ideally with a no-blame culture, there are challenges to this perspective.

Limitations of Prospective Accountability in a No-Blame Culture

There are aspects of prospective accountability that are often challenged. Prospective accountability dismisses punishment and focuses on learning and improving. A challenge is identifying which behaviours are unacceptable. Wachter and Pronovost mention, "having our own profession unblinkingly deem some behaviours as unacceptable, with clear consequences will serve as a vivid example of our professionalism" (Wachter and Pronovost, 2009; pp. 1404). Subcontractors are the professionals of their work. They are hired and paid for their competence and expected skill do conduct the work. When a negative outcome occurs, Subcontractors are naturally questioned about their profession, and the demand for punishment or terminating the Subcontractor arises. Another aspect that is missing from prospective accountability is punishment. Samuel Reis-Dennis provides three examples of why wrongdoers should be punished:

- "In knowingly breaking the rules, the offender gains an unfair advantage over others who do not break them.
- In breaking the rules, wrongdoers express an attitude of contempt for the rules themselves and for those who follow them.
- When such violations lead to harm, the social imbalance is exacerbated"

(Reis-Dennis, 2018; pp. 740-741).

A no-blame culture has been scrutinized for appearing to lack accountability. There appears to be little if no difference between a no-blame culture and prospective forms of accountability.

After researching a blame culture, no-blame culture, retrospective and prospective forms of accountability, and restorative justice there appears to be a gap in the literature between a no-blame culture and both forms of accountability. Wachter states, "the main reason to find the right balance between "no-blame" and individual accountability is that doing so will save lives" (Wachter, 2009; pp. 1405). Accountability still remains unclear when it is associated with a no-blame culture.

Research Methodology

Research Strategy

At the beginning of this research project, the researcher was interested in exploring a blame, no-blame culture, accountability and restorative justice from a Safety Professional's perspective in the construction industry. As noted in the previous chapter, there is an abundance of safety science literature on blame, a no-blame culture, retrospective, and prospective accountability and restorative justice. However, literature is limited in regard to these topics in relation to the construction industry. For this thesis, a semi-structured case study with Safety Professionals in construction was conducted to better understand blame, a no-blame culture, retrospective, and prospective accountability in the construction industry. Specifically, a shorter case study interview was conducted and questions were asked in an open-ended manner (Yin, 2018). It became clear after the first interviews that the information received was invaluable in helping understand these concepts in the construction domain.

Designing the Research

"Qualitative research practice demonstrates the benefits of using particular methods from the view-point of real-life experience" (Seale, 2011; pp. xviii). This approach was used to help gain an understanding of a Safety Professional's viewpoint of blame, a no-blame culture, retrospective, and prospective accountability. The researcher decided on a semi-structured case study methodology to conduct this qualitative research study. The literature entailed comprehensive information on blame, a no-blame culture, retrospective, and prospective accountability. Rowley suggests that "case study methodology supports deeper and more detailed investigation of the type that is normally necessary to answer how and why questions" (Rowley, 2002, p. 17).

Participant Selection

The target audience for this interview were Safety Professionals in the construction industry that had experience as a General Contractor or a Subcontractor. As a researcher currently working for a General Contractor, interviewing various Safety Professionals wasn't difficult. The participants that were selected are currently employed with various years of experience. All of the participants are Safety Professionals within the United States. Sampling and selection of those chosen to be interviewed were based on a stratified sampling method (Blaxter et al., 2013). While the thesis topic was not mentioned in the interview, the topics and aim of the research topic were discussed with the participants. Fifteen participants were selected: Ten General Contractors Safety Professionals (Five which were within the researcher's organization) and five Subcontractor Safety Professionals. Table 3 below provides a simple overview of the fifteen participants with their names, years of experience and the type of contractor they work for.

Name	Type of Contractor	Years of Safety Experience in the Construction Industry
SUB01	Subcontractor	24 years
RO01	General Contractor*	7 years
SUB02	Subcontractor	10 months
SUB03	Subcontractor	10 years
SUB04	Subcontractor	13 years
GC01	General Contractor	15 years
SUB05	Subcontractor	3.5-4 years
RO02	General Contractor*	3 years
GC02	General Contractor	13 years

RO03	General Contractor*	16 years
GC03	General Contractor	13 years
GC04	General Contractor	33 years
RO04	General Contractor*	12 years
GC05	General Contractor	3 years
RO05	General Contractor*	3 years

* Indicates that the Safety Professional works for the same company as the researcher's organization

Pilot Interview

A pilot interview was conducted to examine the effectiveness of the interview questions. Seale et al. recommend, "the possibility of carrying out a pilot study to determine appropriateness beforehand; and the extent to which a project can be planned in detail in advance" (Seale, 2011). The clarity of the questions were evaluated to determine if they made sense and ensure the answer received would be open-ended. During the pilot interview, clarity of these questions were noted. After the pilot interview, a few questions were revised due to the misunderstanding of some of the questions. After the adjustments were made to the questions, the pilot interview was again conducted. After an examination of the answers received, the researcher decided to pursue the semi-structured interview.

Data Collection

Fifteen interviews were conducted face-to-face at a job site or an office setting. The location was determined based on what the researcher thought would be comfortable and non-threatening when the interview was conducted. This helps lead to a more open discussion that entails richer information for this research topic.

All of the interviews were conducted in English. The interviews were semi-structured with 17 general questions. Some of these general questions had sub-questions. Sub-questions were used to explore the phenomenon of the general questions in more detail (Creswell, 2013). These questions were not provided to the participants beforehand (See Interview Template Appendix 1). The premise behind not providing the questions beforehand was to receive the participant's initial thoughts on the question. The researcher thought this would provide more entailing information.

The participants were informed in the interview template that these questions were used for guidance and would be further explored depending on the participant's response. After the initial general questions, the researcher would utilize open-ended “how” and “why” questions. Creswell states, “Qualitative research questions are open-ended, evolving, and nondirectional; restate the purpose of the study in more specific terms; start with a word such as "what" or "how" rather than "why" (Creswell, 2013; pp. 107).

Confidentiality

These interviews were voice recorded using the mobile app Temi and the interviews were immediately transcribed by the software. Additionally, to improve the accuracy of the transcription, the researcher also transcribed the interviews personally to ensure accurate reports. All participants were informed prior to the interview that the discussion would be voice recorded. Participants were given the opportunity to withdraw from the interview at any time if they desired.

At the beginning of each interview, a *Consent for Participation in Interview Research* was given to each respondent (See Appendix 2). Additionally, interviewees were informed that only their name, the type of contractor they were and years of experience we're going to be utilized in

the research. Their location and organization were not received to protect all of the participants involved.

Research Limitations

Participant and Researcher Bias: It is important to accept that everyone has their own biases, thoughts, and experience. In this case study, 33% of the participants were employed at the same location as the researcher. These participants have some level of knowledge with a no-blame culture and prospective accountability. Two different strategies were used to gather the utmost amount of data. First, ten other participants were chosen outside of the researcher's organization to capture various perspectives on the research topics. Second, all participants were given zero preparation for the interview. Seale states, “To avoid bias, researchers often do not want their research subjects to know too much, so the really deep question sometimes remains as to what are they consenting and to what extent are they informed” (Seale, 2011; pp. 220). By giving the participants no preparation for the interview, this allowed us to collect their initial thoughts on the questions.

Dependability and Confirmability: Qualitative researcher writing a case study may deploy terms such as credibility, transferability, dependability and conformability (Creswell, 2007). There may be a question of dependability when asking Safety Professionals about their experience with blame and accountability. In order to gather the data desired, a relaxed and open atmosphere was created where the participants felt safe to speak honestly about their thoughts. Additionally, the names of the informants have been coded to protect the participants and the organization they worked for was never received for this study. The community of Safety Professionals is small so protecting the participants confidentiality was a priority.

Another question may be the credibility of the research. To ensure credibility, there were a variety of Safety Professional's gathered for this study. The experience ranged from 10 months-33 years of construction safety. Additionally, Safety Professionals who worked for a General Contractor and Subcontractor were gathered to obtain a variety of experience.

Framework for Data Analysis

One of the research objectives was to use empirical data collected to analyse how a no-blame culture would be perceived among the Safety Professionals in construction. Also, how these Safety Professionals would perceive accountability with their experience. Each of the participants has their unique experience and challenges in their profession.

The researcher decided to use thematic analysis to describe and analyse the data. The guide by Braun and Clarke (2006) was generally used:

Familiarizing yourself with your data. This involved repeatedly reading the raw data and continuously listening to the fifteen interviews and searching for patterns and meanings with regards to the interview questions. The aim was to get a sense from each participant's story as to: 1) What their thoughts were of accountability? 2) Did the participants relate to retrospective, prospective, or both forms of accountability? 3) Their thoughts on blame and blame-free environments 4) How all of these concepts intermix with each other. Notes were taken continuously during this phase. Initial notes were compared to notes from listening to the audio of the interviews.

Generating Initial Codes. The codes were generated personally and not done with a computer program. The notes were taken from phase one and ideas and items of interest were put into specific categories. The data was put into bar charts to compare the data received from the

Researcher's Organization, General Contractors, and Subcontractors. After the data was viewed in bar charts, this was transferred to flip chart paper to ease our review in subsequent phases.

Searching for themes. The raw data in phase one was reviewed with the categories that were developed in phase two. An excel spreadsheet was created to identify possible themes. For each theme, the appropriate respondent code fit that theme. This was done by color-coding the participants to our initial themes.

Reviewing themes. At the end of phase three, we had eight possible themes. The themes were reviewed with the notes, charts, and tables that were generated in the previous themes. The goal was to identify themes that overlap, themes that were interesting, themes that filled the gaps in the literature.

Defining and naming themes. Again, all of the phases were repeated, and this narrowed down to our final four themes. Our final four themes were intended to be concise and clear. It is important to note, the intent of the thematic analysis approach was to fill the apparent gaps in the literature by understanding various experiences from Safety Professionals in the construction industry.

Producing the report. The final phase in this thematic analysis is to propose possible methods to explore the gaps between a no-blame culture and accountability.

Research Findings

Introduction

This chapter focuses on describing and analysing the empirical data collected from the semi-structured case study. The fifteen participants are referenced in the chapter using a code consisting of a number from 01 to 05. Prior to the number denotes what type of contractor the participant works for, i.e., SUB-Subcontractor, GC-General Contractor, RO-Researcher's Organization. It is important to note, this section simply describes our discussion with the participant for each interview question. The analysis of the data captured from these interview questions is found in the next section.

Initial Findings

This section will discuss the findings that surfaced from the semi-structured interviews, as in the researcher's effort to understand a Safety Professional's viewpoint of blame, a no-blame culture, retrospective, and prospective accountability. Our findings were then used to develop the themes for our analysis.

What does the concept of accountability mean to you?

There were various responses that were received on these questions. Some of the responses were similar but most were unique to each individual. A respondent (GC05) stated that accountability means taking ownership. Numerous participants referred to holding people accountable to a standard, company policy or meeting expectations that have been set. One respondent (SUB03) mentioned that "accountability is holding yourself to a standard. Making a commitment to holding yourself to a standard or holding your employees to a standard regardless of who they are." Another participant (GC04) mentioned: "People have to hold themselves to their own personal standards as well as company standards." Similarly, another respondent

(GC01) stated, “accountability means you’re doing what you say you are going to do or meeting expectations that have been set whether that’s a job description or whatever it may be.” Another respondent (RO01) mentioned, “accountability plays hand-in-hand of knowing what the expectations are and rules are and being responsible not just for yourself but others around you.” He added, “with the said, “we need to make sure we are holding the expectation at all times.” The importance of expectation was mentioned from another respondent (RO04) who stated, “Accountability means when you have a relationship between the employer and employee and accountability lies between what the employer expects from the employee on a day-to-day basis and how the employee performs measured to those expectations.” Additionally, another Safety Professional (GC03) discussed, “accountability means someone has a task to do and we are checking to make sure they are doing the task the way they're supposed to be.” The last participant (RO05) who mentioned following up with an employee stated, “accountability is delegating something to an individual, once you ask that individual for assistance, you follow up with them to ensure they're meeting their task or goal.”

There were two Safety Professionals that corralled discipline with accountability. The first participant (SUB01) stated, “accountability is taking ownership of your actions.” He further mentioned, “accountability is also holding someone accountable for failing to meet established safety protocols and procedures.” The second participant (RO02) discussed, “accountability is holding someone accountable for their actions or behaviour and having consequences for their behaviour or actions or lack of behaviour or actions.”

The last four interviewees appeared to use accountability and responsibility interchangeably. The first interviewee (SUB04) mentioned, “accountability means you have to know what you're doing. When it's your responsibility that’s your responsibility and you can’t

point the finger at someone else." Another participant (RO03) stated, "accountability means being responsible for your actions." The third participant (SUB05) discussed, "accountability goes hand-in-hand with taking responsibility of your own person, processes, programs or policies that you're a part of, and things that you have a direct effect on." The last participant (GC02) mentioned, "Accountability is taking responsibility for not only hearing the issue but also being a part of the solution and validating the solution and verifying it so you are a part of the full process versus just overseeing something or just being one part of the response or the mitigation. I think that having accountability is really you're involved in the whole process. Accountability goes hand-in-hand with responsibility."

How is accountability used within your organization?

As noted above, there were also a variety of answers that were received for this section. A third of the participants associated learning with how accountability is used within their organization. However, three of the five of these individuals work for the researcher's organization that has implemented a no-blame culture.

The first participant (RO02) stated, "accountability is used as a learning tool more than traditional accountability. We try to educate instead of blame, shame or retrain. We try to educate people and let people know what they're doing is wrong and give them the benefit of the doubt more times than not and try to understand their circumstances and it's not always the employee's fault and sometimes it's the nature of the work and understanding the procedures." Another informant (RO04) mentioned, "our accountability allows people to work freely and not have a demanding type of work environment that you could have at other construction companies." Respondent (GC05) discussed, "accountability is used as a learning method". They additionally state, "We ask for open communication asking employees to speak up to identify hazards and

coming up with solutions on how to prevent those hazards." Another interviewee (GC04) states, "our accountability for safety is just mentioning their leadership activities, giving them constant feedback on how they're doing, recognition and encouragement." The last participant (RO03) who has experience in a no-blame culture mentions, "Accountability is not used very well. We have shifted to a non-blame culture. We try to keep accountability to a minimum. If someone does something that is blatantly wrong, we will make them accountable besides that we try to make it a learning experience."

A couple of participants again appeared to use accountability and responsibility interchangeably. One informant (RO05) discussed an example, "Accountability is used as a reinforcement to making sure people are following what they are supposed to be doing. For example, my boss gives me a task, he holds me accountable for that specific task and I am responsible to meet that deadline." Another participant (GC02) suggests, "Within our organization, as a GC you're the controlling contractor, we did take the responsibility of mentoring our subcontractor base. We did have specific policies and procedures that maybe other GCs didn't have at the time. Anytime we were going to change our requirements or if we found that subs were having issues with our requirements, we would bring them in and we would have a discussion.

Another couple of participants correlate accountability within their organization to expectations that are set. One participant (GC03) states, "Accountability is our checks and balances. If I'm asking someone to walk from here to there in a straight line, I have to be able to check to make sure they're doing it correctly. That's the rules and that's the concept." Another Safety Professional (SUB05) suggests, "In construction, organizations hire you for a position and they expect you to do that position and they're holding you accountable for your actions and making sure that your actions align with budgets, production, and schedule."

The remaining participants mentioned that their organizations enforced a disciplinary policy. One informant (GC01) discussed, “accountability is measured by compliance putting yourself in a position to be accountable for your actions. There are disciplinary actions that happen from the safety side of the field.” Another participant (RO01) discusses, “My current organization doesn’t use accountability. At my other organization, we used to have certain ground rules that needed to be followed at all times and everyone understood that there was a three-strike rule, and everyone understood that their first offense was going through orientation again. Second would be orientation and some type of training. Third would be removed from the job and that was usually the culture that we would drive on the job sites.” Another Safety Professional (SUB03) mentioned, “accountability is not as well as it should be. Accountability is a hard thing because I believe that loyalty between the employer and the employee sometimes comes as a big wedge in the accountability factor. We try to hold people accountable for what they do but to what degree. What degree of accountability are you holding people to that’s the hardest thing?” The last participant (SUB01) stated, “We hold people accountable through the form of disciplinary action for failing to meet established protocols and procedures.”

How is accountability perceived in your organization? (Upper Management and the frontline workers)

This question was challenging to most of the interviewees and there was no consistency in the answers that were received. With that said, numerous participants felt that accountability was not defined within their organization. One interviewee (RO02) discussed, “This is something I struggle with personally. Within safety I believe there is accountability for us as Safety Professionals within our department but outside of our department it gets to frontline workers, Superintendents, and Senior Superintendents it gets very challenging and accountability is not defined. There is a lack of accountability and how we handle that is still undetermined. We are

still trying to navigate the right way to do that." Another informant (RO02) mentioned, "Upper management doesn't really get involved with it unless it's a life-threatening thing that had happened or was blatantly against the law. The Director would make the call of what we would do. We have a disciplinary program that's not used very much. We are more of a learning organization. Accountability is something that we are trying to define because it is hard to define." He further mentioned, "Our Supervision on the job site still views accountability with an old school view. If someone does something wrong, they are going to call them out for it. Yes, they will help them correct it but they will call them out for it. If it happens more than once, then they will get rid of them." Another Safety Professional (RO01) discussed, "I have always felt that higher-ups are always going to set their expectation and try to write the standard in or the guidelines that we need to follow but those expectations are never met in the field for whatever reason. It becomes derailed and it has to do a lot with the influence of other individuals on the job site and the work itself." Some people like to measure accountability based on relationships with certain subcontractors. He further explained, "Based on conversations and my interaction with them they feel that it is a joke there is no accountability. They themselves understand what the culture is but they don't actually grasp the culture. They always feel they may be called out on a safety violation but someone else may be violating a safety rule, but their work is prioritized, and they don't get called out." Similar to this response, informant (SUB03) stated, "Currently, what I see a lot in our line of work is it's more of who you are and not necessarily full accountability. How long have you been there? What have you done for them? I think accountability and loyalty get blurred together." He further mentioned, "Some guys can get away with anything and another guy can't. Frontline workers view that some people can get away with things and are held to a different standard. Some people are held to a different accountability standard." Another participant (GC01) discusses, "Lack of belief there is accountability from Senior leadership to the

field due to the disconnect because most of our field guys don't know who upper management is. I would say it is like this in the industry. We are working towards closing that gap but it's a long road." Informant (RO05) mentions, "From upper management accountability is used as a mechanism to make sure people are following what they are supposed to be doing." He further explains, "For the frontline workers, that's a dual-edge sword. Although you may hold someone accountable in the field. The field is constantly changing so it could be manipulated. For example, say we ask someone to do a specific task out in the field, we are holding them accountable and they are aware of what that means. Since the field is constantly changing, I feel that frontline workers can manipulate accountability. Frontline workers know what they are accountable for and if they don't, they come up with excuses by saying, I didn't have any help, the task was unclear, etc."

There were a few interviewees that referenced blame and compliance in correlation with how accountability is perceived in their organization. Informant (SUB04) mentions, "A Safety Professional's role is to enforce regulatory compliance and make sure the frontline workers are complying with the regulations." Another participant (GC05) mentions, "Upper management perceives accountability as taking ownership". They further suggest, "Frontline workers view accountability as blame and fear." A subcontractor Safety Professional (SUB01) mentions, "The management standpoint for the field is that people need to be held accountable for failing to meet established protocols and procedures." He further mentions, "From the field standpoint or the employee standpoint I think there is a level of fear that is instilled on accountability because if they don't do the right thing and they are caught not doing the right thing they know they can be held accountable. Which are disciplinary action is a three-strike rule. The first is a verbal warning but that is documented. Second, could be suspension with time off. The third would be termination and we reserve the right to terminate for violated blatant safety policies." A general

contractor safety representative (GC02) states, “From the frontline workers it took some time to convince them that there was accountability from the top to the bottom and there was this full circle of having conversations, discovering issues and coming up with solutions and validating that solution. It took a lot of effort on my part and my team's part in communicating what was being done.”

The last Safety Professional (GC04) presents the perspective of Upper management, middle management, and the frontline workers. They mention, “Well nobody likes to be held accountable that’s for sure. I think that for a long time at the upper management level there was a lack of accountability. There was a tolerance for people to operate outside of the boundaries if they achieve the profit goals of the organization. I think that is slowly changing and people are realizing that there’s more to it than that bottom-line number.” He then explains, “As far as accountability in middle management, it’s something that if they don’t clearly understand what the criteria are, what the guidelines are, a sense of fairness, having a mentor or supervisor who openly communicates and maintains transparency that could all lead to a dysfunctional accountability system. He lastly states, “As far as the frontline workers, the culture of the city where we do most of our work has been defined by a couple of larger construction companies where is fear and blame and accountability is your fired. That has presented a huge challenge for us to overcome that mentality.”

How can people learn from accountability?

Again, this topic brought a diversity of responses. There were Safety Professional’s that associated learning with discipline, open discussion, and few who mentioned ‘good and bad accountability’. The first interviewee (RO02) mentioned, “The old way of looking at accountability is there are consequences for your actions. If you don’t have consequences it

allows people to run amuck and do whatever they want without having fear or regret of punishment." Another informant (GC01) states, "If it's disciplinary, hopefully, they learn what they are not supposed to do. You are accountable for your own safety. You are responsible for the environment that you're in. Construction is ever-changing so you always have to be looking out for it. Your safety first and the people around you. I've never thought of this much." A Subcontractor Safety Manager (SUB01) discussed, "People can learn from accountability by not repeating a violation. Whoever was held accountable for that violation, learning from that. I'm not going to let that happen to me and learn from that, so the violation doesn't reoccur." Another (RO04) mentions, "By knowing what is expected during their work activities. You learn by example and following what your boss expects from you. If you don't follow what your boss says there will be ramifications either way if you won't follow what you are expected of." Another Subcontractor Safety Professional (SUB04) suggests that you learn from experience and from the task you are doing. Frontline workers should "know better."

As previously mentioned, there were a few Safety Professionals that recognize that there are two sides to accountability. One informant (GC04) mentions, "I think if you're good at accountability, it's really an open dialogue between team players, tradesman to tradesman, tradesman to the superintendent. It's the willingness to share with each other, coach each other and hold each other accountable in a positive way where it's constructive, its helping people be good teammates, be better at what they're doing, and learning along the way. He further states, "I think when you get on the disciplinary side of accountability, that's something completely different but there's accountability every day to each other and what our values are." Another (RO03) discusses, "It all depends on how you handle the accountability. It depends on what action you are taking out on the person. People could shy away from accountability because they see it as disciplinary action, or they can grab on to it and see it as a learning activity." A different

participant (SUB05) stated, “Accountability can be taken as a negative or a positive. If you do a good job and you’re rewarded for it or even spoken to about it then you feel like you took the appropriate actions to do what I needed to and obviously, everyone is satisfied with my work. This would be reassuring that I’m doing a good job.” He further discusses, “Accountability in a negative context, as far as someone messing up, causing an accident, or injuring yourself or a fellow worker it could be daunting at that point. Not only do you feel accountable, going back to my definition, but you're also directly included or interacting with the result.”

The final interviewee (GC02) interestingly mentions that “Don’t use the word accountability when you’re talking to other people because it sounds negative. When you use the word accountability most people will assume discipline so I wouldn’t even use the word accountability.” She further states, “I think giving people ownership of a piece of the process, inviting people to be engaged. I think that all becomes individual accountability. Because when you own a part of the process, you aren’t going to want that process to fail so it becomes a team effort. Accountability happens naturally or organically when you start giving ownership and you start getting engagement in processes. I wouldn’t use the word accountability in the field at all.”

Who should be “accountable” for improving a process?

This topic had three different variations of answers. Of the fifteen interviewees, eight of them thought that everyone involved in the process should be accountable for improving the process. One of the informants (GC02) mentioned, “I think everyone involved should be accountable and the reason being is that the reason is it ultimately affects everybody. Everyone on the project and even the higher-ups. It can affect the bottom-line which is the higher-up's responsibility, but it could affect the schedule on the project. It could affect your quality. I think that everybody tied to that project has a stake in it and it should be a team effort. If there’s a

problem whether its quality, safety or whatever it is, its everyone's issue so how do we come together as a team to get it done." Another participant (GC03) discussed, "Everyone that is involved in the process that visually sees it or hears about it. You need all of that information to check a process." A Subcontractor Safety Professional (SUB01) explains, "A lot of times it falls on the management's standpoint but from my perspective, it should be a combination of the field workers and management because field workers are the ones that do the task and they may have better ideas then management has. He further explains, "Sometimes management will draft a policy from their office, and they have no experience with tools or the task from start to finish. When management drafts a policy on their own, they develop a program or policy that will not work in the field and it won't translate well, and it will leave the craft workers to finger out workarounds for that policy."

Another option that was discussed was the frontline workers should be accountable for improving a process. The first informant (RO05) discusses, "The field employees should be accountable for improving a process since they are the ones involved. They are the experts and they are the ones performing the work. They have the ability to improve that process even though it is typically management, but I don't think that's how it should work. I feel anybody can improve the process." A personal example was given by another interviewee (RO01), "I've done work in the field and the biggest complaint that I would have as an actual worker out in the field was the fact that I was made to do the stupidest things out there and follow the stupidest rule. I would go through this intensive training for 4-5 days, pass a test that nobody could pass and then ask to conduct the work that didn't follow any of the guidelines. It was in our standard operating procedures (SOP) that I had to follow a specific protocol and none of the guidelines or the methods that management would put in the SOP would actually work for us out in the field. We would always find a certain tool that would help us do the job, being more innovative and there

were times that we knew we were completely on the other side of the page. We were not on the same page as management."

The remaining participants felt that management or the safety professional should be accountable for improving the process. Participant (RO02) felt, "It should be supervision. The superintendent is the one that should have the experience and the knowledge for that work It's the reason that they are in that position. Most supervision comes from the field and have the experience. They understand the work and the process and have the resources. If they don't understand the work or the process, they will do the research to make changes or modifications to the work and the workers shouldn't do that." Another informant (SUB04) states, "Me, the Safety Manager. We will make sure that if something is wrong, we need to improve on it and change it. It has to be done the right way so no one can point the finger. No one can say it's not my fault or it's their fault."

How does someone know what they're accountable for?

There were three main discussion points made for the topic: job description, communication and policies or procedures. The first informant (GC03) stated, "Someone knows what they're accountable for through a role definition. If I am a Safety Manager, then my role my responsibility is the safety on a project." Another participant (GC05) suggested that "Someone knows what they're accountable for is in the job description."

Some of the interviewees that felt this information should be in policies or procedures. One interviewee (RO01), suggests, "From my experience, it has always been SOPs. This should line out who is responsible for what. That is the kind of responsibility that you want to take on. Whatever you are being directed to be fully responsible for that's what you should be able to handle." Another informant (RO02) stated, "Policies. You have to have company policies

outlining procedures. Within the policies, you should have accountabilities for those procedures. If you don't do a,b, or c this is the repercussions if you don't follow these procedures."

The other interviewees mentioned that communication should be the tool that lets someone know what they're accountable for. One participant (GC02) mentioned, "It has to be very clear communication on what the expectations are. What people own and what their role is going to be and follow up. If you have an issue and you come up as a team to do it, it's making sure everyone on the team knows what their role is and also making sure not to expect perfection. "Another participant (GC04) mentioned, "There has to be open communication. A leader has to be a good leader and you have to set your own expectations. We layout the expectations in our onboarding process so they can see what they're measured against." The next interviewee (SUB03) stated, "You have to set the standard and discuss it with everybody. If you have a change coming within your organization let everyone know the direction the organization is headed, and everyone will be held accountable for their actions. It has to be a standard so there are no grey areas. A standard is a standard and you need to stick to that. You may not like to punish someone if they do something wrong but that sends a clear message. Good communication sets expectations."

What does the concept of blame mean to you?

All of the interviewees answered this question similarly. There were common answers given such as pointing the finger, making someone feel guilty and finding someone who is at fault. The first informant (SUB03) mentioned, "Blame is a bad word and should not be used. Blame means identifying an individual who is at fault. It would be great if you could take the human factor out of everything, but you cannot." Another respondent (RO05) states, "Blame means to make someone feel guilty. It's an emotional word. It's to place shame and hurt someone

emotionally." A different interviewee (RO04) mentioned, "Blame means pointing the finger at someone and telling them they are completely at fault for something. This is common in the construction industry. Pointing the blame at someone doesn't achieve very much it puts people in corners and can completely shut out people."

Is blame used in your organization?

This discussion also received similar answers. Eleven of the fifteen participants claimed that their organization used blame. Two of the five individuals who are employed at the researcher's organization claimed that their organization was not a blame-free environment. The first interviewee (SUB05) suggested, "In every organization, blame is used indirectly. However, when you get to the frontline workers blame is used more directly." Another individual (GC03) mentioned, "Blame is a natural reaction. The first reaction is to blame something. Blame is a defence mechanism for some people." Additionally, informant (GC02) stated, "When we use to have issues with our subcontractors, immediately our project teams would blame that contractor." Lastly, Subcontractor Safety Professional (SUB01) discussed, "Blame is a tool to learn from. If someone does get written up for something, we want to make sure it doesn't happen to someone else or we don't have a similar violation that could lead to an incident. We want to make sure we learn from it and share that information with others, so they won't fall in the same path of getting written up."

Does your company have a blame-free environment?

This question was used as a trigger to get the participants thinking of a blame-free environment. As listed above eleven of the fifteen participants mentioned that blame was used in their organization. For this question, nine of the fifteen respondents addressed that their organization had a blame-free environment. General Contractor Safety Representative (GC03)

states, “You have to have a blame-free environment. Good companies understand that blaming does not fix the problem. We don’t stop at blame and we try to find out what else is going on.” The next interviewee (RO01) states, “Currently, we don’t have the blaming and shaming type of culture on our work sites. Upper management clearly understands that and they are very clear of their expectations on that. However, that gets diluted when that gets to middle management and the message getting out to the field. With the amount of workforce that we get day in and day out, they get to experience so many different cultures. They come to our job site today and work for someone else tomorrow that has a completely different culture.”

Would a blame-free environment be accepted in your organization?

After the completion of the fifteen interviews, thirteen of the participants felt that their organization would completely accept a blame-free environment. The first participant (SUB03) mentioned, “We would not accept a blame-free environment because I don’t think you could have accountability without blame.” Another participant (SUB05) suggests, “The field would be more accepting of a non-blame environment because they’re getting the job done and they're making the money and if they feel that they're going to be blamed, they're always going to be on edge. They are going to be more prone to accidents because they are going to be looking over their back.” He further mentions, “Upper management wants answers. They want to know who did what and why someone did something. When you get closer to the frontline workers you understand that it is broader and it's not one person that is at fault. Upper management likes the blame game.”

Could a blame-free environment provide any value to you or your organization?

During this discussion, thirteen of the fifteen participants felt that a blame-free environment would provide value. There was consistent discussion among these thirteen

individuals that the values would be open-communication, transparency, honesty, and learning. The first participant (GC02) states, “I think if you have a blame-free environment you have more open and transparent conversations about what's really going on so if the employees know you have a blame environment, they aren’t going to tell you the truth. They are going to tell you what you want to hear and really you're flying blind and the less blame culture you have the more transparency you have.” The next interviewee (RO02) states, “Opening up communication would allow people to be more honest, more direct, more willing to present ideas, problems or issues that they are not able to do right now because they have fear of being blamed.” Another participant (SUB01) suggests, “It definitely can because it is more of a learning process and you are learning from incidents instead of just fact-finding. There is a lot from an employee’s perspective when it comes to an incident or a violation of a safety rule. Learning how an employee got themselves in a certain position? What were the challenges that caused them to get hurt or cause a safety violation?” Participant (GC03) suggests, “Open environment. Once people realize once you aren’t going to blame them for things that have happened they are more willing to communicate. They start to accept responsibility for the things they could control because they realize that I’m not going to get into trouble just because I skipped this process.” Another informant (SUB05) mentions, “The spectrum would completely change. The information, channels, finding out things. People are not going to try to hide things. I think it would be an impactful change to have a blame-free environment. People would feel more comfortable and feel like they could talk to you. This could help production and morale on the job site.” Interviewee (RO01) explains, “Create better leaders. Bring clear lines of communication. It's going to drive that everyone is engaging with the work and with the environment. It's going to make the job site safer because everyone is going to know the expected outcome and understand they won't be blamed for something. Instead, people will collaborate and figure out how to

prevent a bad outcome." The last informant (GC04) states, "Hopefully more transparency, open communication. Be able to spot issues, opportunities well ahead of them before they become issues and consequences. It would help with employee retention, mental health. There's a lot of positives."

What challenges could arise from a blame-free environment?

There were a variety of discussions during this topic. Three of the fifteen participants didn't feel that there would be any challenges to a blame-free environment. One participant (SUB01) mentioned, "I don't think there would be any challenges to be honest with you. If field employees felt that they had an open avenue to discuss their concerns with management without fear of repercussion."

Another three of the fifteen participants felt the need to still have accountability in a blame-free environment. One participant (RO02) mentioned, "If you take away the blame it goes back to accountability. If you get rid of blame where does accountability fit in? If there's no blame, there is no accountability. But I think you could still have accountability without blame. You don't have to tell somebody that they screwed up or did something wrong without having accountability. You can still get that across to somebody without telling them they are wrong or screwed up. If someone does something wrong, they know they have done it and you can still hold somebody accountable for that." Another (SUB03) mentioned, "If no one is accountable then its no one's fault. You have to have accountability." The last participant (GC03) stated, "We still have to hold people accountable to what we require."

There were another three participants that discussed carelessness, blatant errors, or willingness to accept juvenile ideas. The first informant (RO03) mentioned, "People might do something blatantly stupid because they want to. You may hang on to some people that you

should get rid of. No matter what system you have someone is going to try to work the system. There has to be accountability for someone doing something blatant." The second informant RO04) addressed, "The willingness to accept some ideas people have come up with. Some ideas have been juvenile at times." The next participant (SUB05) mentions, "Carelessness if you become too comfortable or if you don't have a good disciplinary policy. If you become comfortable then people are going to think that they could do whatever they want."

The remaining participants felt the biggest challenge to a blame-free environment would be having everyone buy into the no-blame culture. One informant (GC04) mentioned, "People are programmed differently besides blame-free. If you have to put effort into making something blame-free, you are already pushing something uphill. It would be a true long-term effort. You will have people at all levels that aren't able to get there. You would have to make a decision as an organization of how long we put the training and the coaching in place before identified how long an employee has dragged down everyone else." Another (GC01) stated, "Buy-in from everyone. There's always someone that wants to blame and point the finger." The final participant (RO05) suggests, "People not accepting this culture. This is the biggest challenge that our organization has faced."

Any restrictions to a blame-free environment?

During this discussion, ten of the fifteen interviewees mentioned that there would be no restrictions to a blame-free environment. Three of the five participants mentioned accountability as a restriction. The remaining two individuals had different restrictions. The first informant (RO04), suggested, "The field workers think we are joking and still withhold information. They still think there is a blame and shame culture." The last participant (GC04) suggests, "If there is negligence and intent that would be really hard to stand behind blame-free."

Do you think there is accountability in a blame-free environment?

Three of the fifteen participants did not think there is accountability associated with a blame-free environment. The first participant (SUB03) mentioned, “No, I don’t think there is accountability. You can’t take the human factor out of an incident. You are always going to find blame. If someone is at fault, they are the ones to blame. You have to take ownership of your actions and that’s the accountability side of it.” The next participant (SUB05) stated, “No because those are two opposite concepts. If you have a blame-free environment how can you have accountability? If you knowingly feel accountable whether you are blamed or not. In a supervisory position, you are accountable for your team.”

The remaining informants explained that there was accountability in a blame-free environment. The first informant (GC03) states, “There has to be. They are two different concepts. We have to hold people accountable because if we don’t people will feel they can free reign on whatever they want, and nobody is ever going to get into trouble. I'm not blaming you for doing that but I'm holding you accountable for your own actions. You know the rules and what they are. You have to be able to hold people accountable that is what’s missing in a lot of safety programs. We talk about it but we don’t do it all of the time. Another participant (RO02) states, “There is an accountability to a certain extent. I think for us as a company we are taking the blame as a company instead of the worker. The company is taking the blame and finding out where we went wrong to put an employee in that position. How did we fail for that employee to do what they did? So the company is taking the emphasis of the blame and taking it off of the employee and putting it on the company.”

The next interviewees had a positive look on accountability. The first participant (GC04) suggests, “Yes, I do. Blame is saying to someone that you screwed up and you're responsible for this. It is a very negative connotation. Accountability from a team standpoint is knowing you

have a challenge and figuring out how to overcome this. There are openness and transparency, the ability to find issues quickly, to be nimble. This is completely different than blame." Another informant (GC02) suggests, "You can still have accountability in the ownership of things. If you have a no-blame environment, people are transparent, and they bring you the issues then you come together and find a solution and then now you come up with ways to implement that solution and then follow up. The solution is new and it's not in their nature. I don't want to use the word accountability but commitment to everyone's best interest. We need commitment and not accountability to making those changes to keep people safe. The last informant (SUB01) states, "Yes there could be accountability. When I explained to you my definition of accountability how there are two sides of it now. I think it would be more accountability of someone owning up or being open to what they did to cause an accident or cause them to get hurt, or what they did to break a violation. I think it would be more open communication."

Is there a need for accountability in a blame free environment?

In this section, all fifteen participants felt that there was a need for accountability in a blame free environment. Participant (SUB01) mentions, "There is always a need for accountability. There are people that will blatantly have disregard for a safety rule. This may be 1 of 100. That is one person that needs to be held accountable from a disciplinary action standpoint." Another participant (RO04) addresses, "Yes, there is a need. You still have to have accountability. If you don't have accountability, the organization could fail. You still have to be accountable for what your actions are whether they are good or bad. If you don't have accountability in any environment there could be chaos." Another interviewee (RO03) mentions, "There has to be a mark and a definition where it becomes detrimental instead of learning." A Subcontractor Safety Professional (SUB05) says, "People still need to be held accountable for

something. There is still accountability whether you have a blame-free environment or not." The last informant (RO01) states, "Yes, there is definitely a need. If you're going to set expectations, set controls, set a process and you want to make sure it doesn't get derailed by leaving something out or planning accordingly. You have to find a way to tell everyone what's at stake. Expectations and accountability have to go hand in hand. There has to be something that holds someone responsible.

In this section, the participants had a positive outlook on accountability. The first informant (GC01) mentions, "There has to be something that someone is accountable for. Something could happen and somebody has to hold folks accountable to solve the problem. Even without blame there is a reason to solve the problem. We aren't trying to find who did it. What the process and where did the process fail." Another General Contractor Safety Professional (GC04) says, "There has to be accountability. Accountability doesn't mean blame. Blame and accountability are two different things." The final General Contractor Safety Representative (GC02) stated, "If we go through all of these steps and come up with great solutions and we don't have anyone adhering to them and they're circumventing them then that you aren't going to get the end result that you know you could have because you have already addressed the solution. There are some people that aren't going to want to get on the same bus with you and major business decisions need to be made. Leaders need to say if you can commit to the changes that we are making then maybe you just aren't going to be a part of our team and that's the right choice because you have to have the right mindset to be in a blame-free environment."

Could accountability in a blame-free environment improve performance?

In this discussion, all fifteen participants felt that accountability in a blame-free environment would improve performance. Additionally, all of their outlooks toward

accountability appeared to be positive. The first informant (RO02) said, “I think it could. If you have a blame-free environment and you are willing to open up and are willing to have the dialogue and conversation with honesty. This is going to create a more productive and safer job site.” Another informant (SUB01) said, “Yes, I think it can. I am a big believer in communication. If we have communication coming from both sides, we can get ahead of the game and maybe pinpoint something. Identify problems ahead of time apposed of getting there and it's right in front of your face now.” A Safety Professional from the researcher's organization (RO04) mentioned, “Employees don’t think that they're being spied on or looked at like a hawk. They feel free to work in their own current environment which is good. Supervisors will go to them and ask open questions. The employees are much more responsive.” Another (RO03) says, “There is good accountability. When workers come up with a solution. They should be accountable for the new process because they developed it. There have to be checks and balances.” A Subcontractor Safety Professional (SUB05) mentioned, “Yes because someone if feeling the pressure. However, with no blame, it doesn’t matter who did what. Let’s just fix the process and move on.” Informant (GC01) stated, “If we aren’t going to blame someone. We are going to give them the freedom to have more of a voice, try things differently, listen to the people that do the work. Give them a voice to create something new and do something different.” The final informant (RO01) suggests, “Everyone who works in construction has the mindset that they're going to be accountable that day. No one comes to the job sites thinking they aren’t going to be accountable or not follow the rules. People want to do the right thing. However, most organizations follow the three-strike disciplinary rule.”

How do you see accountability being used in a blame-free environment?

The final topic of this case study received three different variations of discussions. Three of the fifteen participants didn't believe that you could have accountability in a blame-free environment. Informant (SUB03) mentioned, "I don't think it is possible to have a blame-free environment with accountability."

The remaining participant's related open communication, transparency, and discipline to accountability in a blame-free environment. Six of the fifteen informants associated aspects of prospective accountability with a blame-free environment. The first informant (RO04) states, "I see accountability as a great tool to improve employee morale. You are able to hold on to good employees. With blame, you aren't able to hold onto as many employees. Once you are able to hold onto an employee you are able to improve them by open communication. A blame-free environment is an ideal working environment with any organization." Another participant (GC02) states, "You get people to be committed to the process and supporting others and being transparent." She further states, "Accountability is important, but I want to say I don't like the word accountability I want to say commitment to it. So, the commitment of having a blame-free environment because having a blame-free environment takes a lot of work and are you committed to doing that work. If you are committed, it's going to be great." Informant (GC04) discusses, "I see it as a key component of a true no-blame environment, everyone is willing and understanding the value of holding everyone accountable and holding yourself accountable and it's not in a negative way. It's a way to accomplish the goal effectively. By having people who are truly accountable to the team, themselves, I think that is what success is based on."

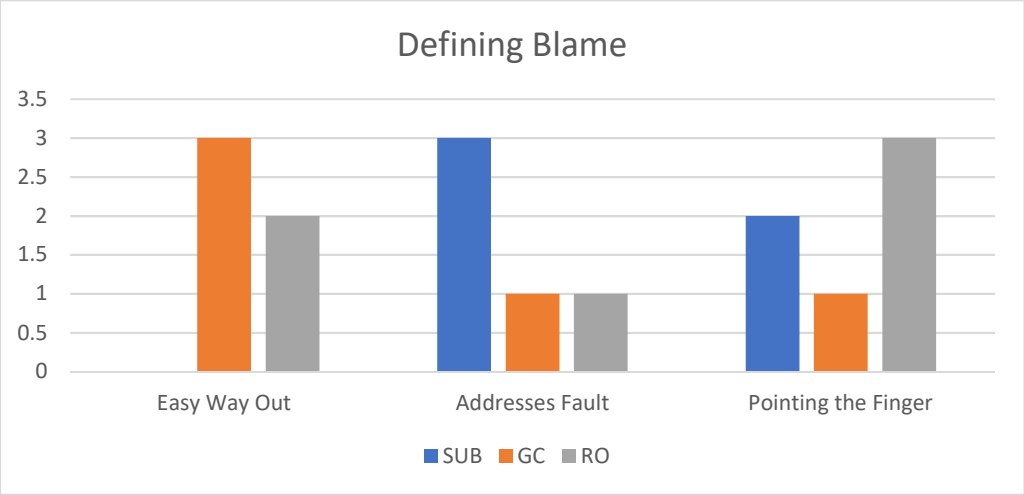
The remaining six participants associate disciplinary in regards to accountability in a blame-free environment. The first interviewee (RO02) mentions, "In a blame-free environment I truly believe in my heart that you still need accountability and you still need a process of some type of

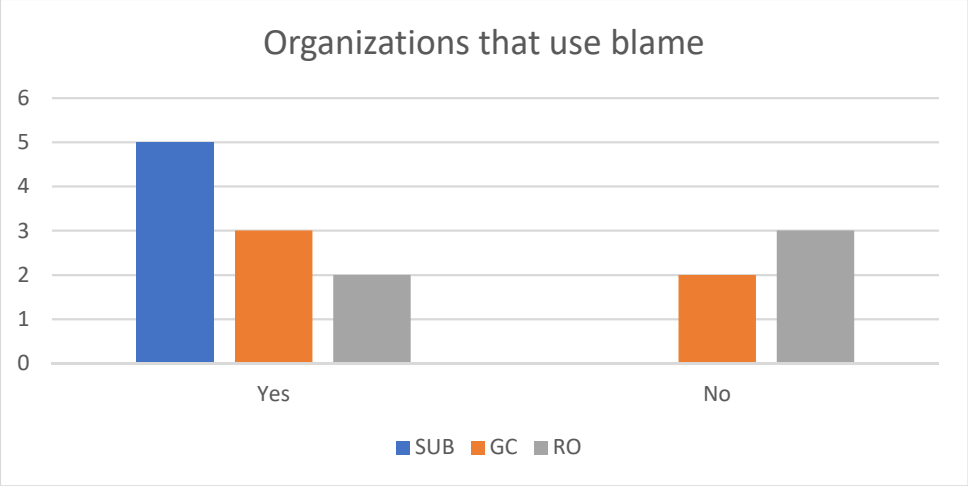
formal reprimand without a formal reprimand it won't work. We don’t live in a society where we are all on the same page.” Another participant (SUB01) states, “You still have to have disciplinary action procedures. People should still be written up depending on the nature or severity of the violation.” Another General Contractor Safety Professional (GC03) suggests, “Setting the expectations upfront. Going back to that responsibility. Identifying what is the responsibility, setting the expectations, giving the tools necessary to do their job. As an organization, we have to do a better job of giving people the tools to succeed up front. Don’t allow them to fail. If there is a failure in the system take the time to figure out what the problem was. Hold people accountable for their actions. It doesn’t have to be termination; it can be a write-up.” Lastly, the final interviewee (RO05) mentions, “With everything I've said during this interview, I believe I would contradict myself. For example, if I trained someone to follow a certain procedure and they didn’t, I would discipline them.”

Theme Development

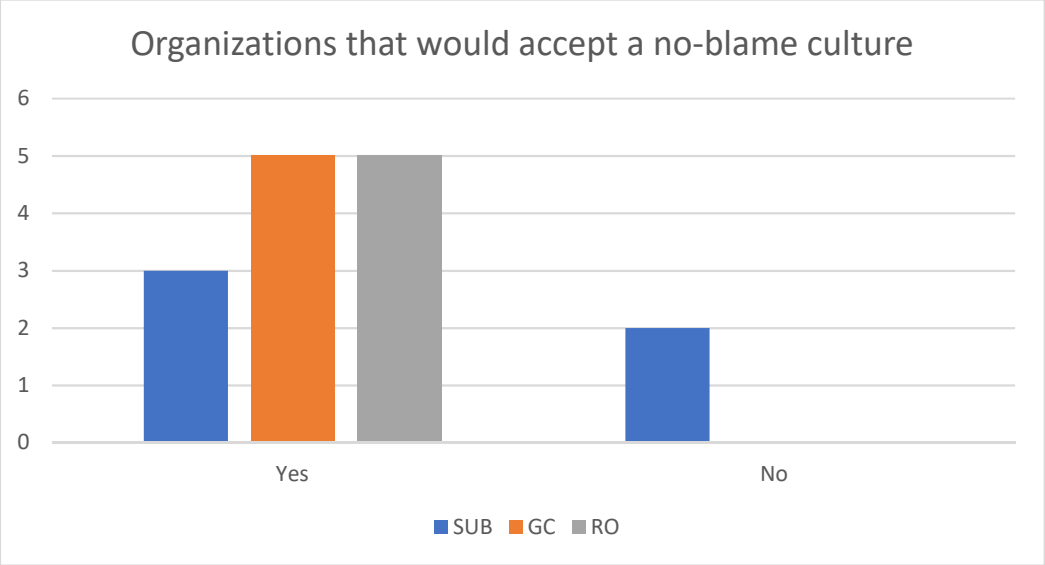
"One strategy calls for reviewing your data with the explicit goal of surfacing a new concept or theme can be highly valuable to your overall study" (Yin, 2018; pp. 215). As the researched progressed through the phases described in the Framework for Data Analysis, commonalities among the data began to evolve. During the coding process of the interviews, we began to identify themes among the data. Braun and Clark suggest, "This phase, which re-focuses the analysis at the broader level of themes, rather than codes, involves sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes." (Braun and Clarke, 2006; pp. 19). After reviewing raw data from the interviews, comparing them with the interview notes this resulted in the initial themes below:

Blame is an easy way out- A third of the respondents directly associated blame as an easy way out after a negative outcome has occurred.

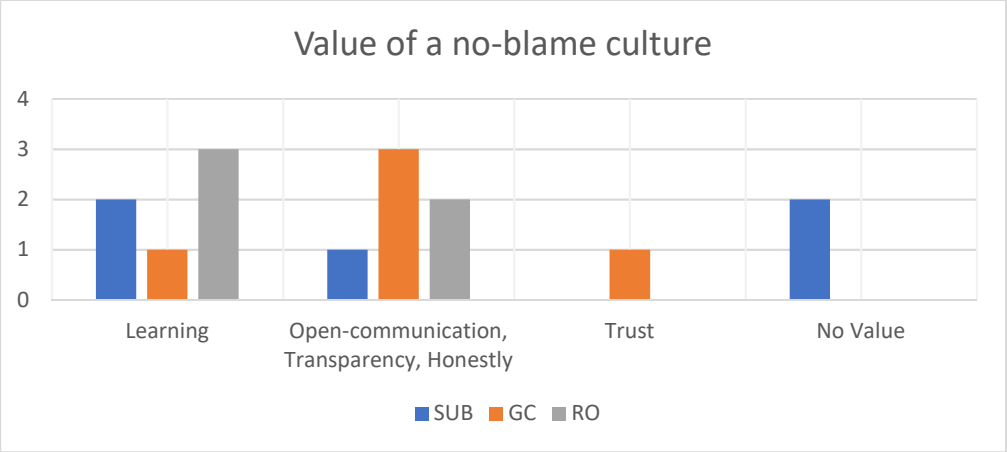




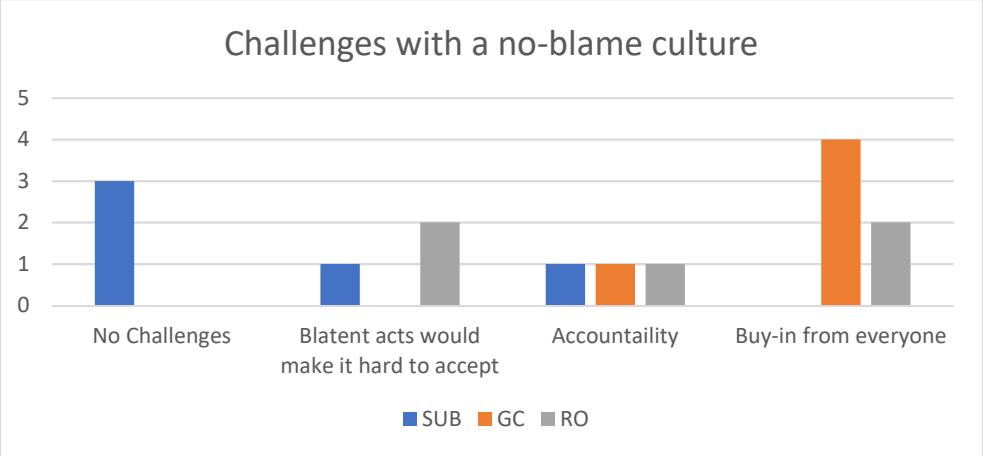
A blame-free environment would be accepted among organizations in construction- Thirteen of the fifteen participants believe that a blame-free environment would be accepted throughout their entire organization.



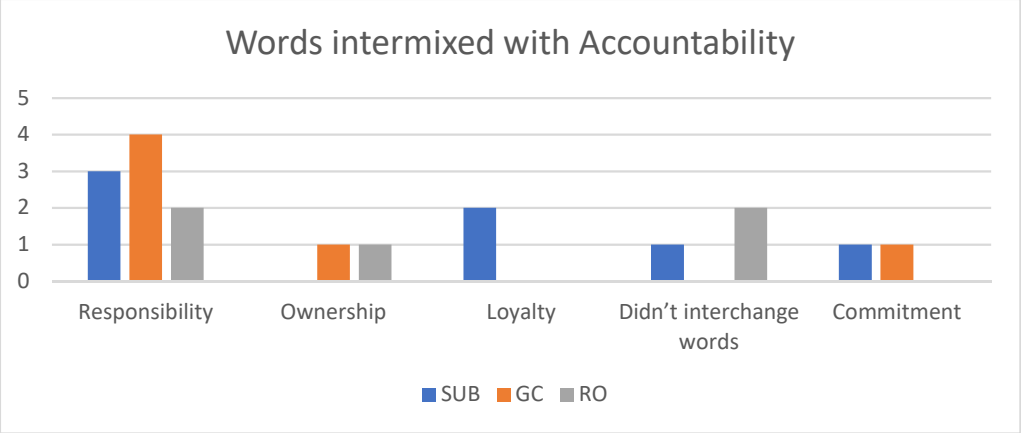
There are prospective and restorative values from a blame-free environment- Thirteen of the fifteen interviewees identified open communication, transparency, trust, and honesty with a no-blame culture.



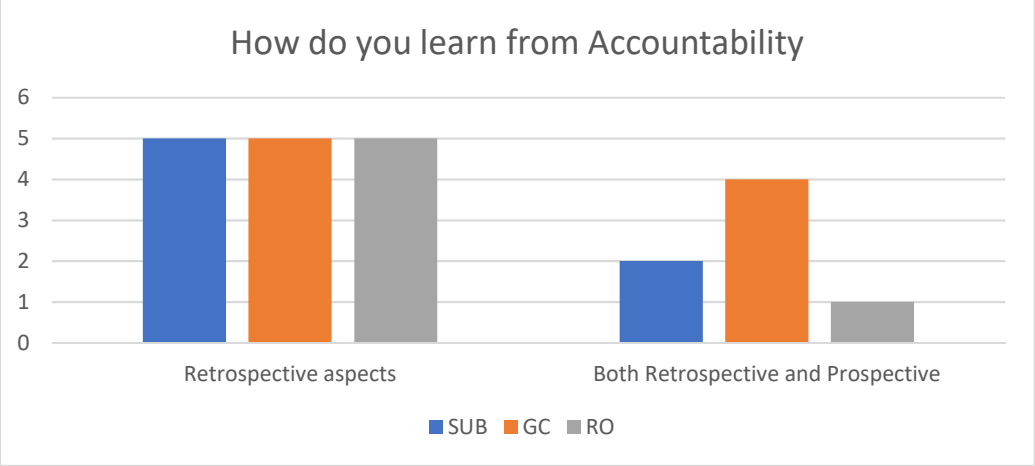
Complete buy-in to a no-blame culture is the biggest challenge to adopting a blame-free environment- While there were a couple of other challenges mentioned, six of the fifteen participants address that accepting a no-blame culture would be the biggest hurdle.



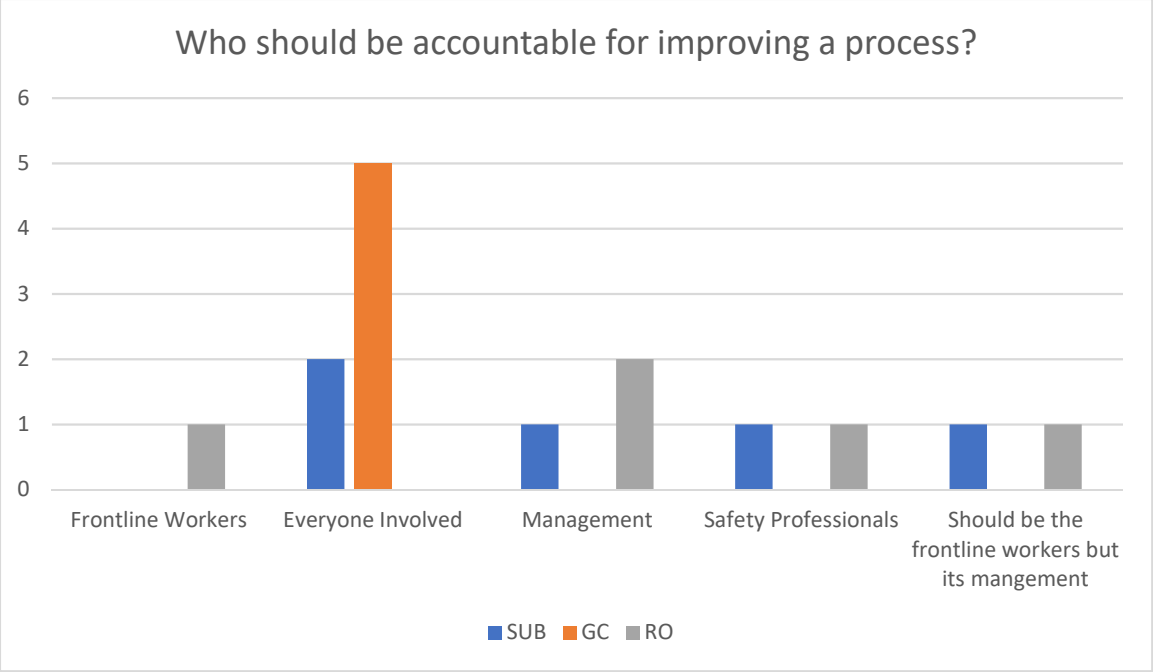
Accountability has a variation of meaning- During the interviews, twelve of the fifteen participants used accountability interchangeably with words such as responsibility, ownership, loyalty and commitment.



Accountability is associated more with retrospective forms of accountability- All of the participants related retrospective attributes to accountability. Seven of the fifteen participants acknowledge aspects of prospective accountability and restorative justice.



Accountability for improving a process should be done by frontline workers and everyone involved- Ten of the fifteen participants believe that the job site team and the frontline workers should be accountable for improving a process.



There is a need for accountability in a blame-free environment- All of the participants believe that accountability is needed in a no-blame culture. However, three of the fifteen participants did not believe that the two concepts could be intermixed.

The next step in developing the initial themes was to define and rename the final themes in accordance with Braun and Clarke's guide to thematic analysis. To do this, the researcher re-read the interview notes, sorted the data on spreadsheets, and reviewed the data gathered in the previous phases of the process. Braun and Clarke state, "At this point, you then define and further refine the themes that you will present for your analysis and analyse the data within them. By "define and refine" we mean identifying the "essence" of what each theme is about (as well as the themes overall) and determining what aspect of the data each theme captures." (Braun and Clarke, 2006; pp. 22). The final themes are listed below:

- **Blame is retrospective-** This theme evolved from the stories the interviewees described of how their organizations use blame and what blame means to them.

- **Acceptance of a no-blame culture-** This theme progressed from the numerous values that a no-blame culture would provide Safety Professionals in the construction industry.
- **Accountability was predominately acknowledged as retrospective and retributive-** Many of the participants relate retrospective aspects of accountability in relation to their organizations and the construction industry.
- **Accountability is interwoven with other meanings-** Throughout the case study, accountability was consistently used interchangeably with other words that have different meanings.
- **Accountability is needed in a no-blame culture-** All of the participants acknowledge that accountability is needed in a no-blame culture.

This section describes the final themes that were developed from our research methodology. The next section will be the analysis of these themes.

First-Order Theoretical Analysis

The aim of this section is to go beyond describing the interviewee's discussion with the questions that were asked but to look deeper and identify gaps related to the research questions. To meet this objective, the themes that have previously been mentioned will be analysed and discussed in the context with the research questions and pertinent literature that has been reviewed in chapter two. It is important to note, while the themes are discussed separately, they are related and correlate with each other.

Theme 1: Blame is retrospective

While this seems obvious and is apparent in the literature, blame is used in ten of the fifteen interviewee's organizations. Additionally, blame is an attribute to retrospective accountability which will be discussed further in theme three. Throughout the interviews, blame was identified as an easy way out, faulting an individual and pointing the finger. All of the participant's associated retrospective aspects to blame. Dekker states, “We blame individuals (and, in a sense, blame the victim) without understanding the deeper context behind the event” (Dekker, 2014; pp. 18). When blame is used, the deeper context is not discovered. One informant (GC04) said, “Blame means an easy way out in a difficult situation. It’s almost as if there's a problem or an event with consequences, negative consequences and it’s a way where everyone is washing their hands because you can blame an individual or a company for the incident rather than taking the deep dive and figuring out and doing the hard work to figure out what the real issues were.” Conklin mentions, “knowing who screwed up is so compelling, so complete, and is strong enough to stop asking more questions about the event, about the worker, about the facility, and about the systems” (Conklin, 2018; pp. 18). Another interviewee (GC02) mentioned, “Blame means an easy way out. When you go into a situation and you're looking for blame, you are

clearly looking for the easiest solution because blame can be quick. It can be a person, subcontractor, equipment, or a plan but in reality, if you're not looking for blame and you're asking the right questions, it's going to create more work."

In my experience, most organizations in construction that utilize root cause analysis as an accident causation model. Harvey et al. states, "The Root cause model which contributes blame surrounding accidents (Harvey et al., 2019; pp. 531). Informant (RO01) mentions, "I have been in many root cause analysis meetings to understand that no matter how you want to word it, someone who has done something wrong is always going to feel like they are always being blamed for something."

In all fifteen interviews, blame was described as a negative denotation. One informant (SUB03) suggests, "Blame is a bad word and can be misconstrued. Fault is a better word." Another participant (RO05) states, "Blame means making someone feel guilty. It's an emotional word. It places shame and hurt to someone emotionally." Throughout the interviews, blame was directly correlated with accountability once. One participant (SUB03) mentioned, "We would not accept a blame-free environment because I don't think you could have accountability without blame." Blame has consequential negative influences.

Theme 2: Acceptance of a no-blame culture

As previously mentioned in the research topic, there is minimal literature on a no-blame culture in the construction industry. Thirteen of the fifteen Safety Professionals that were involved in this study identified that a blame-free environment would be completely accepted in their organization. While the majority of the participants believe that a no-blame culture would be accepted, they also mentioned values of a no-blame culture that align with similar values found in

prospective accountability and restorative justice. Lastly, the thirteen interviewees that suggested proactive values in a no-blame culture had unique differences between the answers.

Learning is a fundamental of a no-blame culture that was suggested by six participants. Participant (RO04) suggests, “We have learned a lot more than just pointing the finger at people. Any process that goes on in the field, the guys are asking more questions and are willing to come to the supervisor with different ideas that they have seen on other projects.” The six participants feel that by moving past blame, we can learn more from the frontline workers. Stanley suggests, “Organizations should acknowledge mistakes and failure, but a positive outlook is best for success. By not demeaning employees, supervisors and managers can create an organizational culture that will learn from failure” (Stanley, 2011; pp. 3). Learning was a prospective aspect that six of the participants associated with a no-blame culture. Another participant (RO03) states, “I come back to the learning part of it. I’ve been in construction and with a blame-free environment, I’m learning things that I have never thought about. People have different ideas, so I see creativity. I think a blame-free environment has a lot of pluses.”

Along with identifying learning as a value to a blame-free environment, another six participants mention open-communication, transparency, and honesty as other values. Interviewee (RO02) states, “The direct result would open up communication. Opening up communication would allow people to be more honest, more direct, more willing to present ideas, problems or issues that they are not able to do right now because they have fear of being blamed.” Walton mentions, “reporting systems for capturing errors, and advocates a ‘‘blame-free’’ environment so that staff will report their mistakes or near misses” (Walton, 2004; pp. 163). Communication and transparency are positive fundamentals of a no-blame culture that would benefit an organization. Another participant (GC04) suggests that transparency and open communication are values that would help spot issues ahead of time before they become

consequences. They further mention, “It would help with employee retention and mental health. There’s a lot of positives.” Even though thirteen participants recognize value in a no-blame culture, two participants suggested otherwise.

The values suggested by thirteen of the participants were proactive fundamentals that could positively influence a job site. However, two participants did not acknowledge any value of a no-blame culture. One participant (SUB03) states, “I don’t think so. It’s a double edge sword. When things go right, we end up praising someone and say that person went above and beyond. If you give the mentality of not blaming someone then nobody can be at fault. I believe you have to call some people out sometimes". The second individual (SUB04) states, “No, this is not what we want people to do. We don’t want people to blame others, we want people to own responsibility and own your mistakes. You can’t blame it on others.” The perception of these two participants would appear to demand retrospective accountability if a negative outcome occurred.

Due to the minimal literature found on a no-blame culture in the construction industry, the information received from the participants was invaluable to the research topic. Additionally, the information gathered from the interviews aligned with the minimal literature that was found in regard to a no-blame culture in the construction industry. Lloyd-Walker et al. states, “project alliances have a no-blame culture, high levels of collaboration, trust and knowledge sharing which provide an ideal environment for organizational learning that leads to innovation” (Lloyd-Walker et al, 2014; pp. 230). Aligning with Lloyd-Walker et al., interviewee (GC05) states, “A blame free environment employees are more comfortable to tell you the truth and what really happened. It helps identify what the true problem is and how we come up with a better solution not just brush it under the table or hide from it.”

Theme 3: Accountability was predominately acknowledged as retrospective and retributive

Another aim of this interview was to understand a Safety Professional's view on accountability. When the interview discussions focused on accountability, all of the participants mentioned retrospective and retributive aspects of accountability: discipline, ramification, and termination. It is important to note, seven of the participants also acknowledged prospective forms of accountability. Interestingly, the fundamental learning was used retrospectively. Participant (SUB01) states, "People can learn from accountability by not repeating a violation. Whoever was held accountable for that violation, learning from that. "I'm not going to let that happen to me" and learn from that so the violation doesn't reoccur." He further mentions, "From the field standpoint or the employee standpoint, I think there is a level of fear that is instilled on accountability because if they don't do the right thing and they are caught not doing the right thing they know they can be held accountable. Which are disciplinary action is a three-strike rule." This type of sanction is retrospective and retributive accountability. Dekker states, "If we see an act as a crime, then accountability means blaming and punishing somebody for it. Accountability in that case is backward-looking, retributive. Another participant (GC01) mentions, "If accountability is viewed as disciplinary, hopefully, they learn what they're not supposed to do." This type of learning counters the positive learning values mentioned by six of the participants for a blame-free environment. This form of accountability appears to have a negative influence on job sites. McCall and Pruchnicki address, "This form of accountability is something to be avoided, even feared, and that it takes place after something has gone wrong" (McCall and Pruchicki, 2017; pp. 145).

Accountability usually implies that people who do not provide a satisfactory explanation for their actions will result in negative consequences (Lerner and Tetlock, 1999). One interviewee (GC02) mentions that when using the word accountability, most people will assume discipline

and use discipline as a tool to act with. Dekker suggests, “If we see an act as a crime, then accountability means blaming and punishing somebody for it. Accountability in that case is backward-looking, retributive” (Dekker, 2018; pp. xii). Informant (SUB03) states, “I don’t think there is accountability in a blame-free environment. You can't take the human factor out of an incident. You are always going to find blame. If someone is at fault, they are the one to blame. You have to take ownership of your actions and that’s the accountability side of it.” However, problem ownership can be eroded by safety bureaucracies when protocol and compliance is valued over technical expertise (Dekker, 2014).

The information gathered from the participants and the literature show that accountability is acknowledged in a negative connotation. Unfortunately, many pressures in construction generate retributive and retrospective accountability: project-based nature, transient workforce, widespread outsourcing of labour and financial pressure (Harvey et al., 2019). When blame was the focus in the interview, accountability was directly associated with blame once. Nonetheless, aspects of blame were apparent when accountability was the focus of the interview. Aspects of blame that were mentioned when accountability was the focus were shame, blame, and various forms of discipline. One participant (RO01) in the researcher’s organization mentioned “a no-blame culture hasn’t been that successful at times because there is someone in that group that has the shame and blame mentality that corrupts everyone else.” All of the participants associated retrospective elements to accountability and eight of the fifteen participants only recognized fundamentals of retrospective and retributive accountability.

Theme 4: Accountability is interwoven with other definitions

Throughout the interviews, accountability was intermixed with various other words that have a different meaning. Twelve of the fifteen participants used words such as responsibility,

ownership, loyalty, and commitment. As previously mentioned in the previous theme, one participant (GC02) mentions to not use the word accountability due to its negative influence. They additionally state, “I don’t like the word accountability. I want to say commitment to a blame-free environment. So, the commitment of having a blame-free environment because having a blame-free environment takes a lot of work and are you committed to doing that work. If you are, it's going to be great.” Not only was this occurring in the interviews, but some of these same words are also intermixed with accountability in the literature. Virginia Sharpe states, “When we think about accountability, its important to keep in mind that responsibility ascription depends for its sense on the purposes or ends to which we put it and the information that we take or do not take to be directly relevant” (Sharpe, 2004; pp. 13). The two terms accountability and responsibility were treated as one by the participants and in the literature.

Loyalty was another term that was also recognized to relate with accountability. An example in the interviews, informant (SUB03) states, “ Accountability and loyalty get blurred together.” In the literature, McCall and Pruchnicki mention, “Accountability may also be forward-looking in duty, commitment, and loyalty” (McCall and Pruchicki, 2017; pp. 145). Creating loyalty between the employer and employees on a job site may be beneficial for system safety. Participant (SUB05) suggests that a sense of loyalty is created with a no-blame culture. They state, “With no blame, it doesn’t matter who did what. Let’s just fix the process and move on. This also creates a sense of loyalty.” In the interviews, it was apparent that the meaning of accountability is blurred with other definitions.

Theme 5: Accountability is needed in a no-blame culture

The last question of this study allowed the Safety Professionals to discuss how they would incorporate accountability in a no-blame culture. Fourteen of the fifteen informants believe that

accountability is needed in a no-blame culture. Of the 14 interviewees, seven gave aspects of prospective accountability.

During the final question of the interview, seven participants conveyed that you need aspects of prospective accountability in a no-blame culture. The data received from the informants was transparency, supportive, open communication, and collaboration. Participant (SUB05) stated, “It doesn’t matter who did what. Let’s improve the process and move on. Having the knowledge of the frontline worker being supported and looked out for will make the process better.” Dekker and Breakey suggest, “Restorative justice achieves accountability by listening to multiple accounts and looking ahead at what must be done to repair the trust and relationships that were harmed” (Dekker and Breakley, 2016; pp. 191). Prospective accountability is about building relationships with the team. Additionally, prospective accountability has emerged by linking to goal-setting and moral deliberation (Sharpe, 2003). Another participant (RO04) states, “I see accountability as a great tool to improve employee morale. You are able to hold on to good employees. With blame, you aren’t able to hold onto as many employees.” The goal with prospective accountability is to promote team working, good communication, diverse roles, cooperation, caring, and being supportive (Edgar, & Cavadino, 2006).

All of the participants acknowledge retrospective and retributive forms of accountability in a no-blame culture. These aspects consisted of reprimand, discipline, or possible termination. Please refer back to theme three for the retrospective accountability discussion.

Analysis Summary

This section discussed and analysed through coding the thoughts shared by the participants in conjunction with pertinent literature to their thoughts. Five themes were used to focus on the empirical data as they are related to the aim of this research – is a no-blame culture a

more valuable option in the construction industry? Additionally, is accountability needed in a no-blame culture? In theme 1, *Blame is retrospective,* the data revealed that blame "is the easiest solution because blame can be quick" (GC02). In theme 2, *Acceptance of a no-blame culture,* the data illustrates that thirteen of the fifteen construction Safety Professionals would accept a no-blame culture within their organizations. The data in theme 3, *Accountability was predominately viewed as retrospective and retributive,* illustrated that accountability is often viewed as retrospectively and retributively. Less than half of the participants acknowledge that there is prospective accountability. The data in theme 4, *Accountability is interwoven with other definitions,* show that there is a challenge with understanding accountability. The data proved that there is not a clear definition of accountability and many intermix other definitions with accountability. Lastly in theme 5, *Theme 5: Accountability is needed in a no-blame culture,* fourteen of the fifteen participants believe that accountability is needed in a no-blame culture. Seven participants mentioned prospective forms of accountability while the other seven discussed retrospective forms of accountability. As previously stated, all of the themes are interwoven to explore the research topic.

Second-Order Theoretical Analysis

The purpose of this section is to extrapolate the data into a theoretical explanation and determine how the participant's responses relate to the construction industry. Shkedi explains, "Second-order theoretical analysis is a process of constructing theoretical explanation through a conversion of the descriptive categories based on the less than ideally dense data pool we already have" (Shkedi, 2004; pp. 627).

Theme 1: Blame is Retrospective

Blame was expressed by the participants to identify an easy way out, addressing fault and pointing the finger. All three of these definitions of blame can be viewed as retrospective and retributive.

Blaming a worker is an easy way out of an accident investigation. Prior to beginning a task, each crew will review a job hazard analysis to understand safe work procedures that supervisors have developed. When these work plans are not followed, blame is an easy way out for Superintendents, Foreman, and Safety Professionals. Punishing the worker is a fast and easy way to solve the problem (Conklin, 2012). From a Safety Professional's perspective, blaming the worker relives a Safety Professional from more work. If a worker is not blamed, a Safety Professional will have to conduct more interviews, more documentation, and identify an alternative solution. It's quick and easy to blame the worker and continue throughout the day.

Another aspect of blame is to identify an individual at fault. After a job hazard analysis is reviewed, the individuals in the crew will sign the job hazard analysis which means they have reviewed and understand the work plan. If a negative outcome occurs while performing a task, the Foreman and crew members will sometimes identify an individual who is at fault. Foreman and crew members will classify an individual at fault to secure their jobs and relieve the worry of

discipline for themselves. Superintendents and Safety Professionals will check to see if the individual who is at fault has signed the job hazard analysis to verify that the 'at fault' individual reviewed and understood the plan. Participant (SUB03) mentions, "You can't ignore the repercussions of someone's actions. I like the word fault more than the word blame." From a Safety Professional's view, deviating from the job hazard analysis and continuing work could be viewed as a choice that leads to disciplinary action.

Similar to addressing an individual at fault, many point the finger to relieve themselves from discipline. Work plans are usually developed by Superintendents, Foreman, and Safety Professionals. When an accident occurs, the work plan is reviewed to see if there are any gaps in the plan. Even if there are gaps in the plan, the finger is pointed at the frontline worker for continuing work. Job hazard analysis either misses information or plans are too detailed to follow. However, the finger rarely points at the supervisors who developed the plan.

Identifying the individual at fault, pointing the finger, and referring to the easy way out leads to some form of disciplinary action for the frontline worker. Supervisors exercise disciplinary action as an alleviation from discipline for themselves.

Theme 2: Acceptance of a no-blame culture

Acceptance of a no-blame culture by thirteen of the participants was directly correlated to the values that a no-blame culture could provide their organization. The values discussed were learning from the frontline workers, open-communication, transparency, honesty, and trust.

Learning from the frontline workers is a value of a no-blame culture that would improve complex tasks in the construction industry. Most construction companies will bring management into a room after a negative outcome occurs. Discussions of solutions usually occur soon right after the accident. Unfortunately, some solutions are developed before an employee is finished

receiving medical care. Hindsight bias derives from supervisors and solutions are quickly found. Hindsight bias assesses people's decisions and actions mainly in the light of their failure to pick up critical pieces of data artificially narrowing an accident investigation (Dekker, 2014). By engaging frontline workers, supervisors can understand the actual problems and challenges the workers face. Due to schedule pressures, most construction supervisors don't have time to learn from frontline workers. Construction supervisors portray that they already know the work and taking the time to learn is unnecessary.

Communication, transparency and honesty were other values that were mentioned by the participants. Unfortunately, fear of discipline has hindered these values due to construction companies conducting blame. Safety Professionals need to rely on the willingness of frontline workers to provide information, but this can't be done if people are in fear that they may be "held accountable for everything they did" (Hollnagel, 2015). Safety Professionals are recognized for enforcing compliance and enacting discipline procedures. Safety Professionals have made it difficult for frontline workers to communicate, be transparent, and to be honest with middle management.

The values of a no-blame culture were discussed by thirteen of the fifteen participants. However, twelve of the participants identified the challenges of implementing a no-blame culture. There were three restrictions mentioned by the participants that would inhibit a no-blame culture: accountability, buy-in from everyone and blatant acts. Accepting a no-blame culture wouldn't be simple in the construction industry. On a job site, many positions would need to accept a no-blame culture. The researcher's organization has struggled to implement a no-blame culture because not everyone has bought into the culture. Every job position in the company has struggled to buy into the concept. In construction, frontline workers don't believe that they won't be blamed, Supervisors want to hold people accountable, and Safety Professionals struggle to

understand the concept. A no-blame culture wouldn't be easy to implement, and implementation could take years.

Theme 3: Accountability was predominately acknowledged as retrospective

All of the Safety Professionals in the study acknowledge retrospective and retributive aspects of accountability. The majority of construction companies have a disciplinary policy and companies in California are required to have a disciplinary policy according to regulatory agencies that enforce health and safety regulations.

The retrospective and retributive aspects mentioned by the Safety Professionals were some forms of discipline. This could entail termination, removal of a project, or days off without pay. Construction challenges make discipline an appealing option. Every position in the construction industry faces the challenge of the project schedule which makes production the main priority. This pressure of the job site schedule makes the measures of discipline intriguing. Discipline is a fundamental of the bureaucratic organization to reinforce rule-following and conformity (Vaughan, 2016). Bureaucracies on a job site in construction are made up of middle management. Negative aspects of accountability are recognized due to its simplicity. Sharpe states that in a retrospective sense, accountability is linked to praising and blaming (Sharpe, 2004). In reality, frontline workers are rarely praised for their work. When frontline workers do their work successfully without injury or error, middle management may be praised for their success. However, the expectation for successful work without a negative outcome is standard. Blame and discipline is the only link to accountability in a retrospective sense.

Theme 4: Accountability is interwoven with other definitions

Accountability is often used as a synonym for numerous definitions. Other vocabularies used in the interviews while discussing accountability were ownership, loyalty, and responsibility. The meaning of these words is different than the meaning of accountability.

There is an extensive amount of loyalty between middle management and certain frontline workers. Employees that have been with organizations for a long time or employees that have relationships with middle management outside of work, tend to have more margin than other frontline workers or subcontractors when violations occur. Participant (SUB03) states, "The biggest fight we have with the loyalty thing is somebody does something. Management Says, well that's our best guy, they have been with us a long time, they have made us a lot of money, things like that. Upper management may think we need to give them extra breaks." Upper management on job sites typically demand retrospective accountability after violations. However, accountability and loyalty become convoluted when Safety Professionals demand discipline among frontline workers who are favorable within an organization.

Ownership for mishaps was also identified to relate with accountability. Personal ownership for outcomes in construction has become a problem for Safety Professionals. Safety Professionals depend on developed rules and compliance for successful outcomes not understanding the tacit knowledge of the frontline workers. The easiest job in the world is to watch someone work and point out every rule being broken.

Theme 5: Accountability is needed in a no-blame culture

During the interviews, fourteen of the participants declared that accountability is needed in a no-blame culture. Due to the variety of meanings, accountability is impractical to define. Retrospective and retributive accountability generally don't align with a no-blame culture. Other

researchers have mentioned concepts where retrospective accountability and a no-blame culture could exist. However, defining a standard of when discipline is acceptable would be difficult. Also, drawing a line in the sand to identify when someone would be disciplined is unrealistic. Challenges of standardizing who draws the line, defining the line, and acknowledging that the line is dynamic and is continuously moving. Lastly, this line could always be manipulated and not give a frontline worker a fair chance. A no-blame culture and retrospective accountability would be taxing to implement.

As previously mentioned, accountability is already associated with some form of discipline on construction job sites. Dekker eludes that forward-looking accountability should lay out the opportunities and responsibilities for making changes so that the probability of such harm happening again goes down (Dekker, 2018). Prospective accountability is confusing not only to Safety Professionals but middle management on a job site. A no-blame culture accomplishes Dekker's goal without the challenge of trying to redefine accountability in an industry where discipline and accountability go hand-in-hand. Prospective accountability becomes confusing when it is introduced in a retrospective or retributive accountability dominated industry.

Discussion

In the previous chapter, the participant's answers to the questions were described and analysed. The empirical data from the semi-structured case study revealed the value of a no-blame culture and willingness to accept a no-blame culture. This was one of the gaps in the literature review due to the lack of literature on a no-blame culture in the construction industry. One of the aims of this study was to determine if a no-blame culture would be accepted by Safety Professionals in the construction industry. As previously mentioned, thirteen of the fifteen participants would accept a no-blame culture throughout their organization. The values from a no-blame culture mentioned by the Safety Professionals in the interviews align with the values in other industries that have been mentioned in the literature. Additionally, the proactive values between a no-blame culture compared to a blame culture appear to be indisputable. However, is accountability needed in a no-blame culture?

From the interviews, Fourteen of the participants agree that accountability is needed in a no-blame culture. There is literature that addresses the need for accountability in a no-blame culture. Wachter states, “finding the right balance between “no-blame” and accountability is tricky for all” (Wachter, 2011; pp. 1402). Throughout this research topic, the researcher has compared blame, no-blame culture, retrospective and prospective accountability, and restorative justice. The mission of this section is to minimize the gap to identify if accountability is needed in a no-blame culture.

Minimizing the Gap

Throughout the literature and the interviews, the aspects from a no-blame culture, prospective accountability, and restorative justice are compared and there are similar values. All three promote open-communication, learning, transparency and trust.

A no-blame culture has many similarities to prospective accountability and restorative justice. A no-blame culture entails values of planning, collaboration, knowledge sharing, organizational learning in a supportive environment (Lloyd-Walker et al., 2014). Dekker states, "accountability is about looking ahead. Not only should accountability acknowledge the mistake and the harm resulting from it. It should lay out the opportunities (and responsibilities!) for making changes so that the probability of such harm happening again goes down." (Dekker, 2018; pp. 24). This form of accountability aims to repair the harm that has been caused. (Zehr, 2014). A no-blame culture allows error reporting and implementing safeguards after a negative outcome.

Walton mentions:

> The current focus on improving care by redesigning systems, tasks and workforce necessarily emphasises the multiple factors underpinning errors, relies on reporting systems for capturing errors, and advocates a ''blame-free'' environment so that staff will report their mistakes or near misses. This approach examines system factors as causes of errors rather than individuals. (Walton, 2004; pp. 163)

Prospective accountability and restorative justice has positive attributes and provides value. The data received from the interviews addresses that there is a need for accountability in a no-blame culture. Seven of the participants mention open communication, transparency, trust, supportive, and collaboration for the values of accountability. These values are also identical to the values received for a no-blame culture. However, seven other participants mention a need for retrospective and retributive accountability in a no-blame culture.

As compared in the literature review, retrospective accountability and a no-blame culture contradict each other in every aspect. By having retrospective accountability in a no-blame

culture, the values that arise from a no-blame culture will diminish. Naturally, retrospective accountability and a no-blame culture do not work together. The researcher would recommend that if an organization desires to use a no-blame culture to completely eliminate retrospective accountability due to the conflicts the two concepts have.

Prospective accountability and restorative justice have more restrictions than a no-blame culture. Dekker and Breakey state, “the production of different and partially overlapping narratives plays an important role in restorative justice, it is set up to create the kind of accountability that encourages learning” (Dekker and Breakley, 2016; pp. 191). Most of the concerns about restorative justice rest on a belief in the virtues of accountability (Braithwaite, 2016). The outcomes from restorative justice and prospective accountability must be accepted to be successful. Restorative justice is always unfinished business until an account has been accepted by the stakeholders (Braithwaite, 2006). Construction is a top-down driven industry (Fang et al., 2015). Middle management and Foreman which are the leaders of the frontline workers on a construction job site have to accept the outcomes produced by restorative justice or prospective accountability. In a no-blame culture, all stakeholders become equally responsible for an outcome and each will have an equal share (Lloyd-Walker et al., 2014).

Accountability itself has a negative connotation. The Merriam-Webster dictionary defines accountability as “the quality or state of being accountable” (Merriam-Webster's collegiate dictionary, 2019). Diving further in, accountable is defined as “subject to giving account: answerable” (Merriam-Webster's collegiate dictionary, 2019). The dictionary sentence example, “If anything goes wrong I will hold you personally accountable” (Merriam-Webster's collegiate dictionary, 2020). The accountability definition appears to have a negative connotation. This definition also aligns with Sharpe’s view on backward-looking accountability. Sharpe states, “When we speak of “holding someone accountable,” we tend to do so after the fact of some

action gone awry" (Sharpe, 2004; pp. 13). Throughout the interviews and the literature, accountability is used interchangeably with other words that have a positive outlook. Responsibility has a definition of, "the quality or state of being responsible such as: reliability, trustworthiness" (Merriam-Webster's collegiate dictionary, 2019). By definition, responsibility would appear to better replace accountability. However, interchanging the words may also lead to confusion and may diminish the values that a no-blame culture provides. All of the participants in the interviews acknowledge that there is retrospective accountability. Few of the interviewees that acknowledge prospective forms of accountability mention that the term accountability is a negative term and should not be used. Prospective accountability may hinder a no-blame culture because of accountabilities' negative meaning.

Conclusion

The inspiration behind this thesis came from the researcher working for an organization with a no-blame culture which has struggled to define accountability. A no-blame culture has apparent values that would help improve safety in the construction industry. The values mentioned by Safety Professionals in the construction industry align with studies that have been conducted in other industries. Even the values mentioned about prospective forms of accountability are comparable to a no-blame culture. By adding accountability to a no-blame culture, accountability could create a contradiction with retrospective aspects of accountability and minimize the values of a no-blame culture. Even though prospective accountability and a no-blame culture technically have positive outlooks, accountability is associated with a negative connotation and may have a negative influence on a no-blame culture in the construction industry. For a no-blame culture to flourish in the construction industry, accountability should not be desired. If prospective accountability is desired, accountability in a prospective approach should be associated with responsibility.

Going Forward

The aim of this research was to identify if a no-blame culture would be accepted in the construction industry. This study focused on the Safety Professionals view if this would be the case. Further research should be conducted among supervisors on job sites to determine the acceptance of a no-blame culture in construction. Another aim of this research was to determine the need for accountability in a no-blame culture. Again, supervisors on job sites should be the target audience to help determine the need for accountability in a no-blame culture.

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Appendix 1

Interview Template

Thesis Topic: Would Forward-looking Accountability's Satisfy the need for Accountability in a No Blame Culture in the Construction Industry?

Mission:
Below are some semi-structured interview questions. The intent of these questions are to be open-ended. These questions are for guidance and the questions will be explored in more detail varying on points of interest. Below, you will see three topics that I will exploring during this interview: No blame focused questions, accountability focused questions, and how the no-blame culture and accountability correlate with each other. I plan to interview 10-15 Safety Professionals from three different organizations in the construction industry. These interviews will be recorded and transcribed using an app termed Temi.

Accountability Focused Questions

- What does the concept of accountability mean to you?
- How is accountability used within your organization?
    - Policies?
- How is accountability perceived in your organization?
    - Upper Management?
    - Front line Workers?
- How can people learn from accountability?
    - In what ways?
- Who should be "accountable" for improving a process?
    - Why [named] individual/position?
- How does someone know what they're accountable for?

No Blame Focused Questions

- What does the concept of blame mean to you?
- Is blame used in your organization?
    - How?
- Does your company have a blame free environment?
- Would a blame free environment be accepted in your organization?
    - Upper Management?
    - Job sites?

- Could a blame free environment provide any value to you or your organization?
    - What value's would these be?

- What challenges could arise from a blame free environment?

- Any restrictions to a blame free environment? Explain?

Accountability and a No-blame culture Questions

- Do you think there is accountability in a blame free environment?
    - If so, how?

- Is there a need for accountability in a blame free environment?

- Could accountability in a blame free environment improve performance?
    - How?

- How do you see accountability being used in a blame free environment?
    - How?

Appendix 2

Consent for Participation in Interview Research

School: Lund University

Masters Program: Human Factors and System Safety

Thesis Topic:
Would Forward-looking Accountability Satisfy the need for Accountability in a No Blame Culture in the Construction Industry?

Researcher:
Shaun Trussler
Email: strussler@pankow.com
Phone: +16262558519

Purpose:
He purpose of this research is to identify from other Safety Professionals in the Construction Industry the relation between a blame free environment, accountability and how these concepts correlate together.

Consent:

- Your participation in this research project is entirely voluntary. You may refuse to participate or withdraw from the research at any time.
- I understand that if I feel uncomfortable in anyway during the interview process, I have the right to decline any question or end the interview.
- The interview will last approximately 30-60 minutes. The researcher will takes notes during the interview and the interview will be recorded and transcribed.
- You name and years of experience may be used in this research project.

By signing below, the interviewee understands the purpose of this interview, the intent of this consent form and agrees to participate as outlined above.

Participate Signature: _____ Date:_____

Researcher Signature: _____ Date:_____