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# Triangulating a Sustainable Safety Culture in the Readymade Garment Industry of Bangladesh

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Abstract

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Abstract

Many obstacles still exist toward improving safety standards, practices, and culture in the ready-made garment (RMG) industry in Bangladesh. Workers' beliefs and habits, employers' level of involvement, and gaps in the regulatory framework necessitate an examination of safety practices to build a foundation for safety culture in the workplace. The focus of this study was to contribute to regulatory reform aimed at creating a safe work environment by exploring the perceptions of workers, employers, and government regulators through the lens of the theory on reciprocal determinism. A total of 41 participants, categorized into three groups of workers, employers, and government regulators, consented to face-to-face interviews. The study provided individual and group perspectives of requirements for safe factories and development of safety culture. Interview data were inductively coded and subjected to a thematic analysis procedure. The results showed the groups collectively prioritized the need for training, collaboration, health, and safety, and they raised concern over civil unrest. The groups differed on the importance placed in areas such as protection of workers, profit, and legal enforcement. The study results can serve to contribute to effective government reform by developing self-efficacy of workers and improve collaboration between workers, employers, and government in the RMG industry of Bangladesh.

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# Dedication

I dedicate this study to Bangladesh RMG workers who died or sustained injury due to unsafe working conditions. My prayers go to loved ones affected by such tragedies and to employer and government in their ceaseless efforts to improve safe working conditions in the Readymade Garment industry and society as a whole.

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# Chapter 1: Introduction to the Study

## Introduction

The readymade garment industry (RMG) is essential to Bangladesh's economy, contributing 80% of the total export earning of the country (Ahmed, Raihan, & Islam, 2013). Bangladesh is the world's largest apparel exporter after China with RMG exports valued at 19 billion U.S. dollars per year (Alamgir, Cooper, & Delclos, 2013). While the industry and workforce are expanding, many events in the last decade constitute a sobering reminder of its history. The Spectrum garment factory collapse near Dhaka in April, 2005 killed 64 and injured 80 (Stanwick & Stanwick, 2015). The Eurotex factory explosion in Dhaka on December 3, 2010 killed 62 (Stanwick & Stanwick, 2015), and the That's It Sportswear factory fire on December 14, 2010 killed at least 29 (Enigbokan & Patchett, 2011). The Tazreen Fashion factory fire on November 24, 2012 killed 112 (Appelbaum & Lichtenstein, 2014). The Rana Plaza collapse on April 24, 2013 killed more than 1,100 people (Appelbaum & Lichtenstein, 2014). The events that result in death merit an examination of the safety culture and practices in the workplace.

Similarities exist between present factory conditions in Bangladesh and factory conditions in the United States from more than 100 years ago (Alamgir et al., 2013). Alamgir et al. noted that the November 24, 2013 fire in Bangladesh had similar circumstances to the Triangle Shirtwaist factory fire in New York City in 1911. Because the Triangle fire was the event that led to fire codes in the United States, the trend of fires in Bangladesh raises concerns regarding the development and enforcement of fire codes in Bangladesh. Another factor to consider is that in the Triangle Shirtwaist factory fire,

the majority of workers were economically disadvantaged young women (Ahmed, Greenleaf, & Sacks, 2014). According to 2011 data, the garment industry in Bangladesh employed approximately 3.6 million workers, of which 80% were female from rural areas (Bangladesh Garment Manufacturers and Exporters Association [BGMEA], 2011). That number rose to roughly 4 million garment workers in 4 years (BGMEA, 2016). This difference in estimates is partly due to improved data collection methods since 2011. However, the Department of Inspections for Factories and Establishments (DIFE; 2016) estimated 2,179,870 workers worked in 4,765 factories that are registered with DIFE. Of 2,179,870 workers, 1,233,541 were female (Department of Inspections for Factories and Establishments [DIFE], 2016). This amounts to 56% women RMG workers working in factories registered with the government (DIFE, 2016). Alamgir et al. (2013) also noted that Bangladesh's growth depends on keeping wages low and restricting the rights of workers. The increase in the number of employees and concerns for workers' rights to safe working conditions warranted a closer look into psychosocial factors of the garment worker in Bangladesh.

These events and the current conditions of workers in Bangladesh led to the National Tripartite Plan of Action on Fire Safety and Structural Integrity (International Labor Organization [ILO], 2013; Ministry of Labor and Employment [MOLE], 2013). This plan called on workers, employers, and government officials to come together to improve working conditions in the RMG industry and to find a sustainable approach to correcting the current problems in the RMG sector of Bangladesh (ILO, 2013; MOLE, 2013). This plan resulted in three initiatives to address this issue. The initiatives are the

Accord, the Alliance, and the National Initiative empowered through the Tripartite Committee on the National Plan of Action on Building and Fire Safety in the Ready-Made Garment Sector in Bangladesh. This committee is referred to as the National Tripartite Committee (NTC). The Accord represents global buyers primarily from European brands, while the Alliance represents global buyers primarily of North American brands. The International Labor Organization (ILO; 2013) is committed to supporting the National Initiative (N.I.) through the NTC to ensure safety and workers' rights in factories, not under the remit of Accord or Alliance. Engaging the three initiatives were an important step to improve working conditions. This commitment is not the only testament to the work of the ILO.

The ILO (2013) is a global entity, which has been participating in the international scene since 1919. The organization is responsible for regulating working hours and other key issues regarding workers' rights and justice. The ILO received the Nobel Peace Prize in 1969 and was lauded as a key organization to promote world peace through addressing labor issues (United Nations, n.d.). Worker safety in Bangladesh's RMG industry is a new and welcomed challenge for the ILO. The ILO's RMG Program is one of its leading global initiatives aimed at improving working conditions.

Improving working conditions begins with developing a sustained safety culture that embraces the presence of a safe work environment. A lack of safety culture presents a dangerous combination of pressure to meet production targets and a deficiency of internalized safety habits (Pidgeon, 1998; Reason, 1998). An important factor in developing a sustained safety culture is an internalization of safety culture by workers,

employers, and the government. This point is crucial as interaction and power relationships between these groups determine the level of safety in the RMG industry (Cox & Flin, 1998; Rock, 2003).

Limited information exists pertaining to safety culture norms in Bangladesh's RMG industry (Wadud, Huda, & Ahmed, 2013). Additionally, closing the gap between predominant worker attitudes, culture, behavior, and technical approaches implemented for safety in the workplace is necessary (Naevestad, 2009; Pidgeon, 1998). Mending this gap may improve safety measures in the RMG industry. The gaps in the literature that researchers need to address refer to how workers and employers presently define safety and how beliefs and perceptions shape safety culture. Furthermore, researchers should look at social cognitive aspects to help explain how human behavior interacts with the environment. Information gained from the present study can assist in determining key areas to improve working conditions or aid in exposing weak points to address the infrastructure of safety implementation in the RMG industry of Bangladesh.

This chapter includes a background of the events that occurred because of lapses in the RMG industry and attempts to define safety culture. Additionally, I summarize research related to how safety culture is essential to the success of safety practices in the workplace and how this may play a role in workers' and employers' beliefs regarding safety practices. Furthermore, I emphasize the need for government, with valuable input from employees and employers, to develop standards that are sustainable and empower enforcement of safety regulations. Included is a discussion of the problem, the purpose and significance of the study, the research questions, the definitions of key terms, and

limitations.

## Background

### Safety Culture

The April 1986 nuclear disaster at Chernobyl was the largest in history regarding cost and casualties, which prompted studies, reflections, and analysis that led to a theory of safety culture (Guldenmund, 2010; International Atomic Energy Agency, 2002; Naevestad, 2009). This accident resulted from oversights created because of beliefs and organizational culture at the site (Hudson, 2007). Although a modern concept, the understanding of safety culture is not clear, and scholars agree that research is fragmented and unsystematic (Naevestad, 2009; Pidgeon, 1998). Naevestad (2009) suggested the problem with current thinking of safety culture is that it is general rather than contextual or particular. This prevailing view inhibits gauging and examining behaviors and underlying assumptions of workers and employers. In this study, I sought to merge the gap in the literature by exploring individual experiences that can provide a link between general concepts and experiential knowledge of safety culture. Discovering this connection required an in-depth analysis of the perceptions of workers, employers, and government.

Intrinsically motivated employees can achieve an ideal safety culture that protects workers (Cooper, 2000). Empowered employees who have self-efficacy and understand their role in a safe working environment will provide the necessary foundation for a safe workplace (Cooper, 2000). Additionally, working together, workers and employers can ensure worker safety through internalization and implementation of safety measures.

Employees and managers can accomplish this through understanding policy and having respect for government entities charged with ensuring compliance. A shared understanding of safety concepts takes empowerment, motivation, and a willingness to learn.

Motivating employers and workers can facilitate a smooth transition to normalized safety practice. Guldenmund (2010) defined safety culture as an implicit group of shared beliefs, attitudes, or convictions that help minimize danger and injury to employees and managers. Hence, to create an environment of vested employers and intrinsically motivated workers, it is necessary to modify attitudes and behaviors so that staff and employers desire to seek change instead of blindly implementing rules and established protocols.

In eight additional studies, researchers defined safety culture. These studies include grouping safety culture as a social responsibility of an organization's pattern of response. Additional factors are social beliefs and mental programming of employees (Advisory Committee on the Safety of Nuclear Installations, 1993; Berends, 1995; Cox & Cox, 1991; International Nuclear Safety Advisory Group, 1986; Ostrom, Wilhelmsen, & Kaplan, 1993; Pidgeon, 1998; Richter & Koch, 2004; Westrum, 2004). Nevertheless, Cox and Flin (1998) stated that organizational values represent safety culture, which the organization reflects in its procedures and behaviors. Moreover, Cox and Flin stated that because of the lack of a definitive theory of safety culture, academic debate is not sufficient to establish a theoretical framework for its definitions and measures. This assumption created a problem of finding tools and methods for assessing and evaluating a

particular safety culture regarding industries and establishments.

An alternative way of addressing ambiguities of a sound theoretical framework is to inquire further into human action regarding safety. Reason (1998) defined the *elimination of paradoxes* within safety culture theory as a step closer to establishing a genuine culture of safety. The variability of human action, though often looked at as a liability resulting from error, maintains safety in the face of a changing environment. Variability allows for more sophisticated forms of adaptability. Mullen and Kelloway (2009) stated that safety leadership is a key contributing factor to preventing accidents and injuries in the workplace. In this regard, transformational leadership combined with an understanding of human action is crucial because it emphasizes safety management on a more engaged level with employees rather than considering safety compliance alone (Mullen & Kelloway, 2009).

**Readymade Garment Industry in Bangladesh**

Since 1971, the RMG industry has shown rapid growth, but throughout the development of this sector, Bangladesh's government policy has been one of noninterference (Ahmed et al., 2014). This perception is because of government corruption, ineffective bureaucracy, and a lack of leadership (Ahmed et al., 2014). This lead to the state delegating responsibility to privatized companies, which resulted in export-led growth in the RMG industry. Little institutional capacity or will to deal with safety issues in the RMG may have lead to the problems that exist in the 21st century (Ahmed et al., 2014).

Companies should follow a top-down and bottom-up approach to develop a

sustainable safety culture in Bangladesh's garment industry. F.Z. Ahmed et al. (2014) addressed the question of how to pursue worker safety in the context of the shortcomings of government institutions. A change in thinking and modernization of Bangladesh's regulatory framework will help address this issue. Government involvement in matters of safety and workers' rights, combined with a new generation of well-trained owners and managers, may have a better understanding of the value of safety (F.Z. Ahmed et al., 2014). These changes will potentially attract international competitiveness by improving safety, production technologies, and negotiating better contracts with international buyers. According to Ahmed et al. (2014), these changes lead to increased transparency in business transactions and provide a productive and safe work environment. Additionally, this concept can lead to opportunities for higher wages and better quality of life.

Consideration for worker safety has multiple dimensions. When interconnected, this concern can lead to a better understanding and support from stakeholders. Rock (2003) drew a relationship between working conditions and labor processes in an effort toward collective action to improve working conditions in the RMG industry through unionizing of workers. However, Rock noted that unionizing is difficult because the government protects the industry through owners who have political ties. In light of the political dimension, many companies negotiated with labor unions and nongovernmental organizations after the Rana Plaza collapse (Rock, 2003). Companies expressed commitment by signing on to a legally binding plan to ensure funds were available for safety improvements (Greenhouse, 2013). This commitment was a significant first step to

ensuring workplace safety and underscored the need for a look into the relationship of an existing safety culture and the influence of various actors. Research was necessary to glean information on the complexities of political, social, and economic dimensions influencing safety in the garment industry.

## Problem Statement

A strategy of establishing safety culture is vital. The existence of safety culture plays a role in preventing accidents in the workplace (Pidgeon, 1998; Reason, 1998). A strategic approach aimed at pursuing a symbiotic relationship between workers and the employers is necessary to ensure the foundations are laid to develop safety culture. Additionally, a collective approach between workers and employers may provide the necessary momentum to influence national policy decisions on worker safety. Therefore, a tripartite relationship between workers, employers, and government is essential.

It is essential to consider concerns of employees and employers and the limited capacity of public institutions to fill the gap and to realize the high ideals of the National Tripartite Plan of Action on fire safety and structural integrity in the garment sector of Bangladesh (Ahmed et al., 2014). This plan required a look at the RMG industry and the complex relationship between government, employers, and workers. Significant research exists regarding safety in the RMG industry of Bangladesh. However, a gap exists between the current research literature and perspectives of workers, employers, and government regulators on safety in the RMG industry of Bangladesh. Individual views are necessary to first understand underlying issues and take pragmatic views on the situation in the RMG industry. This situation was of particular concern in light of the

possibility of workers not knowing their rights regarding safety, employers not understanding the benefits of empowering workers, and government regulators lacking the political capital for enforcement.

A need exists to examine beliefs, habits, and practices of workers, employers, and government regulators to establish a foundation of safety culture in the workplaces of the RMG industry. Through interview questions, I was able to objectively assess the status of workers in the RMG industry and the power relationship between workers, employers, and government regulators. The proved beneficial to the finding and conclusion of the study.

## Purpose of Study

In this study, I focused on RMG workers who did not fall within the remit of the Accord or the Alliance initiatives. The Accord and the Alliance efforts accounted for estimated than 3.1 million workers in Bangladesh actively exporting garment factories (Accord, 2016; Alliance, 2016). The remaining workers under the N.I. were not privy to the same consideration given to those under the Accord or the Alliance by their respective buyers. The buyers' forums have corporate social responsibility initiatives that provide incentives for buyers and employers to ensure safe working conditions. Workers under the N.I. do not share this same level of concern for corporate social responsibility. Therefore, conditions of factory workers under the N.I. required an assessment of its safety situation. Through this qualitative study, I explored the safety culture in RMG factories under the N.I. The results of the study may contribute to the discussion on how to develop a sustainable culture of safety to reduce the likelihood of workplace accidents

and disasters in the RMG industry of Bangladesh long after the initiative supported by the ILO, Accord, and Alliance has surpassed its projected deadlines.

The RMG industry in Bangladesh employs approximately 4 million workers, in which 56% are women from rural areas mainly with little education (DIFE, 2016). Therefore, workers' rights violations may go unnoticed or unreported, which requires an assessment of the relationship between workers, employers, and government. This tripartite relationship and perceptions of safety by the three entities supported the purposes of this study. The phenomenon warranted an examination of safety conditions in factories by first assessing the baseline understanding of safety culture among workers, employers, and the government. After establishing this baseline, themes emerged that revealed similarities and differences of perspectives. I used the results to inform decision makers in Bangladesh regarding the role and value of developing a sustainable culture of safety in the workplace that is agreeable to all stakeholders.

The results of this study may provide the basis for a paradigm shift in thinking about safety in the RMG industry and serve as a model for other industries in Bangladesh. The need for safe working conditions is not limited to the RMG sector, and should be a requirement in all workplace settings. The study informs practitioners in the field by contributing to the ongoing discussion of the way government, employers, and workers interact among each other and view safety in Bangladesh's RMG sector. This study contributed to the conversation regarding the necessary support needed to develop a sustainable culture of safety in the workplace.

## Research Question and Interview Questions

RQ1: What is the perception of workers, employers, and government officials on safety in the RMG sector of Bangladesh?

The interview questions were

1. What is your understanding of safety culture?
2. What is the worker's role in developing a culture of safety?
3. What is the employer's role in developing a culture of safety?
4. What is the government's role in developing a culture of safety?
5. What is your understanding of a safe workplace?
6. How important is a safe workplace to you?
7. What safety measures are currently in place at your workplace?
8. What do you think should happen to ensure safe working conditions?
9. How do you report a safety hazard?
10. What understanding do you have on developing safety culture?

The interview questions were (Bangla)

1. ১। নরিাপত্তার সংস্কৃনি (সসফটি কালচার) বলতি আপনি নিক সবাতেি?
2. ২। নরিাপত্তার সংস্কৃনি (সসফটি কালচার) গতে সালিার জযি কর্মীতরে করীযি. নক?
3. ৩। নরিাপত্তার সংস্কৃনি (সসফটি কালচার) গতে সালিার জযি সতেে র্মানলকপতরে করীযি. নক?

4. ৪। নরিাপত্তার সংস্কৃনি (সসফটি কালচার) গতে সালিার জযি সরকাতরর করণীযি নক?

5. ৫। নরিাপে কর্মমস্থল বলতি আপনি নিক সবাতে?

6. ৬। নরিাপে কর্মমস্থল সকি গুরুত্বপূর্ম?

7. ৭। আপনার কর্মমস্থতল বমি র্মাতি নিক ধরতরি নরিাপত্তা বযবস্থা রতযি.তে?

8. ৮। নরিাপে কর্মমস্থল ননর্মাি করতি পারতল নক হতব বতল আপনি র্মতি কতরি?

9. ৯। সকাি র্মাটি রিটতল আপনি নিকভাতব ি নরতপাটম কতরি?

10. ১০। সসফটি কালচার গতে সালিার নবষতযি. আপনার ধারণা নক?

## Theoretical Framework

The theoretical framework for this study built on Pidgeon's (1998) distinction between belief and behavior regarding safety in the workplace. Merging the gap between belief (or culture) and behavior may provide the necessary impetus for a sustainable safety culture in the RMG industry of Bangladesh. Acceptance of safety culture by workers, employers, and government, including their interactions and power relationships, will determine the level of significance given to safety in the RMG industry (Cox & Flin, 1998; Rock, 2003). Furthermore, researchers can develop a more concrete concept of safety culture to move closer to establishing a theoretical framework for definitions and safety culture measures (Cox & Flin, 1998). Reason (1998) contended that to establish this framework, it is important to eliminate paradoxes in safety culture

theory. Some paradoxes include the notion that the apparent absence of safety problems because of improvisations resulting in not reporting incidences defines the level of safety. According to this view, barriers and safeguards designed to increase safety can be the source of safety failures (Dekker, 2014). Furthermore, the goal of absolute zero accidents can impede smaller, realizable safety goals (Dekker, 2014). This goal underscores the importance of the human element in examining this process. Technology, policies, and procedures do not define success of safety culture. Success includes individual perceptions that coexist with technology used to create a safe work environment.

Complications and combinations of events are elements that create dangerous situations for workers. Thereby, safety tends become a subjective idea rather than an absolute, concrete goal (Beus, Payne, Bergman, & Arthur, 2010; Pinto, Ribeiro, & Nunes, 2013). Safety trends, combined with other complexities, lead to safety failure. Hazards are real, but risks are socially constructed (Pinto et al., 2013). Often, tools designed to assess safety are a blend of science and judgment based on psychosocial, cultural, and political factors (Pinto et al., 2013).

Another factor to consider is the fear of reporting hazards. Two-thirds of workplace injuries go unreported by employees because of fear of disciplinary action or loss of wages (Beus et al., 2010). Consequently, figures that account for worker injury may not include unreported incidents (Beus et al., 2010). This informational lapse is because of an underdeveloped safety climate. Lallemand (2012) defined safety climate as an environment that exists with safety culture as its foundations. Instilling safety measures is key to this process. Safety climates supportive of safety measures have lower

workplace injury rates (Beus et al., 2010).

Safety theory does not apply to physical manifestations of safety, such as to rules, policy, and actions taken by workers and management. Scholars recognized a difference between culture theories and behaviorism, noting that behaviorism does not involve the cognitive aspects of human life and narrows the focus only on behavior (Tharaldsen & Haukelid, 2009). Additionally, Tharaldsen and Hauelid found that research treated cultural perspectives poorly in safety research and, therefore, suggested that a better understanding of cultural approaches might clarify the cultural or subcultural influences on safety practices. This thought aligns with Pidgeon's (1998) theory that belief and behavior are cultural influences that effect one another.

Cognitive aspect of human life and culture is complex and requires depth into the human experience to better understand its influence on safety culture. Bjerkan (2010) confirmed that the divide between safety theory and behaviorism does not account for the complexities of real-life work environments and the influence of cultures and subcultures on these environments. Bjerkan contended that in the traditional view of industrial accidents, people tend to blame technological and human failures, but failures that lead to accidents are dynamic problems between social and physical environments. An understanding of social and physical environments is necessary to consider a holistic approach to pursuing safe working conditions.

Bandura's (1978) reciprocal determinism theory can bridge the gap between beliefs and behavior by allowing explanation of how the individual affects his or her environment and how the environment affects the individual. Reciprocal determinism is

composed of three factors that influence behavior: the environment, the individual, and the behavior itself. In complex interactions, these three elements form and inform each other and influence how the individual behaves in a given environment. This theory applies to safety because a breakdown between social environment, culture, and physical environment can results in safety failures. Understanding reciprocal determinism theory can potentially reduce the problems between social and physical environmental safety risks to residual levels. The theory is derived from social cognitive theory and holds that personal and environmental factors influence individual behavior. If a person can understand the interrelationship between individual beliefs, behaviors, and the environment, then a person can arrive at a deeper understanding of factors that lead to the development of safety culture (Cooper, 2010).

Success of accomplishing goals is directly related to confidence levels (Cooper, 2000). If having a safe work environment is a goal of confident workers and employers, then the distinction between beliefs and behaviors has the potential to merge. Hence, Pidgeon's (1998) theory of belief and behavior combined with Bandura's (1978) reciprocal determinism theory can result in a workplace environment motivated toward safety. If an individual has confidence that his or her role in safe working conditions is valued, then this will affect his or her beliefs, resulting in behavioral change. If behavioral change is emulated by peers and positively reinforced by supervisors and employers, then self-efficacy will increase (Bandura, 1977). If self-efficacy increases, the development of a safety climate will result in a culture of safety. Chapter 2 further details these propositions.

The theoretical framework served as the foundation for organizational understanding regarding how the worker and the environment, including technology, require equal attention in developing a safety culture that ensures safe working conditions while having a limited effect on productivity. However, although an incentive exists for organizations to improve safety culture and empower employees to be more involved, the validity of the concept of safety culture improving safety remains largely unproven (Cox & Flin, 1998). This lack of validity furthers the divide between safety theory and empirical proof of safety.

It is necessary to gain a better sense of how safety theory applies in practice. Lallemand (2012) proposed one way to examine the dynamics between theory and practice. Lallemand distinguished between safety climate and safety culture and suggested that one informs the other—safety climate is a behavioral manifestation of safety culture. Safety climate may be easier to gauge and measure; however, safety culture is the overarching and complex structure that ultimately determines and shapes how the results of practices and beliefs come together to produce and shape the safety of an organizational environment. Additionally, Lallemand suggested that it is key to define what a positive safety culture consists of to achieve it. Properly defining a positive safety culture may provide the evidence Cox and Flin (1998) required to validate the concept of safety culture.

To determine significance and appropriately define safety culture, I must first look for themes or trends. I accomplished this by examining the perceptions of RMG workers regarding safety culture within the workplace. If the study found relevant

attitudes and a patterns, then the results may support further inquiry into behavioral attributes of factory workers. Therefore, researchers can continue to develop the understanding of safety culture across industries.

## Nature of Study

In this study, I assessed safety culture in Bangladesh's garment industry and how a sustainable culture of safety has the potential to develop among government officials, employers, and workers. The approach taken was aimed at understanding societal norms, thought processes, and priorities placed on safety. To address the need and to understand behaviors and attitudes of the target audience, I employed a qualitative case study using content analysis. The goal of a case study researcher is to examine a specific and bounded to contribute to a richer understanding of the perspective of workers, employers, and government regulators. Some secondary statistical data pertaining to demographics contributed to the research. However, the aim was to better understand the experiences of the RMG workers and to determine if RMG workers' lived experiences are significant enough to justify further study. Hence, a qualitative approach to the study was necessary.

The qualitative case study process involved interviews with a number of employees in selected factories, employer representatives, and key government officials. I used interviewing techniques as the primary method for data collection. The data collection process involved face-to-face, open-ended interviews, including note-taking and observations. The process involved recorded interviews, which allowed me to observe nonverbal cues (Creswell, 2013). One problem in the study included gaining access and trust from employer representatives and workers. Enlisting a reliable source

whom had a strong rapport with the target population helped to alleviate any perceived mistrusts. Through this study, I established an understanding of the perceptions of workers, employers, and government officials regarding the status of safety within the RMG industry. Additionally, each interviewee's offered their views on requirements to develop a sustained culture of safety in the workplace.

## Definitions

*Elimination of paradoxes:* Eliminating the misunderstanding of the interconnectedness of the variability of human action (Reason, 1998).

*International Labor Organization:* A United Nations agency that resolves labor issues, such as international labor standards (F. Z. Ahmed et al., 2014).

*Mock compliance:* When a supplier conceals nonadherence to policy and appears to be complying with a code of conduct (Huq, Stevenson, & Zorzini, 2013)

*Readymade garment (RMG):* Untailored, mass-produced finished textile clothing and apparel (Ahmed, 2009).

*Reciprocal determinism:* Derives from social cognitive theory and entails that personal and environmental factors influence individual behavior (Cooper, 2000).

*Safety climate:* An individual's perceptions of safety policies, procedures, practices, and behaviors in the work environment that indicate true priority given to safety relative to other organizational goals (Bosak, Coetsee, & Cullinane, 2013).

*Safety culture:* An implicit group of shared beliefs, attitudes, or convictions that help minimize exposure of employees and managers to danger or injury (Guldenmund, 2010; Lallemand 2012).

## Assumptions

Understanding the assumptions of a study provides a foundation for making statements about the nature of the findings (Patton, 2002). The key assumption of this research was that the sampled workers, employers, and government officials were representative of the target population of RMG workers, employers, and government officials. In addition, I assumed that participants provided honest and open responses to the interview questions. A final assumption was that all participants were able to provide firsthand knowledge regarding their individual experiences. These assumptions were necessary to provide a baseline of understanding for the study.

## Scope and Delimitations

In this study, I focused on RMG industry factory workers in non-Accord or Alliance factories, and I intentionally did not include victims of the Rana Plaza collapse. This event had an effect on the families and friends of the deceased and Rana Plaza victims, who are still living. Although tragic, it would not serve the purpose of this study to interview the aforementioned victims, as it may have skewed the results. Additionally, due to the politically charged nature of the RMG safety issue, the vulnerability of the workers, inter-relationships among the workers, and to alleviate any fear of reprisals the study approach that provided assurance that the identity of interviewees would remain confidential. Protecting participants' confidentiality was crucial, as in some instances employers fired workers who raised questions regarding factory safety (R. Wayss, personal communication, December 8, 2014).

Although unique to the Bangladesh RMG sector, a potential exists for knowledge

gained in this study to be relevant to other sectors, because of practical applications to other sectors in Bangladesh. However, some Bangladesh-specific nuances may exist to safety culture that may not apply to industries outside of Bangladesh. Still, the basic concept can apply globally to any industry with safety concerns.

## Limitations

Potential issues of validity in this qualitative research study included researcher bias, misinterpretation of collected data, lost meaning of translated words, generalizability, and participants choosing to drop out of the study. In qualitative research, researcher bias can pose a threat to data collection and interpretation (Flyvbjerg, 2006). With this in mind, I set aside personal biases and remained open to new perspectives. Additionally, I was prepared in the event of misinterpretation of data provided by participants. I used a certified translator during the interview process to accurately interpret interviewees' responses as well as their verbal and nonverbal cues. Because of the small sample size, as compared to the target population, I anticipated that generalizability may be difficult to achieve, which represented a limitation to the study. Furthermore, as expected, some participants choose to withdraw from the study, resulting in a loss of data.

## Significance

The study contributes to the existing body of knowledge in scholarly, global, and business communities regarding how safety beliefs contribute to practices and safety protocols in the RMG industry in Bangladesh. Organizational culture is what can encourage safety performance because culture and subcultures influence safe practices

and underlying assumptions (Blair, 2013). Furthermore, to establish a safety culture, it is essential to (a) report and catalog injuries and accidents without fear of reprisal from organizational leaders, (b) develop safety rules and adhere to those rules, and (c) train leaders to observe and re-enforce safety behaviors (Blair, 2013). To accomplish these tasks efficiently, and because a remedy and plan of action begin with reporting and examining basic information, researchers need to understand the present practices in the RMG sector of Bangladesh.

Lallemand (2012) noted that safety culture influences management decisions, organizational policies, and safety practices. Moreover, Lallemand described safety climate as a behavioral manifestation of safety culture and that both concepts need to be assessed to prevent workplace accidents. Additionally, identifying hazards and estimating risk is key to maintaining a safe work environment (Pinto et al., 2013). In addition, companies need to minimize risk through a risk assessment program and control mechanisms. This can be accomplished through engineering controls, administrative or work practices control, and personal protective equipment. Hossan, Sarker, and Afroze (2012) contended that responsibility ultimately lies with managers and that managerial skills are of particular importance in labor-intensive industries. Managers' lack of competence may put workers at risk (Hossan, Sakar, & Afroze, 2012). I examined which part of the mechanism of safety contributes to safety failures and risks.

This study has fundamental implications for a shift in thinking about safety culture by elucidating how cultural beliefs influence behavior and how this understanding can propel the development of a climate for positive social change. In terms of practical

application of policy, the study filled the gap between assumption and practice, as well as the difference between ideas and policy implementation for workers, employers, and government officials in Bangladesh's RMG industry.

## Summary

While the RMG industry in Bangladesh is significantly expanding, many tragic events occurred in the past decade, including fatal accidents, such as the Tazreen Fashion factory fire that killed 112 people on November 24, 2012 and the Rana Plaza collapse on April 24, 2013 that claimed more than 1,100 lives. The severity and frequency of these disasters merits an examination of what caused safety failures as well as the current state of safety culture and practices. An important step in this effort is the National Tripartite Plan of Action on Fire Safety and Structural Integrity established in 2013. This plan called on workers, employers, and government officials to join in an effort to improve working conditions in the RMG industry and find a sustainable approach to the current problems in the RMG sector of Bangladesh (ILO, 2013; MOLE, 2013).

However, according to researchers, a divide exists between safety culture theory and its application in the workplace (Guldenmund, 2010; Hudson, 2007; International Atomic Energy Agency, 2002; Naevestad, 2009; Pidgeon, 1998). To gain a better understanding of how culture influences and informs safety decisions, researchers need to examine safety culture in the RMG industry in Bangladesh. This qualitative study contributed information regarding safety culture in the RMG industry to develop a sustainable culture of safety that will reduce the likelihood of workplace accidents. This study can potentially provide the impetus for behavioral change that is not only reflected

in the workplace, but also in the home. The results of this study have potential to create positive social change from the perspectives of workers, employers, and government. Chapter 2 presents the literature and a further examination of the complexities and applications of safety culture.

# Chapter 2: Literature Review

## Introduction

A need exists to establish a foundation for safety culture in the workplaces of Bangladesh's RMG industry. A partnership between workers, employers, and government regulators will make safety culture a reality. Establishing safety culture is vital, as the existence of safety culture plays a role in preventing accidents in the workplace (Pidgeon, 1998; Reason, 1998).

Limited information exists regarding safety culture within the RMG industry in Bangladesh and the gap between predominant worker attitudes, culture, and behavior on creating a safe workplace setting (Naevestad, 2009; Pidgeon, 1998; Wadud et al., 2013). The gap in the literature needs addressed is how workers and employers define safety. The results of this study may lead to improved working conditions, highlight policy gaps, or aid in exposing weak points to address the infrastructure of safety implementation of the RMG sector in Bangladesh.

Researchers have addressed the distinction between the concepts of safety culture and safety climate, the role organizational leaders and workers play in ensuring a safe work environment, and the significance of beliefs and behavior regarding how workers and employers prioritize safety (Beus et al., 2010; Bosak et al., 2013). The literature provides a basis for further inquiring into the inter-relationship of key stakeholders regarding safety. However, not much literature exists on the tripartite relationship between workers, employers, and government authorities regarding safety. The purpose

of this study was to gain an understanding of the perspectives of the three parties in an effort to find an approach to safety in the workplace.

In this chapter, I discuss literature search strategy. Additionally, this chapter includes a background of the events that occurred because of safety lapses in RMG factories and a definition of safety culture. I also summarize the research related to safety culture and safety climate, and then delve into the theoretical and conceptual framework that provided the setting for further inquiry. The focus pertains to literature regarding organizational safety standards within the RMG industry and the distinction between safety climate and safety culture.

## Literature Search Strategy

Keywords used to search various databases led to a compilation of literature for this review. Among the journal databases searched, those that generated the most applicable results were SAGE, JSTOR, EBSCO, Wiley, and Elsevier. The search involved a multitude of other databases in the process with the peer-reviewed feature selected before generating the returns. I reviewed current literature containing empirical research in relevant areas. The literature appeared in a wide range of publications, such as *Journal of Risk Research*, *Journal of Accounting, Common Law World Review*, *Safety Science*, *International Journal of Injury Control and Safety Promotion*, *Journal of Applied Psychology*, *Society for Risk Analysis*, *International Journal of Operations and Production Management*, and *Journal of Contingencies and Crisis Management.*

Google Scholar results allowed access to related articles. Additionally, further review of key authors' work revealed other relevant research, which resulted in more

articles to review. In addition, I reviewed identified journals, especially in specifically themed issues, for other relevant work. The keywords used included *ready-made garment industry*, *Ready-made garment*, *Bangladesh*, *safety culture*, *garment industry*, *culture of safety*, *safety climate*, *safety intervention*, *risk management*, *organizational culture*, and *occupational safety.*

Few articles were available that related to the RMG industry in Bangladesh. This provided an opportunity to widen the search to include articles on general safety topics. This approach allowed for a broader view of safety considerations and resulted in finding an adequate source for literature to review. Research published more than 5 years ago was the starting point to find recent research on safety.

## Theoretical Foundation

The term *safety culture* derived from reports published in the wake of the nuclear disaster at Chernobyl in April of 1986. Chernobyl was one of the largest nuclear disasters in history in terms of cost and casualties, and it prompted studies and analysis that led to the theory of safety culture. Oversights, because of beliefs and organization culture, lead to accidents (Guldenmund, 2010; Hudson, 2007; International Atomic Energy Agency, 2002; Naevestad, 2009). Although safety culture is a popular concept, it is not well understood, and scholars agree that research on safety culture is fragmented and unsystematic (Naevestad, 2009; Pidgeon, 1998). Naevestad (2009) suggested that the problem with current worker safety culture is that it is not contextual and specific, but seen as a general model. This approach does not allow for gauging and examining behaviors.

Safety culture can protect workers if workers are intrinsically interested and employers invest in ensuring worker safety. This requires both workers and employers to internalize and implement safety measures. Guldenmund (2010) defined safety culture as an implicit group of shared beliefs, attitudes, or convictions that help minimize exposure of employees and managers to danger or injury. Hence, to create intrinsically motivated workers, companies need to change their attitudes and behaviors so that they seek change in addition to following rules and established protocol. This builds on Bandura's (1978) reciprocal determinism theory, which suggests a direct relationship between success of accomplishing goals and confidence levels. Raising confidence levels to achieve goals requires workers to believe in success and a change in behavior to reflect this belief. Pidgeon (1998) recognized a distinction between beliefs and behaviors. However, confidence, or lack thereof, determines the distance between beliefs and behavior.

Other researchers also defined safety culture, and these definitions range from grouping it as a social responsibility, to an organization's pattern of response, to social beliefs, and mental programming of employees (Advisory Committee on the Safety of Nuclear Installations, 1993; Berends, 1995; Cox & Cox, 1991; International Nuclear Safety Group, 1986; Ostrom et al., 1993; Pidgeon, 1998; Richter & Koch, 2004; Westrum, 2004). Cox and Flin (1998) stated that an organization's values, procedures, and behaviors represent its culture. However, because no definite theory of safety culture exists, academic debate is not sufficient to establish a theoretical framework, which creates difficulty in finding tools and theories for assessing and evaluating a given safety culture in particular industries and establishments (Cox & Flin, 1998). Reason (1998)

defined the elimination of paradoxes within safety culture theory as a step closer to establishing a true culture of safety. The variability of human action, though often looked at as a liability because of error, is what maintains safety in the face of a changing environment (Reason, 1998). This is because variability allows for more complex adaptability (Reason, 1998). If rules and procedures are viewed as guidelines that allow for flexibility regarding how to implement safety measures, then employers will be motivated to empower workers to take ownership of workers' safety.

Adaptability requires organizational understanding of its value and support of workers. Mullen and Kelloway (2009) stated that safety leadership is a contributing factor to the prevention of accidents and injuries in the workplace, especially transformational leadership, because, in additional to compliance, safety leadership emphasizes safety management on a more engaged level with employees. Positive interaction on safety between leadership and workers will lead to increased interests in identifying safety problems and will reduce fears that oftentimes stigmatize safety efforts (Pidgeon, 1998). This interaction will help reduce the likelihood of accidents. Failure to recognize impending danger through narrow perceptions, overlooking problems, and communication difficulties can lead to major accidents (Pidgeon, 1998). Widening perceptions and reducing communication difficulties can lead to safer working conditions.

A concerted effort between safety professionals, managers, and workers to identify areas of mutual interest can help to lay the groundwork for safer working conditions. Rock (2003) found a relationship between working conditions and labor

processes in an effort toward collective action to improve working conditions in the RMG industry through the unionizing of workers. However, Rock noted that unionizing is difficult because the government protects the industry and owners have political ties. Many companies began negotiating with labor unions and nongovernmental organizations after the Rana Plaza collapse, and those companies have signed on, since May 2014, to a legally binding plan to ensure funds are available for safety improvements (Greenhouse, 2013). The companies included in this scheme are H & M, Carrefour (the parent company of Calvin Klein), and Tommy Hilfiger.

The aforementioned theoretical considerations proposed by Mullen and Kelloway (2009), Pidgeon (1998), and Rock (2003), along with practical application of Greenhouse's (2013) example warrants examination. Their combined perspectives highlight the importance of workers recognizing unsafe working conditions and employers creating a forum of open communication. Potential exists for a mutually beneficial relationship between employer and employee representatives that will prove valuable to creating safe working conditions. Safe working conditions can set the stage to motivate worker to be proactive in ensuring their own safety.

## Theoretical Framework

The theoretical framework for this study built on Pidgeon's (1998) findings that a divide exists between belief and behavior in terms of safety issues in the workplace. Pidgeon discussed preconditions to organizational systems failures as determinants of risk management. These conditions include a work environment that does not advocate proper safety measures, which leads to systems failures. Workplace safety culture is a

paradox because it always promotes safety, but does not always enforce it; a good safety culture is a precondition for safe operations, but a weak safety culture can be the cause of accidents (Pidgeon, 1998). Therefore, a divide exists between safety culture and organizational outcomes, which causes the preconditions for accidents. Pidgeon also recognized that uncertainty causes difficulty in managing a complex system with weak infrastructure management, lack of information, and often ignorance. Pidgeon's solution was to engage in the process of social negotiation and to look at institutional politics and power because they are critical for the outcome of safety culture goals and organizational learning.

Political will of government officials to prioritize safety for the RMG industry and society, as a whole, is necessary to shows the commitment of government and harnesses a collective effort among stakeholders. Naevestad (2009) agreed that research on safety culture is unsystematic and unincorporated into general models of an organization. This lack of contextual consideration is a problem, and safety, culture, and technology need to come together for implementation of a sustained safety culture (Naevestad, 2009). Determining a definition of safety culture that researchers can measure and evaluate is essential (Naevestad, 2009). Patterns of behavior are easier to change than patterns of meaning, and what people believe may be irrelevant in establishing safety norms, as long as they comply with established practices. However, regarding studies of culture within organizations, looking at patterns of behavior is only a superficial view and an examination of a more complex cultural context and undercurrents is necessary (Naevestad, 2009).

Reciprocal determinism theory provides a possible answer to the inquiry pertaining to the influence of behavioral patterns on establishing a sustainable safety culture. This theory states that the individual influences his or her environment and the environment influences the individual. Therefore, an individual's beliefs and behaviors require an in-depth examination to understand how he or she interprets his or her surroundings. If this can be determined, then a general theme can be understood to address how the individual can have a useful role in shaping his or her environment (Bandura, 1977, 1978). Reciprocity that is positive and constructive can build self-efficacy in the individual, leading to a change in behavior (Bandura, 1977, 1978). Positive reciprocity is the beginning of developing safety culture.

Merging the gap between culture and behavior could produce a sustainable safety culture in the RMG industry. To accomplish this, an acceptance of safety culture by workers, employers, and government must exist in their interactions (Cox & Flin, 1998; Rock, 2003). Additionally, researches need to build a theory of safety culture to establish a theoretical framework for definitions and measures (Cox & Flin, 1998). Reason (1998) contended that to create this structure, eliminating paradoxes in safety culture theory should be a priority. Some of these paradoxes include the notion that the absence of safety defines safety and that barriers and safeguards are designed to increase safety, but instead these barriers can be the source of safety failures and the goal of absolute zero accidents can impede smaller, realizable safety goals.

## Review of the Literature

To compose this literature review, I considered various articles in the body of

knowledge. Pinto, Ribeiro, and Nunes (2013) stated that hazards are real, but risk is socially constructed and often tools designed to assess safety are a blend of science and judgment based on psychosocial, cultural, and political factors. This judgment can create complexities that lead to safety failure. Many companies complete an occupational safety risk assessment (OSRA), but this can present a superficial analysis of hazards and only serve as paperwork to comply with legal requirements (Pinto et al., 2013). A thorough and effective use of the OSRA depends on analysts' skills, sufficient data, coverage of hazard identification, and accuracy of consequences estimation (Pinto et al., 2013). The analyst must be able to gather correct data from factories. Collecting such data is sometimes difficult to achieve in the current environment.

Additionally, results of an OSRA depend on (a) initial assumptions, (b) simplifications made in the system's description and accidents modeling, (c) confidentiality, (d) inaccuracy of consequence models, and (e) ill-defined data (Pinto et al., 2013). Subjectivity creates room for error in completing the OSRA in every stage of the process, from the initial structuring of risk to the final assessment (Pinto et al., 2013). The limitation of the OSRA is that it depends on information subject to uncertainty, imprecision, or left incomplete. The lack of data or incomplete data, measurement errors, or subjective interpretation also contributes to OSRA limitations. The tools designed to assess safety are a result of multiple factors. The three factors of psychosocial, cultural, and political related to the study and aligned with exploring perspectives of workers, employers, and government regulators.

Understanding of different perspectives between workers, employers, and

regulators can serve as a basis to bridge the gap between beliefs and behavior. Beus, Payne, Bergman, and Arthur (2010) noted that two-thirds of workplace injuries go unreported by employees because of fear of disciplinary action or loss of wages. Consequently, figures that account for worker injury may not include unreported incidents. Beus et al. contended that this informational lapse is because of a breakdown of safety climate, and those safety climates that do support safety have lower workplace injury rates. Beus et al. defined safety climate as "employees' perceptions of organizational safety policies, procedures, and practices" (p. 713). Compared to safety culture, which focuses on belief, safety climate focuses on behavior, and because safety climate informs behavior expectancies, a supportive safety climate that reinforces safe behavior results in fewer injuries (Beus et al., 2010). An unsupportive climate, in which safe behavior is not encouraged or is punished, is associated with more injuries (Beus et al., 2010). Bandura's (1978) reciprocal determinism theory explains how self-efficacy can lead to a supportive environment and safer working conditions.

A safety climate can be a predictor of workplace injuries, but workplace injuries can also be a predictor of safety climate, largely because injuries provide information about worker safety practices in the workplace (Beus et al., 2010). Individual perceptions influence worker safety practices. Organizational policies, procedures, and practices build individual perceptions, thereby creating a psychological climate (Beus et al. 2010). However, organizational climate is collective and reflects group policies, procedures, and practices; hence, the organizational and psychological climate should be distinguished from each other. Psychological safety climate reflects individual perceptions of policies

and procedures, whereas organizational safety climate is the collective of perceptions of these concepts (Beus et al., 2010). A triangulation of individual and organizational themes is necessary to find similarities in perceptions of safety culture.

To create understanding of how culture influences climate and vice versa, an understanding of its similarities must exist. Lallemand (2012) distinguished the differences between a safety climate and safety culture and suggested that one informs the other: safety climate is a behavioral manifestation of safety culture. Safety climate may be easier to gauge and measure, but safety culture is the overarching, complex structure that ultimately determines and shapes how the results of practices and beliefs come together to produce and shape the safety of an organizational environment (Lallemand, 2012). Additionally, Lallemand suggested that it is key to define what a positive safety culture is in order to achieve that culture. Some factors that govern the application of the definition of safety culture include management decisions, organizational policies, and safety-related practices and processes (Lallemand, 2012). A successful safety culture reflects a shared understanding by employees that safety is the first priority in the workplace. An organization that develops and maintains a safety culture will be more effective at preventing accidents, especially when attitudes and behaviors of employees align with company goals (Lallemand, 2012).

In order to provide platform to synergize behaviors with company goals an understanding of culture and its influence on behavior is necessary. Tharaldsen and Haukelid (2009) highlighted the difference between cultural theories and behaviorism, noting that behaviorism does not involve the cognitive aspects of human life and narrows

the focus only on behavior. Tharaldsen and Haukelid also found that prior researchers paid little attention to cultural perspectives in safety research, and suggested that a better understanding of cultural approaches might clarify the cultural or subcultural influences on safety practices. Researchers with traditional views of industrial accidents tend to blame technological and human failures, but failures that lead to accidents are dynamic problems between social and physical environments (Bjerkan, 2010).

**RMG Industry and Organizational Safety Standards**

Among many other organizational issues, organizational performance is the responsibility of managers (Hossan et al., 2012). Managers often do not have the skills or competencies necessary for managing superior performance (Hossan et al., 2012). Organizational performance includes effectiveness, productivity, and efficiency, but human resource management is also important (Hossan et al., 2012). This is particularly true for labor-intensive organizations. Researchers have noted a link between organizational performance and efficiency in human resource management (Hossan et al., 2012). Although researchers have examined human resource management in many developed countries, limited studies exist regarding developing countries, such as Bangladesh (Hossan et al., 2012).

With the rapid growth of industrialization in Bangladesh, the RMG sector is expanding. The sector employs approximately 4 million people, of which 56% are women (DIFE, 2016). Beyond the RMG industry, employment is limited with 40% of the country's 60 million people unemployed (Kaye & Arendse, 2005). Additionally, the RMG industry accounts for approximately 48% of all jobs in the manufacturing sector

(Hossan et al., 2012). With such a large workforce, managers must lead, schedule tasks, mediate, and motivate workers (Hossan et al., 2012). Successful managers are crucial because the difficulty in the RMG industry is not limited to competitiveness or factory compliance, but includes additional factors, such as lead times and unavailability of fabrics, which place workers and managers in a difficult situation and create a bottleneck effect under slow production and increased pressure (Kaye & Arendse, 2005). Pressure to produce increases the likelihood of serious or dangerous workplace safety violations.

Part of the problem in developing sound safety standards is that stronger economies encourage investors, regulators, nongovernmental organizations, and civil society groups to collaborate with the private sector to self-regulate (Rahim, 2012). However, weak economies in developing countries do not have this kind of environment that enables different actors to shape corporate attitudes (Rahim, 2012). The difficulty in developing countries is that corporate laws have not delineated stakeholders' rights and limitations (Rahim, 2012). Bangladesh lacks a corporate regulatory framework that would involve more interaction between stakeholders and government. However, because of poverty, illiteracy, and lack of dissemination of information, little action on corporate issues by nonstate actors exists in the civil sphere in Bangladesh (Rahim, 2012).

In strong economies, these types of actors monitor the actions of businesses and even impose sanctions against some corporate behaviors (Rahim, 2012). In Bangladesh, these actors cannot gain enough public support for such actions, because the number of nongovernmental organizations that work in the corporate sector is low; therefore, civil influence is limited (Rahim, 2012). Low civil influence was evident in public

demonstrations to increase the minimum wage. Few nongovernmental organizations were involved and workers were not able to bring enough public support and attention to the issue (Rahim, 2012). A lag exists in the development of legal regulations and social responsibility in corporations in Bangladesh. Rahim (2012) pointed to the corporate attitude as one that complies with rules and regulations, but lacks disclosure. Corporations expect to be trusted, but complying with regulations is not part of corporate management strategies (Rahim, 2012).

A study conducted by the Centre for Policy Dialogue revealed this lag between corporate promises and reality (as cited in Rahim, 2012). The study, conducted in 2003, included 50 company executives, 70 employees of various companies, and 32 civil society members (Rahim, 2012). The researcher found that more than 60% of companies did not have clear policies for issues related to workers' rights (Rahim, 2012). None of the companies had a director assigned to address the issue of workers' rights, and only 11.1% of these companies had management committed to this problem (Rahim, 2012). On the issue of human rights, 4.4% of these companies had management committed to the issue (Rahim, 2012). Of these companies, 67% had policies in place to ensure a clean, healthy, and safe working environment, but 26% of the companies did not have procedures for senior management pertaining to these policies (Rahim, 2012). One-fourth of RMG factories do not comply with mandatory pay standards, and corporations and employers considered labor costs fixed and unrelated to productivity (Rahim, 2012).

Huq, Stevenson, and Zorzini (2012) also affirmed that many corporations struggle with managing social sustainability issues in their supply chains and have difficulty

improving conditions. A lack of research exists regarding operations and supply chains in terms of social sustainability, and researchers conducted most studies within developed countries (Huq et al., 2012). As a result, existing models of social sustainability or social responsibility are based on the experiences of developed countries, and do not consider the cultural, market, and technological environments of developing countries (Huq et al., 2012).

The difficulty in improving conditions lies in compliance efforts (Huq et al., 2012). *Mock compliance* is a term used to describe when a supplier conceals nonadherence to policy and appears to be complying with a code of conduct (Huq et al., 2012). Many corporations admitted to some form of mock compliance to pass audits. One example is staying open on Fridays, a public holiday in Bangladesh (Huq et al., 2012). Another example is breaking a local law, which dictated that employees should have one day off per week. Many factories stay open on Fridays and conceal this from auditors. Additionally, the ILO global standard clearly requires regulated hours of work (ILO, 2016). Local law limits only allow 2 hours per day of overtime, but to meet output targets these hours are not enforced (Huq et al., 2012). This may seem like corporations are exploiting the workforce, but many employees desire overtime because the hourly rate is higher and it supplements their income (Huq et al., 2012). Employees go so far as to slow down toward the end of the week to ensure overtime hours. If no offer of overtime exists, companies risk losing employees to another factory (Huq et al., 2012).

Usually, employers keep two timesheets—one for buyers and auditors that complies with regulations, and one used to pay workers, which reflects actual hours

worked (Huq et al., 2012). Employee noncompliance with regulations is common, as well, with full knowledge of these practices by auditors and buyers (Huq et al., 2012). Auditors understand this unspoken agreement with overtime and do not ask how much overtime workers accrued, or they simply ensure workers receive fair wages and without forced work hours (Huq et al., 2012). At the end of the year, if auditors believe employees have worked too many hours overtime, auditors will ask employers to cut back; but they will not fail the factory in the audit (Huq et al., 2012). Still, third-party auditors, who do not understand, carry out audits; hence, the reason why factories keep two sets of records (Huq et al., 2012).

**Safety Culture and Safety Climate**

According to Hudson (2007), safety climate receives much attention and is easier to measure, but the best and safest organizations have a safety culture. Safety climate becomes a way of assessing safety culture. However, safety culture is difficult to implement because multinational corporations conduct a broad range of operations, often in many time zones and spanning several languages and cultures (Hudson, 2007). A hands-on approach is not feasible for such complex and varied organizations.

According to Lallemand (2012), employees' unsafe actions are one of the leading causes of workplace accidents. Corporations examining worker behaviors to address this problem and the development of a strong safety culture is essential to develop safer practices among employees (Lallemand, 2012). Because safety climate reflects safety culture, it has been a focus of researchers (Lallemand, 2012). Lallemand defined *safety culture* as the attitudes, beliefs, perceptions, and values of employees that pertain to

worker safety. Therefore, companies can integrate safety culture into the organizational culture (Lallemand, 2012).

Management decisions, regulatory policies, and safety-related practices or processes constitute elements that contribute to safety culture within an organization. Lallemand (2012) defined a positive safety culture as one that places safety as the priority in the company and reflects that employees understand this as a top priority. An organization that develops and maintains a strong safety culture is more effective at preventing accidents (Lallemand, 2012). A positive safety culture also is associated with increased job satisfaction, work involvement, and organizational commitment (Lallemand, 2012). Promoting safety culture is broader and has an effect beyond safety. Researchers view safety climate as an alternative indicator of the safety of an organization (Lallemand, 2012). The climate goes beyond measuring the frequency rate of accidents, as these performance measures only provide superficial information, and do not help the investigators understand perceptions about safety. Many scales exist for measuring safety climate, but to understand how safety climate affects behaviors at work, researchers developed structural models that help explain the complexity of worker behavior (Lallemand, 2012).

Tharaldsen and Haukelid (2009) contended that the problem involves the concept of culture being technical in nature. This technical view means that complex problems are often superficially treated, and much of the safety culture research pertained to procedures. The researchers also found that attempts to ignore conflicting issues lead to superficial or inadequate explanations (Tharaldsen & Haukelid, 2009). This echoes

findings by Reason (1998), who defined the elimination of paradoxes within safety culture theory and Bandura's (1978) reciprocal determinism theory as a path to establishing a genuine safety culture.

Trust and involvement are necessary to change worker behavior and commitments. According to Tharaldsen and Haukelid (2009), this process fails if:

1. There is no trust between management and employees;
2. The intervention serves as a management tool to spy on the employees;
3. The process is used as a weapon towards the employees; and
4. The employees experienced a lack of correspondence. (pp. 376–377)

Limitations to implementing a strong safety culture could also include rejection of performance goals or not reaching expected safety goals. Employees have a lack of risk awareness if they do not recognize some behaviors as dangerous (Tharaldsen & Haukelid, 2009).

Bjerkan (2010) contended that organizational culture is conscious and unconscious, meaning it consists of visible behavior, values, and beliefs. In addition, employees' values and beliefs reflect the values of senior management (Bjerkan, 2010). A persistent problem is that the two terms, *climate* and *culture*, are interchangeably used, but the two concepts are not synonymous (Bjerkan, 2010). Bjerkan defined *climate* as localized and focused on one point in time to evaluate workers' perceptions at the time of measurement. *Organizational climate* is temporal and defined regarding the employees' perceptions of various aspects of the working environment (Bjerkan, 2010). Bjerkan defined organizational climate as "a property of the individual, defined by how it is

interpreted and perceived by the employees" (p. 448); however, the researcher defined *culture* as the property of the organization. Bjerkan also linked cultural climate as essential to creating safe worker behaviors and organizational climate to leadership styles, work morale, levels of work stress, accident rates, burnout rates, and turnover rates.

Cox and Flin (1998) stated that a good safety culture is important, but is not the solution to all health and safety-related problems. While a need exists to assess prevailing safety standards, the validity of safety culture as a concept and a tool remains largely unproven (Cox & Flin, 1998). One problem is that the idea of safety culture has become a widely used concept for all social, psychological, and human factor issues. Cox and Flin also suggested that optimism might have dangerously inflated the problems that the concept of safety culture can solve. For example, the idea of what a healthy safety culture encompasses is open to interpretation. However, in the absence of sound theory, the notion of safety culture runs the risk of becoming meaningless (Cox & Flin, 1998). Developing a sustained safety culture will provide the basis to build thorough safety practices. A safety culture that all stakeholders embrace and value will provide the impetus for a meaningful and sustainable safe work environment. Understanding the complexities of safety culture will allow researchers to create a well-defined theory of safety.

Reason (1998) contended that the pursuit of safety entails a paradox in organizational culture. The researcher also suggested that the better companies understand these mysteries, the more likely the implementation of safe practices (Reason,

1998). However, identifying the existence of a paradox is not enough (Reason, 1998). Reason added that the investigation of adverse events is not as productive in examining these paradoxes, as is the close observation of high reliability organizations. In measures of safety and in written records, many employers try to conceal rather than reveal paradoxes. According to Reason, these paradoxes allow researchers to define and measure safety related to its absence or only when accidents occur. For example, safety equipment design relates to protection, but often defenses, barriers, and safeguards cause harm by preventing evacuation. Reason contended that human ability to adapt to conditions is what preserves system safety. Additionally, that belief in absolute safety or zero accidents can impede the achievement of safety goals. Achievable safety goals entail accepting residual risks and establishing protocols to deal with those risks.

Guldenmund (2010) noted that culture is a value-free concept, but safety is not, which poses a problem in safety evaluations. Safety involves tracking behavior, but understanding culture pertains to the meaning of behavior (Guldenmund, 2010). This makes researchers' assessment of safety culture complicated, and behavior tends to become the primary focus; thus, the behavior itself overshadows the actual meaning of the observed behavior (Guldenmund, 2010).

Safety evaluations aimed at developing safety management systems are far more efficient when considering overall safety rather than creating an attractive looking façade on paper to fit with a bureaucracy of rules and procedures (Guldenmund, 2010). Organizations that can learn continuously tend to be more successful. Guldenmund (2010) suggested that organizations that notice weaknesses in their safety procedures

might be able to prevent events that have yet to materialize into something significant. Guldenmund further recommended that an uninhibited flow of information throughout the organization would help with safety evaluations and accident prevention. Along with valuing qualities, such as trust and responsibility, organizations can promote empowerment to the workforce and solve safety issues. Simply stated, an efficient prevention program will ensure worker safety. For example, a sound fire safety management plan embraced by employees and employers of the RMG industry in Bangladesh may serve this purpose.

**Effective planning.** Political complexities, problems with infrastructure, and economic issues offer complications. However, basic fire protection is more straightforward (Alamgir et al., 2013). Interventions, such as protected escape paths, fire drills, emergency plans, training, first aid stations, alarm systems, exit signage leading to unlocked exits, and announcement systems should be in use (Alamgir et al., 2013). Additionally, Alamgir et al. (2013) suggested that higher-level policy changes that ensure safety, skill development, upward mobility, improved health care, and wage enhancement need to be addressed in the RMG industry in Bangladesh (Alamgir et al., 2013). Furthermore, Alamgir et al. noted that some underlying issues that need provisions include improved worker awareness of legal rights and accurate and truthful monitoring and enforcement of existing laws.

**Cost and logistics.** The pressure for price reductions begins with the final consumers, which carries on to the producers, and ultimately to the workers. Globalization and increased competition cause this pressure (Ahmed, 2014). This results

in more subcontracting of production work or employment of part-time or home-based workers (Ahmed, 2009). The difficulty with this type of employment is that it is a challenge to monitor work, and therefore a higher chance exists that workers' rights are violated (N. Ahmed, 2009). As defined by the ILO, workers' rights follow the concept of ''decent work'' (N. Ahmed, 2009, p. 610). This concept of decent work sets work standards and shapes the social environment for employment of workers (N. Ahmed, 2009). Because of these work standards, social standards have evolved as indicators of the competitiveness of a country. Economists consider poorer countries to have an unfair advantage because the working conditions are often exploitative (N. Ahmed, 2009). Low-cost labor, a source of competitiveness in the RMG industry, remains inexpensive because workers' rights, wages, overtime payment, maternity leave, job security, and factory environment are continually violated (N. Ahmed, 2009).

Infrastructure bottlenecks and inefficiencies further complicate an already stressed workforce (N. Ahmed, 2009). Production interruptions in electric power, gas, port facilities, and telecommunications affect completion and transport time of goods from Bangladesh, which reduces the competitiveness and hampers the quality of production, increases cost, and extends lead times (N. Ahmed, 2009). Researchers have identified infrastructure as an important determinant of transportation cost and transporting goods increases with poor infrastructure (N. Ahmed, 2009).

## Summary

As seen in this review of the literature, although previous researchers have made efforts, many obstacles still exist toward improving safety standards, practices, and

culture in the RMG industry in Bangladesh. The workforce and RMG industry are expanding in Bangladesh, but with a history of accidents in the last decade, efforts to establish parameters and infrastructure for safety require implementation. Worker beliefs and practices require examination in terms of safety to build a foundation for safety culture in the workplace.

With the National Tripartite Plan of Action on Fire Safety and Structural Integrity, workers, employers, and government officials are improving communication and infrastructure (ILO, 2013; MOLE, 2013). However, Ahmed, Greenleaf, and Sacks (2014) stated that the problem of developing better worker safety is more complex than building inspections and changing policy; rather, it depends on changing the context of weak governance, corruption, and competitive production. One way to accomplish change in safety awareness is to examine safety culture. However, safety culture is a complex term that scholars defined and redefined without any clear applications in practice (Bjerkan, 2010; Reason, 1998). Merging this gap between culture and behavior is key to producing a sustainable safety culture in the RMG industry, but to accomplish this, an acceptance of safety culture by workers, employers, and government must exist in their interactions.

The literature review showed a gap in the literatures on the understanding of safety culture and its application in the context of bangladesh's RMG industry. Filling the gap in the literature would allow for a deeper understanding of the parameters that separate workers, employers, and government. In addition, bridging this gap offers a unique addition to the literature regarding the need for a tripartite relationship in

establishing safe working conditions. This assumption requires further inquiry into the perspectives of workers, employers, and government officials on safety in the RMG industry of Bangladesh. Triangulation and understanding similarities goes a long way in bridging gaps (Cooper, 2000). Additionally, these findings serve as the foundation for a change in thinking and behavior toward workplace safety. This positive social change can inspire better cooperation between government, employers, and workers in Bangladesh's RMG sector and beyond. The next chapter details the research methodology used to collect and analyze information from research participants.

# Chapter 3: Research Method

## Introduction

Beliefs, habits, and practices of workers in the RMG industry in Bangladesh regarding safety culture require further analysis to begin to understand perceptions of safety norms. Proper safety norms may prevent accidents in the workplace. A deeper understanding of these perceptions or experiences may contribute to increased workplace safety (Pidgeon, 1998). Because little knowledge exists regarding perceptions of safety culture in the Bangladeshi RMG sector, the intent of this study was to explore the perception of safety from the viewpoints of workers, employers, and government.

In this chapter, I explain the method and approach to my research, as well as the participant and data collection techniques. The chapter also presents a description of data analysis and ethical procedures with protocols to remedy any possible harm to the participants.

## Research Design and Rationale

The research centered on the following research question.

RQ1: What is the perception of workers, employers, and government officials on safety in the RMG sector of Bangladesh?

Management must have an interest in worker safety, while workers must be motivated and understand the benefit of safety. In this regard, I considered the behavioral aspects of workers toward safety. I considered the pressure to produce and how this affects safety. This study was aimed at determining which incentives drive a worker's active participation, as well as what the government and employers can do to make a

safer and more productive work environment through technology, which will not impede worker comfort and will allow for safe evacuation during an emergency. Consideration for incentives requires a clear understanding from employers and regulators on the needs of the workers.

To better understand safety culture, I examined both worker and employer perspectives. A qualitative approach was necessary to answer the research question posed in this study. Qualitative research was best suited for this study because the experiences and perceptions of study subjects served as the data, as numerical representations were not available. Because analyzing the perceptions of Bangladesh workers is a broad concept that requires exploration rather than detailed and specific examination, a qualitative method was appropriate (Morse, 1994). A high level of rich content is the hallmark of qualitative research; this richness does not appear when using quantitative methods, as detailed responses and perceptions go into much more depth than statistical inferences (Yin, 2014).

In using a qualitative method, I conducted a case study using a content analysis approach. The goal of a case study research is to examine a specific and bounded case in order to contribute to an increased understanding without regard to transferability to other contexts. Assessment of transferability is necessary because the results of the study are intended to reduce the chance of subjective inputs from external factors. The setting for this study was the RMG industry in Bangladesh. When conducting the case study, I had little control of the events pertaining to the research so that the participants had a higher level of control. This control allowed participants to freely relay their experiences, lead

the conversation, and discuss the roles that workers, employers, and government regulators play in safety culture.

The case study content analysis approach was the appropriate method to explore the depth of participants' perceptions. Flyvbjerg (2006) posited that a case study is the most appropriate to use when context-sensitive data are assessed. In this research, I examined the perceptions of worker, employer, and government roles in contributing to an efficient safety culture. The subject of the study included the status of safety culture, what employers and the government can do to improve the current culture, and the behavioral aspects of workers toward safety.

## Role of the Researcher

My role as the researcher was to observe verbal and nonverbal cues from the participants while following a systematic procedure for data collection and analysis. I interviewed 41 participants. In total, 16 workers, 12 employers, and 13 government regulators were interviewed. Three categories of participants were necessary to obtain multiple perspectives and to present an accurate depiction of the experiences of workers, employers, and government regulators. I maintained a proportionate number of interviews for each category to represent each group's presence in the industry.

The procedures followed included (a) designing the study; (b) collecting data from interviews, transcription, translation, and back translation; (c) loading the interview results into NVivo; (d) analyzing the data; and (e) composing. The interviews were face-to-face and allowed for open-ended responses. I encouraged the participants to speak openly and to elaborate on the responses they provided when it was necessary.

Participants were invited to provide honest answers to each question. A need existed to conduct the interview in the local language. Because I was not fluent in the local language, the support of research assistants was necessary. The research assistants were experienced with qualitative research methodology and interviews. Additionally, the research assistants were required to complete training on protecting research participants through Walden University recommended organizations.

I created an environment in which the interviewees felt comfortable and were more likely to respond honestly (Moustakas, 1994). The research assistants recorded and transcribed the interviews. The interview data were translated into English and then reviewed with the translator to ensure accurate translations. The research assistants and I examined the transcribed and translated responses to ensure an accurate recording of the experiences. Data analysis did not begin until participants confirmed their responses. In some cases, confirmation of replies was conducted directly after the interview. In other cases, participants were contacted later to confirm their responses. I analyzed the data for commonalities and differences among the responses presented. I maintained an open mind and did not allow personal biases to enter into the data analysis. The goal was to objectively interpret multiple experiences and unexpected occurrences. Data collection involved conducting open-ended, face-to-face interviews. The data collection procedures included establishing an environment that the participants were comfortable with, engaging the participants in the conversation, actively listening to participants' responses, and critical observation.

I was cognizant of personal bias so that it could be managed properly.

Recognizing bias is useful in maintaining neutrality during the research process. Additionally, I am an ILO official who is involved in workers' safety. I received written approval from ILO leadership in Dhaka, Bangladesh to carry out the study. Potential existed for perceived power relationships between the interviewee and I, because of my official status. I explained to participants that I was conducting the study in an academic capacity as a PhD candidate. Additionally, the support of local research assistants to conduct the interviews in the local language helped to dispel any concerns regarding power relationships.

## Sample

### Participant Selection Logic

The population of interest in the present study included workers, employers, and government regulators engaged in the RMG sector of Bangladesh. This included an approximate total population of 4 million workers, of which 56% were women. To gather an appropriate sample from this population, I used a purposive convenience sampling strategy. Using this approach, I sought individuals who met the study criteria and who were available at the time of data collection. Contact with prospective participants occurred with the help of the research assistants and with close collaboration with a trusted member of relevant government departments. I aimed to gather 45 participants representing 20 workers, 15 employers, and 10 government regulators from DIFE and BFSCD respectively. Because of participant withdrawals and unavailability, only 41 participants consented: 16 workers, 12 employees, and 13 government regulators.

I made initial contact with a gatekeeper who provided access to participants. I

provided a description of the study and an invitation to participate, as well as contact information to the gatekeeper so that those who chose to interview could respond with further questions or approval. The gatekeeper provided details of the study and contact information to government officials, employers, and workers. The only inclusion criteria for the study was that participants had to be a worker or employer in the Bangladesh RMG industry, or be a government official with responsibilities in the RMG industry, and had to consent to participate. As exclusion criteria, the study did not include individuals outside the RMG industry or government officials who were not involved in regulating the RMG industry. Those who responded favorably to participate in the study received an informed consent form (see Appendix A) for their signature. I scheduled a time and place for interviews and received signatures on the consent forms before conducting interviews.

**Sample Size**

When conducting quantitative research, maximization of the sample size is advisable to more accurately represent the population and minimize estimation errors, even though that sample size may exceed what is necessary for empirical validity (Van (Voorhis & Morgan, 2007). In such cases, increases in sample size serve to decrease error; however, qualitative research differs in this respect (Glaser and Strauss, 1967). In qualitative research, considerations of sample size center on the concept of saturation (Glaser and Strauss, 1967). Saturation is realized when the incorporation of additional participants' reports no longer offers novel perspectives (Glaser and Strauss, 1967). This idea is not limited to original themes, as it extends to the interrelationships between the

identified themes (Corbin & Strauss, 2008). Each defined theme should be surveyed comprehensively and exhaustively to achieve saturation (Glaser and Strauss,1967). Glaser and Strauss (1967) discussed the concept of saturation at length. Corbin and Strauss (2008) stated that when researchers claim they have achieved saturation, they frequently mean they have reached their limits with the data collection process and have depleted their resources, time, or energy. Rather, sampling is sufficient when the primary themes reflect depth and variation of perspective and the understanding of the case has matured to a substantial extent (Corbin & Strauss, 2008).

Sample sizes in qualitative research should be suitably large enough to achieve the concept of saturation (Corbin & Strauss, 2008). As such, sample sizes must be substantial enough to elicit experiences that cover all or most of the spectrum of perceptions (Corbin & Strauss, 2008). However, researchers vary in their practical recommendations for determining sample size in a phenomenological study design (Creswell, 1998; Guest, Bunce & Johnson, 2006; Morse; 1994). For studies using the phenomenological approach, Creswell (1998) endorsed a sample size of five to 25. Morse (1994) recommended a sample size of at least six. Guest, Bunce, and Johnson (2006) maintained that a sample size of 12 is suitable to achieve saturation in qualitative research using interviews for data collection. In alignment with these suggestions, data collection from approximately 45 participants was necessary. I aimed to obtain adequate representation of both employers and workers, though workers outnumber employers. While a total of 15 employers, 20 workers, and 10 government participants were projected, only 41 were achieved (16 workers, 12 employers, and 13 regulators). Of the

16 worker participants, 10 were women, representing 62.5% of workers in the RMG industry of Bangladesh.

**Instrumentation**

Data collection occurred through semistructured interviews with open-ended questions. I developed the interview protocol for particular use in eliciting responses, which pertained to the focus of the study. The use of open-ended interview questions helped to ensure credibility, facilitate data analysis, and reduce researcher bias (Patton, 2002). Open-ended questions freed participants from the experiences of the interviewer (Creswell, 2013). Patton (2002) also stated that the appeal and advantages of the unstructured interview outweigh the challenges. The open-ended questions ensured interview participants were free to explore their perceptions and allowed the participants to answer the questions in their own way. Although some participants did not have a background in receiving safety training, they provided a clear understanding of basic requirements for safety from their own perspectives.

Before use in the study, an expert panel, with experience in the area of the study, reviewed the interview protocol to ensure that interview questions were clear, concise, and would prompt the participants to respond with answers suitable to the study. The raw audio data were naturalistic, indicating that I did not code, categorize, or process the responses at the time of collection (Willig, 2013). The interviews were face-to-face and spoken verbally. An audio recording device collected the data transposed for textual analysis.

I collected the following demographic information: job position, gender, tenure,

education level, and age. The demographic information provided important information on the level of education and experience in the RMG industry. Participants were encouraged to be open and honest when talking. Even though I employed specific interview questions, the interview began with social conversation to help foster a relaxed and trusting environment (Moustakas, 1994).

## Procedures

For the sake of transparency, I attempted first to contact workers' union representatives at the National Coordination Committee for Workers' Education and employers' union representatives at Bangladesh Garment Manufacturer and Export Association (BGMEA) and ask that they distribute the details of the study and contact information so that prospective participants may respond directly to me. I received verbal approval from an employers' association. However, written approval failed to materialize. I sent follow-up e-mails and phone calls without success. Because of little interest from unions and the timeliness of the study, I engaged directly with the factory owners.

I provided prospective participants with invitation letters. Employers and government principles received cooperative agreements to request permission to engage with workers and government regulators. Once I was approved, invitation letters were sent to the potential participants in each group through the employer or respective government offices. Once requests were accepted, I made contact with confirmed participants to schedule a time and place for interviews. As interviews were scheduled and attended, participants received informed consent forms for signatures and returned the forms before the start of the interview (see Appendix A).

A quiet and private location was required to conduct the interviews so that participants were free from distraction and allowed to provide comprehensive and complete responses. There was a projected 3-month window to conduct interviews. Because of the significant time delay in gaining signed cooperative agreements, it took 8 weeks to complete the interview process. Interviews were projected to take between 60 and 90 minutes each. However, interviews averaged 15 minutes. This short timing was partly because of short answers provided by participants.

Each interview was audio recorded, transcribed in the native language, and translated into English for textual analysis. I communicated to the interviewees a summary of the purpose of the interview, the next steps, and a reconfirmation that their identity would be kept confidential. Additionally, I reminded interviewees of their freedom to withdraw from the study at any time. Interviewees were thanked for their time and received both Walden University's and my contact information.

If a translation of interviews were required, the accuracy of the transcription was verified between the translator and me following each interview. The consent forms were translated and back translated to ensure accuracy. Recorded interviews were necessary to recheck transcripts and verify translations with the translator before uploading to NVivo 11 for Mac. After uploading transcripts, I reviewed the data line by line. If I noted any discrepancies or required clarification on translations, I contacted the translator to verify the data.

**Data Analysis Plan**

Following the transcribing of interview data, I read the transcriptions to develop

an understanding of predominant concepts brought up in the interviews, as well as salient nuances and undercurrents of the responses. I uploaded transcript data to a qualitative analysis software program NVivo 11 for Mac. NVivo 11 for Mac facilitated the organization of data to illuminate relevant themes and supportive excerpts. I began the process of coding the data through the identification of issues to ultimately generate an interpretation of the data's meaning. Organizing of data by interview question was the first step. A full list of responses followed each question, with one response per question per participant. Open and axial coding techniques were necessary to assess and organize the themes resulting from the responses to each interview question.

**Open coding.** Open coding refers to the breakdown of responses into a set of underlying themes. During this phase of coding, units of meaning were assigned to each response. If a participant's response contained more than one unit of meaning, the response was identified as containing each of the resulting open codes. Completion of the open coding phase resulted in a list of annotated responses to each open-ended survey question (Clandinin & Connelly, 2000).

**Axial coding.** During axial coding, the units of meaning, which result from open coding, were matched between participants. Any resulting groups of open codes were identified as themes. Single responses contained several themes. I considered identification of discrepant responses to ensure all perspectives were captured. Researchers organized the resulting thematic responses, or axial codes, so that an ordered, detailed narrative of the participant experiences are examined (Clandinin & Connelly, 2000).

I did not employ content analysis specifically to determine outlying cases or discover the true meaning of experiences, but rather to provide a detailed narrative, which outlined the overarching straightforward responses from a sample, as recommended by Merriam (2009). I used this method to inform the final presentation of results, which provided overarching responses that informed the research questions. The final presentation indicated any discrepant responses or anomalies so that all perspectives were considered.

## Issues of Trustworthiness

The trustworthiness of the study is a measure of the study's credibility, transferability, dependability, and confirmability. To bolster the credibility, I explained to participants the safety measures regarding their anonymity and encouraged them to provide candid, truthful, and accurate information. I reassured participants that there were no right or wrong responses to the open-ended questions. In addition, I employed member checking following transcription to ensure a clear and accurate capture of the interview responses.

Transferability refers to the extent to which a phenomenon in a particular context applies to another context. Transferability is one of the limitations of case study research. In qualitative research and specifically case study research, transferability resides with the reader. Thus, it is the reader's responsibility to determine the depth of uncovering the main ideas. However, I aimed to address transferability by providing rich, deep descriptions of the research context and the investigation's principal assumptions.

Dependability refers to the repeatability of the study's findings. To address this concern, Bloomberg and Volpe (2012) suggested an audit trail with a delineation of the evolution of thinking and rationale for all the choices and decisions that the researcher makes during investigation. I included the specific details and methodological steps in the study to contribute to repeatability in similar or different settings. Confirmability refers to the concept of objectivity in qualitative findings. The basis of any research findings or interpretations requires attention to both the concepts of dependability and confirmability through an audit trail.

**Ethical Procedures**

When a researcher conducts studies that involve the use of human subjects, the protection of participants becomes an important responsibility of the researcher (Bloomberg & Volpe, 2012). In the present study, I followed the ethical and moral recommendations set by the Institution Review Board (IRB), any relevant federal regulations, and any applicable regulations under Bangladeshi law. The translator and I completed The National Institutes of Health web-based training course, *Protecting Human Research Participants*. All data collected in this study were confidential to protect the identity of participants. Assigned pseudonyms of all participants were incorporated to present results with confidential identifiers. Access to the raw and electronic data was limited to the research committee and myself. The data will remain stored for 5 years after completion of the study. After 5 years, the material will follow procedures for thorough use of a data disposal service.

I collected data from human participants for use in this study. I obtained

institutional approval for the study through the IRB before the collection of any data. The IRB approval number is 12-30-15-0052975. My method of data collection consisted of self-reported, open-ended survey items for all participants. In the presentation of results, no identifying information was included to maintain the anonymity of the participants.

I did not have a supervisory relationship with any of the participants included in the study. As such, no power differentials influenced the conduct of this study. I guaranteed participants that no identifying information was included in the presentation of the results. It was clear to the participants that their participation was strictly voluntary. Employer and government regulator participants did not receive incentives for their participation in the study. Workers received a small stipend of 200 BDT (approximately 2.50 USD). All participants were provided with assurances that no adversity would result from not participating. The small stipend was necessary, because the time it took to conduct the interviews overlapped with their work time. Emphasis on the protection of the identity of the participants was needed. As an added measure, it was crucial to ensure that data and reports were free from any identifying factors.

## Summary

Chapter 3 presented the specific methods and measures taken in conducting the research. The chapter outlined the design and approach with supporting rationale for using a qualitative case study method. This chapter also provided information regarding my role, the population and sample selection, and procedures regarding participant contact, data collection, and data analysis. To address potential issues of trustworthiness, I described procedures for contributing to credibility, transferability, dependability, and

conformability. The chapter concluded with the ethical procedures to ensure ethical treatment of human participants during this qualitative content analysis case study. The next chapter presents the findings of the research and illustrates its significance in contributing to the body of knowledge aimed at developing a sustained safety culture in Bangladesh.

# Chapter 4: Results

## Introduction

The purpose of this qualitative case study was to understand the perspectives of workers, employers, and government regulators regarding safety culture in the RMG industry of Bangladesh. Using a translator when necessary, I conducted face-to-face interviews. The interviews involved RMG workers who did not fall within the remit of the Accord or the Alliance initiatives. The Accord represents some garment brands from Europe, and the Alliance represents many North American brands (Accord, 2016; Alliance, 2016). Approximately 3.1 million workers fall within the remit of Accord and Alliance (Accord, 2016; Alliance, 2016). The remaining actively exporting factories are the responsibility of the National Initiative, representing approximately 900,000 workers due to BGMEA estimates of 4 million workers in the RMG industry and taking into account the Accord and Alliance figures (Accord, 2016; Alliance, 2016; BGMEA, 2016). This area was the primary focus of the study. In addition to workers, both employer representatives and government officials were included in the interview process. I employed one central research question, with interview questions used for data collection.

RQ1: What is the perception of workers, employers, and government officials on safety in the RMG sector of Bangladesh?

Through this qualitative case study, I explored perspectives of safety culture in factories of the RMG industry under the National Initiative from the experiences of

workers, employers, and government regulators. The aim of the study was to contribute to the discussion on how to develop a sustainable culture of safety that will reduce the likelihood and influence of workplace accidents and disasters in the RMG industry of Bangladesh. I plan to use the results to inform decision makers in Bangladesh regarding the role and value of developing a sustainable culture of safety in the workplace.

The chapter provides a clear understanding of the problem and the data collection process. First, I provide a brief introduction to restate the purpose of the study, the target audience, and re-emphasize the study's significance to developing a safety culture in the RMG industry of Bangladesh. A narrative of the circumstances surrounding the data collection process follows the introduction. After that, the chapter details the demographic information followed by a detailed discussion of the data analysis process. This process includes the steps taken during uploading the interview data to NVivo 11 for Mac, open coding, axial coding, and analysis. Following the results, I describe the implementation of credibility, transferability, dependability, and confirmability. I also address any adjustments made to the strategy outlined in Chapter 3. The chapter concludes with the results for each research question, a summary, and introduction to Chapter 5.

## Setting

I faced challenges in securing agreement to conduct interviews with the factory workers and factory employers. Five factories verbally agreed to take part in the study. These five factories requested detailed information on the study. The five factories received copies of the prospectus, invitation letters, and consent forms for review. After

receiving the forms, the factories had to receive clearance from their respective boards. One factory withdrew interest and provided a reason for not participating in the study. The justification was that the study would breach the company's safety and security policy. One factory verbally withdrew interest, expressing concern that the study could be used as a tool for incrimination. Three factories provided signed cooperative agreements. On this basis, it was projected that workers' interviews would be divided between the three factories. However, only workers from two factories participated. One factory that signed the cooperative agreement withdrew without reason.

Cooperative agreements from government regulators took approximately 6 months for final approval after several attempts to obtain signatures. The responsible officials received numerous calls and e-mails to gain approval. Verbal approval was given immediately. However, the process for obtaining a signature on the cooperative agreement caused significant delays. I received full support once the respective principles from DIFE and BFSCD provided signed cooperation agreements. Government volunteers seemed excited to participate in the interview. Only one government representative chose not to partake in the study after receiving an invitation to interview.

I had to be innovative in my approach and was required to be accommodating to the schedules and venue arrangements to conduct interviews. Interviews occurred at varying locations owing to the three distinct categories of participants involved in the study. Individual BFSCD and DIFE interviews were conducted during a workshop on joint follow-up of fire and building safety inspections at the Olive Hotel in Dhaka, Bangladesh. Interview participation did not take any time away from the workshop as

interviews were scheduled before the workshop began, during breaks, and after completion of the workshop. The venue for the interviews was a private meeting room.

I received approval to conduct interviews at three separate factories for employers and workers. As indicated, two factories participated in the interview process with the other withdrawing without notice or reason. In total, 19 workers from these factories consented to be interviewed. Three of the 19 workers withdrew from the interview because of lack of confidence in answering the questions. All three withdrawals were women. These individuals expressed little indication of their understanding or willingness to have an opinion on the subject under study. This resulted in 12 workers interviewed from Factory A; Four workers interviewed from Factory B.

## Demographics

Interview participants' ages ranged from 21–49, with 15 females and 26 males agreeing to participate. Their tenures ranged from 9 months to 25 years with education ranging from no formal education to a master's degree. The following is a breakdown by workers, employers, and government regulators. The original target audience was 45 interviews with the following breakdown: 20 workers, 15 employers, and 10 regulators (5 BFSCD and 5 DIFE). Out of the targeted 45 participants, 44 agreed to be interviewed. On the days of the interviews, three participants voluntarily withdrew. Therefore, 41 interviews were conducted. There were 16 workers, 12 employers, and 13 government regulators. Tables 1, 2, and 3 present the participants' demographics by group.

Table 1

*Frequencies and Percentages of Demographics for Workers (n = 16)*

| Workers | *N* | % |
|---|---|---|
| Age | | |
| 21–30 | 8 | 50 |
| 31–40 | 8 | 50 |
| 41+ | 0 | 0 |
| Gender | | |
| Male | 6 | 38 |
| Female | 10 | 63 |
| Education | | |
| None | 1 | 6 |
| 1–8 | 7 | 44 |
| 9–10 | 6 | 38 |
| High School | 2 | 12 |
| Bachelors | 0 | 0 |
| Masters | 0 | 0 |
| Tenure | | |
| 0–5 years | 7 | 44 |
| 6–10 years | 7 | 44 |
| 11–15 years | 1 | 6 |
| 16–20 years | 1 | 6 |
| 20+ years | 0 | 0 |

*Note.* Due to rounding error, all percentages may not sum to 100.

Table 2

*Frequencies and Percentages of Demographics for Employers (n =12)*

| Employers | *N* | % |
|---|---|---|
| Age | | |
| 21–30 | 3 | 25 |
| 31–40 | 6 | 50 |
| 41+ | 3 | 25 |
| Gender | | |
| Male | 10 | 83 |
| Female | 2 | 17 |
| Education | | |
| None | 0 | 0 |
| 1-8 | 0 | 0 |
| 9–10 | 1 | 8 |
| High School | 4 | 33 |
| Bachelor's | 2 | 17 |
| Master's | 5 | 42 |
| Tenure | | |
| 0-5 years | | |
| 6–10 years | 10 | 83 |
| 11–15 years | 1 | 8 |
| 16–20 years | 1 | 8 |
| 20+ years | 0 | 0 |

*Note.* Due to rounding error, not all percentages may sum to 100.

Table 3

*Frequencies and Percentages of Demographics for Government Regulators (n = 13)*

| Government Regulators | *N* | % |
|---|---|---|
| Age | | |
| 21–30 | 5 | 38 |
| 31–40 | 4 | 31 |
| 41+ | 4 | 31 |
| Gender | | |
| Male | 10 | 77 |
| Female | 3 | 23 |
| Education | | |
| None | | |
| 1-8 | 0 | 0 |
| 9-10 | 0 | 0 |
| High School | 0 | 0 |
| Bachelor's | 4 | 31 |
| Master's | 9 | 69 |
| Tenure | | |
| 0–5 years | 7 | 54 |
| 6–10 years | 2 | 15 |
| 11–15 years | 0 | 0 |
| 16–20 years | 1 | 8 |
| 20 + years | 3 | 23 |

*Note.* Due to rounding error, not all percentages may sum to 100.

## Data Collection

The same procedure followed for workers, government, and employer participation in the data collection process. This research study included 41 participants. Participants received invitation letters describing the study. If they were interested in participating in the study, they were asked to contact me. Once they contacted me, the participants received detailed information about the study through my IRB approved translator and were informed that participation in the study was strictly voluntary.

Participants were told, through my translator, they could withdraw from the study at any time, for any reason, with no fear of retribution. The interview participants were also encouraged to ask any questions they had regarding the study. I asked each participant to sign the consent form voluntarily before proceeding with the interview questions.

I conducted the individual interviews at two different venues for government regulators and two different venues for employers and workers. The Olive Hotel was used to interview Deputy Assistant Director level officials of BFSCD. The Amari Hotel was used to interview front line BFSCD inspectors. The employer and worker interviews occurred at the venue four and two factories, respectively.

The interviews averaged 15 minutes for regulators and 5–10 minutes for employers and workers. The interviews were audio recorded with the approval of each participant. I used an iPhone 6 voice recorder to record interviews conducted in English and mobile phone Walton Primo Z, Lava KKT 27 and Walton Tab 10x to record interviews conducted in Bangla. The Bangla interviews were recorded differently because an alternate dictation system needed to be used to translate the interviews. The English audio transcripts were uploaded into NVivo 11 for Mac. I transcribed the English interview data from voice to text in NVivo 11 for Mac. I uploaded interviews conducted in Bangla into NVivo 11 for Windows. Uploading the data into NVivo 11 for Windows permitted compatibility with the translator's operating system. The Bangla interview data were first translated into English, and then transcribed into text. I uploaded the English version of the text into NVivo11 for Mac.

### Variations in Data Collection

Chapter 3 indicated that participants would be organized through employers' associations and trade unions. Although approval from these organizations was not required, it was pursued to obtain a thorough database of employer and worker members. This approach resulted in little support beyond a verbal agreement. In one case, the vice president of one employers' association verbally agreed to participate in the study. However, all efforts to secure a signed cooperative agreement failed. I directly approached factory owners to negotiate cooperative agreements to locate participants who met the study selection criteria. Through this method, I was able to find employers and workers who were willing to participate in the research study.

The data collection process had challenges. Some participants offer prerehearsed responses. Some government regulators offered thorough descriptions, while others provided succinct responses that did not fully relate to the questions. A majority of workers participating in the study responded to the interview questions with brief and limited replies. Some participants chose not to answer all questions, while others withdrew from the study once interviews began, because they did not feel familiar with the subject matter under study.

## Data Analysis

I saved the interview data in a Microsoft Word document after completion of transcriptions. I transferred the information to a Microsoft Excel document to use the autocode function in NVivo 11 for Mac software. The autocode function enabled efficient capture of the responses to the interview questions and organization of the

demographic data. Once I completed the transfer, I uploaded the interview responses to NVivo 11 in Microsoft Excel format. The attribute function in NVivo 11 stored demographic data. Storing the data in this manner allowed querying of demographic information in a variety of ways.

The English versions of all interview responses were stored in the internal folder in NVivo 11 for Mac. The initial open coding exercise involved the interview questions to create nodes to establish a baseline. The data were categorized under interview response folder. A separate folder was created and titled emergent themes. This folder stored coding derived while searching for themes in the interview responses. As I analyzed the interview data, chunks of information were identified and placed in related nodes. Some comments were placed in more than one node. As the analysis continued, new points emerged, resulting in the creation of additional nodes. Once all interviews were open coded, I explored the data placed in each node to determine if nodes should be merged or further divided. Listed below are initial open codes attributed to the 10 interview questions supporting the central question (RQ1). The interview questions were listed as interview responses in the NVivo 11 for Mac software. The interview response section contains raw data from the interviews. The same coding was used for employers, government regulators, and workers.

Open codes were categorized as follows:

- Definition of safety culture,
- Workers' role in developing safety culture,
- Employers' role in developing safety culture,

- Regulators' role in developing safety culture,
- Definition of safe workplace,
- Importance of safe workplace,
- Mechanisms currently in place,
- How to ensure safe working conditions,
- Safety hazard reporting, and
- Developing safety culture.

I scrutinized interview responses to the 10 interview questions to identify themes. Once the final themes were identified and organized, I created a separate folder titled, emergent themes. The emergent themes section contains nodes of themes derived from the interview response folder. The themes are reported first by group, followed by a discussion of a comparison of responses between groups.

## Evidence of Trustworthiness

### Credibility

The trustworthiness of the study is a measure of the study's credibility, transferability, dependability, and confirmability. Credibility in qualitative research denotes the equivalence of the results with the true experiences of the participants (Patton, 2002) . Before each interview began, I spoke with the participants, using a translator when necessary, and assured each participant of his or her confidentiality. Participants received equal opportunity to express their thoughts throughout the interview. I asked each participant to provide candid, truthful, and accurate information. Participants were informed that there were no correct or wrong answers to the interview

questions. I reviewed the transcripts with willing participants to ensure that the participants were satisfied and felt the transcripts accurately reflected their lived experiences.

I explained that the focus of the interview was to hear the participants' perspectives on safety culture and safety in general. This focus provided a basis for a reliable response to the interview questions. The questions were structured so that participants had a smooth transition from one question to the next. This structure allowed participants to have the freedom to answer the question and to explain their responses in a way that was comfortable for them. Interviewing in the native language contributed to ensuring credibility. A translator was used to improve the interview process by giving the participants a choice of being interviewed in English or their native language, Bangla. I paid attention to nonverbal cues to enhance understanding of the participant's mindset when responding to questions. Interviews conducted in Bangla were translated into English and scrutinized by the translator and myself. I reviewed the data, documenting spelling errors and any information that required further explanation. The translator and I discussed each transcript to correct spelling errors and provide additional details regarding the translations. Once these issues were resolved, the data were transferred to an excel document for upload into NVivo 11 for Mac.

**Transferability**

Transferability is the responsibility of the reader (Shentom, 2004). He or she should examine all stages of the research study to see what comparisons they can draw with their distinct populations (Shentom, 2004). I provided a considerable amount of

detail in Chapters 3 and 4 to enable readers to gain a clear picture of the processes involved in this research study. Each group's interview data were scrutinized internally. Additionally, I studied the information across groups. This information resulted in similarities and differences in perceptions across participants. The similarities and differences caused themes to emerge that provided insight into collective issues and differences that spanned across the three groups.

**Dependability**

I kept a filed log of the entire research process. That log helped to create Chapter 4 and report the data collection and analysis processes. I documented each step that occurred throughout the course of the study to create a clear audit trail for others.

The steps for each interview were mirrored. The interview questions were asked to each participant word for word from the interview protocol. Any deviation from the exact line of questioning was limited to clarification or rewording to make the question more understandable. Interview data were properly coded in the same format for each participant and numbered to allow for the identification of the chronology of interviews in each category.

**Confirmability**

To assure the dependability and confirmability of the study, I kept a detailed audit trail of all thoughts, ideas, and actions connected with the study in a field journal. I included the specific details and methodological steps throughout the course of the study to aid in the repeatability for other settings.

## Results

This section presents an analysis of the thematic responses to RQ1, derived from the 10 interview questions. The three categories addressed were employers, government regulators, and workers with comparisons within and across each category.

### Employers

This section presents the primary themes associated with the employer group. Table 4 contains a list of open codes. In total, I drew 48 themes from interview responses. However, four thematic areas were prominent across the majority of participants in the employer's category. I took into account the number of respondents from where the theme emerged and the number of times a specific theme was referenced to determine the four most prominent themes. The themes were (a) training, (b) health and safety, (c) safety equipment, and (d) need for collaboration.

Table 4

*Open Coding Exercise of Interview Responses-Employers*

| | |
|---|---|
| Awareness of Avoiding Risk | Need for Self-Efficacy |
| Building Safety | Path of Egress |
| Check Safety Equipment | Pay and Benefits |
| Committee Formations | Perception of Workers Level of Knowledge |
| Economic Incentive for Safe Working Conditions | Perception on Level of Awareness |
| Employer's Acknowledgement of Government Inactivity | Pressure from Stakeholder |
| Employer's acknowledgement of Workers' Activities | Profit Incentives |
| Employer's Perception of Employer's Role | Provide Safety Equipment |
| Employer Perception of Workers' Role | Punitive Action for Non-compliance |
| Employer Unaware of Government's Role | Quality Output of Production |
| Employer's Acknowledgement of | Reference to Law |

| | |
|---|---|
| Government Activities | |
| Employer's Acknowledgement of Employer's Activities | Reporting Hazards |
| Employer's Acknowledgement of Employer's Role | Responsibility for Medical Expenses |
| Employer's Awareness requirements for Safe Working Conditions | Road Safety |
| Employer's Perception of Government's Role | Safe Environment |
| Employer's Training | Safety from Building Collapse |
| General Understanding of Safety Measures | Safety from Fire |
| Government Regulator | Safety from Unrest |
| Health and Life Safety | Safety Training in Society |
| Investment in Safety | Sector Development |
| Maintain Safety Compliance | Understanding Need for Collaboration |
| Meeting production and delivery deadlines | Understanding of Hazard Reporting |
| More Attention to Small Factories | Workers' Awareness |
| Need for Employer Awareness | Workers' Training |

**Training.** The first theme found during the analysis of the data was *training*. This theme emerged while inquiring into participants' perceptions on safety culture, requirements of safe factories, and how to develop safety culture. All 12 employers spoke about training on different levels, with 34 individual codes making up the overall theme (see Table 5).

Table 5

*Analysis of Training Theme*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Training | Received Training | 6 | 11 |
| | Expressed Training Needs | 9 | 17 |
| | Training Recommendations | 6 | 12 |

*Note.* The Number of Respondents and the Number of Times Referenced do not match the number of participants, due to participants speaking on more than one theme and referencing each theme more than once.

The three areas discussed in the theme of training were (a) training being conducted, (b) training needs, and (c) recommendations for who and what should be involved in training. Most participants expressed a need for training but also acknowledged that training was being provided. Participants spoke about making recommendations for training.

One employer recognized the importance of trained workers to have a safer factory. FB-Employer-3 recognized that, "The safety of the factory depends on how many workers are trained." FC-Employer-1 further stated: "We are making them aware and providing training. After the training, the workers can realize that safety is an important issue." FA-Employer-2 spoke in detail regarding some training that was offered in his factory. He said:

> We provide training on fire every one and half month. The training describes who will do what, how they will perform their assigned responsibilities to ensure safety. What they would do if there is a fire. The workers need to follow all the training. There is specific team on fire and medical. They need to take help from those teams.

The concept of *trained workers make safer factories* can be used as an incentive for factory owners to properly invest in worker training, particularly if safe factories attract business.

FD-Employer-3 spoke about training workers and stated:

> Most of the garment workers are uneducated they do not understand many things. It is hard to make them understand many things providing training. They have to

> be careful to be safe. There are many issues. One, ignorance may cause a big accident. For example, Operators need to check if they have needle guard or not. If they do not have it, it may cause injury on their hand while working. They need to check belt cover, pulley cover, etc. If everyone checks those items and keeps them safe, everyone on the floor will be safe.

This participant felt that the workers' general levels of education could be a hindrance in the safety setting. He felt repeated training was necessary to improve safety and ensure that fewer accidents occurred.

FD-Employer-1 took the approach of making key recommendations to ensure safe factories by stating,: "Firstly, we need to assess risk and work to be safe from those risks. The management needs to act to be safe from those risks, provide training to be safe from those risks and provide all sorts of support." FD-Employer-1 elaborated and said, "There needs to be initiative from everyone, and everyone needs to be trained. For example, ILO, BGMEA, the government is providing training. Already there has been a visible initiative to develop a safety culture in RMG sector." This participant provided a key recommendation for assessing risk and providing training based on risk. The participant also understood the need for collaboration between stakeholders to stand the best chance of ensuring safer factories. FB-Employer-4 indicated, "They need to arrange training for the employer and worker." The employer understood that both workers and employers required training to assure that safety needs were identified and met. Generally, employers seemed to understand the value of training, its effect on the safety of factories, and its link to overall profitability of the factory.

**Health and life safety.** The second most prevalent theme found in the data pertained to health and safety. The employers not only spoke on the importance of health and safety, but also attributed their own safety to the safety of the factory. Employer representatives discussed measures currently in place to ensure health and safety of the garment workers. Employers stressed the importance of health and safety to the overall well-being of the work environment. Nine out of 12 employers spoke about health and life safety, with 20 codes making up the overall theme (see Table 6).

Table 6

*Analysis of Health and Safety Theme*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Health and Safety | Concern for life | 6 | 9 |
| | Measures in Place | 3 | 3 |
| | Link to Production and Profit | 1 | 1 |

From the employers' interviewed, the overall perspective was that health and safety considerations are based on personal safety and ensuring workers and employers are alive at the end of the workday. FA-Employer-2 and FC-Employer-1 noted that, "It is important because I need to be sure that I would be able to go home alive after finishing my work." FB-Employer-5 stated: "It is important. It is important because my life is valuable than my work. To save my life the workplace need to be safe." FB-Employer-6 answered: "It is important because we have our life for one time. We came here to work not to die. So it is important." An understanding among employers emerged that life safety of workers is just as significant as life safety of the employer representatives.

Employers discussed the mechanisms in place to ensure health and life safety. Some reported that they maintained nurses and medical facilities in the factories to provide initial care for injured workers. One employer mentioned that they have worker participation committees (WPC) to look after the welfare of the worker.

FA-Employer-3 believed that his company did a good job focusing on employee health and safety. He stated: “The health and safety environment of the factory is favorable to the worker. People can work safely." He saw that the workplace was conducive to having a positive focus regarding the issue of safety. FA-Employer-3 elaborated on his initial response and stated:

> We have fire safety, health, safety measures. We have WPC, nurse. We have people working for every necessary sector to make it safe. We conduct two training each month to aware worker. We conduct two fire drills every month. One declared one undeclared. We told them if you hear fire alarm, you need to go to a safe place.

FB-Employer-3 was able to list a variety of strategies, ideas, and services the employers provided and need to provide to ensure health and safety for employees at the factory. FB-Employer-3 discussed safety of equipment, regular training provided, the role of employers to provide safe working conditions, and the role of the government to monitor compliance. Overall, employers were aware of the need for health and safety, because they attributed it to their own safety.

**Provide safety equipment.** The next theme uncovered pertained to safety equipment. Employers mainly referenced safety equipment in requirements for safe

factories and what they currently had available. Six out of 12 respondents supported this theme, with 17 codes making up the overall theme. Table 7 provides a breakdown of the data.

Table 7

*Analysis of Provisions for Safety Equipment*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Safety Equipment | Requirements | 5 | 8 |
| | Currently Available | 4 | 6 |
| | Link to Training | 2 | 2 |

The majority of respondents discussed the requirements for safety equipment and outlined some basic considerations. FB-Employer-7 noted that, “The worker needs to maintain safety in the factory even if the employers provide all equipment and training." By stating that workers need to maintain safety, the employer highlighted the important role workers have in ensuring safe factories. Additionally, employers stressed the importance of proper monitoring of equipment and its use.

When speaking about safety equipment, FB-Employer-5 identified the most common hazards. He stated, “The main safety hazards are fire and earthquake. The employer needs to provide adequate number of fire extinguishers and other necessary equipment.” The data showed that fire was the main safety hazard that the employers focused on. Both FB-Employer 1 and 5 focused on the fact that firefighting accessories were always readily available. FB-Employer 1 elaborated and said, “Firstly, there is firefighting team, all requires accessories are ready here.”

FB-Employer-1 listed safety equipment provided by the employer. FB-Employer-1 said, “The employer must provide the required instruments like gloves, hood, sand and other type of equipment to fight fire.” Additionally, FB-Employer-1 spoke about the importance of readiness and stated, “In every factory all equipment including fire extinguishers need to be ready.” FB-Employer-7 also spoke about equipment, stating: “We have everything needed to be compliant. We have a hose pipe reel, water available always, CO2 gas and powder extinguishers, more than one staircase etc.”

Overall, employers realized the importance of maintaining safety equipment and the role workers play in ensuring that this occurs. The employers focused on fire safety above other safety issues. Some spoke about the specific equipment they had available to handle safety issues.

**Understand the need for collaboration.** The next theme found was to understand the need to collaborate. Employers discussed the importance of collaboration and the need to work with workers, employers, and government officials to develop a safety culture in the RMG industry. Seven of the 12 participants responded to this theme with seven codes, as shown in Table 8.

Table 8

*Understand the Need for Collaboration*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Need for Collaboration | Link with Safety Culture | 4 | 4 |
| | Currently Collaborating | 2 | 2 |
| | Link to Training | 1 | 1 |

FA-Employer-1 noted the importance of collaboration between employees and factory owners, stating: “To ensure a safe working environment good understanding is needed between the employees and factory owner. Both parties need to understand their demands and capacity.” FC-Employer-1 understood the value of teamwork when realizing that workers, employers, and government regulators need to work together. This participant stated:

> We all need to work together. Three parties need to work together. If the management provides everything needed, but the workers do not use those or follow the instruction the workplace will not be safe. So three parties together need to ensure safety culture.

FD-Employer-1 added to this by saying: “There needs to be initiative from everyone and everyone needs to be trained. For example, ILO, BGMEA, the government is providing training. Already there has been a visible initiative to develop a safety culture in RMG sector.” FD-Employer-1 linked collaboration with training, noting that training was not limited to one of the tripartite partners, but all parties should be involved in training.

In this group, the majority of responders linked the need for collaboration with developing safety culture. Participants provided two examples for current collaboration, but only linked one to training. In general, the respondents understood the importance of teamwork in developing a sustained approach to safety culture.

**Employers’ perceptions of workers’ roles.** The fifth prevalent theme was employers’ perceptions of workers’ roles. Six out of 12 respondents provided responses under this theme (see Table 9). Employers discussed what workers should do to ensure

individual safety. However, comments raised regarding how workers could help keep the factory and assets safe. Employers recommended that workers become more aware of risks surrounding the workplace and follow proper procedures to ensure their safety. The majority noted that training was an important element and part of the requirement for workers.

Table 9

*Analysis of Employers' Perception of Workers' Role*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Workers' Role | Risk Awareness | 3 | 5 |
| | Training | 3 | 4 |
| | Proper Procedure | 3 | 3 |

In this sample, risk awareness had the most responses followed by training. FB-Employer-2 summarized the relationship between risk awareness and training by stating:

> The workers need to be trained. They need to understand this issue. They need to be alert about those issues, which may be harmful for them. They need to be careful about those issues, which may keep them safe. They need to know and understand those two issues to keep them safe and report to the management. They need to have an idea about how to face such situation.

FB-Employer-4 explained what should be considered when thinking about surrounding hazards. The respondent spoke about injuries that could result from mishandling of equipment:

> They need to be trained about what they need to during a fire, what they need to do if they have an injury from needle, etc. They need to know what to do when someone needs medical assistance. If there is any accident the workers need to follow the instruction. During a fire drill they need to get out from the factory when they hear the alarm.

FB-Employer-1 mirrored the words of FB-Employer-4, but included additional considerations:

> For fire safety, every worker need to ensure that there would not be any fire. To ensure that we need to be careful about the operation of the machine. For example, motor jam, electric short circuit, boiler burst. For earthquake of similar types of disaster, the workers need to get out from the building and go to a safe place or an open place.

FB-Employer-1 was specific about issues that workers should focus on. FB-Employer-1 began with speaking on the topic of fire, but continued to discuss other areas of danger, including how workers should react. The participant discussed the need to ensure equipment properly functions, training on fire safety, and proper reporting of hazards.

Overall, employers emphasized that the primary role of workers was training. This coincided with the theme of training. The employer not only pointed out the importance of training, but also the role of the worker.

**Government Regulators**

This section pertains to the themes associated with the government regulator group. Table 10 presents a list of open codes. In total, I drew 29 themes from interview responses. To determine the four most prominent themes, I took into account the number of respondent from where the theme emerged and the number of times a specific theme was referenced. The four main themes expressed by government regulators were (a) worker awareness, (b) health and safety, (c) reference to law, and (d) worker training.

Table 10

*Open Coding Exercise of Interview Responses*

| | |
|---|---|
| Asset Protection | Safety from Unrest |
| Awareness of Avoiding Risk | Safety Training in Society |
| Building Safety | Understand Need for Collaboration |
| Check Safety Equipment | Workers' Awareness |
| Committee Formation | Workers' Training |
| Egress Path | Pressure from Stakeholders |
| Employer's Awareness | Profit Incentives |
| Gender Considerations | Proper Implementation |
| Health and Life Safety | Proper Monitoring |
| Investment in Safety | Provide Safety Equipment |
| Maternity Care | Quality Output of Production |
| New Solutions | Reference to Law |
| Pay and Benefits | Safe Working Environment |
| Perception of Workers Level of Knowledge | Safety from Sexual Assault |
| Perception on Level of Awareness | |

**Worker awareness.** The first theme for government regulators was worker awareness. This was the overall theme derived from the 10 interview questions. Twelve out of 13 regulators gave their perspectives on workers' awareness and its link to both safe working conditions and the development of a culture of safety. From the 12

participants, 23 coding references emerged. Regulators stressed the importance of awareness in developing safety culture. They also identified key roles of workers, employers, and government officials by understanding that the worker is the foundation of safety culture, but workers require support from employers and regulatory bodies.

Table 11

*Analysis of Government Regulators Perception of Workers' Awareness*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Workers' Awareness | Awareness program | 8 | 16 |
| | Training | 7 | 8 |
| | Law and Rules | 2 | 3 |

As displayed in Table 11, the majority of inspectors gave importance to instituting awareness programs. BFSCD-1 spoke about workers' responsibilities:

> They have to be more aware about the safety and security. Have to have knowledge about safety issue and existing safety measurement and practice them regularly. I hope, if they are aware they can maintain their own safety and safety of the asset in the factory.

BFSCD-1 felt workers must be more aware of their surroundings and practice safety. BFSCD-4 made a suggestion for the role of employers, "They have to be proactive to create awareness and train workers on fire safety, earthquake disaster and other common health and safety hazard." Labor-Inspector-3 followed by stating, "The employer should organize safety related awareness and training program for the workers." BFSCD-2

acknowledged the role of regulators and said, “We need to organize awareness program for the workers and train them on fire safety.”

BFSCD-6 stated, “They [employees] need to identify where there is a safety risk and act to solve it.” BFSCD-6 felt employees needed to become active partners in identifying and solving problems. BFSCD-6 continued on to state, “We need to identify the risks and gradually solve those.” This response implied that everyone involved at every level needs to assume responsibility for safety. BFSCD-6 believed this was essential because, “We live in risk in Bangladesh. It is a disaster prone country. We need to be prepared to fight any safety risk.” BFSCD-6 felt the surroundings were dangerous because of their geographic location. Because of this, it was necessary for everyone to be extra vigilant.

Labor-Inspector-5 spoke of a pilot project organized by the DIFE to establish safety committees and believed, “Through this committee, we can now learn from the workers about their safety, risk and take action accordingly.” Labor-Inspector-5 felt that by working as a team and using committees, changes could occur and more effective safety measures could be created.

The overall theme of worker awareness did not imply that this responsibility was solely the duty of the worker. The theme clearly suggested that tripartite partners have a key role in ensuring awareness of workers. This concept aligned with the idea of collaboration and teamwork that continued to resonate throughout the interview process.

**Health and life safety.** The second theme in this category was health and safety. The theme evolved from asking regulators about their perspectives on the roles and

requirement of making factories safer. Eleven out of 13 inspectors commented on health and safety, with 23 coding references (see Table 12).

Table 12

*Analysis of Government Regulators' Perceptions of Health and Safety*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Health and Safety | Life Safety | 6 | 9 |
| | Occupational Diseases | 3 | 5 |
| | OSH | 3 | 3 |

The prominent points discussed pertained to protection of life and property, security, occupational diseases, hygiene, and the need for inspectors to have education on Occupational Safety and Health (OSH). Labor-Inspector-5 commented: "Safety culture is new in our country, but very important. The inspector should have academic degrees in OSH to develop safety culture. There need to academic degree in this subject which is absent in this country at this moment." Labor-Inspector-6 coincided, stating: "OSH is also important. If the workers have any diseases because of their occupation, they will have a lifetime problem."

BFSCD-3 focused on life safety in general and stated, "So, for me safety culture is to ensure safety for people and their assets." BFSCD-3 felt it was essential to ensure lives were protected. The participant went on to offer a definition of a safe workplace and said: "For me safe workplace means where I do not have life risk, feel safe, the machineries are safe to use. The place is safe from fire and other health hazards."

BFSCD-3 counted more than just fire as a hazard, as he also spoke about the health of the workers.

BFSCD-4 spoke about how to protect the health and safety of workers. BFSCD-4 said, "They [employers] have to be proactive to create awareness and train workers on fire safety, earthquake disaster and other common health and safety hazard." He believed it was the responsibility of the employers to ensure that workers received adequate training in these areas. Labor-Inspector-1 spoke regarding how this could be accomplished, stating,

> Because in our law there are many sections about safety. And as in section 90, maybe you know, there is a law for owners to own if you have at least 50 workers, you have to form a safety committee.

Using safety committees could enable employers to ensure that health and safety policies are created and enforced. Labor-Inspector-2 spoke about concerns of disease and the effect chemical use could have on employees:

> In other countries, occupational diseases are specified, Workplace 70 or 30, but in our country, this disease…workplace-related disease is not specified in our country. So many issues remain undisclosed. Employers also should be concerned about that. Because in many factories you know in chemical or tannery when you will go so much issues are related this issue, but they just avoid this. But owner should come to solve this. And I think owners should have training also. In case of textile dying sector. So much chemical, so many chemicals are using in that sector, and in case of tannery. Owners sometimes not much educated, so they

> don't know what the effect of this chemical. So they need much training many training.

Labor-Inspector-2 believed this was a major concern. Labor-Inspector-2 raised concern about the effect of chemical exposure on the workers and felt further training was needed. Labor-Inspector-2 believed it was the employers' responsibility to learn about this issue and protect their workers. Overall, the government regulators focused on improving conditions for workers. The regulators were concerned about workers' health and safety and that not enough was being done to protect the workers.

**Reference to law.** The next theme discussed by regulators pertained to the law and its role in ensuring safe working conditions. Eleven out of 13 inspectors offered perspectives on this topic with 27 coded references (see Table 13).

Table 13

*Analysis of Reference to Law*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Law | Enforcement | 7 | 7 |
| | Understanding | 3 | 7 |
| | Monitoring | 4 | 4 |

The main points explored in this theme were the importance of workers and employers, the need for enforcement, understanding the law, and proper monitoring. BFSCD-3 noted:

> Government can form relevant policy and law to ensure safety in RMG sector. In fact, there are many laws already we have. Government just

> needs to make sure that factory owners are following the rules to ensure safety for their workers. Different government institute can monitor the implementation of these existing laws.

This participant believed the law existed for a reason and it was essential to follow up and ensure that laws were being followed. BFSCD-1 agreed with this point and said, "Employers have to follow the rules and regulations formed by the government to ensure safety in their factory." BFSCD-1 continued, describing his responsibilities, "We monitor their activities regularly and there is a mobile court to see how garments factory workers are following the rules and regulation about safety instructed by the Bangladesh government." BFSCD-1 felt this was important and ensured that regulations were obeyed.

BFSCD-2 felt it would be easier to ensure safety with employers' awareness. BFSCD-2 noted: "If the employers become a bit aware implementation of these laws become very easy. If we cannot ensure proper implementation of the existing laws, we cannot achieve the purpose behind it." BFSCD-2 felt education was an essential component in raising levels of safety and health. BFSCD-1 believed knowledge of the laws and regulations was important and employers needed to make the effort to learn more about the laws that governed their sector.

**Workers' training.** Eleven out of 13 inspectors offered perspectives on workers' training (see Table 14). The main areas discussed focused on collaboration between

employers and government, proper monitoring to ensure training occurred, and worker interest in learning about fire safety.

Table 14

*Analysis of Workers' Training*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Workers' Training | Collaboration | 3 | 11 |
| | Awareness | 7 | 10 |
| | Workers' interests | 1 | 1 |

BFSCD-1 noted, "Government institutions will monitor that whether a garment factory building constructed following building code or are they organizing fire drill or training on safety measurement, etc." BFSCD-1 felt it was important to ensure these areas were examined because they directly affected safety. BFSCD-1 believed employers needed to "identify where there is a safety risk and act to solve it." BFSCD-1 believed identifying and being proactive regarding risks is necessary to protect workers.

BFSCD-2 stated, "Factory owners have to take the initiative and contact the fire service to organize basic fire safety training for their workers." Training was regarded as essential and the government regulators felt that it was the responsibility of the employers to ensure it occurred. Labor-Inspector-3 noted that government regulators,

> can pressure the employers to take necessary initiatives such as: fire related training, electric related training, provide PPE to prevent different health hazard, ensure proper working environment (suitable sound,

temperature, light). This was essential as employers who neglected to follow these procedures put all employees at risk.

**Workers**

This section presents the themes associated with the workers group. Table 15 presents a list of open codes. In total, I drew 31 themes from interview responses. I took into account the number of respondents from where the theme emerged and the number of times a specific theme was referenced to determine the four most prominent themes. The workers were not verbose and offered short, succinct replies to the questions. I was able to draw four main themes associated with this group of participants. The four main themes expressed by workers were (a) provision for safety equipment, (b) worker training, (c) path of egress, and (d) road safety. Of noteworthy concern, workers included additional thoughts regarding what they considered important to safety. These were (a) cleanliness, (b) medical team, and (c) transportation.

Table 15

*Open Coding Exercise from Interview Response*

| | |
|---|---|
| Awareness on Avoiding Risks | Punitive Action for non-compliance |
| Building Safety | Quality Output for Production |
| Cleanliness | Reference to Law |
| Committee Formation | Responsibility for Medical Expenses |
| Could Not Answer the Question | Road Safety |
| Factory Utilities | Safe Environment |
| Health and Life Safety | Safety from Unrest |
| Hygiene | Safety Meeting |
| Medical Team | Safety Starts When Leaving Home |
| Egress Path | Stress Free Work Environment |
| Pay and Benefits | Transportation |
| Pressure from Stakeholders | Understand the Need for Collaboration |
| Profit Incentive | Workers' Awareness |
| Proper Functioning of Factory Equipment | Workers' Safety |
| Proper Monitoring | Workers Training |

**Provide safety equipment.** Worker perceptions regarding the need or use of equipment were expanded on by 14 out of 16 workers with 34 coded references (see Table 16). The main points discussed under this theme were personal protective equipment (PPE), fire protection, and training.

Table 16

*Safety Equipment*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Safety Equipment | Fire Protection | 12 | 23 |
| | Training | 9 | 12 |
| | PPE | 4 | 5 |

Analysis of interview data shows that fire protection was the most discussed consideration of safety equipment. Pertaining to safety concerns, FA-Worker-9 said, “It is related to disaster like fire. We need to be safe from accidents.” FA-Worker-9 expressed concern regarding safety and equipment. FA-Worker-9 called for support from employers: “They [employers] need to provide guidance to the workers. They should provide regular training. People who joined recently should get training as soon as possible.”

FB-Worker-3 spoke about employer responsibility in the factories. FB-Worker-3 believed certain essential responsibilities existed that employers should assume. FB-Worker-3 said: “They [employers] need to ensure that the factory is clean. They need to

arrange fire drill each and every month. They need to instruct how many seconds one person should take to leave the building during a fire."

FB-Worker-3 also identified workers' responsibilities, raising concern that many workers did not take the drills seriously. FB-Worker-3 continued to speak about how equipment linked to fire safety could be improved, noting:

> The electrical and building safety needs to be ensured. The workers would be able to work without any tension. There needs to be automated fire alarm system, which would alert the workers of the floor where the fire has started.

FB-Worker-3 believed (a) workers were fearful, which made the workplace uncomfortable; (b) it was important for them to feel safe; and (c) by implementing additional safety measures, the employers could create a safe atmosphere in the factories.

Other workers spoke about the need for training and proper safety equipment. Workers' perception of PPE referred to equipment from health hazard, in addition to fire safety equipment. FA-Worker-7 expressed that "The employers need to help with training, meeting, and equipment." FA-Worker-7 felt it was incumbent on the employer to assure that workers received the training necessary to be safe. FA-Worker-9 stated, "We need to use the equipment provided according to the training provided to keep us safe." FA-Worker-9 believed the equipment needed to be easily accessible, and employees should be aware of equipment location.

**Workers' training.** Thirteen out of 16 workers expressed their thoughts on training. There were 23 coded themes related to workers' training (see Table 17). The

underlying themes discovered were workers' concern for having proper equipment and training and ensuring fire prevention measures are in place.

Table 17

*Training*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Training | Need for Training | 9 | 9 |
| | Equipment | 8 | 12 |
| | PPE | 3 | 3 |

In this theme, the responses varied, suggesting that safety and training practices do not follow a specific standard. Nine workers expressed the need for training, four workers stated they received training, and one worker stated they never received training. Most coded references regarding equipment focused on the type of equipment provided or needed. Some workers discussed the need for an environment that would encourage safety, while others discussed general requirements. FA-Worker-3 recommended, "Employer should create an environment where all workers are ready/trained for any accident, workers know what to do during fire or earthquake." FB-Worker-3 noted: "The workers need to have training what to do during a fire. For example, they would not rush during a fire, they leave the building one by one. They need to leave the building without taking their belongings." FB-Worker-3 felt training improvement was required because workers were often engaged in panicked behaviors because of little practice in appropriate evacuation procedures.

**Path of egress.** The next theme focused on path of egress. Ten participants revealed thoughts on path of egress with 16 coded references (see Table 18).

Table 18

*Path of Egress*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Path of Egress | Unobstructed | 6 | 8 |
| | Pathways | 3 | 4 |
| | Installed Equipment | | |
| | Orderly Evacuation | 2 | 2 |

The majority of workers spoke about always locating unobstructed pathways and finding the most prominent path of egress. Of these themes, some linked cleanliness to path of egress. The theme cleanliness was an important focus for the workers. FA-Worker-10 expressed the importance of cleanliness when needing to evacuate quickly, "They [workers] need to keep their surroundings clean to get out quickly in case of a fire." FA-Worker-2 stated: "If fire occurs we need clearer passage to evacuate. So we should always clean our passage and be ready for any type of accident." They were always conscious of their risk. They felt a need to be hyper-vigilant and know the most direct path out of the building. They did not focus on planned evacuation procedures; rather they wanted to ensure they were aware of the most direct route to the outside. FA-Worker 4 stated, "Our emergency exit is always open." Among the workers, a high level of concern existed regarding the ability to evacuate the building as quickly as possible. The workers felt the need to know how to save themselves, regardless of training.

**Road safety.** In this theme, seven workers commented with 10 coded references (see Table 19). The main points discussed were upkeep of roads, firefighting vehicle access, and traffic.

Table 19

*Road Safety*

| Theme | Open Code | Number of Respondents | Number of times Referenced |
|---|---|---|---|
| Road Safety | Road upkeep | 5 | 6 |
| | Fire Vehicle Access | 2 | 2 |
| | Traffic | 2 | 2 |

The most discussed underlying theme in this category was road upkeep. This category also included safe passage between home and work. FA-Worker-6 stated that, "The workplace is safe and the road to come is also safe." Workers believed that not only did the factory need to be safe, but the employees also needed a clear and easy way to get home. FB-Worker-3 noted, "Safety culture includes everything we face after leaving the home including road." FA-Worker-4, said, "They [government] need to repair the road I use to come to the factory." Getting to his workplace was challenging. FA-Worker-4 felt the road repairs were important because "They [government] need to ensure the fire vehicles can come to the factory." This participant was aware that in the event of fire, the firefighting vehicles had limited means to reach the factory to offer aid. FB-Worker-4 believed that with the road being impassible by the fire trucks, there was no real way of fighting any possible fires.

Workers included cleanliness as important to ensure safe working conditions. Workers elaborated on the need to have medical facilities available. The participants mentioned the need for ambulance service from the factory to the hospital. The following figure illustrates internal comparisons between each group and comparisons across categories. Additionally, the figure illustrates the areas of importance that were not in comon between the three groups.

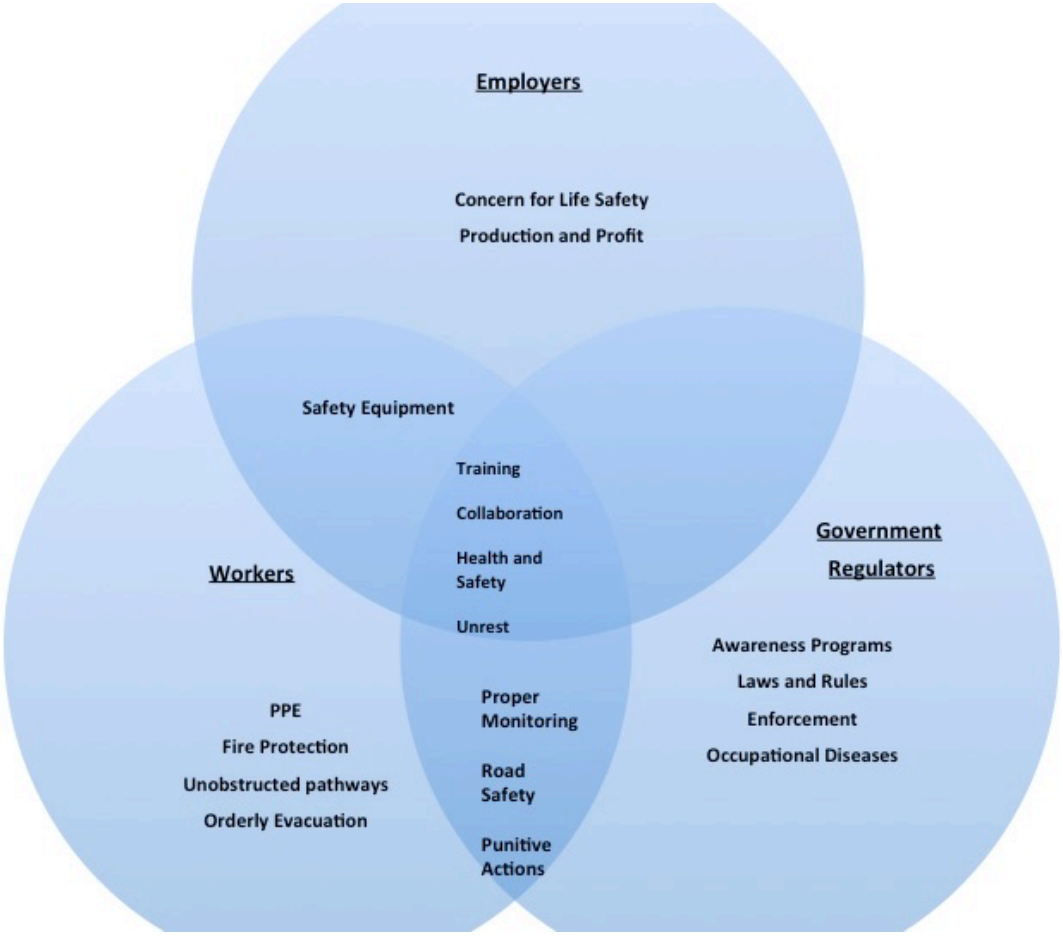


*Figure 1*. Comparison and contrast.

**Internal Comparison**

**Employers.** Employers' four main themes were training, health and safety, safety equipment, and the need for collaboration. Training was the predominant coded reference that spanned across three of the four main themes. In the training theme, participants gave perspectives on the need for training and made recommendations on what training should entail. When participants identified safety equipment as a requirement for safety, they emphasized the need to be properly trained on safety equipment. Participants also acknowledged that training should occur in collaboration with other workers, employers, and government officials. Other areas that were important, but did not span across themes, were health and life safety and its connection with the understanding of the value of the life, health, and safety connections to production and profit.

**Government.** Government regulators' four main themes pertained to workers' awareness, health and safety, reference to law, and worker training. Awareness was coded in two of the four main themes. Government regulators asserted that awareness programs were essential to developing a culture of safety within the RMG industry. Government regulators referred to collaboration and training as key elements to improve workers' awareness. Other prominent areas discussed were workers' awareness about safety related laws and rules; enforcement; monitoring based on existing laws; the need for workers' interest in training; road safety; and understanding and consideration of occupational disease, life safety, and OSH.

**Workers.** Workers focused on the need for PPE as their priority when considering safe working conditions. Moreover, workers drew a link between training

and PPE. Workers understood that proper training on the use and maintenance of safety equipment was necessary in ensuring their safety. Other key areas discussed were fire protection and equipment, the need for unobstructed pathways, orderly evacuation, proper monitoring for compliance, road conditions that would allow free access for fire vehicles, and safe travel to and from work. Although workers expressed little knowledge of safety culture, they had many beliefs on practical measures required to ensure their safety.

### Comparison Across Categories

The data indicated that health and safety, as well as training, were within the top four main themes for employers and government. Collaboration was within the top coding references for both groups. Training and safety equipment were in the top four themes for employers and workers, with both showing an understanding that training is necessary for safety equipment. Government regulators and worker comparison reveal that training was one of the main themes discussed by each. Other areas that were not discussed often, but spanned across two or more groups, were proper monitoring, road safety, and punitive actions (workers and government officials) and unrest (workers, government officials, and employers).

## Summary

The main research question (RQ1) for this study was What is the perception of workers, employers, and government officials on safety in the RMG sector of Bangladesh? I asked 10 interview questions to participants to capture perceptions of

safety culture from the three perspectives of workers, employers, and government regulators.

I addressed each interview question, drawing themes by identifying key points, differences, and similarities from interview responses. This line of questioning resulted in group and collective themes aimed at answering RQ1. The results showed that training, collaboration, health, and safety are essential among all interview participants. Workers and employers agreed on the importance given to safety equipment in the factories. Workers and government regulators also agreed on the importance of safe roads that allow unobstructed access to factories and of continued monitoring for compliance. Employers and government regulators were similar in their views regarding the priority for health and safety.

I sought to gather interview data from three separate target groups, analyze that data, and compare perspectives across groups. I was able to accomplish this by looking at each group separately, recognizing similar and different perspectives between the groups. The results of this study indicate that workers, employers, and government regulators understand the importance of training to begin the process of developing a culture of safety.

The majority linked collaboration, health, and safety as requirements to ensure safe factories. The perspectives of workers and employers were that a workforce trained on safety, and employer involvement in that process, would make for a safer and happier work environment. This concept aligns with the motivational aspects of Bandura's (1977) self-efficacy theory. The theory holds that if workers are empowered and have

organizational support, then they are motivated and have a vested interest in life safety and safety of property (Bandura, 1977). Chapter 5 includes a brief introduction to the chapter, discussion on the interpretation of findings, limitations experienced during the study, recommendations for future engagement, implications for change, and concluding remarks.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Introduction

Triangulating the perspectives of workers, employers, and government regulators in the RMG industry of Bangladesh is significant to understanding the underlying conditions of factory safety. To achieve this understanding, stakeholders undertook studies on the working conditions and the level of involvement from employers and the government; however, further in-depth analysis on different perspectives is required (Labowitz & Baumann-Pauly, 2015). This analysis is necessary to explore thoughts and experiences from individuals and groups involved in the RMG industry to gain insight into the sources of the problem. The findings of this study provided a collective insight of perceptions within and across groups. A need exists to look above the interests of each group and to consider collective interest in developing an environment in which safety culture can flourish.

The purpose of this study was to examine the complex relationships and perspectives on factory safety from workers, employers, and government regulators through individual interviews. I sought to analyze and explore the similarities and differences within each group. I assessed safety culture in Bangladesh's garment industry

and inquired into perspectives on the development of a sustainable safety culture. I employed a qualitative case study using content analysis design. The goal of the case study was to examine a bounded case to contribute to a comprehensive understanding of perspectives. The aim was to gain a clear understanding and compare the experiences of the RMG workers, employers, and government officials.

To examine the complex relationships and perspectives of factory safety from workers, employers, and government regulators, this qualitative research study used the following research question, What is the perception of workers, employers, and government officials on safety in the RMG sector of Bangladesh?

## Interpretation of Findings

This subsection of the study presents the conclusions from the findings of the qualitative study, which answer the research question. This subset also includes information regarding how the findings support the theoretical framework for this study and correlates with the prevailing body of knowledge on effective practices.

### Research Question 1

To answer RQ1, I conducted interviews at two venues for government regulators and two venues for employers and workers. The interviews averaged 15 minutes for regulators and 5–10 minutes for employers and workers. The recording of interviews started with consent from the participants. I used an iPhone 6 voice recorder to record interviews conducted in English and mobile phone Walton Primo Z, Lava KKT 27 and Walton Tab 10x to record interviews carried out in Bangla.

Training stood out as the most discussed topic when asked about developing a

safety culture. Training was in the top four most discussed topics across the three groups of worker, employer representatives, and government regulators. The three groups believed that with proper employee training, a safety culture could form and flourish within the RMG industry. This finding is similar to that of Alamgir et al. (2013), as they asserted that proper planning for training is a necessary intervention measure to ensure safe factories. According to Alamgir et al., when companies implement basic, effective planning—fire escapes, skill development, unlocked exits, and announcement systems—underlying issues related to safety are rectified. Solving safety issues is more difficult when the workforce remains unaware of legal rights, safety monitoring, and the enforcement of existing labor laws, which falls back on changes that must be adhered to at the higher level (Alamgir et al., 2013). These changes did not make the top four, but were discussed by a significant number of participants.

Participants discussed passive fire protection, awareness of workers' rights, understanding of existing laws related to workers' safety, and proper monitoring and enforcement action. Participants stressed the importance of the aforementioned areas, and this importance was stressed by Alamgir et al. (2013). These elements are critical to workers, employers, and government regulators to understand their roles in ensuring safe working conditions and developing a safety culture.

Workers and government regulators agreed that safety must be a priority for workers. An employer vested in ensuring safe working conditions will strive to reduce accidents that can cause delays in productivity and reduction of profits. Employers should rethink their assumptions about the importance of safety to the business model.

Moreover, workers should serve as the foundation for developing a safety culture. As suggested by Lallemand (2012), employees' perceptions and attitudes toward safety, combined with organizational policies and procedures that embrace safety will result in an environment of job satisfaction, worker involvement, and organizational commitment. Workers' perceptions revealed a higher level of job satisfaction if workers believed that employers prioritized workers' best interests. Workers stressed the direct relationship between their safety and their level of satisfaction at work.

Workers, employers, and government regulators can begin to build mutually beneficial relationships as the industry and country move forward in their pursuit of safety culture. These relationships can materialize if each party involved can build on the similarities revealed in this study and connect the link between the differences. Positive behavioral change will result in increased self-efficacy from the three partners, as conceptualized by Bandura (1977, 1978). I found that workers, under the right conditions, see the value of their work and feel empowered to ensure their environment is safe for work. Employers also appreciate that safe factories are good for business, and government regulators embraced the idea of workers and employers as equal partners in developing a safety culture, not only in the factory, but also in society.

## Limitations of the Study

The study remained within its intended boundaries and I was successful in gathering data on the perceptions of workers, employer representatives, and government regulators. However, limitations resulted in extensive delays in data collection. One limitation of the study was receiving signed cooperative agreements from factory owners

and government regulators. While factory owners and regulators verbally agreed to the study, some factory owners withdrew interest, and it took several months to gain signed approval from the government officials. Employer associations and factory owners exercised caution when approached with a request to take part in the study because of the current political environment surrounding garment factories. Criticism from the media and academia on the progress of making factories safe, and political pressure, resulted in factory owners taking a defensive approach to any questions on safety. Gaining signed cooperative agreements with government officials took longer than expected because of the delays that occur with government bureaucracy. A combination of employer and government delays resulted in the research process falling behind the projected work plan.

Another limitation was the inability to engage multiple factories of different sizes and populations. I had a limited pool of volunteer factories from which to choose. Of the factories that agreed, one withdrew interest after IRB approval. This withdrawal resulted in me seeking out additional factories to take part in the study. I obtained permission and received a signed cooperative agreement from one additional factory. This resulted in two factory managers from two factories providing permission to conduct interviews with workers. The limited number of factories led to a smaller number of workers than projected. An additional limitation of the study was that I focused on factories not under the remit of the Accord or Alliance, which typically do not have a history of awareness campaigns and systematic training.

I followed all procedures required by the IRB and guaranteed that measures were taken to ensure interview results were honest and had minimal chance for loss of integrity. In one example, employers requested a copy of the interview questions ahead of the interview to prevent asking incriminating questions. I did not provide the research questions and explained to the employers that providing the questions would affect the credibility of response. I determined that prematurely providing the questions could give the opportunity for interview participants to provide prepared or artificial responses.

I issued invitation letters to workers through employers and government regulators. The limitation of issuing invitation letters to workers through employers was the inability to determine how workers were selected to be a part of the interview. Employers assured me that workers voluntarily participated. However, the factory owners did not provide any evidence to support this claim. I presented consent forms to participants in their native language of Bangla and explained confidentiality measures taken with the interview results. Participants were assured of identity security through coding.

I was able to identify areas of trustworthiness through transferability. The basis of the research was to look at internal and cross-group perspectives. Similarities of participant responses confirmed transferability. Participants were interviewed individually at different times and days. This revealed a high level of transferability that drew out similar themes within and across categories. I used the same methodology for each participant. The interviews opened with establishing rapport, briefly explaining the purpose of the study, ensuring privacy of the individual and interview responses, and

receiving a signature on the consent form. The collection of demographic data and the interview followed. Each participant had an equal opportunity to provide his or her perspectives on each question, and I was able to address any misunderstandings or misinterpretations.

I received some differing responses from participants; however, the richness of data was different among the participants. While detailed answers were received from government regulators, workers offered fewer details in their answers. Many answers were short with little interest from the worker to expand further. This is significant to the findings as it correlates with the assumption that workers had a limited understanding of what it means to have safety culture. However, based on interview responses, I was able to see general interest in safety.

## Recommendations

The intent of this study was to gain an understanding of the perspectives of the three parties in an effort to triangulate perspectives toward insight into laying the groundwork for developing safety culture. The strength of the study was the findings of commonalities between each group of participants' perspectives regarding value and need for training, safety and health, and collaboration. Commonalities existed on passive fire protection requirements and priorities of safety requirements.

Employers have the potential to benefit from a more confident and productive workforce, which may increase profit while serving as a model for subcontractors and other industries still struggling with creating safe work environments. In conjunction with employers, policy can also change to encourage safe working conditions. Incentives, such

as insurance schemes, can be provided for compliance. From the perspectives of workers and government regulators, policy must be designed to ensure that enforcement actions and legal proceedings are carried out for noncompliance. Workers call on government regulators to do more to increase awareness of factory owners regarding their legal obligations.

## Implications

I explored perspectives of workers, employers, and government regulators to find similarities and differences in perspectives regarding the development of safety culture. The findings of this study have the potential to inform workers, employers, and government regulators on their similarities and differences pertaining to the requirements for developing a culture of safety in the RMG industry. Similarities in perspectives can serve as the foundation for increased collaboration and understanding. The differences in priorities can be discussed through mechanisms, such as elected occupation safety and health committees, regular interaction with government authorities, the willingness of the employers to exercise the responsibilities of compliance, and creating an environment in which safety culture can flourish. Workers' confidence can improve if a tripartite relationship is established, encouraging the three parties to work together. Safety practices may not only benefit the individual worker, but the family as well when sound safety practices are not limited to the workplace—these practices can carry into the home and family life.

If workers, government officials, and employers see the value of collaboration, they can develop a culture of safety within the industry and society as a whole. This study

provided a view of the perspectives of the three participant groups to determine if the ability to change exists. If the three groups implement the recommendations of this study, then a foundation for collaboration may be established. This basis will allow a more sustainable and positive social change to exist in Bangladesh's RMG industry and beyond.

## Conclusion

Considering the perspectives of workers, employers, and government regulators, and their similarities, can serve as a foundation for further collaboration and mutually beneficial relationships. While workers represent the foundation of any effective safety program, employers have a duty and a responsibility to ensure that workers receive the proper tools and training to work in a safe environment. The findings of the study and research literature support this assumption by suggesting that self-efficacy can result in a change in attitudes and behaviors toward safety (Bandura, 1977). If safety culture develops, then there is potential for safety culture to carry into society and affect people from an early age. Safety awareness should begin during elementary school so that the next generation of workers and employers has an imbedded notion of safety culture. Outside of the workplace, neighborhood safety campaigns can be organized and accomplished at the local level to ensure that all sectors of society will benefit from the changes.

If decision makers in Bangladesh consider the findings of this study, then the findings have the potential to contribute to a paradigm shift in thinking regarding the importance of developing a safety culture. The most prevalent theme among workers,

employers, and government regulators is the need for training. If workers and employers receive proper training, positive behavioral changes could result, beginning at home. The factory would be safer, alleviating safety concerns from buyers. Government regulators must work with employers and workers to monitor compliance and ensure that their constituents can get the required assistance in developing safety programs. Proper collaboration will help build confidence with the public regarding the willingness to comply with government regulations, giving increased legitimacy to government enforcement mechanisms. This study can serve to inform workers, employers, and government regulators regarding the best way to collaborate on a mutually beneficial relationship focused on improving safe working conditions.

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Appendix A: Consent Forms

**CONSENT FORM (Workers' representative)**

You are invited to take part in a research study of safety culture in the Ready-made garment industry of Bangladesh. The researcher is inviting selected RMG employers' representatives to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Maurice L Brooks, who is a Doctoral Candidate at Walden University

**Background Information:**
The purpose of this study is to explore worker perception of the existence of safety culture in the RMG factory.

**Procedures:**
If you agree to be in this study, you will be asked to:

- Sit for an initial 60 minute interview
- Sit for an additional 60 minute interview to clarify information.
- Provide final confirmation of interview results

Here are some sample questions:

- How old are you?
- How long have you worked in RMG factories?
- What is your current position?

**Voluntary Nature of the Study:**
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at your factory will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

**Risks and Benefits of Being in the Study:**

Being in this type of study involves some risk, such as unfamiliarity with the questions or concern with remaining anonymous. Being in this study would not pose risk to your safety or wellbeing. The research process will ensure your identity is protected by using a coding system rather than your name.

The study has potential to provide results that can be used to inform decision makers on the current state of safety culture in the RMG industry. This added value is that by understanding the current state of safety culture, decision makers can be better informed so that they can make sound decision that will improve safety in the RMG factory.

**Payment:**
Each participant in the study will receive an honorarium for participating in the study.

**Privacy:**
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by password protection on the computer. The data will be stored as well as the software used for data analysis. Data will be kept for a period of at least 5 years, as required by the university.

**Contacts and Questions:**
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via maurice.brooks@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number 001-612-312-1210 (for participants outside the US). Walden University's approval number for this study is **IRB will enter approval number here** and it expires on **IRB will enter expiration date.**

Insert the phrase that matches the format of the study:

The researcher will give you a copy of this form to keep. (for face-to-face research)

**Statement of Consent:**

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Only include the signature section below if using paper consent forms.

Printed Name of Participant _____

Date of consent _____

Participant's Signature _____

Researcher's Signature _____

**সম্মতি পত্র (শ্রতকি প্রতিতিি)**

বাংলাদেশের তরের পাকে রদেরে ররিা ত্তার সাংস্ক্রৃতে সম্পরকতি একটি গদবষণায় আংে রদিতে আ গ্রদিক আমন্ত্রণ জাগিদি হদে। তরের পাকে রদেে কমরিতে শ্ররমকদরে রবিরিতি প্ররররেরি রিহসাদব গদবষক আ গ্রদিক আমন্ত্রণ জাগিদে। আ রজিররদ আংে রদিতে আগ্রহী রকগি পসই রসদ্ধান্ত পওিয়ার আদগ গদবষণাটি বুঝদতে সাহায্য করার জযি এই ফরমটি 'ইফিরমড কদিসন্ট' প্ররয়িার একটি আংে।

এই গদবষণাটি যুক্তরাদে অবরতি WALDEN রবশ্বরবযোলদয়র মররস এল ব্রুকস গিমর একজি ডক্টদরট প্রার্থী ররলিগি করদে।

**পটভূতি:**

তরের পাকে কারখাগয়ি ররিা ত্তার সাংস্ক্রৃতে সম্পদকি কিমীদরে রিগি অুসি□াি করা এই গদবষণায় উদযে। _

**পদ্ধতি:**

আ রি এই গদবষণায় আংে রদিে সম্ভে হদল:

• ৬০ রমরদিটর একটি সাক্ষাৎকার রদেে হদব

• রৈখয য্াহি এর জযি অররৈরক্ত ৬০ রমরদিটর একটি সাক্ষাৎকাদরর জযি সময় রদেে হদব

• সাক্ষাৎকাদরর ফলাফল সম্পদকি রিশ্চয়াে প্রাে করদে হদব।

এখাদি রিকে মিুি প্রশ্ন পয়ো হল:

• আ াি বয়স কে?

• আ রি তিরৈর প াোক কারখাোয় করৈেি য্াবে কাজ করদে?

• আ রি বমৈোদি পকাি দে আদে?

**স্বচ্ছোসসবী াি অংশগ্রহণ:**

এই গদবষণায় আংগ্রৈহণ সম্পূণি আ াি ইোর উ র রর্িরি কদর। _এই গদবষণায় আ াি আংে রদিে িওয়া বা ি িওয়ার রসদ্ধান্তদক সবাই সম্ভাি করদব। আ রি আংে রদিে ি হিদল কারখাোি পকউ আ াি সাদর্থ রর্ন্ধ পকাি আরিণ করদব ি। আ রি এখি গদবষণায় আংগ্রৈহণ করার রসদ্ধান্ত রদিলও রবৌদে ৈ রররবৈি করদে াোরদব। _আ রপিয্ পকাদাি সময় উত্তর পয়ো ব□ করদে াোদর। _

**গসবষণায. অংশগ্রহসণর উপকাতরাি এবং ঝুঁতক:**

এই রিদরি গদবষণায় আংগ্রেহদণর রকে ঝুঁরক রদয়দে পয্মি, অ রররে প্রশ্ন বা পবামী ি র্থাকদে ারার ঝুঁরক । _এই গদবষণায় আংগ্রেহদণর জযি আ রি ররিা ত্তা বা উ কাররে ঝুঁরকর সম্ভুরখি হদব ি। _এই গদবষণা প্ররয়িায় আ রি িদমর ররবদে একটি সিওয়াডি সুররক্ষে পকারডাং রসদমে বযবহার কদর আ রি ররদিয়র পগা ীয়ে ররিশ্চে করা হদব। _

এই গদবষণার মাযিদম এমি ফিলাফল াওয়ার স াবি রদয়দে যা তরের প াকে রদেরে ‘ররিা ত্তার সাংস্ক্ররে’ বমৈোি অবি সম্পদকি ীরিরৈেীিরিকদরে অবরহে করদব। এই গদবষণার বাড়রে াওয়া হল, ীরিরৈেীিরিকরা তরের প াকে রদেরে ‘ররিা ত্তার সাংস্ক্ররে’ বমৈোি অবি সম্পদকি সিঠকিরাদব অবরহে হদয় তরের প াকে রদেরে কমি ররদবদরে ররিা ত্তা বৃরদ্ধদে সঠকি রসদ্ধান্ত গ্রহণ করদে ারদবি।

**সম্মীি:**

গদবষণায় আংগ্রেহদণর জযি আংগ্রেহণকারী একটি সম্ভীি াদবি। _

**স্বগাপীযি.ি:**

আ রি প্রত্েত রৈথয পগা িরাখা হদব। _গদবষক আ রি বযরক্তগে রৈথয এই গদবষণার বাইদর পকাদাি কাদজর জযি বযবহার করদব ি। এোড়াও, গদবষক গদবষণা ররদ াদটি আ রি িমি বা আ াদিক সাক্ষ্ত করদে াদর এমি রিকে অন্তরুক্ষ্ত করদব ি। _আ রি পয়ো রৈথয করম্পউটাদর াসওয়াডি দ্বারা সুররক্ষে রাখা হদব।

_রৈ্থয এবাং রৈ্থয রবদষেদণ বযবহৃতৈ সফ্টওয়যার সাংরক্ষণ করা হদব। _রবশ্বরবযোলদয়র রয়িম অুয়ি্যী কম দক্ষ ৫ বরে য্নি্ত রৈ্থয সাংরক্ষণ করা হদব।

**স্ব াগাস াগ এবং প্রশ্ন:**

আ রি পকাি্রশ্ন র্থাকদল এখ রিজজ্ঞাসা করদতৈ াদরি। _রবতৈদে পকাি্রশ্ন করদতৈ হিদল আ রি maurice.brooks@waldenu.edu ইদমইল ঠকিাি্য গদবষক এর সাদর্থ পয্াগাদয্াগ করদতৈ াদরি। _একজি আংগ্রেহণকারী রহদসদব আ রি অরকিার সম্পদকি বিযরক্তগরৈোদব কর্থা বলদতৈ হিদল , আ রি WALDEN রবশ্বরবযোলদয়র প্ররররৈরিি Dr. Leilani Endicott এর সাদর্থ পফাদি পিয্াগাদয্াগ করদতৈ াদরি। _তৈার পফাি ম্বির (মারকি যিুক্তরাদরে বাইদর আংগ্রেহণকারীদরে জযি) 001-612-312-1210। এই গদবষণা প্রকদরে WALDEN রবশ্বরবযোলদয়র অুদিমাদি ম্বির _____ এবাং এটরি পময়াদ পষে হদব _____.

এই গদবষণাটি একটি গুণগতৈ পকসরোরড য্া কদন্টন্ট রবদষেণ এর মাধ্যদম করা হদব। _

গদবষক আ াদিক এই সম্ভরতৈ দরে একটি কির প্ররোি করদবি। _

**সম্মতিএর তবৃতি:**

আরম উ দরর রৈ্থয দড়রে এবাং আরম মদি করর আমার আংগে্রহদণর রবষদয় রসদ্ধান্ত পওিয়ার জযি

গদবষণার রবষয়বস্তু র্ালর্াদব বুঝদৈে প দররে। রদিে প্রত্যে স্বাক্ষদরর মাযিদম আরম উ দর বরণৈি

রবষদয় সম্ভরৈে প্রাে করররে। _

কাগদজ মুরৈি ফমি বিযবহাদরর পক্ষদে শুমিাে স্বাক্ষর আংে অন্তরুক্তি করু।ি

আংগে্রহণকারীর িমি: ----------

অমিরৈে প্রাদেরি তারিখ: ----------

আংগে্রহণকারীর স্বাক্ষর: ----------

গদবষদকর স্বাক্ষর: ----------

**CONSENT FORM (Employers' representative)**

You are invited to take part in a research study of safety culture in the Ready-made garment industry of Bangladesh. The researcher is inviting selected RMG employers' representatives to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Maurice L Brooks, who is a Doctoral Candidate at Walden University

**Background Information:**
The purpose of this study is to explore employers' perceptions of the existence of safety culture in the RMG factory.

**Procedures:**
If you agree to be in this study, you will be asked to:

- Sit for an initial 60 minute interview
- Sit for an additional 60 minute interview at a later date to clarify information.
- Provide final confirmation of interview results

Here are some sample questions:

- How old are you?
- How long have you worked in RMG factories?
- What is your current position?

**Voluntary Nature of the Study:**
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at your factory will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

**Risks and Benefits of Being in the Study:**

Being in this type of study involves some risk, such as unfamiliarity with the questions or concern with remaining anonymous remaining anonymous. However, being in this study would not pose risk to your safety or wellbeing. The research process will ensure your identity is protected by using a coding system rather than your name.

The study has potential to provide results that can be used to inform decision makers on the current state of safety culture in the RMG industry. This added value is that by understanding the current state of safety culture, decision makers can be better informed so that they can make sound decision that will improve safety in the RMG factory.

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Each participant in the study will receive an honorarium for participating in the study.

**Privacy:**
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. The data will be kept secure by password protection on the computer the data will be stored as well as the software used for data analysis. Data will be kept for a period of at least 5 years, as required by the university.

**Contacts and Questions:**
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via maurice.brooks@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number 001-612-312-1210 (for participants outside the US). Walden University's approval number for this study is **IRB will enter approval number here** and it expires on **IRB will enter expiration date.**

Insert the phrase that matches the format of the study:

The researcher will give you a copy of this form to keep. (for face-to-face research)

**Statement of Consent:**

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Only include the signature section below if using paper consent forms.

Printed Name of Participant _____

Date of consent _____

Participant's Signature _____

Researcher's Signature _____

**সম্মতি পত্র (তসিয.াগকতিার প্রতিতিতি)**

বাংলাদেশের তরের পাোক রদেরে রিরা ত্তা সাংস্কৃরে সম্পরকে একটি গিদবষণায় আংে রদিে আ াদিক আমন্ত্রণ জাদিি হদে। তরের পাোক রদেরে শ্ররমক রবিারিে রদিয়াগকৌরি প্ররৈরিি রিহসাদব গদবষক আ াদিক আমন্ত্রণ জাদিি। আ রজিররদ আংে রদিে আগ্রহী রকাি পসই রসদ্ধান্ত পওিয়ার আদগ গদবষণাটি বুঝদে সাহায্য করার জযি এই ফরমটি 'ইফিরমড কদিসন্ট' প্ররয়িার একটি আংে।

এই গদবষণাটি যুক্তরাদে অবরিে WALDEN রবশ্বরবযোলদয়র মররস এল ব্রুকস াদিমর একজি ডিক্টদরট প্রার্থী ররলিাি করদি।

**পটভূতি:**

তরের পাোক কারখাায়ি রিরা ত্তার সাংস্কৃরে সম্পদকি কিমীদরে রিাি অুসি াকিরা এই গদবষণায় উদয্যে।

**পদ্ধতি:**

আ রএই গদবষণায় আংে রদিে সম্ভে হদল:

• ৬০ রমরদিটর একটি সাক্ষাৎকার রদেে হদব

• রৈখয য্াহি এর জযি অররৈরক্ত ৬০ রমরদিটর একটি সাক্ষাৎকাদরর জযি সময় রদেে হদব

• সাক্ষাৎকাদরর ফলাফল সম্পদকি রিশ্চয়াে প্রাোকিরদে হদব।

এখাদরিকে মিুি প্রশ্ন পয়ো হল:

• আ ারি বয়স কে ?

• আ রতিরৈর প াকে কারখাায়ি করৈেযি্াবে কাজ করদে?

• আ রবিৈমোিদপিকাদিে আদে?

**স্বচে্ছাসসবী ীি অংশগ্রহণ:**

এই গদবষণায় আংগে্রহণ সম্পূণি আ ারি ইারে উ র ররি্রি কদর। এই গদবষণায় আ ারি আংে রদিৈ িওয়া বা ি িওয়ার রসদ্ধান্তদক সবাই সম্ভাি করদব। আ রআংে রদিৈ ি িহিদল কারখাারি পকউ আ ারি সাদর্থ রর্ন্ধ পকাি আরিণ করদব ি। আ রএখগিদবষণায় আংগে্রহণ করার রসদ্ধান্ত রদিলও রবৌদৈ ৌ ররবৈি করদৈ ারদবি। আ রপিয্ পকাদাি সময় উত্তর পয়ো ব□ করদৈ াদরি।

**গসবষণায. অংশগ্রহসণর উপকাতরাি এবং ঝুঁতক:**

এই রিদরি গদবষণায় আংগে্রহদণর রকে ঝুঁরক রদয়দে পয্মি, অ রররৈি প্রশ্ন বা পবামী ি র্থাকদৈ ারার ঝুঁরক । এই গদবষণায় আংগে্রহদণর জযি আ ারি ররিা ত্তা বা উ কাররৈ

ঝুঁরকর সম্ভুরখি হদব ি। এই গদবষণা প্ররয়িায় আ রি িদমর ররবদৈে একটি সিওয়াডি সুররক্ষৈে পকারডাং রসদমে বযবহার কদর আ রি ররদিয়র পগা ীয়ৈে ররিশ্চৈে করা হদব।

এই গদবষণার মাযিদম এমি ফিলাফল াওয়ার স□াবি রদয়দে যা তরৈের প াকে রদেরে 'ররিা ত্তার সাংস্ক্রররৈ' বমৈোি অবি সম্পদকি ীরিরৈেীিরকদরে অবরহৈে করদব। এই গদবষণার বাড়রৈে াওয়া হল, ীরিরৈেীিরকরা তরৈের প াকে রদেরে 'ররিা ত্তার সাংস্ক্রররৈ' বমৈোি অবি সম্পদকি সিঠকিরাদব অবরহৈে হদয় তরৈের প াকে রদেরে কমি রিরদবদরে ররিা ত্তা বৃরদ্ধদৈে সঠকি রসদ্ধান্ত গ্রহণ করদৈে রিদবি।

**সম্মাি:**

গদবষণায় আংগ্রেহদণর জযি আংগ্রেহণকারী একটি সম্ভাি িদবি।

**স্বগাপীযি.ি:**

আ রি প্রত্েত রৈ্থয পগা রিাখা হদব। গদবষক আ রি বযরক্তগৈে রৈ্থয এই গদবষণার বাইদর পকাদাি কাদজর জযি বযবহার করদব ি। এেড়াও, গদবষক গদবষণা ররদ াদটি আ রি িমি বা আ দিক সাক্ি্ত করদৈে াদর এমি রকৈে অন্তরুক্ি্ত করদব ি। আ রি পয়ো রৈ্থয করম্পউটাদর াসওয়াডি দ্বারা সুররক্ষৈে রাখা হদব। রৈ্থয এবাং রৈ্থয রবদষেদণ বযবহৃৈে সফ্টওয়যার সাংরক্ষণ করা হদব। রবশ্বরবযোলদয়র রয়িম অুয়ায়ী কম দক্ষ ৫ বরে য্নি্ত রৈ্থয সাংরক্ষণ করা হদব।

**স্ব াগাস াগ এবং প্রশ্ন:**

আ ারি পকাি প্রশ্ন র্থাকদল এখ রিজজ্ঞাসা করদৈ াদরি। রবদৈদে পকাি প্রশ্ন করদৈ াহিদল আ রি maurice.brooks@waldenu.edu ইদমইল ঠকিাোয়ি গদবষক এর সাদর্থ পয্াগাদয্াগ করদৈ াদরি। একজি আংগ্রেহণকারী রহদসদব আ ারি অরকিার সম্পদকি বিযরক্তগরৌদব কর্থা বলদৈ াহিদল , আ রি WALDEN রবশ্বরবযোলদয়র প্ররররৈরিি Dr. Leilani Endicott এর সাদর্থ পফাদি পয্াগাদয্াগ করদৈ াদরি। তাঁর পফাি ম্বির (মারকি যুক্তরাদরে বাইদর আংগ্রেহণকারীদরে জযি) 001-612-312-1210 । এই গদবষণা প্রকদরে WALDEN রবশ্বরবযোলদয়র অুদিমাদি ম্বির _____ এবাং এটরি পময়াদ পষে হদব _____.

এই গদবষণাটি একটি গুণগদৈ পকসস্টাডি য্া কদন্টন্ট রবদষেণ এর মাধ্যদম করা হদব ।

গদবষক আ াদিক এই সম্ভরদৈ দরে একটি কির প্রাি করদবি। _

**সম্মতি এির তববৃতি:**

আরম উ দরর রৈখয দড়রে এবাং আরম মদি করর আমার আংগে্রহদণর রবষদয় রসদ্ধান্ত পওিয়ার জযি

গদবষণার রবষয়বস্তু র্রালর্াদব বুঝদৈে প দররে। রদিে প্রত্যে স্বাক্ষদরর মাযিদম আরম উ দর বরণৈে

রবষদয় সম্ভরৈে প্রাে িকররে।

কাগদজ মুরৈে ফমি বিযবহাদরর পক্ষদে শুমিাে স্বাক্ষর আংে অন্তরুক্ত করু।ি

আংগে্রহণকারীর িম: ----------

অমিরৈে প্রাদেরি তারিখ: ----------

আংগে্রহণকারীর স্বাক্ষর: ----------

গদবষদকর স্বাক্ষর: ----------

**CONSENT FORM (Government representative)**

You are invited to take part in a research study of safety culture in the Ready-made garment industry of Bangladesh. The researcher is inviting selected government officials from relevant institutions to be in the study. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Maurice L Brooks, who is a Doctoral Candidate at Walden University

**Background Information:**
The purpose of this study is to explore government officials' perception of the existence of safety culture in the RMG factory.

**Procedures:**
If you agree to be in this study, you will be asked to:

- Sit for an initial 60 minute interview
- Sit for an additional 60 minute interview at a later date to clarify information.
- Provide final confirmation of interview results

Here are some sample questions:

- How old are you?
- How long have you worked in RMG factories?
- What is your current position?

**Voluntary Nature of the Study:**
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at your factory will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

**Risks and Benefits of Being in the Study:**

Being in this type of study involves some risk, such as unfamiliarity with the questions or concern with remaining anonymous remaining anonymous. However, being in this study would not pose risk to your safety or wellbeing. The research process will ensure your identity is protected by using a coding system rather than your name.

The study has potential to provide results that can be used to inform decision makers on the current state of safety culture in the RMG industry. This added value is that by understanding the current state of safety culture, decision makers can be better informed so that they can make sound decision that will improve safety in the RMG factory.

**Payment:**
Each participant in the study will receive an honorarium for participating in the study.

**Privacy:**
Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. The data will be kept secure by password protection on the computer the data will be stored as well as the software used for data analysis. Data will be kept for a period of at least 5 years, as required by the university.

**Contacts and Questions:**
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via maurice.brooks@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number 001-612-312-1210 (for participants outside the US). Walden University's approval number for this study is **IRB will enter approval number here** and it expires on **IRB will enter expiration date.**

Insert the phrase that matches the format of the study:

The researcher will give you a copy of this form to keep. (for face-to-face research)

**Statement of Consent:**

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Only include the signature section below if using paper consent forms.

Printed Name of Participant _____

Date of consent _____

Participant's Signature _____

Researcher's Signature _____

**সম্মতি পত্র (সরকারী প্রতিষ্ঠিত)**

বাংলাদেশের তৈরি পোশাক শিল্পের শ্রমিক সংস্কৃতি সম্পর্কিত একটি গবেষণায় আপনি আমন্ত্রণ জানানো হচ্ছে। তৈরি পোশাক শিল্পের বিভিন্ন সরকারী প্রশাসনিক সাথে গবেষক আপনি আমন্ত্রণ জানানো। আপনার আগ্রহী হলে পরই সিদ্ধান্ত গ্রহণের আগে গবেষণাটি বুঝতে সাহায্য করার জন্য এই ফরমটি 'ইনফরমড কনসেন্ট' প্রশ্নের একটি অংশ।

এই গবেষণাটি যুক্তরাজ্যে অবস্থিত WALDEN বিশ্ববিদ্যালয়ের মাস্টার্স ইন ব্যবসা প্রশাসন বিভাগের একজন ডক্টরেট প্রার্থী পরিচালনা করছে।

**পটভূমি:**

তৈরি পোশাক কারখানায় শ্রমিক সংস্কৃতির সম্পর্কে কর্মীদের মতামত জানা এই গবেষণার উদ্দেশ্য।

**পদ্ধতি:**

আপনি এই গবেষণায় অংশ নিতে সম্মত হলে:

• ৬০ মিনিটের একটি সাক্ষাৎকার দিতে হবে

• ঐচ্ছিক এর জন্য অতিরিক্ত ৬০ মিনিটের একটি সাক্ষাৎকারের জন্য সময় দিতে হবে

• সাক্ষাৎকারের ফলাফল সম্পর্কে নিশ্চিত করতে হবে।

এখাদরিকে মিুি প্রশ্ন পয়ো হল:

• আ রি বয়স কে ?

• আ রতিরৈর প াকে কারখাায়ি করৈেযি্াবে কাজ করদে?

• আ রবিৈমোিদপিকাদিে আদে?

**স্বচে্ছাসসবী ি অংশগ্রহণ:**

এই গদবষণায় আংগে্রহণ সম্পূণি আ রি ইরে উ র ররি্রি কদর। এই গদবষণায় আ রি আংে রদিৈ িওয়া বা ি িওয়ার রসদ্ধান্তদক সবাই সম্ভাি করদব। আ রআংে রদিৈ ি িহিদল আ রি কমদিলর পকউ আ রি সাদর্থ রর্ন্ধ পকাি আরিণ করদব ি। আ রএখ গিদবষণায় আংগে্রহণ করার রসদ্ধান্ত রদিলও রবৌদৈ ৌ ররবৈি করদৈ োরদবি। আ রপিয্ পকাদি সময় উত্তর পয়ো ব□ করদৈ োদরি।

**গসবষণায. অংশগ্রহসণর উপকাতরি এবং ঝুঁতক:**

এই রিদরি গদবষণায় আংগে্রহদণর রকে ঝুঁরক রদয়দে পয্মি, অ রররৈ প্রশ্ন বা পবামী ি র্থাকদৈ োরার ঝুঁরক । এই গদবষণায় আংগে্রহদণর জযি আ রি ররিা ত্তা বা উ কাররৌ

ঝুঁরকর সম্ভুরখি হদব ি। এই গদবষণা প্ররয়িায় আ রি িদমর ররবদৈে একটি সিওয়াডি সুররক্ষৈে পকারডাং রসদমে বযবহার কদর আ রি ররদিয়র পগা ীয়ৈে ররিশ্চৈে করা হদব।

এই গদবষণার মাযিদম এমি ফিলাফল াওয়ার স□াবি রদয়দে যা তরৈের প াকে রদেরে 'ররিা ত্তার সাংস্ক্রররে' বমৈোি অবি সম্পদকি ীরিরৈেীিরকদরে অবরহৈে করদব। এই গদবষণার বাড়রৈে াওয়া হল, ীরিরৈেীিরকরা তরৈের প াকে রদেরে 'ররিা ত্তার সাংস্ক্রররে' বমৈোি অবি সম্পদকি সিঠকিরাদব অবরহৈে হদয় তরৈের প াকে রদেরে কমি ররদবদরে ররিা ত্তা বৃরদ্ধদৈে সঠকি রসদ্ধান্ত গ্রহণ করদৈে রদবি।

**সম্মীি:**

গদবষণায় আংগ্রেহদণর জযি আংগ্রেহণকারী একটি সম্ভীি াদবি।

**স্বগাপীযি.ি:**

আ রি প্রত্েত রৈ্থয পগা রিাখা হদব। গদবষক আ রি বযরক্তগৈে রৈ্থয এই গদবষণার বাইদর পকাদি কাদজর জযি বযবহার করদব ি। এড়োও, গদবষক গদবষণা ররদ াদটি আ রি িমি বা আ দিক সাকি্ত করদৈে াদর এমি রকৈে অন্তরুক্তি করদব ি। আ রি পয়ো রৈ্থয করম্পউটাদর াসওয়াডি দ্বারা সুররক্ষৈে রাখা হদব। রৈ্থয এবাং রৈ্থয রবদষেদণ বযবহৃৈে সফ্টওয়যার সাংরক্ষণ করা হদব। রবশ্বরবযোলদয়র রয়িম অুয়ায়ী কম দক্ষ ৫ বরে য্নি্ত রৈ্থয সাংরক্ষণ করা হদব।

**স্ব াগাস াগ এবং প্রশ্ন:**

আ ারি পকাি প্রশ্ন র্থাকদল এখ রিজজ্ঞাসা করদৈ াদরি। রবদৈ পকাি প্রশ্ন করদৈ াহিদল আ রি maurice.brooks@waldenu.edu ইদমইল ঠকিাি য়ি গদবষক এর সাদর্থ পয্াগাদয্াগ করদৈ াদরি। একজি আংগ্রেহণকারী রহদসদব আ ারি অরকিার সম্পদকি বিযরক্তগরৌদব কর্থা বলদৈ াহিদল , আ রি WALDEN রবশ্বরবযোলদয়র প্ররররৈরি Dr. Leilani Endicott এর সাদর্থ পফাদি পয্াগাদয্াগ করদৈ াদরি। ৈার পফাি ম্বির (মারকি যুক্তরাদরে বাইদর আংগ্রেহণকারীদরে জযি) 001-612-312-1210 । এই গদবষণা প্রকদরে WALDEN রবশ্বরবযোলদয়র অুদিমাদি ম্বির _____ এবাং এটরি পময়াদ পষে হদব _____.

এই গদবষণাটি একটি গুণগৈ পকসরোরড য্া কদন্টন্ট রবদষেণ এর মাধ্যদম করা হদব ।

গদবষক আ াদিক এই সম্ভরৈ দরে একটি কির প্রাি করদবি। _

**সম্মতি এির তবব্যতি:**

আরম উ দরর রৈ্থয দড়রে এবাং আরম মদ কিরর আমার আংগে্রহদণর রবষদয় রসদ্ধান্ত পওিয়ার জযি

গদবষণার রবষয়বস্তু র্রালর্াদব বুঝদৈে প দররে। রদিে প্রত্যে স্বাক্ষদরর মাযিদম আরম উ দর বরণৈে

রবষদয় সম্ভরৈে প্রাে কিররে।

কাগদজ মুরৈে ফমি বিযবহাদরর পক্ষদে শুমিাে স্বাক্ষর আংে অন্তরুক্ত করু।ি

আংগে্রহণকারীর িম: ----------

অমিরৈে প্রাদেরি তারিখ: ----------

আংগে্রহণকারীর স্বাক্ষর: ----------

গদবষদকর স্বাক্ষর: ----------

# Appendix B: Organizational Approval

International Labour Organization

Mr. Maurice L Brooks
Fire Safety Expert
Improving Fire and General Building Safety in Bangladesh
ILO CO-Dhaka

Ref: P.F./Maurice/ 18 February 2015

Dear Maurice L Brooks,

Based on my review of your research prospectus, I give permission for you to conduct the study entitled "A Qualitative Case Study: Triangulating a Sustainable Safety Culture Among Workers, Employers, and Government in the Ready-made Garment Industry of Bangladesh" within the ILO-Dhaka area of operation. The office grant permission with the understanding of the following:

1. The dissertation may be published in outside publications without authorization, under your own name and in your personal capacity, material not relating to the Organization which you have prepared in your own free time, subject always to the need to avoid any pronouncement that might adversely reflect on the reputation of the Organization and the international civil service;

2. In cases of doubt as to whether the material relates to the Organization, then you will seek the advice of the Country Director.

3. Understand that permission may be revoked at any time during the process if deemed a conflict of interest or if any ethical barriers are crossed. Understand that you will be responsible for complying with ILO staff rules and regulations while conducting your research.

4. If the publication identifies the ILO affiliation of the author, it should state **"The views expressed herein are those of the author(s) and do not necessarily reflect the views of the International Labour Organization."**

I confirm that I am authorized to approve research in this setting in accordance with IGDS Office Guideline Number 67 version 1, paragraphs 18,24-25 and that this plan complies with the organization's policies.

I understand the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University Institutional Review Board.

Sincerely Yours

Srinivas B. Reddy
Country Director

**ILO Country Office for Bangladesh**
House # CEN (B) 16 (First Floor), Road #99
Gulshan -2, Dhaka 1212
Bangladesh

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Appendix C: Sample Letter of Cooperation from a Research Partner

**Department of Inspections for Factories and Establishments**
Mr. Syed Ahmed
Inspector General

Department of Inspections for Factories and Establishments (DIFE)

Date

Dear Maurice L Brooks,

Based on my review of your research proposal, I give permission for you to conduct the study entitled **A Qualitative Case Study: Triangulating a Sustainable Safety Culture Among Workers, Employers, and Government in the Ready-made Garment Industry of Bangladesh** within the Ministry of Labout and Employment (MOLE). As part of this study, I authorize you to interview individuals related to inspections of the Ready-made Garment Industry. Individuals' participation will be voluntary and at their own discretion.

Once research is completed and accepted by Walden University, the results will be shared with the MOLE in order to inform MOLE on possible approaches to policy development on factory safety affecting the RMG and other sectors in Bangladesh.

We understand that our organization's responsibilities include: permitting interviews with MOLE members. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,
Authorization Official
Contact Information

**Bangladesh Fire Service and Civil Defence**

Brigadier General Ali Ahmed Khan
Director General
Bangladesh Fire Service and Civil Defence (DFSCD)

Date

Dear Maurice L Brooks,

Based on my review of your research proposal, I give permission for you to conduct the study entitled **A Qualitative Case Study: Triangulating a Sustainable Safety Culture Among Workers, Employers, and Government in the Ready-made Garment Industry of Bangladesh** within the Bangladesh Department of Fire Safety and Civil Defense (DFSCD). As part of this study, I authorize you to interview individuals related to inspections of the Ready-made Garment Industry. Individuals' participation will be voluntary and at their own discretion.

Once research is completed and accepted by Walden University, the results will be shared with the DFSCD in order to inform DFSCD on possible approaches to its fire safety awareness campaigns for factory workers and employers. Additionally, provide research data to consider when developing policies affecting the RMG and other sectors in Bangladesh.

We understand that our organization's responsibilities include: permitting interviews with DFSCD members. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Authorization Official
Contact Information