

Echoes Beneath the Earth: Cultural and Spiritual Beliefs of Miners in the Mining Industry

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ABSTRACT

Mining is a high risk occupation in which danger, uncertainty, and survival are part of everyday work. In many community based and small scale mining contexts, miners rely not only on technical knowledge but also on cultural and spiritual belief systems that guide conduct, decision making, and safety practices. This study explored the cultural and spiritual beliefs of miners in a selected mining barangay in Mankayan, Benguet and examined how these beliefs shape work behavior, readiness, and safety within everyday mining life. Using a qualitative phenomenological approach, in depth semi structured interviews were conducted with ten experienced miners selected through purposive sampling. Data were analyzed thematically to surface shared meanings embedded in miners' lived experiences. Findings revealed that miners' beliefs are deeply embedded in daily work routines and are expressed through rituals, taboos, prayer, bodily discipline, and behavioral restraint inside the mine. These belief based practices function as practical safety frameworks that influence readiness to enter the mine, attentiveness during work, and responses to danger. Safety was understood not only as a technical concern but as a moral and spiritual responsibility sustained through collective discipline and shared norms. The study further found that miners actively negotiate traditional cultural beliefs alongside Christian faith and contemporary safety awareness. Rather than abandoning earlier practices, miners integrate and reinterpret belief systems in response to generational change and evolving work conditions. This negotiation allows belief based practices to remain meaningful and relevant within modern mining contexts. By centering miners' narratives, the study highlights belief as a lived and functional component of safety and work in mining life. The findings contribute to qualitative research on labor, culture, and occupational safety by demonstrating that effective understanding of mining safety must account for cultural and spiritual dimensions alongside technical measures.

Keywords: mining beliefs, cultural practices, spiritual beliefs, safety practices, phenomenology

INTRODUCTION

Background of the Study

Mining has long been a significant activity in many societies, shaping not only economic livelihoods but also the cultural and spiritual lives of those who depend on it. In mining communities, work beneath the earth is often accompanied by beliefs and practices that help miners make sense of danger, uncertainty, and survival. These beliefs are not merely inherited traditions but lived systems of meaning that guide conduct, discipline, and preparedness in a high risk occupation. In one selected barangay of Mankayan, Benguet, mining serves as a primary source of income for many families and remains deeply embedded in community life. Over time, miners in this area have developed cultural and spiritual practices that are closely tied to their daily work. These practices include rituals, taboos, prayers, and behavioral rules that are observed before, during, and after entering the mine. For miners, such beliefs function as sources of guidance and protection, offering a sense of order and control in an environment where danger is ever present. Across different mining cultures worldwide, spiritual practices have historically been used to seek protection from accidents, honor the land, and ensure the success of labor. Similar patterns are evident among miners in Mankayan, whose beliefs influence decision making, social

relations, and safety related behavior. These beliefs shape how miners understand risk, interpret accidents, and define what it means to work responsibly underground. Rather than being separate from work, spirituality is woven into the routines and expectations of mining life. Despite the richness of these traditions, existing research has largely emphasized the technical and physical dimensions of mining safety, such as equipment, training, and regulations. Comparatively little attention has been given to how cultural and spiritual beliefs influence safety practices from the perspective of miners themselves. In particular, there remains limited understanding of how indigenous and community based belief systems inform preparedness, discipline, and responses to danger within everyday mining work.

This study explores the cultural and spiritual beliefs of miners in this specific area of Mankayan, with attention to how these beliefs influence work practices, decision making, and safety. By documenting miners’ lived experiences and narratives, the study seeks to illuminate how culture and spirituality continue to shape safety in mining contexts. Through this focus, the research aims to contribute a grounded understanding of belief as a practical and meaningful part of life beneath the earth.

Conceptual Framework

This study is anchored on a conceptual framework that situates miners’ cultural and spiritual beliefs as central influences on work practices, safety behavior, and decision making within the mining context. The framework is grounded in the assumption that belief systems are not peripheral to labor but are embedded in everyday action, shaping how miners prepare for work, interpret risk, and respond to uncertainty. Rather than treating belief as a static background variable, the framework presents belief as a dynamic and lived system that interacts continuously with safety practices and changing social conditions.

As illustrated in **Figure 1**, the framework begins with miners’ **cultural and spiritual beliefs**, which include traditional beliefs expressed through rituals, taboos, and behavioral discipline, as well as contemporary Christian spiritual beliefs centered on prayer and reliance on God for protection. These belief systems form the foundational layer of the framework, providing meaning structures through which miners understand danger, protection, and responsibility. Beliefs influence how miners interpret the mine as a space that requires respect, restraint, and moral preparedness.

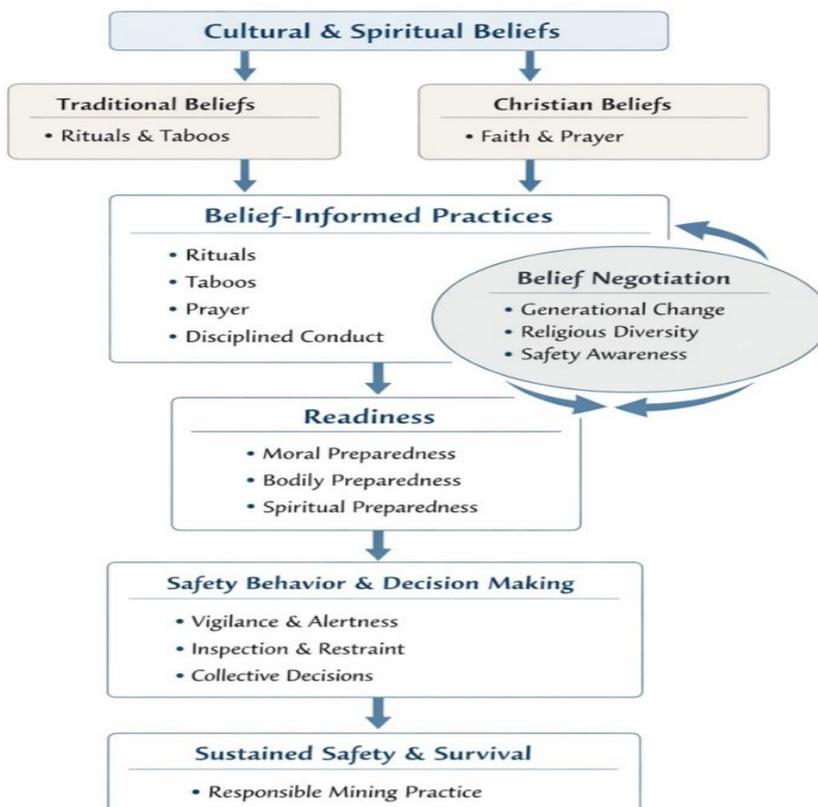


Figure 1. Diagram of the Conceptual Framework.

Flowing from these belief systems are **belief informed practices**, which include rituals, observance of taboos, prayer, and disciplined conduct before and during mining activities. These practices function as mechanisms through which belief is enacted in daily work. They shape miners' **readiness**, defined in this study as moral, bodily, and spiritual preparedness prior to entering the mine. Through these practices, belief directly influences decisions about when work should begin, who is permitted to enter the mine, and under what conditions mining activities may proceed.

The framework further shows that belief informed practices shape **safety behavior and decision making** during mining activities. Practices such as silence, restraint, vigilance, inspection, and alertness regulate conduct inside the mine and support hazard awareness. Safety is conceptualized not only as a technical outcome but as a moral responsibility sustained through disciplined behavior. Decision making is shown to be both individual and collective, with elders, supervisors, and peers playing roles in enforcing belief based safety practices and regulating work activities.

An important feature of the framework is the inclusion of **belief negotiation**, which represents the process by which miners balance traditional cultural beliefs, Christian faith, and modern safety awareness. As indicated in Figure 1, belief negotiation reflects adaptation rather than replacement. Miners selectively retain, reinterpret, or integrate belief systems in response to generational change, religious diversity, and evolving safety perspectives. This negotiation influences how beliefs continue to shape safety practices without remaining rigid or obsolete.

Finally, the framework points toward **sustained safety and survival** as outcomes of the interaction between belief systems, practices, and decision making. These outcomes are not depicted as guaranteed results but as continuously maintained conditions that depend on vigilance, responsibility, and collective discipline. The framework emphasizes that safety in mining emerges from the integration of belief, practice, and awareness rather than from any single factor alone.

Statement of the Problem

Mining communities operate within environments marked by constant physical risk, uncertainty, and exposure to danger. In response to these conditions, miners often rely not only on technical knowledge and experience but also on cultural and spiritual beliefs that guide their conduct and decision making. In many indigenous and rural mining contexts, these beliefs shape how miners prepare for work, interpret accidents, and define what constitutes safe and responsible behavior underground.

In the selected mining barangay of Mankayan, Benguet, miners continue to observe a range of cultural and spiritual practices that influence their everyday work life. These practices include rituals, taboos, prayers, and behavioral restrictions that are believed to provide protection and prevent misfortune. While such beliefs remain visible in daily mining activities, they exist alongside contemporary religious orientations and modern safety awareness, creating a complex landscape of belief negotiation and practice.

Despite the presence of these belief systems, existing studies on mining safety have largely focused on technical, mechanical, and regulatory dimensions. There is limited research that examines how miners themselves understand the role of cultural and spiritual beliefs in shaping work behavior, safety practices, and responses to risk. In particular, there is a need to document miners' lived experiences to understand how belief based practices function within actual mining conditions rather than treating them as symbolic or peripheral traditions.

Given this gap, the present study seeks to explore the cultural and spiritual beliefs of miners in this specific area and examine how these beliefs influence their work, safety practices, and decision making. It also aims to identify safety practices and precautions that are regarded as sacred or essential within the community. Furthermore, the study investigates how miners negotiate traditional cultural beliefs alongside contemporary religious perspectives and evolving safety understandings in their mining work.

Specifically, this study seeks to answer the following research questions:

1. What cultural and spiritual beliefs do miners in this specific area hold?
2. How do these beliefs influence their work, safety practices, and decision making?

3. What safety practices or precautions are considered sacred or essential in this area?
4. How do miners negotiate traditional cultural beliefs alongside contemporary religious and safety perspectives in their mining work?

Scope and Delimitation

This study focuses on the cultural and spiritual beliefs of miners in a selected mining barangay in Mankayan, Benguet, and how these beliefs shape work practices, safety behaviors, and decision making. The scope of the research is limited to miners who are actively engaged in small scale or community based mining activities within this specific area. The study examines beliefs as they are lived and practiced in everyday mining life, with particular attention to rituals, taboos, prayer, behavioral discipline, and belief negotiation in relation to safety.

The research is qualitative in nature and adopts a phenomenological approach to capture miners' lived experiences. Data were gathered through in depth interviews, allowing participants to describe their beliefs and practices in their own words. The analysis centers on participants' narratives and meanings rather than on objective measurement of safety outcomes or accident rates. As such, the study does not attempt to evaluate the effectiveness of belief based practices using technical or statistical indicators.

This study is delimited to the perspectives of the miners themselves and does not include viewpoints from mine owners, government regulators, health professionals, or safety inspectors. The focus remains on how miners understand and interpret their beliefs and safety practices within their own cultural and social context. Observational data and direct assessment of mining sites are also outside the scope of this research.

Furthermore, the study does not seek to compare belief systems across different mining communities or regions. Its findings are grounded in the specific cultural, historical, and social conditions of the selected barangay. While insights from this study may resonate with similar contexts, generalization beyond the study site is not intended. The delimitations are set to allow for an in depth and contextually grounded understanding of belief and safety in this particular mining community.

REVIEW OF RELATED LITERATURE

Cultural Beliefs as Lived Mining Practices

Recent scholarship in the Philippines shows that cultural beliefs in small scale mining communities are expressed through lived practices that shape how miners relate to land, resources, and work conduct. In Benguet, community level norms are closely tied to indigenous views of ownership and stewardship, including the belief that resources are ultimately held under the authority of Kabunian and ancestral spirits, with elders playing central roles in community regulation and conflict resolution.

These belief systems are enacted through community recognized rules and sanctions rather than through written codes, making belief inseparable from mining life as practiced. (Benguet Province, 2018).

Within Kankanaey mining contexts in Itogon, recent ethnographic work highlights that mining beliefs and practices continue to guide conduct even under modernization pressures, with spirituality shaping norms, behaviors, and the sense of responsibility attached to mining.

The persistence of belief based practices is not presented as mere cultural display but as a working logic that miners use to interpret conditions, regulate behavior, and negotiate community concerns, including safety and well being. This literature supports the view that cultural beliefs operate as grounded, practical systems that organize everyday mining activity. (Tabuzo, 2024).

From a policy and governance lens, national level analyses emphasize that small scale mining in the Philippines remains deeply shaped by local arrangements and community practices, particularly where formalization is uneven and where livelihoods depend on customary regulation. These discussions help explain why community anchored norms and belief informed practices remain influential in decision making and collective discipline in mining communities. (Pascual, Domingo, & Manejar, 2020).

Spiritual Beliefs, Rituals, and Protection in Mining Contexts

Philippine mining literature indicates that spirituality in small scale mining is often tied to beliefs about unseen ownership, protection, and accountability, with ritual practices operating as concrete expressions of these beliefs. In Benguet small scale mining contexts, documented community views emphasize spiritual ownership of resources and the social authority of elders, situating spiritual belief within collective regulation and shared responsibility. This aligns with qualitative accounts where spirituality becomes embedded in work practice rather than separated as private faith. (Benguet Province, 2018).

Recent local research on Kankanaey mining beliefs in Itogon further shows that spirituality remains a key feature in understanding and regulating mining practices. Spiritual concerns are described alongside community challenges, including the perceived weakening of spirituality and cultural practice under modernization, suggesting that miners experience spirituality as a guiding orientation that can shift in intensity across time. The emphasis on belief and practice as intertwined helps ground the present study's focus on rituals and taboos as lived safeguards rather than abstract customs. (Tabuzo, 2024).

At the same time, religious change in the Cordillera region is documented in recent scholarship as complex, where religiosity remains high while indigenous cosmologies and ritual traditions continue to shape meaning. This literature supports the need to treat Christian faith and traditional belief as distinct but co present in lived contexts, especially when communities navigate continuity and change. (Del Castillo, 2023).

Safety, Discipline, and Work Conditions in Small Scale Mining

Recent Philippine focused literature on small scale mining emphasizes persistent safety and working condition challenges, including exposure to hazards, uneven implementation of safety measures, and limitations in resources and enforcement. National and institutional studies underscore that safety is not only a technical matter but also shaped by how practices are adopted, regulated, and sustained in real settings. These sources provide grounding for understanding why miners may rely on shared norms and disciplined conduct to manage risk where formal safety systems may be limited or inconsistently applied. (DOLE Institute for Labor Studies, 2021; Lu, 2021).

Global and multi country reviews specific to artisanal and small scale gold mining further reinforce that occupational risks remain significant and are intensified by constraints in training, equipment, and access to safer processing systems. These discussions contextualize why safety behavior in small scale mining must be understood within lived constraints, where locally sustained routines and disciplined attention become central in everyday survival strategies. (World Bank, 2020; ILO, 2019).

Health focused mining research also points to the continuing presence of chemical and occupational hazards in small scale gold mining, reinforcing the importance of examining how miners interpret and respond to danger under conditions of exposure and uncertainty. Although such studies primarily document health risks, they support the broader argument that mining safety cannot be treated as purely procedural and must be read through the realities of miners' daily environments. (Leung et al., 2016).

Belief Negotiation in Contemporary Mining Communities

Recent local scholarship suggests that belief systems within Cordillera mining communities are subject to negotiation under modernization, shifting values, and changing social influences. In Itogon, qualitative work reports concerns related to declining spirituality and cultural practice, alongside the continued relevance of traditional beliefs in shaping norms and behaviors. This supports the idea that miners may not abandon belief systems outright but may reinterpret and reposition them in relation to present realities. (Tabuzo, 2024).

Related literature on Cordilleran religiosity provides support for understanding why Christian faith can become more central while indigenous traditions remain meaningful. Studies describing high religiosity among Cordilleran youth, alongside acknowledgment of indigenous cosmologies and ritual life, help frame belief negotiation as a process shaped by generational location and community context rather than as a simple shift from one belief system to another. (Del Castillo, 2023).

From a governance and sectoral perspective, analyses of small scale mining in the Philippines highlight conditions that encourage ongoing adaptation, including formalization issues, livelihood dependence, and the complex relationship between community practice and external regulation. These works provide a background for understanding why miners may integrate spiritual practice with practical safety awareness, as both are used to navigate risk within a difficult work environment. (Pascual et al., 2020).

Synthesis and Relevance to the Present Study

The reviewed literature supports the position that cultural and spiritual beliefs in Philippine small scale mining contexts are embedded in lived practices that shape conduct, responsibility, and interpretations of danger. Local evidence from Benguet and Itogon shows that belief is tied to community regulation and everyday mining norms, while broader safety and sectoral analyses highlight the persistent risks and constraints that shape safety practice in small scale mining. Together, these sources justify examining belief and safety as intertwined, lived systems rather than treating belief as separate from work. (Benguet Province, 2018; DOLE Institute for Labor Studies, 2021; Tabuzo, 2024).

While the literature provides strong grounding for belief, safety, and change in mining communities, there remains limited qualitative work that centers miners' own accounts of how these beliefs shape readiness, disciplined conduct, and negotiated practice within one specific community context. This gap supports the relevance of the present study's phenomenological focus on miners' lived meanings, particularly in documenting how traditional beliefs, Christian faith, and safety awareness are navigated in everyday mining life. (Pascual et al., 2020; Tabuzo, 2024).

International Studies

Recent international qualitative studies on artisanal and small scale mining emphasize that belief systems and everyday practices play a significant role in how miners understand safety, risk, and responsibility. Ethnographic research in small scale gold mining communities in Ghana shows that miners rely on culturally embedded norms, rituals, and moral rules to regulate behavior in hazardous environments. These practices influence decisions related to mine entry, conduct during work, and responses to accidents, demonstrating that safety is negotiated through shared meanings rather than enforced solely through technical standards (Tschakert & Singha, 2017).

Studies in Latin American mining contexts similarly document how spiritual beliefs and ritual practices are integrated into mining life. Research among small scale miners in Peru and Bolivia reveals that rituals directed toward mountain spirits and protective forces are practiced alongside modern tools and techniques. These studies highlight that spiritual practices function as mechanisms for managing uncertainty and reinforcing discipline, particularly in environments where formal safety systems are limited or inconsistently applied (Valdivia, 2015; Scurrah, 2019).

Research conducted in African artisanal mining communities further demonstrates that belief based practices contribute to behavioral regulation and attentiveness. Qualitative studies in Tanzania and Burkina Faso describe how miners observe taboos related to conduct, timing, and bodily preparation, believing these practices reduce the likelihood of accidents. These studies emphasize that safety is often understood as a moral obligation embedded in community norms rather than as individual compliance with external rules (Hilson et al., 2019; Verbrugge & Geenen, 2020).

More recent international reviews focusing on occupational risk in artisanal and small scale mining underscore the importance of understanding local belief systems when designing safety interventions. These studies caution that safety programs that disregard cultural practices are less likely to be adopted or sustained. Instead, interventions that recognize existing norms and belief informed practices are shown to be more effective in promoting cautious behavior and collective responsibility (World Bank, 2020; attaching both technical and socio cultural analyses).

Philippine Studies

Philippine based studies on small scale mining consistently emphasize the centrality of culture and belief in shaping mining practices. Qualitative research in Benguet documents how indigenous belief systems influence

miners' relationships with land, resources, and safety. These studies describe how rituals, taboos, and respect for unseen ownership of mineral resources guide conduct and reinforce community based regulation, particularly in areas where mining is organized informally (Caballero, 2016; foundational concepts revisited in recent provincial studies).

Recent local research focusing on Itogon and nearby Cordillera mining communities highlights the persistence of belief based practices amid modernization pressures. Studies report that miners continue to observe rituals and behavioral restrictions even as Christian faith becomes more prominent. These practices are described as influencing readiness, attentiveness, and responses to accidents, indicating that belief remains intertwined with safety practices in everyday mining life (Tabuzo, 2024).

National level analyses of the Philippine small scale mining sector further show that safety challenges are shaped by informal organization, livelihood dependence, and limited access to formal safety mechanisms. While these studies focus primarily on policy and working conditions, they acknowledge that community practices and local norms play a role in regulating behavior and managing risk on the ground. This supports the relevance of examining belief systems as part of miners' lived safety frameworks (Pascual, Domingo, & Manejar, 2020).

Health focused studies on artisanal gold mining in the Philippines also provide contextual support for understanding risk and safety. Research examining mercury exposure and occupational hazards emphasizes that miners often rely on experiential knowledge and shared practices to cope with danger. Although these studies prioritize health outcomes, they reinforce the importance of examining how miners interpret and respond to risk within their daily work environments (Appleton et al., 2017; Lu, 2021).

Across both international and Philippine studies, there is consistent evidence that belief systems, rituals, and community based norms play significant roles in shaping mining practices and safety behavior. International research demonstrates that belief informed practices are common in artisanal and small scale mining contexts worldwide, particularly where formal safety systems are weak. Philippine studies further show that these practices are deeply rooted in indigenous culture and continue to influence conduct despite religious and social change.

However, much of the existing literature addresses belief and safety either broadly or from policy and health perspectives. There remains limited qualitative research that centers miners' own narratives to understand how beliefs are lived, negotiated, and integrated with contemporary safety awareness in a specific community. The present study addresses this gap by providing a phenomenological account of miners' experiences in one selected mining barangay, contributing contextually grounded insights into belief based safety practices in Philippine mining life.

Synthesis of Literature and Studies

The reviewed literature and studies collectively establish that cultural and spiritual beliefs are deeply embedded in work practices within hazardous occupations, including artisanal and small scale mining. Across international and Philippine contexts, beliefs are shown to operate through lived practices such as rituals, taboos, prayer, and disciplined conduct, shaping how workers interpret danger, responsibility, and protection. Safety emerges in these accounts as a social and moral practice sustained through shared norms and collective enforcement rather than as a purely technical or regulatory matter. These insights provide a broad understanding of belief as an integral component of mining life.

At the same time, existing studies tend to approach belief and safety from specific angles that leave important gaps. International research often emphasizes general patterns of belief and ritual in artisanal mining communities, while Philippine studies frequently focus on policy, governance, health risks, or working conditions. Although these works acknowledge the presence of cultural and spiritual practices, they rarely center miners' own narratives to examine how beliefs are experienced, interpreted, and enacted in everyday work. As a result, belief based safety practices are often described at a descriptive or structural level rather than through the lens of lived experience.

Another gap identified in the literature concerns the treatment of belief as static. Many studies document traditional practices or note religious change, but fewer examine how miners actively negotiate multiple belief

systems within contemporary contexts. The coexistence of traditional cultural beliefs, Christian faith, and modern safety awareness is acknowledged in several works, yet the processes through which miners balance, reinterpret, or integrate these perspectives remain underexplored. This limits understanding of how belief systems adapt over time while continuing to shape safety behavior and decision making.

Furthermore, while safety is a recurring concern in the literature, it is often framed in terms of technical interventions, exposure to hazards, or regulatory challenges. Less attention is given to how safety is constructed and maintained through belief informed practices such as readiness, vigilance, restraint, and collective decision making. Studies that do address safety behavior frequently treat beliefs as background context rather than as central organizing frameworks that guide action in high risk environments.

In response to these gaps, the present study positions itself within the intersection of belief, safety, and lived experience in a specific mining community. By adopting a phenomenological approach, the study foregrounds miners' narratives to understand how cultural and spiritual beliefs shape work practices, safety behavior, and decision making. It also examines how safety practices are regarded as sacred or essential and how miners negotiate traditional beliefs alongside contemporary religious and safety perspectives. This focus allows the study to contribute contextually grounded insights that extend beyond technical accounts of mining safety.

The synthesis demonstrates the need for a qualitative, phenomenological investigation that centers miners' lived meanings and practices. The reviewed literature provides conceptual grounding but leaves space for deeper exploration of belief as a dynamic and enacted system within mining life. Guided by this synthesis, the study advances to Chapter III to detail the research design and methods used to capture and analyze miners' lived experiences in relation to belief and safety.

METHODOLOGY

Research Design

This study employed a **descriptive phenomenological design**, grounded in the aim of capturing and describing the lived experiences of miners regarding their cultural and spiritual beliefs in relation to safety and work practices. The approach follows a Husserlian orientation, focusing on participants' conscious experiences while bracketing researcher assumptions to preserve the integrity of meanings expressed.

Phenomenology was selected over ethnography because the study does not seek to map an entire cultural system but rather to understand how belief is experienced, interpreted, and enacted in everyday mining life. The emphasis is placed on shared structures of meaning across participants' narratives.

Research Locale

This study was conducted in **one of the barangays of Mankayan** where in it is known as a mining community in Benguet. Also, it has a long history of mining with many of its resident rely on it as their primary source of livelihood.

Participants of the Study

The informants of this study consisted of **ten (10) individuals** who are actively engaged in mining activities in the selected mining barangay in Mankayan, Benguet. These informants were chosen based on their direct and sustained experience in mining work, ensuring that they could meaningfully articulate their lived experiences, beliefs, and practices related to safety and decision making. The focus on informants with firsthand involvement supports the phenomenological aim of understanding the phenomenon as it is experienced by those who live it.

All informants met the inclusion criteria of being currently involved in mining activities within the study area and possessing sufficient experience to reflect on cultural and spiritual beliefs associated with mining life. Selection emphasized depth of experience rather than demographic representation, consistent with qualitative and phenomenological research standards. Informants were able to describe belief based practices, safety routines, and decision making processes grounded in their everyday work.

To protect confidentiality and encourage open sharing, the identities of all informants were kept anonymous. Pseudonyms were used in transcripts, data analysis, and presentation of findings. Participation in the study was voluntary, and informants were informed of their right to decline participation or withdraw at any point without consequence. These measures ensured ethical engagement and supported the credibility of the data gathered.

The sample size of ten participants is consistent with phenomenological research, where the aim is depth rather than breadth. Data sufficiency was reached when recurring patterns of meaning emerged across participants' accounts, indicating that additional interviews were unlikely to yield substantially new themes.

Sampling Method

This study used **purposive sampling**, a non-probability sampling technique that allows for the deliberate selection of participants who meet specific criteria relevant to the research. This method ensures that only miners with significant experience and familiarity with cultural and spiritual practices in mining are included in the study following these specific criteria where in respondents must be **30 years old and above**. Also, they are a resident of this place and have **10 years or more experience** on the field.

Research Instruments

The research instrument used in this study was a **semi-structured interview guide** designed to gather information about the cultural and spiritual beliefs of miners and how these beliefs influence their work and safety practices. The interview guide consisted of open-ended questions that allowed participants to freely share their experiences, traditions, and personal beliefs related to mining. Its semi-structured format enabled the researcher to ask follow-up questions when necessary to obtain clearer and more detailed responses. Prior to data collection, the interview guide was reviewed to ensure clarity, relevance, and cultural sensitivity, and minor revisions were made to improve the flow of questions. The instrument was used consistently throughout the study to ensure that the data collected were aligned with the research objectives.

Data Collection Methods

In this study, data was collected using **In-depth interviews** to gain deeper knowledge and insights about their beliefs and culture.

A **semi-structured interviews** was conducted with each participant to gather personal insights into their cultural and spiritual beliefs. Open-ended questions will allow miners to share their experiences, rituals, and perspectives on how these traditions influence their work and daily lives.

Data Analysis Procedure

Thematic analysis was used to process and interpret the collected data allowing for the identification of patterns and themes related to the cultural and spiritual beliefs of miners in this particular area. Firstly, the researcher familiarize the data collected interviews and observations are needed to be understand. Next is the researcher clearly articulate if the information that are gathered is needed for the research. Finally, in writing the report phase, the findings was presented in a logical and coherent manner.

Data Validation

To ensure that the findings of this study are accurate and reliable, data validation was done through triangulation and member checking. **Triangulation** means comparing information from different interviews and observation to see if common themes emerge. This helps ensure that the results are not based on just one perspective but are consistent across different methods.

Member checking was also used, where some of the miners will be asked to review the findings and confirm whether their experiences were accurately represented. This step helps correct any misunderstandings and makes sure their voices are truly reflected in the study.

Additionally, the researcher remains aware of personal biases to avoid influencing the interpretation of the data. By using these validation techniques, this study present findings that are credible, trustworthy and deeply connected to the real experiences of miners in this particular area.

Ethical Considerations

This study strictly observe ethical guidelines to ensure that all participants are treated with respect, fairness and confidentiality. Before any interviews or discussions take place, miners were given informed consent forms explaining the purpose of the study, how the data will be collected and their right to withdraw at any time without any consequences.

Additionally, in order to keep the privacy of the respondent their confidentiality was prioritized ensuring that instead of their real names pseudonyms or coded identifiers are used.

Lastly, the study was conducted with cultural sensitivity where in participants were not be forced to share information they are uncomfortable with and their traditions and beliefs will be treated with respect. This study also ensure that no harm comes to any participant because of their involvement.

Conflict of Interest

The authors declare that there are no financial, professional, institutional, or personal conflicts of interest that could have influenced the conduct, analysis, interpretation, or reporting of this study. The research was conducted independently, and no external funding, sponsorship, or organizational affiliation had any role in the design of the study, data collection, analysis, interpretation of findings, or preparation of the manuscript. All authors affirm that the study was carried out with full academic integrity and transparency, and that the findings presented reflect the authentic lived experiences of the participants without bias or undue influence.

RESULTS AND DISCUSSION

This chapter presents the findings of the study and interprets them in relation to the research questions, conceptual framework, and existing literature. The purpose of this chapter is to articulate how miners' cultural and spiritual beliefs are experienced, enacted, and understood within the context of everyday mining work. Drawing from in depth semi structured interviews with ten experienced miners, the analysis centers on participants' lived narratives to illuminate how belief systems shape work practices, safety behavior, decision making, and responses to risk. Rather than treating belief as symbolic or peripheral, the findings reveal belief as a functional and embodied component of mining life, embedded within routine conduct, collective discipline, and moral responsibility.

The analysis follows a phenomenological thematic approach, focusing on patterns of meaning that emerged across participants' accounts. Through careful examination of interview transcripts, recurrent ideas, practices, and interpretive frameworks were identified and organized into themes that reflect shared structures of experience. These themes represent not isolated individual perspectives but collectively sustained understandings shaped through long engagement with mining work. The analytic process prioritized participants' own expressions and interpretations, allowing their voices to guide the construction of thematic meanings while situating these meanings within broader scholarly discussions on belief, labor, and safety.

The findings are organized into four superordinate themes, each representing a distinct but interconnected dimension of miners' lived experiences. The first theme examines how cultural and spiritual belief systems are embedded in everyday mining life and expressed through rituals, bodily discipline, and behavioral taboos. The second theme explores how belief actively guides safety related decisions, readiness, and conduct before and during mining work. The third theme focuses on safety practices regarded as sacred or essential, highlighting how belief based actions function as protective mechanisms within hazardous environments. The fourth theme examines how miners negotiate and reinterpret traditional cultural beliefs alongside Christian faith and contemporary safety awareness, reflecting processes of adaptation and continuity across changing social conditions.

Together, these themes provide a comprehensive account of how belief operates as a lived and practical system that shapes miners' relationship with work, danger, and survival. The presentation of findings integrates participant narratives with interpretive discussion and scholarly literature to contextualize meanings and deepen understanding. Through this structure, the chapter addresses the research questions by demonstrating how cultural and spiritual beliefs function not only as systems of meaning but as active frameworks that regulate conduct, guide decision making, and sustain safety within mining life.

Superordinate Theme 1: Embedded Cultural and Spiritual Belief Systems in Mining Life

The findings indicate that miners' cultural and spiritual beliefs are embedded deeply in the everyday realities of mining rather than existing as abstract or symbolic ideas. Participants consistently described belief as something lived and practiced through concrete actions, restrictions, and observances that shape how mining is approached. These beliefs are not articulated as personal preferences but as shared understandings learned through elders, coworkers, and long engagement with mining work. The mine is repeatedly framed as a space that demands respect and proper conduct, suggesting that belief is inseparable from how miners interpret danger and responsibility. In this sense, belief operates as a practical guide for navigating a hazardous environment.

Participants' accounts also show that belief systems function as explanatory frameworks for both safety and misfortune. Accidents, success in mining, and survival are often understood through belief based reasoning rather than technical explanations alone. This does not mean that miners reject practical knowledge, but that practical action is layered with spiritual meaning. Belief provides coherence to experiences that are uncertain, unpredictable, and often dangerous. Through belief, miners make sense of why certain events occur and how they should respond to them.

Another defining feature of this superordinate theme is the collective nature of belief. Participants frequently referred to what "the elders say" or what "is agreed upon," indicating that belief is socially maintained rather than individually negotiated. Observing beliefs becomes a way of aligning oneself with the community and its accumulated wisdom. Through shared practices, miners reinforce a sense of belonging and mutual responsibility. Belief thus functions as a social glue within the mining context.

Finally, the belief systems described by participants reveal an internal consistency across different forms of practice. Whether expressed through rituals, food restrictions, or behavioural taboos, beliefs consistently emphasize restraint, discipline, and preparedness. These recurring values suggest that belief systems are oriented toward protecting life and minimizing risk in an occupation marked by constant danger. The following subthemes detail how these beliefs are concretely expressed in mining life.

Subtheme 1.1: Ritual Practices as Expressions of Belief in Mining

This subtheme explains how ritual practices emerge from the accounts as primary expressions of miners' cultural and spiritual beliefs. Rather than being framed as symbolic traditions, rituals are described as necessary actions that directly relate to safety, order, and continuity of mining work. Participants consistently situate rituals within everyday mining routines, indicating that belief is enacted through practice rather than articulated through abstract explanation. These rituals are socially learned and collectively observed, reinforcing their legitimacy within the mining community. Through ritual, miners navigate uncertainty and respond to the inherent dangers of their work environment.

One participant explained the presence of ritual within mining life by stating, "*Din sana pammati,ada. Ti pammati idi no kaspanjang no eh di pammati sin usok ah adady awal ngem adadu met abey amagen sin ruwar ay mausar ed uneg.Kaman din nay manpakde kami.*" (There are beliefs. In mining, there are many prohibitions, and there are also things that must be done outside that are later brought or used inside the mine. One example is that we perform pakde.)-**Pedro**.

This statement shows that belief is understood as a structured system composed of both prohibitions and required actions. There are things miners must avoid and there are rituals they must perform before entering or working in the mine. Practices such as pakde are presented as part of what mining naturally involves. They are not optional or dependent on individual preference. Instead, they are collective expectations that guide behavior and preparation.

By placing ritual alongside prohibitions, the participant frames belief as practical knowledge. Ritual observance functions similarly to safety rules or technical procedures. It shapes how miners act, how they prepare for work, and how they maintain discipline in a hazardous environment. Belief, therefore, is embedded in routine practice and reinforced through participation in the mining community. Scholarly research supports this interpretation.

Scholarly work supports this interpretation of ritual as a practical and socially embedded response to risk. Studies on indigenous and small scale mining communities show that rituals function as culturally grounded mechanisms for managing uncertainty and reinforcing collective discipline in hazardous environments (Basu & Samaddar, 2019; Macdonald, 2020). These works emphasize that rituals are integrated into labor processes as safety oriented practices rather than separate religious acts. Such findings align with the participant's depiction of ritual as part of everyday mining life.

Other recent studies highlight that rituals in high risk occupations help workers cope with danger by providing shared frameworks for action and meaning. Research suggests that ritual observance strengthens social cohesion and reinforces norms of responsibility in environments where outcomes are unpredictable (Reyes & Banerjee, 2021; Tengan, 2018). These insights support the view that ritual practices like manpakde operate as collective safety logics embedded in work routines.

Another participant reinforced the connection between ritual and safety by explaining, "Manpakde kami kaman no way naaksidente ngay iparti an min ubla manparti kamis besaang ngem baken pakde payng sa ah. Din eh ta maiwasan di aksidente waday 'es-eset'." (We perform manpakde when there is an accident. We butcher a pig, but that is not yet the full pakde. To prevent accidents, there is something called es-eset.)-**Pedro**

This excerpt illustrates that rituals are performed both reactively and proactively. When accidents occur, rituals such as manpakde are conducted to address the disruption. Preventive rituals such as es-eset are also performed to reduce the possibility of further harm. Accidents are not interpreted only as mechanical failures or physical misfortunes. Instead, they are understood as disturbances that require ritual correction.

This account reflects a belief that safety is actively maintained through ritual observance. Rituals are framed as proactive measures that restore balance and prevent recurrence of danger. By linking ritual practice to accident prevention, the participant emphasizes that belief shapes how miners understand causality and risk. Safety is thus approached through both action and observance, reinforcing the practical significance of ritual in mining life.

Research on hazardous occupations supports this pattern. Studies show that ritualized practices following accidents help workers cope with fear, reaffirm social norms, and re-establish a sense of control in uncertain environments (Nunez & Garcia, 2017; Reyes & Banerjee, 2021). In such contexts, rituals stabilize the work group after disruptive events. They reinforce shared responsibility and encourage vigilance. Additional literature highlights that rituals function as culturally embedded safety mechanisms in environments where danger is constant (Macdonald, 2020; Santos & Pe-Pua, 2018). These findings align with the participants' accounts of ritual as necessary for preventing misfortune and maintaining order.

Additional literature notes that rituals addressing danger function as culturally embedded safety mechanisms in contexts where risk is constant. Such practices reinforce vigilance and shared accountability among workers, contributing to sustained safety oriented behavior (Macdonald, 2020; Santos & Pe Pua, 2018). These findings further support the interpretation of ritual as a meaningful and practical expression of belief in mining contexts.

Belief is further expressed through offerings and ritual speech directed toward spiritual entities: "*Lalao kaman ngay man gamet da sin naba da. Naey in-ali mi din naey lalao mi ta taptapiam ay Kabunian.*" (Lalao refers to taking a portion from what was mined. It is like saying, "This is what I obtained for gold. We bring this as our lalao so that you may bless it, Kabunian.") – **Pedro**

The practice of lalao shows that miners believe in maintaining reciprocal relationships with spiritual forces. By offering a portion of the gold to Kabunian, miners express gratitude and acknowledge that success is not achieved by human effort alone. Ritual speech becomes a form of communication and negotiation between the miners and the unseen world. Through this act, mining is framed not only as economic labor but as participation in a moral and spiritual order.

Scholarly work on indigenous belief systems explains that offerings and ritual speech reinforce ethical relationships between people and their environment (Santos & Pe-Pua, 2018). Such practices emphasize reciprocity, respect, and balance in resource extraction. They provide moral guidance in contexts where natural resources are taken from the land. In this way, rituals like lalao are not residual traditions but active expressions of belief that shape how miners understand their relationship with nature and the spiritual realm.

Across these accounts, rituals are socially learned and collectively practiced. They are often guided by elders or experienced miners, reinforcing their authority within the community. Because these rituals are repeated and observed together, they become legitimate forms of knowledge passed down across generations. Belief is therefore not only personal conviction but shared and embodied practice.

Taken together, the accounts presented in this subtheme demonstrate that ritual practices are central expressions of miners' cultural and spiritual beliefs. Rituals are enacted as necessary responses to danger, preparation, and disruption, reinforcing their role within everyday mining routines. These practices are socially learned, collectively observed, and treated as authoritative forms of knowledge. Through ritual, miners express belief in ways that directly shape how mining life is organized and understood.

At the subtheme level, ritual practices reveal how belief is lived through action rather than articulated through doctrine. Ritual observance reinforces discipline, preparedness, and collective responsibility in a hazardous environment. This subtheme illustrates how belief becomes embedded in mining life through repeated, socially sanctioned practices that guide behavior and response to risk.

Subtheme 1.2: Food, Bodily Conduct, and Abstinence as Belief-Based Regulations

This subtheme explains how miners' beliefs are expressed through food intake, bodily conduct, and abstinence appear in the accounts as concrete regulations that miners observe as part of preparing for and engaging in mining work. These practices extend belief beyond ritual moments into everyday life, shaping what miners eat, how they conduct themselves, and when they consider themselves fit to enter the mine. Participants consistently describe these regulations as inherited rules passed on by elders, suggesting that belief is learned through socialization rather than personal reflection. Through these practices, miners align their bodies and behavior with what is considered safe and appropriate in relation to the mine. Belief, in this sense, is embodied and enacted long before work begins.

One participant described food related belief by stating, "*Wada abe din man abig ay abigen di nanakay ay adi da kanu adi manparparti si aso asi no amey dan umintra tay lawa kanu din aso ya adi da kanu mansida si laya tay mansapangka kanu adi amin din naba et masinasina sana din ibagbaga da.*" (There is also something called abig, where the elders agree that dogs should not be butchered or eaten before entering the mine because it is forbidden, and they are also not allowed to eat ginger because it is said that the ore would disappear.)- **Abe**

This statement shows that certain foods are believed to affect mining outcomes. Eating dog meat or ginger is associated with loss or disappearance of ore. Food is therefore not seen as neutral. It is connected to productivity, safety, and success inside the mine. Food is therefore not neutral but morally and spiritually charged within mining life.

This statement also reflects how belief based regulations are sustained through collective agreement rather than individual choice. The reference to what elders say positions belief as authoritative knowledge rooted in experience and tradition. By following these food restrictions, miners demonstrate respect for inherited rules and align themselves with communal expectations. Bodily discipline becomes a form of compliance with shared belief systems that govern mining life.

Scholarly work on food taboos in hazardous labor contexts supports this interpretation. Recent studies argue that dietary restrictions often function as embodied safety rules that promote self regulation and attentiveness in high risk occupations (Meyer-Rochow, 2015; Reyes & Banerjee, 2021). These practices are not merely symbolic but operate as culturally meaningful ways of managing uncertainty and risk. Research further suggests that food taboos reinforce collective discipline by linking everyday consumption to work related outcomes (Douglas, 2002, foundational; Santos & Pe-Pua, 2018).

Other scholars note that food based prohibitions in indigenous work settings often encode environmental knowledge and moral responsibility. By regulating what workers consume, belief systems extend safety considerations into daily life beyond the workplace (Grim & Tucker, 2014; Chan, 2017). These findings align with participants' accounts that food restrictions are integral to preparing the body for mining work and maintaining harmony with the mining environment.

Another participant emphasized bodily conduct related to sexual activity, stating, "*Siya adi din kaman kon inbaga ed kaunyan adi aydoy ay no engka nanbabae yan adi ka sengsengep ed usok adi.*" (As I mentioned earlier, if you are involved with a woman, you are not allowed to enter the mine.)- **Abe**

This account indicates that belief based regulation extends into moral and bodily behavior outside the mine. Sexual abstinence is treated as a condition for eligibility to work, reflecting an understanding that bodily state affects safety and outcome.

This statement suggests that the mine is viewed as a space requiring physical and moral preparedness. Entering the mine without observing abstinence is believed to increase risk or invite misfortune. Through this belief, miners regulate their personal conduct in relation to work, reinforcing discipline and restraint. Belief thus shapes decisions about readiness and timing of work, not merely actions inside the mine.

Recent studies on bodily discipline in indigenous and manual labor contexts highlight similar patterns. Research shows that abstinence practices often function as mechanisms for enhancing focus, reinforcing responsibility, and maintaining respect for dangerous workspaces (Li & Velasco, 2020; Reyes & Banerjee, 2021). These practices are understood as culturally grounded strategies for managing risk rather than purely moral injunctions. Such findings support the interpretation that bodily conduct beliefs in mining are closely tied to safety logic.

Additional literature emphasizes that moral regulations tied to labor reflect broader worldviews in which body, work, and environment are interconnected. Scholars argue that abstinence practices serve to align workers' bodies with culturally defined states of readiness and protection (Chan, 2017; Santos & Pe-Pua, 2018). This perspective reinforces the idea that belief based bodily conduct is a practical and meaningful component of mining life.

Food related belief is further reinforced by another participant who stated, "*Sidoy kayman ah ngem basta lang di aa no ed idi no mansida kas aso adam sengggep si usok no mansida kas baka adam sengggep ed usok sat kan iames dadi kanu.*" (For example, if you ate dog meat you cannot enter the mine, and if you ate beef you also cannot enter the mine; you need to bathe, they say.)- **Naldo**

This account shows that violating a belief require corrective actions before work can resume. Cleansing practices function as ways of restoring readiness and compliance with belief.

This statement highlights that belief based regulations are enforceable and actionable. Bathing is not symbolic alone but a required step to correct bodily state before entering the mine. Through such practices, miners reaffirm the seriousness of belief and the consequences of violating it. Belief thus structures routines of correction and preparation within mining life.

Research on cleansing rituals in labor contexts supports this interpretation. Studies suggest that cleansing practices following taboo violations serve to reestablish order, reinforce discipline, and prepare workers mentally and physically for hazardous tasks (Douglas, 2002, foundational; Nunez & Garcia, 2017). More recent work emphasizes that such practices are embedded in cultural systems of safety and responsibility rather than superstition (Macdonald, 2020; Reyes & Banerjee, 2021).

Scholars also note that cleansing rituals function as embodied transitions between everyday life and dangerous workspaces. By marking a return to readiness, these practices help workers recalibrate attention and behavior (Li & Velasco, 2020; Santos & Pe-Pua, 2018). These insights align with participants' descriptions of bathing as a necessary step before reentering the mine.

Taken together, the accounts in this subtheme show that food, bodily conduct, and abstinence function as belief based regulations that shape miners' preparedness for work. These practices extend belief into daily routines,

linking personal behavior to safety and mining outcomes. Through restrictions, abstinence, and cleansing, miners discipline their bodies in accordance with inherited belief systems. Belief thus becomes an embodied form of regulation that structures when and how mining work is undertaken.

At the subtheme level, these belief based regulations reveal how miners manage risk by aligning bodily state with culturally defined conditions of safety. Food and conduct are treated as integral to mining readiness rather than separate from work itself. This subtheme deepens the understanding of belief as lived, embodied, and continuously enacted within mining life.

Subtheme 1.3: Behavioral Taboos Governing Conduct Inside the Mine

This subtheme examines how miners' beliefs regulate behavior within the underground space, particularly regarding sound, movement, and objects. Participants consistently describe the mine as a space that requires silence, restraint, and attentiveness. These behavioral taboos are learned through experience and reinforced through collective agreement rather than formal instruction. The mine is understood not only as a physical workplace but also as a sensitive and potentially dangerous environment that demands discipline and respect.

Beliefs regulating behavior inside the mine surface in the accounts as strict rules governing sound, movement, and objects deemed inappropriate in the underground space. Participants consistently describe the mine as an environment that requires restraint, attentiveness, and controlled conduct. These behavioral taboos are learned through experience and reinforced through shared understanding among miners rather than formal instruction. The mine is treated not simply as a physical workplace but as a space that demands discipline and respect. Through these taboos, belief becomes a guiding force that shapes how miners move, listen, and act while working.

One participant explained these behavioral restrictions by stating, “*Ed idi adi ed edi sin-ay pamati di lalakay ed idi no man usok ka adi ka man mumusic sin ed uneg. Adi kan man itaktakin si music mo wenno radyom ed uneg, adi kan man isisiw, adi kan mankankanta kasjay.*” (In the past, these were the beliefs of the elders. When you are in the mine, you are not allowed to play music inside. You must not bring music or a radio inside, you must not whistle, and you must not sing.) -**Rey.**

This account shows how sound related behaviors are tightly regulated through belief. Silence is presented as a condition of proper conduct, not merely a preference. The belief system frames noise as something that disrupts appropriate engagement with the mining environment.

The participant's reference to elders situates these taboos within inherited knowledge rather than personal judgment. Behavioral restraint is portrayed as part of the discipline expected of miners who respect tradition and experience. By observing silence, miners align themselves with established norms that emphasize caution and attentiveness. Belief, therefore, functions as a mechanism that shapes sensory engagement within the mine.

Recent studies on underground and high risk labor environments support this interpretation. Research indicates that silence and reduced sensory distraction are culturally reinforced strategies that help workers remain alert to environmental cues such as falling rocks or shifting ground (Li & Velasco, 2020; Chan, 2017). These studies argue that behavioral restrictions often emerge from long term experiential learning rather than imposed safety rules. Such findings align with the participant's depiction of silence as an inherited and respected practice.

Other scholars emphasize that behavioral taboos in hazardous workspaces also carry moral dimensions. By regulating sound and movement, communities reinforce norms of respect for spaces perceived as dangerous or powerful (Macdonald, 2020; Reyes & Banerjee, 2021). These perspectives support the understanding that silence in the mine is both a practical and belief based regulation.

Another participant reinforced these beliefs by explaining, “*Lawlaw din mankankanta tan mabusbos di ubla no mankankanta ka adi kan masiputan din maekgas ay bato into no adi kan masiputan awanen ya bawal abe din manbalsa ka si barya tan mamaga di balitok.*” (Singing is forbidden because work may be affected; if you sing, you might not notice rocks that could fall, and it is also forbidden to keep coins in your pocket because the gold will disappear.) -**Naldo.**

This statement links behavioral taboos directly to both physical danger and symbolic loss. Noise is believed to reduce awareness of hazards, while carrying coins is associated with negative mining outcomes.

The participant's explanation reflects a blending of practical reasoning and belief based interpretation. Singing is discouraged because it distracts attention, while carrying coins is believed to affect fortune or productivity. These taboos shape how miners manage focus and movement inside the mine. Belief thus regulates behavior in ways that reinforce vigilance and caution.

Studies on embodied labor practices note that such taboos often become internalized safety mechanisms. Workers learn to regulate their bodies and actions in response to culturally encoded signals of danger (Bourdieu, 1977, foundational; Chan, 2017). More recent research highlights that prohibitions on distraction in high risk work environments serve both cognitive and cultural functions, reinforcing attentiveness through shared norms (Li & Velasco, 2020; Nunez & Garcia, 2017). These findings support the participant's framing of behavioral taboos as meaningful and functional.

Behavioral restrictions are further echoed in accounts that emphasize prohibition of specific objects. One participant noted, "*Din mankankanta adi ya din man isisiw ya man isegsegep si radio sin uneg kasjay yan awal dadi.*" (Singing, whistling, and bringing a radio inside the mine are prohibited.)-**Rey**. This reinforces the idea that certain objects and actions are incompatible with safe mining conduct. The mine is treated as a space where only appropriate tools and behaviors are allowed.

This account suggests that belief based regulation extends to what miners carry with them underground. Objects associated with noise or distraction are excluded, reinforcing a culture of attentiveness. Through these rules, miners collectively define what belongs inside the mine and what does not. Belief thus shapes spatial boundaries and acceptable conduct within the underground environment.

Research on material culture in labor settings supports this interpretation. Scholars argue that restrictions on objects in hazardous workplaces reflect culturally informed understandings of risk and responsibility (Macdonald, 2020; Santos & Pe-Pua, 2018). Such practices help workers maintain focus and respect for dangerous spaces. These insights align with participants' descriptions of object related taboos in mining.

Across the accounts, behavioral taboos governing conduct inside the mine reveal how belief shapes everyday actions in subtle but powerful ways. Silence, restraint, and careful regulation of movement and objects are treated as necessary conditions for safe work. These practices are learned through shared experience and reinforced through collective observance. Rather than being arbitrary rules, they reflect miners' lived understanding of danger and attention within the underground environment.

Seen through these narratives, belief based behavioral regulations function as practical expressions of caution and respect. They structure how miners engage with the mine on a moment to moment basis, reinforcing vigilance and discipline. This subtheme underscores how belief operates through embodied conduct, shaping safety and responsibility within mining life.

The three subthemes taken together reveal that miners' cultural and spiritual beliefs are woven into mining life as an integrated system of action rather than as isolated traditions. Ritual practices, bodily regulations, and behavioral taboos operate in relation to one another, forming a coherent framework through which miners understand safety, risk, and proper conduct. These beliefs are learned collectively and sustained through everyday practice, allowing them to remain relevant in a work environment defined by uncertainty and danger. Rather than being confined to moments of crisis or ceremony, belief continuously shapes how miners prepare for work, behave underground, and interpret events that occur during mining. In this way, belief becomes inseparable from the lived experience of mining.

Across the accounts, belief is consistently framed as practical knowledge grounded in experience and tradition. Rituals such as manpakde and es-eset are enacted as responses to danger and disruption, while food restrictions, abstinence, and cleansing practices regulate bodily readiness for work. Behavioral taboos governing silence, movement, and objects inside the mine further demonstrate how belief structures attention and discipline in hazardous spaces. These practices reflect an understanding of the mine as an environment that demands respect

and restraint, where improper conduct is believed to invite misfortune or harm. Belief thus functions as a culturally embedded safety logic that complements experiential knowledge of risk.

The collective dimension of these beliefs is particularly evident. Elders, co workers, and shared agreements play central roles in defining what is permitted or prohibited, reinforcing belief as communal rather than individual. Observing these beliefs becomes a way for miners to affirm belonging and responsibility within the group. Through shared adherence, miners maintain continuity with inherited knowledge while reinforcing norms that protect both individuals and the community. Belief, therefore, operates as a social regulator that sustains order and cohesion in mining life.

In addressing Research Question 1, the findings demonstrate that miners hold cultural and spiritual beliefs that are lived, embodied, and enacted through everyday practices. These beliefs are expressed through ritual action, bodily discipline, and behavioral restraint rather than abstract doctrine. By shaping how miners prepare, act, and respond to danger, belief systems form a foundational layer of mining life. This understanding provides a necessary basis for examining how these beliefs influence work decisions and safety practices, which is taken up in the succeeding research questions.

Superordinate Theme 2: Belief-Guided Safety, Readiness, and Work Decisions

The findings indicate that miners' cultural and spiritual beliefs do not remain at the level of values or tradition but actively shape how work and safety decisions are made on a daily basis. Participants describe belief as something that directly informs whether they are prepared to work, how they assess risk, and how they respond to potentially dangerous situations.

Rather than relying on belief only in moments of crisis, miners integrate belief into routine judgments about readiness, caution, and responsibility. These beliefs function as internal guides that influence when work should proceed and when restraint is necessary. In this way, belief becomes a decision making framework embedded in mining practice.

Across accounts, belief is closely tied to notions of safety and preparedness. Participants often describe belief based actions such as prayer, abstinence, and ritual observance as prerequisites for entering the mine or continuing work. These actions are not presented as alternatives to practical knowledge but as complementary measures that shape attentiveness and moral readiness. Belief influences how miners interpret signs of danger and how they position themselves in relation to risk. Safety, therefore, is understood through both experiential awareness and belief guided judgment.

Decision making in mining is also shown to be collective and socially reinforced. Participants refer to elders, supervisors, and shared norms when explaining why certain actions are taken or avoided. Belief provides a common reference point that helps miners coordinate behavior and maintain discipline in a hazardous environment. Through shared observance of belief based practices, miners reduce uncertainty and reinforce mutual accountability. Decision making thus emerges as a communal process shaped by inherited belief systems.

Taken together, the accounts suggest that belief functions as a practical lens through which miners evaluate work conditions, personal readiness, and safety risks. Belief influences not only what miners do, but when and how they choose to act. This superordinate theme captures the ways cultural and spiritual beliefs guide safety oriented behavior and everyday decisions within mining life. The following subthemes elaborate how belief shapes readiness, attentiveness, and authority in work related decision making.

Subtheme 2.1: Beliefs Shaping Readiness and Permission to Enter the Mine

Belief appears in the accounts as a decisive factor in determining whether a miner is ready and permitted to enter the mine. Readiness is not assessed solely through physical ability or availability of tools, but through compliance with belief based conditions that signal moral, bodily, and spiritual preparedness. Participants describe entry into the mine as conditional, governed by observances such as abstinence, ritual completion, and prayer. These conditions shape decisions about when work should begin or be delayed. Readiness, therefore, is constructed through belief informed judgment rather than individual preference.

One participant explained the importance of prayer as a prerequisite for work by stating, “*Kararag latta adi et adi kami man usok no awan nan kararag mi.*” (We always pray, and we do not enter the mine if there is no prayer.)-**Pedro.**

This account indicates that prayer functions as a gatekeeping practice that determines whether mining can proceed. Entering the mine without prayer is treated as inappropriate and potentially unsafe. Belief thus directly influences the decision to work by establishing prayer as a non-negotiable condition for entry.

This statement reflects an understanding of readiness that goes beyond physical preparation. Prayer is framed as an act that aligns the miner with protection and guidance before facing danger. By refusing to enter the mine without prayer, the participant demonstrates that belief structures decision making at the most basic level of work initiation. Readiness is therefore defined through spiritual alignment as much as through physical presence.

Recent studies on religious practices in hazardous labor contexts support this interpretation. Research shows that prayer and spiritual preparation are commonly used by workers to establish psychological readiness and manage perceived risk in dangerous occupations (Pargament, 2017; Park & Hale, 2019). These practices are understood as coping mechanisms that enhance focus and emotional stability prior to engaging in high risk work. Such findings align with participants’ descriptions of prayer as essential to readiness.

Other scholars emphasize that prayer in labor settings often functions as a collective safety ritual that reinforces shared responsibility and discipline. Studies in mining and construction contexts indicate that prayer before work helps synchronize group behavior and establish a shared sense of caution (Reyes & Banerjee, 2021; Macdonald, 2020). This supports the interpretation that prayer serves both individual and communal readiness functions.

Another participant highlighted bodily and moral readiness as conditions for entry into the mine, stating, “*No engka nanbabae yan adi ka sengsenged usok adi.*” (If you were involved with a woman, you are not allowed to enter the mine.)-**Abe.**

This account shows that readiness is evaluated through bodily conduct and moral restraint. Sexual activity is believed to compromise a miner’s suitability to enter the mine, linking personal behavior directly to work permission.

This statement suggests that belief based readiness extends into personal life and regulates decisions about work timing. The mine is treated as a space that requires a particular bodily and moral state, and entry is denied when this condition is not met. Through such beliefs, miners exercise restraint and delay work until readiness is restored. Decision making is therefore shaped by belief informed assessments of bodily condition.

Scholarly literature on bodily discipline in labor contexts supports this understanding. Studies indicate that abstinence practices are often employed to heighten alertness and reinforce respect for dangerous work environments (Li & Velasco, 2020; Chan, 2017). These practices function as culturally grounded safety strategies rather than purely moral restrictions. Such findings align with the participant’s description of abstinence as a requirement for mine entry.

Further research emphasizes that moral and bodily readiness beliefs help workers regulate risk by imposing pauses and delays before engaging in hazardous tasks. By restricting entry based on bodily state, belief systems create moments of reflection and restraint that may reduce impulsive decision making (Park & Hale, 2019; Reyes & Banerjee, 2021). This perspective reinforces the interpretation of belief as shaping readiness and permission to work.

Another participant described readiness as dependent on ritual completion, explaining, “*No awan pay nan pakde adi kami man usok.*” (If the pakde has not yet been done, we do not enter the mine.)-**Pedro.**

This statement shows that ritual observance is treated as a prerequisite for work. Entry into the mine is delayed until required rituals are completed, regardless of other conditions.

This account illustrates how belief structures collective decision making about work schedules and activity. Ritual completion signals that conditions are appropriate and safe for mining to proceed. Until then, restraint is

exercised. Belief thus introduces deliberate pauses into work routines, shaping when action is permitted and when it is withheld.

Research on ritualized work readiness supports this interpretation. Studies indicate that ritual prerequisites often function as safety thresholds in hazardous occupations, marking transitions between ordinary time and dangerous work (Macdonald, 2020; Nunez & Garcia, 2017). These thresholds help workers mentally prepare and reaffirm shared norms before exposure to risk. Such findings are consistent with participants' accounts of ritual as a condition for mine entry.

Other scholars argue that delaying work until ritual conditions are met reinforces collective discipline and reduces individual pressure to proceed despite perceived risk (Reyes & Banerjee, 2021; Santos & Pe-Pua, 2018). This supports the view that belief based readiness practices serve protective and regulatory functions within mining life.

Across these accounts, readiness and permission to enter the mine are shown to be shaped by belief based conditions that regulate timing, behavior, and decision making. Prayer, abstinence, and ritual completion function as gatekeeping practices that determine when work may proceed. These beliefs create structured moments of restraint and preparation before exposure to danger. Through them, miners integrate cultural and spiritual beliefs into everyday decisions about work and safety.

By shaping readiness in this way, belief systems influence not only individual choices but collective work rhythms. Decisions to delay or proceed are grounded in shared understandings of preparedness and protection. This subtheme demonstrates how belief operates as a practical decision making framework that governs entry into hazardous work spaces.

Subtheme 2.2: Beliefs Influencing Attentiveness and Hazard Awareness During Work

Belief based practices also shape how miners maintain attentiveness and awareness of hazards while working inside the mine. Participants describe belief as guiding not only when work begins, but how they remain alert and cautious during mining activities. Attentiveness is framed as a moral and spiritual responsibility rather than a purely technical skill. Through belief, miners regulate their focus, limit distractions, and sustain vigilance in an environment where small lapses can result in serious harm. Awareness of danger is thus cultivated through belief informed conduct.

One participant explained how belief regulates attentiveness by stating, “*Adi kan man itaktakin si music mo wenna radyom ed uneg, adi kan man isisiw, adi kan mankankanta kasjay.*” (It's forbidden to sing or whistle inside the mine.)-Rey

This account shows that belief based prohibitions against noise are understood as safeguards against distraction. Sound is believed to interfere with focus, increasing vulnerability to hazards. Through such beliefs, miners actively limit behaviors that could reduce awareness of their surroundings.

This statement reflects an understanding that attentiveness is fragile and must be protected through disciplined conduct. By avoiding singing or whistling, miners preserve their ability to notice environmental cues such as falling rocks or unstable ground. Belief thus shapes how miners manage their senses while working. Attentiveness becomes a cultivated state reinforced through inherited rules rather than an individual trait.

Scholarly studies on attentional regulation in hazardous work environments support this interpretation. Research indicates that minimizing auditory and sensory distractions is critical for maintaining situational awareness in underground and high risk labor settings (Li & Velasco, 2020; Chan, 2017). These studies argue that culturally reinforced silence helps workers detect subtle warning signs. Such findings align with participants' belief based regulation of sound inside the mine.

Other research highlights that belief systems often encode practical safety knowledge gained through experience. Prohibitions against distraction reflect accumulated understanding of how attention affects safety outcomes (Reyes & Banerjee, 2021; Macdonald, 2020). This supports the view that belief guided attentiveness is grounded in lived experience rather than superstition.

Another participant reinforced the link between belief and hazard awareness by stating, “*No mankankanta ka, adi ka masiputan din maekgas ay bato awanen.*” (If you sing, you might not notice falling rocks because your thoughts are not continuous or focused.)-**Naldo**.

This account connects belief directly to hazard detection. Distraction is believed to interfere with cognitive continuity, increasing the likelihood of missing danger signals.

This explanation shows that belief incorporates practical reasoning about attention and perception. Singing is discouraged not only because it is forbidden, but because it disrupts mental focus. Belief thus frames attentiveness as a condition for survival within the mine. Through such reasoning, miners internalize disciplined behavior as a safety practice.

Studies in cognitive ergonomics support this interpretation. Research shows that continuous focus and reduced cognitive load are essential for detecting hazards in complex environments (Endsley, 2018; Li & Velasco, 2020). While these studies approach attentiveness from a technical perspective, they support the participant’s belief based understanding that distraction increases risk. Belief and experiential knowledge converge in regulating attention.

Other scholars emphasize that culturally embedded attentiveness practices foster shared responsibility. By collectively observing silence and restraint, miners support one another’s safety (Macdonald, 2020; Reyes & Banerjee, 2021). This reinforces the idea that belief guided attentiveness is a communal safety strategy rather than an individual choice.

Another participant emphasized object related distractions, stating, “*Adi kan man isegsegep si radio wenno ania ed uneg tan no wada di nabusbos sisi baka dam madnge.*” (You must not bring a radio or anything inside because if something happens, we might not hear it.)-**Rey**.

This account highlights how belief regulates what objects are allowed underground. Radios are believed to interfere with hearing important cues, increasing risk.

This statement suggests that belief based rules about objects are grounded in concern for hazard awareness. By prohibiting radios, miners preserve their ability to hear subtle changes in the environment. Belief thus shapes material practices that support attentiveness. Decisions about what to carry underground are influenced by belief informed assessments of safety.

Research on material restrictions in hazardous workplaces supports this view. Studies show that limiting non essential objects helps reduce distraction and maintain situational awareness (Nunez & Garcia, 2017; Macdonald, 2020). These practices are often culturally enforced rather than formally regulated. Such findings align with participants’ belief based object restrictions.

Across these accounts, belief influences how miners sustain attentiveness and hazard awareness during work. Silence, restraint, and limitation of distracting objects are treated as necessary conditions for safe mining. These practices are learned collectively and reinforced through shared belief systems. Attentiveness is therefore cultivated through belief informed conduct rather than left to individual discretion.

By shaping how miners manage focus and perception, belief becomes an integral part of safety practice inside the mine. Awareness of danger is maintained through disciplined behavior guided by inherited rules. This subtheme demonstrates how belief operates moment by moment in shaping safety oriented work practices.

Subtheme 2.3: Prayer and Gratitude as Ongoing Safety-Oriented Practices

Prayer and expressions of gratitude appear in the accounts as continuing practices that accompany miners throughout the work process, not only before entering the mine. Participants describe prayer as something that frames the beginning of work, accompanies them during mining, and follows the completion of tasks. These practices are treated as active engagements with protection rather than passive expressions of faith. Through prayer and gratitude, miners situate their work within a moral and spiritual relationship that emphasizes humility,

caution, and dependence on forces beyond human control. Safety, in this sense, is sustained through continuous acknowledgment rather than a single preparatory act.

One participant described the role of prayer in everyday work by stating, “*Kararag latta adi tan aytan sinoy kanam no uneg ta si Apo Dios mangprotektar endaita. Tan di aksidente si uneg adi mamalmalayan.*” (We still pray that God will guide and protect us because accidents in mining often happen without us noticing.)-**Pedro**.

This account shows that prayer functions as a constant reminder of protection while working. Prayer is not limited to formal moments but becomes an internalized orientation that shapes how miners perceive risk. Belief thus maintains a sense of vigilance and humility during work activities.

This statement suggests that prayer reinforces attentiveness by reminding miners of their vulnerability. By keeping the idea of protection in mind, miners approach work with restraint and caution. Prayer shapes an internal posture that supports careful decision making and awareness. In this way, belief operates continuously alongside physical labor.

Recent studies on spirituality in high risk occupations support this interpretation. Research shows that prayer helps workers manage stress, maintain focus, and sustain emotional regulation in dangerous environments (Pargament, 2017; Park & Hale, 2019). These studies emphasize that prayer serves as an ongoing coping mechanism rather than a one time ritual. Such findings align with participants’ accounts of prayer as a constant presence during work.

Other scholars highlight that prayer in labor contexts reinforces ethical responsibility and shared dependence. In mining and construction settings, prayer practices help workers maintain humility and caution, reducing overconfidence that may lead to accidents (Reyes & Banerjee, 2021; Macdonald, 2020). These insights support the understanding of prayer as a safety oriented practice embedded in daily work.

Another participant emphasized gratitude after work, stating, “*No malpas kami man usok, agyaman kami latta tan awan di napasamak ay dakes.*” (When we finish mining, we always give thanks because nothing bad happened.)-**Rey**.

This account highlights gratitude as a response to safe completion of work. Thanksgiving is not treated as routine politeness but as acknowledgment of protection and fortune.

This practice reflects a belief that safety outcomes are not taken for granted. By expressing gratitude, miners recognize that survival and success depend on factors beyond their control. Gratitude reinforces caution by preventing complacency. Belief thus shapes how miners interpret safe outcomes as blessings rather than guarantees.

Studies on gratitude practices in occupational settings suggest that expressing thanks helps workers process risk and reinforce cautious attitudes (Emmons & Mishra, 2019; Park & Hale, 2019). These practices support emotional well being and sustain respect for dangerous work environments. Such findings align with participants’ descriptions of gratitude as part of safety awareness.

Other research emphasizes that gratitude practices contribute to collective morale and reinforce shared values of care and responsibility (Reyes & Banerjee, 2021; Santos & Pe-Pua, 2018). In communal labor contexts, thanksgiving strengthens social bonds and reinforces norms that support safety. This supports the interpretation of gratitude as an integral component of belief guided safety practices.

Another participant further described prayer as protection during uncertainty, stating, “*Agkararag ka latta adi kasjay uray sadino ti ayan mo ta maprotektaran ka. Sunga sakbay ka nga sumrek ket agkararag ka para maprotektaran ka iti sadinoman nga apanam.*” (You should still pray wherever you are so that you will be protected.)-**Tonyo**

This account frames prayer as a response to uncertainty and near misses. Prayer is used to cope with unpredictability and reaffirm trust in protection.

This statement suggests that prayer functions as a way of processing risk and reinforcing acceptance of limits. By acknowledging that outcomes cannot be fully controlled, miners maintain psychological balance in a dangerous environment. Belief thus supports resilience and continued engagement with work despite uncertainty.

Research on coping and meaning making in dangerous occupations supports this view. Studies indicate that prayer helps workers make sense of near accidents and sustain psychological resilience (Pargament, 2017; Park & Hale, 2019). These practices enable workers to continue functioning without denial of risk. Such findings align with participants' descriptions of prayer as a response to uncertainty.

Across these accounts, prayer and gratitude function as ongoing practices that support safety throughout the work process. They shape how miners begin work, remain attentive during labor, and reflect on outcomes afterward. These practices reinforce humility, caution, and awareness of vulnerability. Belief thus operates continuously, not episodically, in shaping safety oriented behavior.

By integrating prayer and gratitude into everyday work routines, miners sustain a belief guided approach to safety that complements practical awareness. These practices help regulate emotions, reinforce attentiveness, and prevent complacency. This subtheme illustrates how belief supports ongoing decision making and safety maintenance in mining life.

Subtheme 2.4: Authority and Collective Enforcement of Belief-Based Safety Practices

Belief-based safety practices are not sustained solely through personal conviction but are reinforced through authority and collective enforcement within the mining community. Participants describe elders, experienced miners, and supervisors as figures who remind, correct, and sometimes prohibit others from working when belief-related conditions are not met. These forms of authority are not portrayed as coercive but as protective, grounded in experience and communal responsibility. Through such enforcement, belief becomes a shared standard rather than an individual option. Safety decisions are therefore embedded within social relations and collective accountability.

One participant described how elders exercise authority in regulating work behavior by stating, "*Nan nanakay adda da latta mangibagbaga no mabalin wenno adi mabalin ay amey ed usok.*" (The elders are always there to say whether it is allowed or not to enter the mine.) **Abe.**

This account indicates that permission to work is mediated through respected figures within the community. Elders are positioned as custodians of knowledge who determine readiness based on belief-based criteria. Their role reinforces the idea that safety decisions are communal rather than individually negotiated.

This statement reflects how belief is institutionalized through social roles. Elders' authority derives from experience and shared trust rather than formal position. By deferring to elders' judgment, miners align their actions with collective standards of safety. Belief-based enforcement thus functions as a mechanism for regulating risk through socially sanctioned decision making.

Research on informal authority in labor communities supports this interpretation. Studies show that in smallscale and indigenous work settings, elders and experienced workers often act as safety regulators by enforcing culturally grounded rules (Macdonald, 2020; Reyes & Banerjee, 2021). These roles emerge from communal trust and long-term engagement rather than official designation. Such findings align with participants' descriptions of elder authority in mining.

Other scholars emphasize that informal authority structures are effective in high-risk environments because they foster compliance through respect rather than punishment (Chan, 2017; Santos & Pe-Pua, 2018). This supports the understanding of elder enforcement as a protective rather than punitive practice.

Another participant highlighted collective enforcement among co-workers, stating, "*Man pinpinalagip ay mankadkadwa ta man bibinantay kami.*" (We remind one another that we must watch out for each other.) **Winwin.**

This account shows that belief-based safety practices are enforced horizontally among miners, not only through authority figures. Reminders and corrections are framed as acts of care for the group rather than personal criticism.

This statement suggests that belief enforcement is embedded in everyday interaction. Miners monitor one another's behavior and intervene when necessary to maintain safety. Such collective enforcement reinforces shared responsibility and reduces individual risk-taking. Belief thus operates through peer regulation as much as through hierarchical authority.

Research on peer regulation in hazardous work environments supports this view. Studies indicate that peer reminders and informal monitoring play critical roles in maintaining safety standards where formal supervision is limited (Reyes & Banerjee, 2021; Nunez & Garcia, 2017). These practices foster mutual accountability and collective vigilance. Such findings align with participants' descriptions of belief enforcement among co-workers.

Other scholars note that peer-based safety enforcement strengthens group cohesion and trust (Macdonald, 2020; Chan, 2017). By framing reminders as communal protection, workers sustain cooperative safety cultures. This perspective supports the interpretation of belief enforcement as socially embedded practice.

Another participant emphasized the authority of supervisors in enforcing belief-based practices by stating, "*Adi dan man intra si three days ta awni ta man ames da pay wenno sinos di. Kaman no Thursday ay Friday enya inamag da sin Friday adi pay ket Friday, Saturday, Sunday. Adipay no Lunes umintra dan dadoy adi*" (After performing the ritual, they refrain from entering the mine for three days as part of the observance.)-**Pedro**.

This account highlights how supervisory figures exercise authority to delay work until belief-based conditions are satisfied. Such decisions prioritize safety over productivity.

This statement reflects a decision-making structure where belief-based criteria override immediate work demands. Supervisors act as gatekeepers who enforce pauses and delays in the interest of collective safety. Belief thus shapes organizational decision making within mining operations, not merely individual behavior.

Studies on leadership and safety culture support this interpretation. Research shows that leaders who enforce culturally meaningful safety practices help reduce accidents and promote compliance in high-risk industries (Macdonald, 2020; Park & Hale, 2019). When supervisors align with shared beliefs, enforcement becomes more effective and accepted. These findings align with participants' accounts of supervisory enforcement.

Additional literature emphasizes that authority grounded in shared values enhances safety outcomes more effectively than externally imposed rules (Reyes & Banerjee, 2021; Santos & Pe-Pua, 2018). This supports the understanding that belief-based enforcement works because it resonates with miners' lived experience.

Across the accounts, authority and collective enforcement emerge as essential mechanisms for sustaining belief-based safety practices. Elders, peers, and supervisors each play roles in reminding, regulating, and sometimes restricting work to ensure compliance with shared beliefs. These practices distribute responsibility across the community rather than placing it solely on individuals. Belief is thus maintained through social structures that prioritize collective safety.

Through collective enforcement, belief-based practices remain active and effective in guiding work and safety decisions. Authority functions not as control but as care rooted in experience and communal well-being. This subtheme highlights how belief systems are operationalized through social regulation, shaping everyday decisions in mining life.

The subthemes under Research Question 2 collectively show that miners' cultural and spiritual beliefs operate as practical frameworks that guide decisions related to work and safety. Belief influences how miners assess readiness, maintain attentiveness, and respond to uncertainty, shaping actions before, during, and after mining activities. Entry into the mine is treated as conditional, governed by prayer, abstinence, and ritual completion, while attentiveness during work is sustained through belief-based regulation of behavior and objects. These practices demonstrate that belief is embedded in the temporal flow of work, structuring when action begins, how it proceeds, and how outcomes are interpreted.

Belief also plays a critical role in shaping collective decision making. Authority figures such as elders and supervisors, along with peers, enforce belief-based practices that regulate safety and readiness. Through reminders, prohibitions, and shared observance, belief becomes a communal standard that guides behavior and mitigates individual risk-taking. These enforcement mechanisms reflect a shared understanding that safety is a collective responsibility rather than an individual burden. Decisions to delay work, remain silent, or pause operations are grounded in belief-informed judgments that prioritize protection over productivity.

In addressing Research Question 2, the findings demonstrate that cultural and spiritual beliefs actively influence miners' work practices, safety behaviors, and decision making processes. Belief functions as an internal and external guide, shaping how miners evaluate risk, maintain vigilance, and regulate conduct in a hazardous environment. Rather than existing alongside work as separate traditions, beliefs are woven into everyday choices that sustain safety and order. This understanding provides a clear transition to the next inquiry, which examines the specific safety practices and precautions that miners consider sacred or essential within their mining context.

Superordinate Theme 3: Sacred and Essential Safety Practices in Mining

The accounts indicate that miners distinguish certain safety practices as sacred or essential, setting them apart from routine or optional actions. These practices are treated as non negotiable safeguards that must be observed to prevent harm and misfortune. Participants consistently describe these practices as rooted in belief and tradition, giving them moral weight beyond practical instruction. Safety, in this sense, is not framed only as a technical requirement but as an obligation tied to respect for the mine and the forces associated with it. Through these practices, miners express a shared understanding that protection requires more than skill or equipment.

These essential practices are enacted through specific actions that signal preparedness, caution, and respect. Participants describe rituals, silence, inspection, and prayer as measures that must be performed correctly and at the right time. Failure to observe these practices is believed to invite danger, accidents, or loss. Such beliefs elevate safety practices from procedural steps to moral responsibilities. As a result, safety becomes embedded in cultural expectations that guide conduct before and during mining.

The sacred nature of these safety practices is reinforced through collective observance. Elders, supervisors, and co workers remind one another of required actions, ensuring that essential practices are not neglected. These shared expectations create a safety culture grounded in belief rather than formal enforcement alone. Through collective reinforcement, miners maintain continuity with inherited knowledge while adapting practices to current conditions. Safety is thus sustained through social agreement and shared vigilance.

Across the accounts, essential safety practices are portrayed as stabilizing forces in an unpredictable environment. By observing rituals, maintaining silence, inspecting conditions, and engaging in prayer, miners create structured moments of caution within dangerous work. These practices help regulate fear, sharpen awareness, and reinforce responsibility. This superordinate theme captures how safety in mining is understood as sacred, embodied, and socially upheld. The subthemes that follow elaborate the specific practices miners regard as essential and the meanings attached to them.

Subtheme 3.1: Rituals Performed to Prevent Accidents and Restore Balance

Rituals described by participants emerge as safety practices that are treated as sacred and essential within the mining context. These rituals are performed not merely as responses to tradition but as deliberate actions believed to prevent accidents and restore balance after disruptive events.

Participants consistently associate accidents, near misses, and unusual occurrences with the need for ritual intervention. Through these practices, safety is understood as something that must be actively maintained through culturally sanctioned actions. Rituals therefore function as protective measures embedded in belief systems rather than as symbolic observances.

One participant explained the role of ritual following accidents by stating, “*Manpakde kami kaman no way naaksidente ngay iparti an min ubla manparti kamis besaang ngem baken pakde paylmg sa ah.*” (We perform manpakde when there is an accident; we butcher a pig, but that is not yet the full pakde.)-**Pedro.**

This account shows that accidents are interpreted as events requiring immediate ritual response. The act of manpakde is framed as a necessary step to address the disruption caused by the accident. Safety, in this sense, is restored through ritual action rather than assumed to return on its own.

This statement also suggests that rituals are layered and purposeful. The distinction between partial and full ritual observance indicates that different situations require different levels of response. The participant's explanation reflects a belief that accidents leave lingering effects that must be addressed through appropriate ritual. Through this practice, miners assert control over uncertainty and reaffirm order within the mining environment.

Research on ritual responses to accidents in high risk occupations supports this interpretation. Studies indicate that rituals following accidents help workers process fear, reestablish order, and restore confidence before work continues (Nunez & Garcia, 2017; Macdonald, 2020). These practices are understood as culturally embedded safety mechanisms that help communities recover from disruption. Such findings align with participants' descriptions of ritual as a necessary response to accidents.

Other scholars note that ritualized responses to danger serve to reinforce collective responsibility and caution. By requiring ritual observance after accidents, work communities create pauses that prevent immediate return to risk without reflection (Reyes & Banerjee, 2021; Santos & Pe-Pua, 2018). This supports the interpretation of manpakde as both a protective and regulatory practice within mining life.

Another participant described ritual as a preventive safety measure by stating, "*Din eh ta maiwasan di aksidente waday es-eset.*" (To prevent accidents, there is es-eset.)-**Pedro.**

This account frames ritual not only as a response to harm but as a proactive measure aimed at preventing future accidents. The practice of es-eset is treated as essential for maintaining safety over time. Belief thus informs ongoing risk management rather than isolated reactions.

This statement reflects an understanding of safety as something that requires continuous attention. By performing es-eset, miners believe they are reducing the likelihood of future accidents and restoring balance within the mine. Ritual becomes a preventive tool that reinforces vigilance and preparedness. Through such practices, belief shapes how miners approach uncertainty and risk.

Recent studies on preventive rituals in hazardous work environments highlight similar patterns. Research suggests that ritualized preventive actions help workers establish a sense of control and readiness before resuming dangerous tasks (Macdonald, 2020; Reyes & Banerjee, 2021). These practices contribute to sustained safety awareness and collective discipline. Such findings support the participant's depiction of es-eset as a preventive safety measure.

Additional literature emphasizes that preventive rituals function as culturally meaningful thresholds that mark transitions between danger and readiness (Nunez & Garcia, 2017; Santos & Pe-Pua, 2018). These thresholds allow workers to reset psychologically and socially before continuing work. This perspective aligns with participants' accounts of ritual as essential for preventing accidents.

Rituals are also described as acts that restore balance between miners and the environment. One participant explained, "*Lalao kaman ngay man gamet da sin naba da. 'Naey inali mi din naey lalao mi ta taptapiam ay Kabunian.'*" (Lalao is like taking a portion from what was mined saying, "This is what we obtained; this is our offering so that you may bless it, Kabunian.")-**Pedro.**

This account shows that offerings are believed to maintain harmony and prevent misfortune. Safety is linked to respectful exchange with spiritual forces associated with the mine.

This statement suggests that accidents are not viewed solely as mechanical failures but as signs of imbalance. Through offering rituals, miners seek to restore harmony and secure protection. Safety is therefore framed as relational, dependent on maintaining proper relations with unseen forces. Rituals like lalao function as essential practices for sustaining this balance.

Research on indigenous environmental ethics supports this interpretation. Studies highlight that offerings and reciprocity rituals are common mechanisms for maintaining harmony between people and natural environments,

particularly in extractive work (Grim & Tucker, 2014; Santos & Pe-Pua, 2018). These practices are associated with ethical restraint and risk awareness. Such findings align with participants' descriptions of ritual offerings as protective measures.

Other scholars emphasize that rituals restoring balance help communities integrate moral responsibility into safety practices (Macdonald, 2020; Reyes & Banerjee, 2021). By linking safety to ethical relations with the environment, rituals reinforce cautious and respectful behavior. This supports the interpretation of lalao as a sacred safety practice.

Across these accounts, rituals performed to prevent accidents and restore balance are treated as essential components of mining safety. They are enacted in response to accidents, used proactively to prevent harm, and performed to maintain harmony with the mining environment. These practices are socially sanctioned and collectively observed, reinforcing their authority within the community. Ritual thus operates as a sacred safety mechanism that structures how miners respond to danger and uncertainty.

Through these ritual practices, miners integrate belief into concrete safety actions that guide behavior before and after risky events. Rituals create pauses, reinforce vigilance, and reestablish order in hazardous conditions. This subtheme illustrates how safety practices in mining are not only technical but deeply embedded in cultural and spiritual belief systems.

Subtheme 3.2: Silence, Restraint, and Vigilance as Sacred Safety Conduct

Silence and restraint inside the mine are consistently described as essential safety practices imbued with sacred meaning. Participants do not present silence merely as a technical precaution but as a form of respectful conduct required in a dangerous and sensitive environment. The mine is portrayed as a space that demands controlled behavior, where unnecessary sound or careless movement is believed to provoke danger. Through silence and restraint, miners cultivate vigilance and attentiveness, reinforcing safety through disciplined conduct. These practices are treated as obligatory rather than optional, reflecting their sacred status within mining life.

One participant explained the importance of silence by stating, "*Adi kami mankankanta wenno man isisiw no ed uneg di usok.*" (We do not sing or whistle when we are inside the mine.)-**Rey**.

This account shows that silence is observed as a rule grounded in belief rather than convenience. The prohibition against singing and whistling reflects an understanding that sound disrupts proper engagement with the mine. Silence is treated as a condition for safety and respect.

This statement suggests that miners understand attentiveness as something that must be protected through disciplined behavior. By avoiding sound, miners preserve their ability to notice subtle environmental cues. Silence becomes a way of aligning oneself with the demands of the mine. Belief thus shapes how miners regulate their senses to remain alert in hazardous conditions.

Research on sensory regulation in underground work environments supports this interpretation. Studies indicate that reduced noise enhances situational awareness and improves detection of hazards such as falling rocks or ground movement (Li & Velasco, 2020; Chan, 2017). These findings suggest that culturally enforced silence aligns with practical safety considerations. Belief based silence, therefore, reflects experiential knowledge accumulated over time.

Other scholars argue that silence in dangerous workplaces also carries moral significance. By maintaining quiet, workers express respect for spaces perceived as powerful or unpredictable (Macdonald, 2020; Reyes & Banerjee, 2021). This perspective supports the interpretation of silence as both a sacred and safety oriented practice.

Another participant reinforced this belief by explaining, "*Lawlawa din mankankanta tan mabusbos di ubla.*" (Singing is forbidden because rocks may fall.)-**Naldo**.

This account directly links sound with physical danger. Singing is believed to provoke or coincide with hazardous events, reinforcing the need for restraint.

This statement shows that belief integrates cause and effect through lived experience. Whether understood symbolically or practically, the prohibition against singing functions as a protective rule. Miners internalize restraint as a safety measure that reduces exposure to risk. Belief thus informs how miners interpret environmental danger.

Studies on embodied safety practices support this understanding. Research suggests that behavioral restraint in high risk occupations emerges from accumulated experience with accidents and near misses (Nunez & Garcia, 2017; Macdonald, 2020). Such practices become normalized as essential safety conduct. This aligns with participants' descriptions of silence as necessary for preventing harm.

Another participant emphasized restraint in carrying objects by stating, "*Bawal abe din manbulsa ka si barya.*" (It is also forbidden to keep coins in your pocket.)-**Naldo**.

This belief indicates that certain objects are considered incompatible with safe mining conduct. Carrying coins is believed to invite misfortune or disrupt mining outcomes.

This statement reflects how restraint extends beyond sound to include material considerations. Objects associated with distraction or symbolic loss are excluded from the mine. Through such restrictions, miners regulate their physical engagement with the environment. Belief thus shapes not only behavior but also what is allowed underground.

Research on material restrictions in hazardous workplaces supports this view. Studies show that limiting unnecessary objects helps reduce distraction and maintain focus (Nunez & Garcia, 2017; Li & Velasco, 2020). Cultural meanings attached to objects further reinforce compliance with these restrictions (Santos & Pe-Pua, 2018; Macdonald, 2020). These findings align with participants' belief based object prohibitions.

Across the accounts, silence, restraint, and vigilance emerge as sacred safety conduct that structures miners' behavior inside the mine. These practices are observed as expressions of respect and caution, reinforcing attentiveness and awareness of danger. They are learned through shared experience and sustained through collective agreement. Silence and restraint thus function as embodied safety practices rooted in belief.

By regulating sound, movement, and objects, miners cultivate vigilance that supports survival in hazardous conditions. These practices demonstrate how belief informs moment to moment conduct underground. This subtheme underscores the sacred dimension of safety practices that shape everyday mining behavior.

Subtheme 3.3: Prayer as an Essential Protective Safety Practice

Prayer is described by participants as an essential safety practice that accompanies miners before and during their work in the mine. Rather than being framed as a personal or optional act, prayer is treated as a necessary measure that provides protection and guidance in a dangerous environment. Participants speak of prayer as something that must be performed to ensure safety, reflecting a belief that human effort alone is insufficient in preventing harm. Through prayer, miners acknowledge vulnerability and seek protection beyond their own abilities. Safety, in this sense, is understood as dependent on both action and divine care.

One participant emphasized the necessity of prayer by stating, "*Kararag latta adi et adi kami man usok no awan nan kararag mi.*" (We always pray, and we do not enter the mine if there has been no prayer.)-**Pedro**. This account shows that prayer functions as a prerequisite for work. Entry into the mine is withheld until prayer has been performed, indicating that prayer is regarded as a condition for safety. Belief thus directly regulates the decision to engage in mining activities.

This statement reflects an understanding of prayer as a protective threshold. By refusing to enter the mine without prayer, miners establish a moment of alignment and preparation before facing danger. Prayer signals readiness not only in a spiritual sense but also in reinforcing caution and seriousness toward work. Belief therefore shapes safety by creating deliberate pauses before exposure to risk.

Research on prayer in high risk occupations supports this interpretation. Studies indicate that prayer serves as a coping and protective mechanism that enhances psychological readiness and reduces anxiety before engaging in

dangerous tasks (Pargament, 2017; Park & Hale, 2019). These practices help workers maintain focus and emotional stability in uncertain environments. Such findings align with participants' accounts of prayer as essential to safe work.

Other scholars note that prayer performed collectively strengthens shared safety norms. In mining and construction settings, collective prayer has been shown to reinforce mutual accountability and collective vigilance (Reyes & Banerjee, 2021; Macdonald, 2020). This supports the understanding of prayer as both a personal and communal safety practice.

Another participant described prayer as ongoing protection during work by stating, "*Mankararag ka sakbay ka ay senggep ta sisyyay man protektar en sika.*" (Pray before you enter the mines so that He will protect you.)-**Rey**.

This account frames prayer as an active engagement with protection rather than a one time ritual. Prayer accompanies miners throughout their work, especially in moments of uncertainty.

This statement suggests that prayer sustains awareness of vulnerability while working. By continually invoking protection, miners remain conscious of danger and avoid complacency. Prayer thus reinforces vigilance and humility, shaping how miners conduct themselves inside the mine. Belief becomes a continuous source of safety orientation.

Studies on ongoing spiritual practices in hazardous work environments support this view. Research indicates that continuous prayer and spiritual reflection help workers manage stress and maintain attentiveness during prolonged exposure to risk (Park & Hale, 2019; Pargament, 2017). These practices support sustained safety awareness rather than momentary reassurance.

Other research highlights that prayer helps workers interpret near misses and uncertain situations without panic. By framing outcomes within a spiritual understanding, workers maintain composure and decision making capacity (Reyes & Banerjee, 2021; Macdonald, 2020). These insights align with participants' descriptions of prayer as protective during uncertainty.

Prayer is also described as an expression of gratitude following safe completion of work. One participant shared, "*No malpas kami man usok, agyaman kami latta tan awan adi napasamak ay dakes.*" (When we finish mining, we always give thanks because nothing bad happened.)-**Rey**. This account positions gratitude as part of the safety practice. Giving thanks acknowledges protection and reinforces caution in future work.

This statement reflects a belief that safety outcomes should not be taken for granted. Gratitude prevents complacency by reminding miners that survival is not guaranteed. Through thanksgiving, miners reaffirm respect for danger and protection. Belief thus shapes how miners interpret safe outcomes as blessings rather than routine results.

Research on gratitude in occupational settings supports this interpretation. Studies show that gratitude practices enhance risk awareness and reinforce cautious attitudes in dangerous work environments (Emmons & Mishra, 2019; Park & Hale, 2019). These practices contribute to sustained respect for hazardous tasks. Such findings align with participants' descriptions of gratitude as integral to safety.

Across these accounts, prayer emerges as an essential protective safety practice embedded in mining life. It regulates entry into the mine, sustains vigilance during work, and frames reflection after completion. Prayer is treated as sacred, non negotiable, and deeply connected to safety outcomes. Through prayer, miners integrate belief into continuous safety practice.

By positioning prayer as an essential form of protection, miners reinforce humility, attentiveness, and shared responsibility. Prayer functions alongside other safety practices to maintain awareness and restraint in a hazardous environment. This subtheme illustrates how spiritual belief directly shapes essential safety practices in mining.

Subtheme 3.4: Inspection and Alertness as Essential Safety Measures

Inspection and alertness are consistently described as safety practices that miners regard as essential rather than optional. Participants frame checking the condition of the mine and remaining alert to environmental changes as responsibilities grounded in both experience and belief. These practices are treated as necessary acts of care toward oneself and others working underground. Alertness is not portrayed as a purely technical skill but as a disciplined state that must be actively maintained. Through inspection and attentiveness, miners express respect for the dangers inherent in mining.

One participant emphasized the importance of inspecting the mine before working by stating, “*Ilaen din pan safetyan sin uneg man pusti ka kasjay.*” (You should check the safety measures inside)-**Rey**. This account shows that inspection functions as a gatekeeping practice that determines whether work proceeds. Entering the mine is conditional on perceived safety, reinforcing inspection as a critical decision making step.

This statement reflects an understanding that danger must be identified and acknowledged before action is taken. By choosing not to enter when hazards are observed, miners demonstrate restraint and respect for risk. Inspection is thus framed as a protective act that prioritizes safety over productivity. Belief supports this practice by reinforcing the idea that ignoring warning signs invites harm.

Research on hazard identification in high risk work environments supports this interpretation. Studies indicate that pre entry inspection and hazard recognition are among the most effective measures for preventing accidents in underground labor (Li & Velasco, 2020; Nunez & Garcia, 2017). These practices rely heavily on workers’ attentiveness and experiential knowledge. Such findings align with participants’ emphasis on inspection as essential to safety.

Other scholars note that culturally reinforced inspection practices strengthen compliance and attentiveness. When inspection is framed as a moral obligation rather than a procedural task, workers are more likely to act cautiously (Macdonald, 2020; Reyes & Banerjee, 2021). This supports the view that inspection is sustained through belief as well as experience.

Another participant highlighted continuous alertness during work by stating, “*Duwan man siput sin uneg di usok tanno masoysoyan din bato ed uneg et lumekneng et malaka ay matekdag et siya di man cause si aksidente.*” (Stay alert because when the rock becomes soaked with water, it becomes soft and can easily fall, which may cause an accident.)-**Winwin**

This account frames alertness as a cognitive and moral responsibility. Maintaining focus is treated as essential for detecting danger.

This statement suggests that alertness is not left to chance but deliberately cultivated. By emphasizing mental fullness and focus, the participant highlights the role of attention in safety. Alertness becomes a disciplined practice shaped by belief and experience. Through this practice, miners remain responsive to subtle changes in the environment.

Studies in cognitive safety research support this understanding. Research shows that sustained attention and situational awareness are critical for preventing accidents in complex environments (Endsley, 2018; Li & Velasco, 2020). These findings emphasize the importance of continuous alertness rather than intermittent checks. Such insights align with participants’ descriptions of focused awareness as essential.

Other scholars highlight that alertness practices are often culturally reinforced in hazardous work communities. Shared expectations around vigilance help workers maintain safety standards even in the absence of formal supervision (Reyes & Banerjee, 2021; Macdonald, 2020). This supports the interpretation of alertness as a collectively sustained safety measure.

Another participant connected alertness with belief by stating, “*Masapol agpanunot ka no apan ka ijay usok as a safety kitaem talyawem amin nga pagnaam no haan nga delikado.*” (You should think when you are in the mine and you need to be alert on your surroundings It is not dangerous.) –**Tonyo**. This account reflects a belief

that lapses in attention invite danger. Alertness is framed as a protective practice that must be continuously upheld.

This statement reinforces the idea that safety depends on sustained care and awareness. By linking inattentiveness to potential harm, belief reinforces disciplined behavior. Alertness thus becomes an essential practice embedded in miners' understanding of risk and responsibility.

Research on safety culture supports this interpretation. Studies show that beliefs linking attentiveness to safety outcomes reinforce cautious behavior and reduce accident rates (Macdonald, 2020; Park & Hale, 2019). These findings align with participants' framing of alertness as essential for preventing harm.

Across the accounts, inspection and alertness emerge as essential safety measures grounded in belief and experience. These practices regulate decisions about entry, guide behavior during work, and sustain vigilance in hazardous conditions. They are treated as responsibilities that protect not only individuals but the collective. Inspection and alertness thus function as sacred forms of care within mining life.

Through disciplined inspection and sustained awareness, miners actively manage risk in an unpredictable environment. These practices illustrate how safety is maintained through continuous engagement rather than momentary checks. This subtheme highlights the role of belief in reinforcing essential safety behaviors that protect life and livelihood.

The subthemes under this research question collectively show that safety practices in mining are not treated as routine procedures but as actions imbued with sacred significance and moral obligation. Rituals, silence, prayer, inspection, and alertness are consistently described as essential practices that must be observed to prevent harm and misfortune. These practices are regarded as non negotiable, reflecting a shared understanding that safety depends on proper observance rather than chance or technical skill alone. Through these practices, miners express respect for the mine and acknowledge the limits of human control in a hazardous environment.

Safety practices identified as sacred are deeply embedded in belief systems that frame danger as something that must be actively managed through disciplined conduct. Rituals are performed to restore balance after accidents and to prevent future harm, while silence and restraint cultivate vigilance inside the mine. Prayer functions as continuous protection before, during, and after work, and inspection and alertness guide decisions about entry and ongoing activity. These practices reinforce caution by creating structured moments of reflection and attentiveness within the flow of work. Safety is thus maintained through repeated, belief informed actions rather than isolated interventions.

A notable feature of these essential safety practices is their collective enforcement. Elders, supervisors, and co workers play active roles in ensuring that sacred practices are observed, reinforcing safety as a shared responsibility. Compliance is sustained through mutual reminders and communal agreement, rather than formal sanctions alone. This collective dimension strengthens adherence and embeds safety within social relationships. Through shared observance, miners maintain continuity with inherited knowledge while adapting practices to present conditions.

In answering Research Question 3, the findings demonstrate that miners consider certain safety practices sacred because they are believed to protect life, restore balance, and prevent harm. These practices integrate belief, experience, and social regulation into a coherent safety framework. Safety, in this context, is not merely technical but moral, cultural, and relational. This understanding provides a foundation for examining how miners negotiate traditional beliefs alongside contemporary religious and safety perspectives, which is addressed in the next research question.

Despite the strong presence of belief-based safety practices, participants' accounts reveal minimal direct engagement with formal institutional safety frameworks. This absence suggests a gap between state-regulated safety systems and community-based practices. Existing literature indicates that when institutional safety measures do not align with local belief systems, adoption becomes limited or inconsistent. This highlights the need to examine how regulatory approaches can engage with, rather than override, culturally embedded safety logics.

Superordinate Theme 4: Negotiation and Reinterpretation of Beliefs in Contemporary Mining Contexts

The findings show that miners do not simply abandon traditional cultural beliefs nor fully replace them with contemporary religious or technical safety perspectives. Instead, participants describe an ongoing process of negotiation in which beliefs are reinterpreted, prioritized, or combined in response to changing social, religious, and work conditions. This negotiation reflects miners' efforts to make sense of risk and protection within a context shaped by generational change, exposure to Christianity, and increased awareness of modern safety practices. Belief is therefore not static, but adaptive, responding to both inherited tradition and present realities.

Participants' accounts reveal that traditional beliefs continue to influence how miners understand danger and responsibility, even as some practices are questioned or reframed. While ancestral rituals and taboos are acknowledged as meaningful, miners increasingly articulate protection and safety through Christian prayer and practical awareness. Rather than presenting these perspectives as mutually exclusive, participants often describe them as coexisting in everyday work life. This coexistence suggests that belief systems are layered, with older practices providing cultural grounding and newer religious frameworks offering moral reassurance. Negotiation occurs in how miners choose which beliefs to emphasize in specific situations.

Another dimension of this negotiation involves generational and social shifts. Participants refer to changes in belief observance among younger miners, the presence of different religious affiliations, and the influence of modern ideas about safety and accountability. These changes do not erase traditional beliefs but alter how they are practiced and justified. Some beliefs are retained symbolically, others are selectively observed, and some are openly reconsidered. Through this process, miners actively reshape belief to fit contemporary mining conditions.

Overall, this superordinate theme captures belief as a dynamic process shaped by continuity and change. Miners draw from multiple sources of meaning as they navigate hazardous work, balancing tradition, faith, and practical judgment. This negotiation allows them to maintain cultural identity while adapting to evolving understandings of safety and protection. The subthemes that follow elaborate how shifts in belief orientation, recognition of past practices, generational change, and integration with modern safety awareness shape miners' lived experience of belief in contemporary mining life.

Subtheme 4.1: Shift from Traditional Ritual Beliefs toward Christian Faith

Participants describe a noticeable shift in spiritual orientation from traditional ritual beliefs toward Christian faith, particularly in how protection and safety are understood in mining work. This shift does not emerge as a sudden break but as a gradual reorientation influenced by personal conviction, religious exposure, and changing community norms. Christian belief is often articulated as providing a clearer or more dependable source of protection compared to ancestral practices. Through this shift, miners reinterpret how safety is secured, placing greater emphasis on prayer to God rather than ritual observance. Belief thus evolves in response to changing spiritual affiliations while remaining connected to the realities of hazardous work.

One participant articulated this change by stating, "*Ngem edwani nan Kristiyano sunga si Apo Dios di nangruna.*" (But now, it is Christianity so God is the foremost.)-Edu. This statement reflects a reordering of spiritual priorities, where Christian faith takes precedence over earlier belief systems. Protection and guidance are now primarily associated with God rather than ancestral or ritual forces. The participant's wording suggests a deliberate shift in belief orientation rather than passive inheritance.

This account indicates that Christian faith provides a central reference point for understanding safety and protection. By identifying God as foremost, the participant signals confidence in a belief system that emphasizes personal prayer and divine care. Traditional beliefs are not explicitly rejected, but they are repositioned as secondary. Belief negotiation thus involves redefining which spiritual framework is considered most authoritative in the face of danger.

Research on religious change in indigenous communities supports this interpretation. Studies show that conversion to Christianity often leads to reconfiguration of traditional belief systems rather than complete abandonment, with new faith practices reshaping understandings of protection and morality (Cornelio, 2016; Robbins, 2018). These studies emphasize that religious shifts are frequently motivated by perceived efficacy and moral clarity. Such findings align with participants' descriptions of prioritizing Christian faith for safety.

Other scholars highlight that Christianity in labor contexts often emphasizes personal prayer and trust in divine protection, offering emotional assurance in dangerous work environments (Pargament, 2017; Park & Hale, 2019). This perspective supports the interpretation that miners' shift toward Christian faith reflects a search for reliable spiritual protection within hazardous conditions.

Another participant expressed distancing from traditional beliefs by stating, "*Edwani et adak mamati ngem din nanakay ed idi a mamati das anito ngem saken et maga.*" (Now, I do not believe but the elders before believed in spirits, but for me, it is not so.)-**Edu**. This account shows an explicit rejection of ancestral spirit beliefs. The participant frames this shift as a personal decision shaped by current belief orientation rather than communal tradition.

This statement suggests that negotiation of belief involves critical evaluation of inherited practices. The participant contrasts past beliefs held by elders with present convictions, indicating generational and ideological change. By distancing oneself from belief in spirits, Christian faith becomes the primary lens for interpreting safety and protection. Belief negotiation here involves selective disengagement from earlier frameworks.

Studies on generational religious change emphasize that younger or newly converted individuals often reassess traditional beliefs through the lens of new faith commitments (Cornelio, 2016; Robbins, 2018). These processes involve reinterpretation rather than simple replacement, with individuals retaining cultural identity while redefining spiritual authority. This supports the participant's articulation of belief shift.

Other research indicates that rejecting spirit based beliefs can reduce fear associated with traditional taboos while strengthening reliance on prayer and moral discipline (Pargament, 2017; Park & Hale, 2019). Such findings align with participants' framing of Christian belief as offering clearer guidance and protection.

Another participant framed Christian faith as more effective by stating, "*Maga adi edwani adi makatulong di pamati ed idi mas mayat ay en Apo Dios.*" (Now, the beliefs from before do not really help it is better to rely on God.)-**Rey**. This account evaluates traditional beliefs based on perceived usefulness. Christian faith is presented as more reliable in ensuring safety.

This statement suggests that belief negotiation is driven by practical assessment of outcomes. Miners choose belief systems that they perceive as offering greater protection and reassurance. Traditional beliefs are not dismissed as meaningless but are viewed as less effective in contemporary contexts. Belief thus adapts in response to lived experience and changing expectations.

Research on pragmatic religious choice supports this interpretation. Studies show that individuals often adopt religious practices that they perceive as more effective in addressing uncertainty and danger (Robbins, 2018; Park & Hale, 2019). In occupational settings, perceived efficacy plays a key role in sustaining belief practices. These findings align with miners' evaluations of belief effectiveness.

Across the accounts, the shift toward Christian faith reflects a reorientation of spiritual authority in mining life. Participants describe prioritizing prayer to God as the primary means of seeking protection, while traditional ritual beliefs are reconsidered or set aside. This shift does not erase cultural memory but reshapes how belief is practiced and justified. Belief negotiation thus involves redefining which spiritual frameworks guide safety and decision making.

Through this shift, miners adapt inherited belief systems to contemporary religious contexts while maintaining focus on protection and survival. Christian faith becomes a dominant reference point for interpreting risk, offering moral clarity and emotional assurance. This subtheme illustrates how belief evolves through selective adoption and reinterpretation within changing spiritual landscapes.

Subtheme 4.2: Recognition of Traditional Beliefs as Meaningful in the Past

While many participants describe a shift toward Christian faith, they also acknowledge that traditional beliefs were once meaningful and effective within earlier mining contexts. These beliefs are remembered as practices that guided conduct, promoted caution, and provided explanations for safety and misfortune at a time when alternative frameworks were limited. Participants do not dismiss these beliefs as irrational; instead, they situate

them within a specific historical and social context. Recognition of past meaning reflects respect for elders' experiences and the conditions under which traditional beliefs emerged. Belief negotiation therefore involves historical awareness rather than simple rejection.

One participant reflected on the value of traditional beliefs by stating, "*Makatulong ed idi tan patien da sunga kaman matet-tet-ewa ngay iman.*" (They were helpful in the past because people believed in them, so it seemed effective then.)- **Edu**. This account suggests that belief efficacy is understood as context dependent. Traditional beliefs worked because they were collectively accepted and practiced. Their effectiveness is remembered as tied to shared conviction rather than inherent power alone.

This statement reflects an understanding that belief functions through social agreement and collective adherence. When everyone followed the same practices, those beliefs shaped behavior and reinforced safety. The participant's reflection does not discredit traditional beliefs but explains their relevance within a different time. Belief negotiation here involves recognizing that meaning and effectiveness change as contexts evolve.

Research on belief efficacy supports this interpretation. Studies indicate that collective belief systems are most influential when shared widely within a community, shaping behavior and expectations (Robbins, 2018; Cornelio, 2016). As social conditions and belief landscapes shift, the perceived effectiveness of earlier practices may diminish. These findings align with participants' reflections on past belief usefulness.

Other scholars emphasize that acknowledging past belief systems helps communities maintain continuity and respect for elders' knowledge even as practices change (Santos & Pe-Pua, 2018; Macdonald, 2020). This perspective supports the participant's recognition of traditional beliefs as meaningful in their time.

Another participant echoed this recognition by stating, "*Din boss kod idi nan pamati dadi pay.*" (The boss we had before still believed in those practices.)-**Rey**. This account situates traditional belief within earlier leadership and authority structures. Belief observance is linked to figures of responsibility who guided work and safety decisions.

This statement suggests that traditional beliefs were embedded in organizational and social roles. Leaders and supervisors reinforced belief-based practices, giving them authority and practical influence. Recognition of this past structure highlights how belief once shaped decision making at multiple levels. Negotiation of belief thus includes acknowledgment of former systems of authority.

Studies on traditional leadership in labor communities support this interpretation. Research shows that belief systems are often sustained through leaders who embody and enforce shared practices (Macdonald, 2020; Reyes & Banerjee, 2021). When leadership structures change, belief observance may also shift. These findings align with participants' recollections of belief under earlier supervisors.

Other research highlights that respect for past authority helps maintain social cohesion even as practices evolve (Cornelio, 2016; Santos & Pe-Pua, 2018). This supports the interpretation that acknowledging traditional belief leadership is part of respectful belief negotiation.

Another participant explained the fading of traditional practices by noting, "*Ed idi di naisisigud, ngem edwani adi pay.*" (Before, it was strictly followed, but now it is no longer.)-**Pollo**. This account contrasts past strict observance with present flexibility. Traditional beliefs are remembered as more rigidly enforced in earlier times.

This statement suggests that belief change is understood as a gradual relaxation rather than abrupt loss. Participants recognize that earlier generations adhered more strictly to belief-based rules. Negotiation of belief thus involves accepting change while acknowledging past discipline. Belief is remembered as once central to mining life, even if less dominant now.

Research on cultural change supports this understanding. Studies indicate that traditional practices often lose rigidity as communities encounter new belief systems and social influences (Robbins, 2018; Cornelio, 2016). However, memory of strict observance remains an important reference point. These findings align with participants' descriptions of belief change over time.

Across the accounts, recognition of traditional beliefs as meaningful in the past emerges as a key aspect of belief negotiation. Participants acknowledge that these beliefs once structured safety, authority, and conduct within mining life. Rather than dismissing them, miners situate traditional beliefs within their historical context. This recognition allows for continuity of respect even as practices are reinterpreted or replaced.

Through acknowledging the past role of traditional beliefs, miners maintain cultural grounding while adapting to new spiritual and safety frameworks. Belief negotiation thus involves remembering, contextualizing, and selectively retaining aspects of earlier systems. This subtheme highlights how miners balance respect for tradition with acceptance of change in contemporary mining contexts.

Subtheme 4.3: Generational and Social Change Influencing Belief Practice

Participants consistently point to generational shifts and broader social changes as factors shaping how beliefs are practiced in contemporary mining life. These changes include exposure to different religious affiliations, increased interaction with people holding diverse beliefs, and evolving views about authority and tradition. Belief is no longer described as uniform or unquestioned, but as something negotiated within a more plural social environment. Younger miners are portrayed as engaging with belief differently from earlier generations, often exercising greater choice and flexibility. Through these shifts, belief practices are reshaped rather than entirely abandoned.

One participant described the influence of generational change by stating, “*Ngem edwani ay new generation adaduy sekta si nadumadumay religion sunga kaman mabalbaliwan.*” (But now, with the new generation, there are many sects and different religions, so things seem to be changing.)-**Pollo**. This account highlights religious diversity as a key factor in belief transformation. Exposure to multiple belief systems introduces alternatives that influence how traditional practices are viewed and followed.

This statement suggests that belief change is driven not by rejection alone but by increased choice. With more religious options available, miners are no longer bound to a single inherited framework. Belief becomes something that is compared, evaluated, and selectively adopted. This process reflects a shift from collective uniformity toward individual negotiation within a shared work environment.

Research on religious pluralism supports this interpretation. Studies show that exposure to diverse belief systems often leads individuals to reassess inherited practices and adopt more flexible approaches to belief (Cornelio, 2016; Robbins, 2018). In labor communities, such pluralism can reshape how traditions are maintained or modified. These findings align with participants’ descriptions of belief change among younger miners.

Other scholars emphasize that plural religious environments encourage dialogue and reinterpretation rather than outright abandonment of tradition (Santos & Pe-Pua, 2018; Macdonald, 2020). This supports the understanding that belief practices evolve through social interaction rather than abrupt rupture.

Another participant connected generational change to weakening enforcement of traditional practices by stating, “*Ed idi di naisisigud ngem edwani kaman awanen.*” (Before it was strictly observed, but now it seems to be gone.)-**Pollo**. This account contrasts earlier strict observance with present looseness. Traditional beliefs are remembered as once rigidly enforced but now less binding.

This statement reflects how authority structures have shifted over time. Earlier generations relied heavily on elders and shared norms to enforce belief-based rules. In contrast, contemporary miners experience fewer sanctions for non observance. Belief negotiation thus involves reduced compulsion and increased personal discretion.

Studies on generational change in cultural practices support this understanding. Research indicates that traditional norms often lose strictness as younger generations prioritize autonomy and reinterpret inherited rules (Robbins, 2018; Cornelio, 2016). However, this does not necessarily result in total loss of tradition, but in selective retention. These findings align with participants’ reflections on changing enforcement.

Another participant highlighted social interaction as a factor in belief change by stating, “*Edwani tan makikinnadang kami si adu a tao, adu met nan maadal mi.*” (Now that we work with many people, we also learn

many things.)-**Pedro**. This account points to workplace diversity as influencing belief practice. Interaction with others introduces new ideas that shape how beliefs are understood and practiced.

This statement suggests that belief negotiation occurs through everyday social encounters. Working alongside people with different beliefs encourages reflection and adaptation. Belief becomes informed by shared experience rather than fixed inheritance. This process reflects the social nature of belief change within mining life.

Research on workplace socialization supports this interpretation. Studies show that interaction in diverse work environments contributes to the exchange and transformation of cultural practices (Macdonald, 2020; Reyes & Banerjee, 2021). Such interactions foster adaptive belief systems that reflect collective experience. These findings align with participants' accounts of learning through social engagement.

Across these accounts, generational and social change emerge as influential forces shaping belief practice. Increased religious diversity, reduced enforcement, and broader social interaction contribute to more flexible and negotiated belief systems. Beliefs are no longer uniformly practiced but are adapted to fit contemporary contexts. This subtheme illustrates how belief evolves through exposure, interaction, and generational transition.

Through these changes, miners maintain continuity with tradition while exercising greater agency in belief practice. Belief negotiation becomes a response to social complexity rather than a rejection of heritage. This subtheme highlights the role of generational and social dynamics in reshaping belief within contemporary mining life.

Subtheme 4.4: Integration of Belief with Modern Safety Awareness

Participants describe a form of belief negotiation that involves integrating cultural and religious perspectives with practical safety awareness rather than treating them as competing systems. This integration reflects miners' recognition that accidents may still occur despite observance of beliefs, and that attentiveness, inspection, and caution remain necessary. Belief is therefore reframed as something that works alongside practical judgment, not as a guarantee against harm. Through this integration, miners balance faith with responsibility, acknowledging both spiritual protection and human limits.

One participant articulated this balance by stating, "*Di aksidente sin uneg adi maiwasan sa ngem no waday safety maiadadayu kayo.*" (Accidents inside the mine cannot be completely avoided, but if there are safety measures, you can stay away from danger.)-**Pedro**. This account shows an acceptance of uncertainty alongside emphasis on practical safety. Belief does not deny the possibility of accidents but encourages the use of safety practices to reduce risk.

This statement reflects a pragmatic orientation toward safety. The participant acknowledges that belief alone does not eliminate danger, underscoring the importance of safety awareness and preventive action. Belief is thus integrated with practical measures rather than positioned as a substitute. Decision making involves combining faith with attentiveness to concrete conditions.

Research on integrated safety cultures supports this interpretation. Studies indicate that workers in hazardous environments often combine spiritual beliefs with practical safety strategies, creating hybrid frameworks that enhance resilience and caution (Macdonald, 2020; Park & Hale, 2019). These approaches allow individuals to maintain faith while acknowledging technical realities. Such findings align with participants' descriptions of belief integrated with safety awareness.

Other scholars emphasize that recognizing the limits of belief encourages responsible behavior. When faith is combined with practical safety knowledge, workers are less likely to engage in fatalistic risk taking (Reyes & Banerjee, 2021; Nunez & Garcia, 2017). This supports the interpretation that integration strengthens rather than weakens safety practice.

Another participant emphasized human responsibility by stating, "*Wada sin ipugaw adi ay man ila sin pan safetyan na.*" It (really depends on the person and how careful they are with safety at work.)-**Abe**. This account

highlights personal accountability in safety. Regardless of belief, miners are responsible for their own attentiveness and actions.

This statement suggests that belief negotiation includes acceptance of individual responsibility. Protection is not externalized entirely to spiritual forces; miners recognize that their behavior plays a crucial role in safety. Belief thus reinforces rather than replaces the need for careful conduct. Decision making becomes a shared responsibility between faith and action.

Studies on safety responsibility support this understanding. Research shows that emphasizing personal accountability alongside belief systems reduces complacency and enhances hazard awareness (Li & Velasco, 2020; Reyes & Banerjee, 2021). These findings align with participants' emphasis on carefulness as essential to safety.

Another participant reflected on combining prayer with vigilance by stating, "*Kararag kami ngem masapol latta ay mangngeg ken mangilasin.*" (We pray, but we still need to listen and observe.)-**Pedro**. This account explicitly articulates integration. Prayer is paired with attentiveness rather than replacing it.

This statement captures the essence of belief negotiation in contemporary mining life. Faith provides orientation and reassurance, while vigilance ensures responsiveness to danger. Belief thus becomes complementary to safety awareness. Miners actively combine spiritual and practical strategies to manage risk.

Research on complementary belief systems supports this interpretation. Studies indicate that when workers integrate spirituality with safety training, they develop more holistic approaches to risk management (Park & Hale, 2019; Macdonald, 2020). These approaches support sustained attentiveness and ethical responsibility. Such findings align with participants' descriptions of integrated belief and safety practice.

Across the accounts, integration of belief with modern safety awareness emerges as a key strategy for navigating risk. Miners acknowledge the limits of belief while valuing its role in shaping caution and humility. Safety is approached through a combination of prayer, vigilance, inspection, and responsibility. Belief thus adapts to contemporary conditions without losing its protective meaning.

Through this integration, miners maintain cultural and spiritual identity while engaging with practical safety realities. Belief negotiation becomes a dynamic process that supports both faith and survival. This subtheme highlights how miners reconcile tradition, religion, and modern safety awareness in their everyday work lives.

Taken together, the subthemes under Research Question 4 show that miners engage in an active and reflective process of negotiating belief rather than simply preserving or discarding inherited practices. Traditional cultural beliefs, Christian faith, and modern safety awareness coexist within miners' lived experience, shaping how protection and responsibility are understood. Participants describe shifts in spiritual orientation toward Christianity, while still recognizing the past significance of ancestral beliefs and rituals. Generational change, religious diversity, and social interaction further influence how beliefs are practiced, questioned, or selectively retained. Belief thus emerges as dynamic, shaped by continuity and adaptation.

The accounts also demonstrate that belief negotiation is grounded in practical concerns about safety and survival. Miners evaluate belief systems based on perceived effectiveness, relevance, and compatibility with present conditions. Christian prayer often becomes the primary source of spiritual assurance, while traditional practices are reinterpreted as part of cultural memory or ethical grounding. At the same time, miners acknowledge that belief alone does not eliminate risk, leading to the integration of faith with attentiveness, inspection, and personal responsibility. This balance reflects a pragmatic orientation toward danger that values both spiritual meaning and practical action.

A key feature of this negotiation is the absence of sharp boundaries between belief systems. Rather than framing tradition, religion, and safety awareness as competing frameworks, miners weave them together in everyday decision making. Prayer is paired with vigilance, faith with accountability, and cultural memory with modern judgment. This blending allows miners to maintain cultural identity while adapting to changing religious landscapes and safety expectations. Belief negotiation, therefore, becomes a strategy for coherence in a complex and hazardous work environment.

In answering Research Question 4, the findings indicate that miners negotiate traditional cultural beliefs alongside contemporary religious and safety perspectives through reinterpretation, selective emphasis, and integration. Belief is neither static nor abandoned but reshaped to remain meaningful and functional in present mining contexts. This process allows miners to navigate risk with humility, awareness, and responsibility. Overall, belief operates as a flexible framework that supports survival, continuity, and adaptation in contemporary mining life.

While the findings are context-specific, they offer analytical insights that may be transferable to similar artisanal and small-scale mining contexts where cultural belief systems intersect with safety practices. Rather than statistical generalization, the study contributes to theoretical transferability by providing detailed accounts of how belief operates as a lived safety framework in high-risk labor environments.

CONCLUSION

The study establishes that miners in the selected mining community hold cultural and spiritual beliefs that are expressed through structured practices governing preparation, conduct, and engagement with the underground environment. These beliefs are manifested through ritual observances, prayer, bodily discipline, food restrictions, and behavioral taboos that regulate miners' interaction with the mine. Belief is experienced as inherited knowledge transmitted through elders and reinforced through collective observance, forming a shared interpretive framework through which miners understand danger, responsibility, and proper conduct. These belief systems are not abstract or symbolic but are enacted through repeated practices that structure everyday mining life.

The findings further demonstrate that these beliefs directly influence miners' work practices, safety behavior, and decision making. Readiness to enter the mine is determined through compliance with belief based conditions, including ritual completion, abstinence, and prayer, which signal preparedness and appropriateness for engaging in hazardous work. These practices regulate when mining activities may proceed and when restraint is necessary. Belief also shapes conduct within the mine by reinforcing attentiveness, vigilance, and behavioral restraint, thereby influencing how miners respond to environmental hazards and uncertainty. Decision making emerges as a process informed not only by technical awareness and experience but also by culturally grounded assessments of readiness, propriety, and protection.

The study also establishes that certain safety practices are regarded as sacred and essential within the mining context. Rituals performed before and after mining activities, prayer for protection, silence within the underground environment, and disciplined inspection and attentiveness are treated as necessary conditions for maintaining safety. These practices function as culturally recognized mechanisms for regulating behavior, reinforcing vigilance, and sustaining collective responsibility. Safety is understood as a condition maintained through adherence to proper conduct and observance of belief informed practices that govern engagement with the mining environment.

The findings further show that miners actively negotiate traditional cultural beliefs alongside Christian faith and contemporary safety awareness. Traditional practices such as ritual observance and behavioral taboos continue to guide conduct, while Christian prayer has become increasingly integrated as a primary protective practice. This coexistence reflects a process of reinterpretation and integration in which miners retain culturally inherited frameworks while incorporating contemporary religious orientation and practical safety awareness. Belief systems remain operative and meaningful through adaptation, allowing miners to sustain continuity with inherited practices while responding to changing social and religious influences.

These conclusions affirm that cultural and spiritual beliefs function as operative frameworks that regulate readiness, guide conduct, and shape safety related behavior within mining life. Belief based practices structure how miners prepare for work, engage with hazardous environments, and maintain vigilance in conditions of uncertainty. Safety, within this context, is sustained through the interaction of belief, embodied discipline, experiential knowledge, and collectively reinforced standards of proper conduct.

Limitations of the Study

This study is bounded by its focus on a single mining barangay in Mankayan, Benguet, which situates the findings within a specific cultural and socio-economic context. While this allows for depth of understanding, it limits transferability to other mining settings with different cultural configurations, regulatory environments, or technological conditions. The sample size of ten participants aligns with phenomenological inquiry; however, it reflects a relatively homogeneous group in terms of long-term mining experience, which may not capture variations across age groups, entry-level miners, or those with intermittent mining engagement.

The study also relies primarily on self-reported narratives through interviews, without observational triangulation within the mining site. This may limit the ability to examine how beliefs are enacted in real-time practice. Furthermore, perspectives from institutional actors such as regulators, health officers, and mining operators were not included, which constrains the analysis to miners' viewpoints alone.

Future research may expand the scope of inquiry by including multiple mining communities across different regions to examine variations in belief systems and safety practices. Comparative studies involving miners from diverse socio-economic backgrounds, marital statuses, and levels of experience may further illuminate how belief is shaped by life conditions beyond work.

There is also a need to examine the intersection between belief systems and institutional safety frameworks, particularly how government regulations and industry standards interact with culturally grounded practices. Integrating ethnographic observation and participatory approaches may deepen understanding of how belief is enacted within actual mining environments.

Further studies may also explore how cultural and spiritual dimensions can be meaningfully incorporated into formal safety programs without reducing them to symbolic inclusion. This includes designing culturally responsive safety interventions that align with miners' lived realities rather than imposing external models of compliance.

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