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AN ASSESSMENT OF FACTORS CONTRIBUTING TO ACCIDENT OCCURRENCE AT DAIRIBORD HOLDINGS LIMITED

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A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS

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Declaration

To be completed by the student

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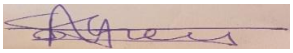
Mafushe Sheunesu H, declare that the work is entirely the outcome of his research. It has never been used in any academic work. Reference to previously published work has been clearly stated.

Student signature: …….  Date……30/05/2025

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This research has been checked for conformity with the faculty guidelines. It is suitable for submission to the faculty.

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Dedication

Dedication goes to my parents, Mr N and Mrs R Mafushe, my siblings Kudzaishe, Unopaishe, and Shemakanaka (‘enemies you cannot live without’). I am where I am through their unconditional love.

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I would like to thank the Almighty God, for his guidance throughout my entire academic career.

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Abstract

This study assessed the factors contributing to accident occurrences at Dairibord Holdings Limited (DHL), with a focus on the Harare Rekayi Tangwena Factory. A mixed-method approach was employed to collect both quantitative and qualitative data. The review of secondary data was used to collect quantitative data on the classification of accidents by nature and time of occurrence. Structured questionnaires withy closed-ended questions were used to capture quantitative employee characteristics across all departments. The levl of employees knowledge and attitude towards OHS was obtained through open-ended questions for qualitative surveys and a Likert Scale for quantitative surveys in the questionnaire. An observation chectlist was employed for recording quantitative data on visible workplace hazards. Semi-structured interviews were conducted to collect qualitative data on perceived high-risk areas. Data obtained from the review of secondary data and questionnaires were presented in tables and graphics in the form of bar graphs and pie charts using Microsoft Excel. Responses from the questionnaires were coded to enable analysis of qualitative data quantitatively through SPSS software. The findings revealed that mechanical-related accidents (32%), slips/trips/falls (25%), and chemical exposures (18%) were the most prevalent, identifying unsafe acts as the primary cause. Contract workers were more prone to accidents than permanent staff, and incidents increased after lunch, likely due to postprandial fatigue. Socio-demographic analysis showed a predominantly male workforce (64,5%), with older employees aged 46 and above, and alcohol consumers (54,6%) displaying higher risks. Despite 75% of employees expressing positive attitudes towards occupational health and safety (OHS), knowledge gaps persisted, particularly in the production department, where 36% demonstrated ‘good’ OHS knowledge. Key hazards included unguarded machinery, improper use of personal protective equipment, and ergonomic strains. The study endorsed Heinrich’s Domino Theory and the Fine-Kinney Risk Assessment Method in Zimbabwe’s industrial context, recommending targeted interventions such as enhanced training, engineering controls, and ergonomic redesigns. These measures align with SDG 8 (Decent Work), emphasizing the integration of safety practices to reduce accidents and promote productivity.

Table of Contents

List of Figures

List of tables

ACRONYMS

NEC	National Employment Council
DHL	Dairiboard Holdings Limited
OHS	Occupational Health and Safety
SDGs	Sustainable Development Goals
HR	Human Resource
PPE	Personal Protective Equipment

SPSS	Statistical Package for Social Science

Chapter 1: Introduction

1.0 Introduction

This chapter introduces readers to the topic of assessing factors that contribute to accidents at Dairibord Holdings Limited. The problem statement, which justifies and emphasizes the necessity of the study, remains unchanged. The chapter also maintains the objectives and research questions to be addressed. Additionally, it discusses limitations, delimitation, and ethical considerations critical to this research.

1.1 Background of the study

An occupational accident refers to an event that occurs during work and results in physical and mental injuries (Iran J Public Health, 2017). Occupational health and safety (OHS) remain critical concerns in industrial settings, particularly in the food production sector, where workers encounter numerous hazards. The dairy industry, a subset of this sector, involves complex processes from milk collection to packaging, presenting unique risks to employees. Despite advancements in technology and safety protocols, workplace accidents continue to happen, often due to factors such as outdated equipment, inadequate training, and poor ergonomic conditions (Ozbakir, 2023). This study focuses on assessing the factors contributing to accident occurrences at Dairibord Holdings Limited (DHL), a leading player in the dairy industry, by drawing insights from existing literature and methodologies, such as the Fine Kinney Risk Assessment Method.

In terms of commercial volume, the food industry is one of the largest global sectors, encompassing diverse subsectors with distinct operational hazards (Tas & Olum, 2020). Within this sector, dairy production is particularly labour-intensive, requiring manual agility and attention to detail, which increases the likelihood of accidents (Tudge & Bayhum, 2021). Statistics from the Social Security Institute indicate that the food production sector ranks in the top 10 in terms of workplace accidents, emphasising the urgent need for effective risk management strategies (Can & Kargi, 2019). Common accidents in dairy industries include slips, trips, falls, electric shocks, and injuries from machinery, some of which require medical

treatment or extended leave (Parlak et al., 2020). These accidents not only harm employees but also disturb productivity and incur significant costs for businesses.

Occupational diseases are another worrying issue in the dairy industry. Workers are frequently exposed to respiratory hazards, such as organic dusts and chemical vapours, which can result in chronic conditions like asthma and bronchitis (MacDonald et al., 2005). Skin disorders, for example, contact dermatitis, are also prevalent due to prolonged exposure to cleaning agents and moisture (Dickel et al., 2002). In addition, musculoskeletal disorders arise from repetitive tasks and poor ergonomic conditions, intensifying physical strain on workers (Ariyanto, 2021). These health challenges indicate the need for panoramic risk assessments and targeted interventions to mitigate workplace hazards.

Risk assessment methodologies such as the Fine-Kinney method give a systematic approach to identifying and evaluating workplace risks. This method quantifies risks by taking into consideration the likelihood, frequency, and severity of hazards, helping organisations to prioritise mitigation efforts (Gul et al., 2018). In a study conducted in a Turkish dairy factory, Ozbakir (2023) used the Fine Kinney method to identify critical risks, including electric shocks (risk score: 1440), injuries from outdated equipment (risk score: 720), and chemical exposures (risk score: 540). The study stated that malfunctioning machinery, lack of training, and poor supervision were the root causes of these risks. Such findings are relevant to DHL, where similar incidents may exist.

The dairy production process involves multiple stages. Pasteurisation, fermentation, and packaging stages introduce specific hazards, for instance, wet floors from whey increase slip and fall risks, while open electrical panels pose electrocution dangers (Ozbakir, 2023). Inadequate ventilation in confined spaces and improper handling of chemicals further compound these risks (Moreau & Neis, 2009). Intensifying these issues, the absence of emergency exit routes and untrained personnel increases the potential for severe accidents (Kamardeen, 2011). Addressing these challenges requires a holistic approach, using the hierarchy of control.

In conclusion, the occurrences of accidents in dairy facilities are influenced by a combination of physical, chemical, ergonomic, and psychosocial factors. The Fine Kinnery method provides a robust framework for assessing these risks, as illustrated in similar studies (Ozbakir, 2023).

For DHL, applying this methodology can help identify critical hazards, prioritise interventions, and enhance the overall workplace safety.

1.2 Problem statement

Despite putting in place profuse safety measures and training programs, Dairibord Holdings Limited continues to experience a worrisome increase in workplace accidents. This is indicated by trends of accidents recorded from 2020 to 2024. Comparing reports of 2015-2019 and of 2020-2024, there was a 32% increase in reported near-miss incidents, a 22% rise in minor injuries requiring medical attention, a 10% increase in first aid accidents, and a 5% increase in road traffic accidents. Employees at DHL are habitually exposed to hazardous conditions, which include the handling of heavy machinery, exposure to chemicals, and the risk of slips, trips, and falls.

Kines et al., (2018) and Kapp et al., (2020) suggest that the persistence of workplace accidents can be attributed to several factors, which include inadequate safety culture, insufficient employee engagement in safety practices, and a lack of comprehensive safety management systems. In addition, the effectiveness of existing safety measures may be subverted by a lack of proper implementation and monitoring, and insufficient communication regarding safety protocols among employees (Hale et al., 2019).

In light of this context, there is a critical need to assess the specific factors contributing to accident occurrences at DHL. Grasping these factors is important for developing targeted interventions that can enhance workplace safety and reduce the incidence of accidents. This research aims to pin down the causes of accidents, evaluate the effectiveness of current safety measures, and provide recommendations for improving safety, health and environmental practices.

1.3 Aim

To assess the factors contributing to accident occurrences at Dairibord Holdings Limited Company (DHL).

1.4 Objectives

1. To classify accidents by nature and time of occurrence at DHL.

2. To describe the socio-demographic and lifestyle characteristics of employees at DHL.

3. To determine the level of knowledge and attitude of employees towards occupational health and safety.

4. To determine safety hazards at DHL.

1.5 Research Questions

1. What is the nature of accidents and the time of occurrence?

2. What are the socio-demographic and lifestyle characteristics of the study participants at DHL?

3. What is the level of knowledge of employees about the occupational health and safety system?

4. What is the attitude of employees towards the occupational health and safety system?

5. What are the safety hazards in the workplace?

1.6 Justification

This research holds important value for multiple stakeholders. It offers both practical and theoretical contributions to occupational safety at Dairibord Holdings Limited (DHL) and beyond.

On organisational Impact, the study will systematically identify overlooked accident causation factors (procedural gaps, behavioural patterns, or infrastructural weaknesses).

The research will also contribute to the knowledge, adding Zimbabwe-specific empirical data to the global discourse on industrial safety. It will test the applicability of established

safety theories (Heinrich's Domino Theory) in a developing economy context, and identify localised factors (regulatory enforcement challenges, cultural attitudes) that may differ from global trends.

The research will also lead to socioeconomic benefits by reducing accidents at DHL. Reducing accidents could lead to fewer lost workdays, lower compensation costs, and improved worker morale, linked to productivity gains (per NSSA, 2023)

On regulatory relevance, Findings will assist NSSA in evaluating current OSH enforcement strategies and developing sector-specific guidelines for Zimbabwe's dairy industry.

This study aligns with SDG 8 (Decent Work) and Zimbabwe's National Development Strategy 1 (2021–2025), emphasising workplace safety as a driver of economic growth.

1.7 Assumptions

1. It is assumed that employees will provide honest and accurate information regarding accidents and safety practices.

2. The company's safety records are assumed to be accurate and reflect the true frequency and nature of accidents.

1.8 Delimitations

Dairibord Holdings Limited has 6 factories: Harare Rekayi Tangwena (RT) factory, Harare Simon Mazorodze, Hobbs and Shaw Harare, Lyons Harare, Chitungwiza factory, and Chipinge factory. The study will be limited to the DHL Harare RT factory. The study will assess factors contributing to occupational accidents, without exploring other aspects of workplace safety, such as health-related concerns or property damage. DHL has double shifts of day and night; the study will focus on employees on day shifts.

1.9 Limitations

The study may be limited by the availability of comprehensive accident records and the employees' willingness to participate, which may be hindered by fear of reprisal.

Chapter Two: Literature Review

2.0 Introduction

This chapter provides a comprehensive literature review related to the factors contributing to accident occurrences at Dairibord Holdings Limited Company (DHL). It is structured around the research objectives, focusing on the nature and timing of accidents, the socio-demographic characteristics of employees, their knowledge and attitudes towards occupational health and safety (OHS), and the assessment of workplace hazards. Understanding these factors is essential for developing effective interventions aimed at reducing workplace accidents.

2.1 Classification of accidents by nature and time of occurrence.

Occupational accidents can be categorised based on their nature (slips, falls, machinery-related, chemical exposures, and ergonomic strains) (Hamalainen et al., 2006). Similarly, in British Columbia, 11% of time-loss claims were machinery-related, with 'caught in' incidents being the most common (WorkSafeBC, 2022).

Research indicates that accident rates vary with work shifts, with higher incidents reported during night shifts due to fatigue and reduced alertness (Caruso et al., 2006). Hamed Yeganeh et al. (2016) noted that construction site injuries rise between 10 AM and 12 noon due to fatigue and decreased vigilance. Eskandari et al. (2017) emphasised that organisational factors, particularly management commitment and supervision, significantly influence accident rates and severity. For instance, poor supervision during high-intensity work periods poses risks (Eskandari et al., 2017). Studies also indicate that cleaning and maintenance activities, mostly performed during non-routine hours, are particularly hazardous (Mahdjun, 2022). For example, a review of 24 fatal and serious accidents in Quebec's food and beverage sector (2000 - 2021) revealed that 8 occurred during cleaning, with 6 happening during evening or night shifts (Mahdjun, 2022).

2.2 Socio-demographic and Lifestyle characteristics of employees

The socio-demographic and lifestyle characteristics of employees have a significant influence on workplace safety. In the dairy and beverage industries, workers often engage in manual tasks requiring physical endurance, making age, experience, and health status critical factors in accident susceptibility (Wakjira, 2024). Younger and less experienced workers are more

prone to accidents due to a lack of training, while older employees may face ergonomic challenges leading to musculoskeletal disorders (Ozbakir, 2023). These findings align with Rommel et al. (2016), who identified age, sex, and working hours as key determinants of injury in Germany. Research indicates that younger workers often engage in riskier behaviours due to inexperience and a tendency toward risk-taking (Smith & Johnson, 2021). For instance, a study by Müller et al. (2021) found that construction sites exhibit a bimodal distribution of accident rates, with younger workers (ages 18-25) experiencing higher rates of minor injuries, while older workers (ages 55-65) face greater severity in injuries due to age-related physical decline.

Research consistently shows that male employees are often assigned to more hazardous tasks, resulting in higher rates of severe injuries (Oliveira & Silva, 2023). In contrast, women frequently occupy support roles where they face ergonomic risks due to repetitive tasks and inadequate personal protective equipment (PPE). Rossi et al. (2021) emphasise that female workers often experience unreported injuries, as cultural norms may discourage them from voicing safety concerns. Oliveira and Silva (2023) suggest that safety protocols should include ergonomic assessments tailored to the needs of female workers, particularly in environments where they may be exposed to machinery.

Workers with lower educational levels may lack the necessary understanding of safety protocols, leading to a heightened risk of accidents (Ndlovu & Khumalo, 2024). Smith and Johnson (2022) found that employees in the construction industry with only a high school diploma were significantly more likely to experience workplace injuries compared to those with higher levels of education.

Training programs that enhance safety knowledge should be prioritised, particularly for lower-educated employees. For example, comprehensive safety training that incorporates practical demonstrations and hands-on experience can improve understanding and compliance with safety regulations (Adebayo & Ibrahim, 2024). Furthermore, integrating safety education into vocational training programs can equip future workers with essential skills for maintaining workplace safety (Müller & Schmidt, 2023).

Job satisfaction, a critical socio-psychological factor, also affects safety behaviour. Eskandari et al. (2017) linked low salary and poor career advancement opportunities to increased accident

rates. This also aligns with Kim et al. (2002), who reported that dissatisfied employees had 30% higher incident rates. Abir et al. (2023) found that socio-economic factors such as income and education level affect individuals' engagement with safety protocols.

2.3 Knowledge and attitudes of employees towards occupational health and safety.

Employee knowledge and attitudes towards occupational health and safety (OHS) play an important role in accident prevention. Studies indicate that inadequate training and poor safety culture significantly contribute to workplace hazards (Ozbakir, 2023). Research by Oliveira and Costa (2022) shows that workers often lack awareness of the long-term health implications associated with chemical exposure, underscoring the need for targeted training programs. In the dairy industry, workers often lack sufficient knowledge about electrical safety, chemical handling, and emergency procedures, leading to preventable accidents (Pekeroglu, 2017). Eskandari et al. (2017) identified education and training as a critical factor, with 94% of experts citing inadequate training as a leading cause of accidents. Effective training enhances risk awareness and safety culture (Jafari et al., 2014). For example, comprehensive training on the proper handling of hazardous materials, including the use of PPE and emergency procedures, is essential for reducing chemical-related incidents (Johnson et al., 2022). Wakjira (2024) found that 66,8% of workers received safety training, yet 17,2% still neglect protective equipment due to a lack of access or awareness.

Safety culture, known as organisational commitment to safety, plays a role where poor culture correlates with underreporting and procedural violations (Petitta et al., 2017). A blame culture discourages incident reporting, perpetuating hazards (Eskandari et al., 2017). However, in many facilities, workers underestimated risks, particularly when safety measures were perceived as time-consuming or unnecessary (Ozbikir, 2023). Adebayo and Musa (2020) suggest that involving workers in safety audits and risk assessments fosters a sense of ownership and responsibility for safety outcomes. Additionally, establishing open communication channels where employees can report hazards without fear of reprisal is essential for promoting a culture of safety (Williams & Brown, 2025).

2.4 Safety Hazards

Poor equipment design, lack of lockout procedures, and machine guards are recurring issues (Mahdjun, 2022). Wakjira (2024) identified slippery floors, chemical exposure, and unguarded machinery as leading causes of injury.

Slips, trips, and falls remain a prevalent safety hazard across various industries. According to Anderson and Lee (2022), environmental design and maintenance are critical in preventing these incidents. Effective interventions can significantly reduce the incidence of slips, trips, and falls. Research suggests that implementing anti-slip flooring and providing employees with training on safe walking practices can mitigate these risks (Mokoena & Nkosi, 2023).

Electrical hazards pose a substantial threat to workplace safety. The National Safety Council (2022) reports that a significant percentage of workplace fatalities result from electrical incidents. Research by Nkosi (2023) emphasises the importance of proper training and adherence to safety protocols in preventing electrical accidents. Studies indicate that proactive maintenance and prompt repairs of faulty electrical systems can significantly reduce the likelihood of accidents (Richter, 2022).

Machinery and equipment hazards are prevalent in industrial settings. The Occupational Safety and Health Administration (OSHA, 2021) indicates that inadequate machine guarding and insufficient training are primary contributors to machinery-related accidents. Research shows that implementing comprehensive safety regulations and training can significantly reduce these incidents (Müller & Schmidt, 2023). Furthermore, incorporating automation and safety technologies can enhance safety in environments where heavy machinery is used (Smith et al., 2023).

Johnson et al. (2022) found a strong correlation between long-term exposure to volatile organic compounds (VOCs) and respiratory illnesses. Ensuring effective ventilation and the use of PPE is critical in mitigating these hazards. Organizations must provide comprehensive training on the safe handling of hazardous materials and establish protocols for emergency response to chemical spills (Silva & Costa, 2023).

Ergonomic hazards, such as repetitive lifting and poor workstation design, contribute to musculoskeletal injuries (Ariyanto, 2021). Smith and Johnson (2022) found that prolonged computer use among office workers leads to an increase in musculoskeletal disorders (MSDs).

Implementing ergonomic interventions, such as adjustable workstations and regular breaks, can significantly reduce the incidence of these disorders (Müller & Schmidt, 2023).

Abir et al. (2023) identified a lack of infrastructure and poor maintenance as key hazards in their study.

2.5 Chapter Summary

This chapter has reviewed literature related to the factors contributing to accident occurrences at DHL. It has highlighted the nature and time of occurrence of accidents, the importance of socio-demographic characteristics, knowledge, and attitude towards OHS, and workplace hazards in shaping safety outcomes. A multifaceted approach that includes tailored training and proactive safety measures is necessary to improve workplace safety. The following chapter will discuss the research methodology adopted in this study.

CHAPTER THREE: METHODOLOGY

3.1 Study Area

The area under study is Dairibord Holdings Limited Company (DHL). Dairibord Holdings Limited (DHL) is a manufacturer and marketer of milk, foods, and beverage products with four factories located in Harare, Chitungwiza, and Chipinge. The study will focus on the Harare factory located at 1225 Rekayi Tangwena Ave. Figure 3.1 below shows a study area map of DHL.

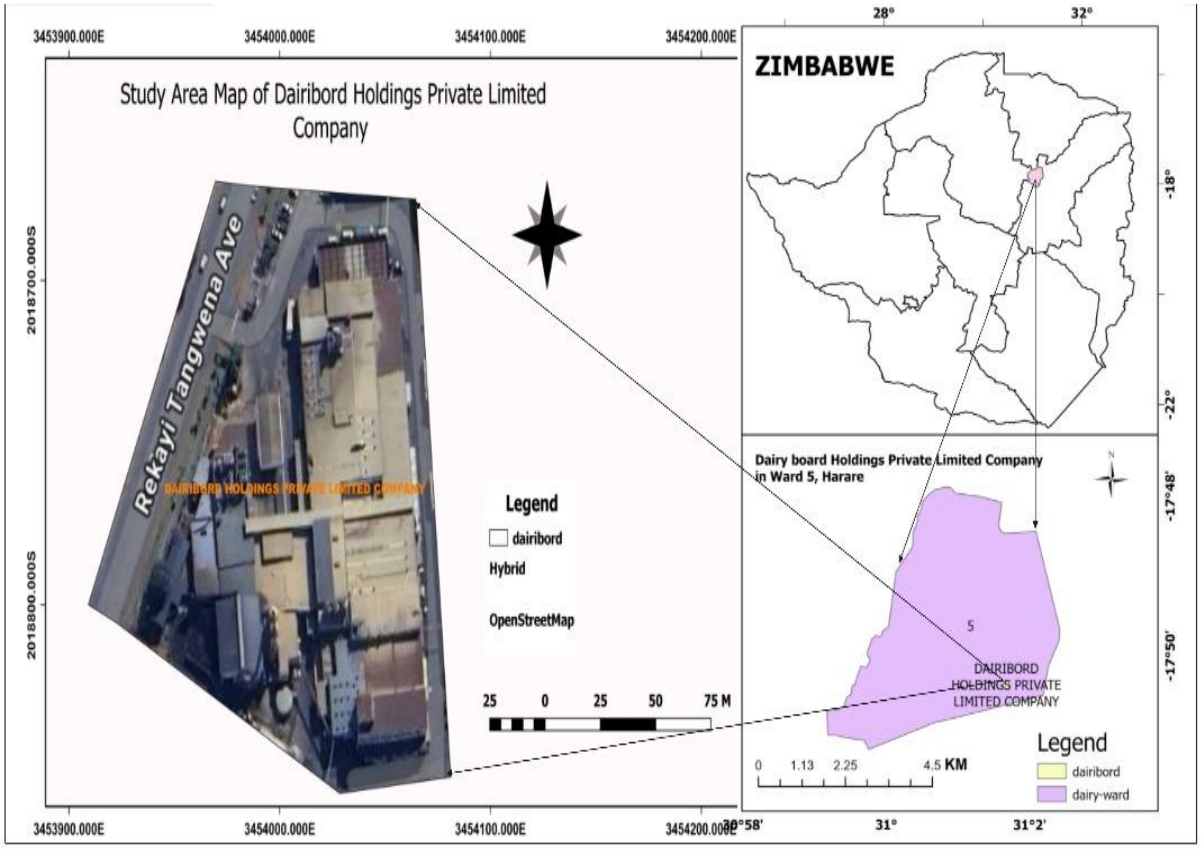

Figure 3. 1 Study area map

At DHL, there are nine departments. The departments are Administration, Production, Quality Control, Engineering, Procurement, Logistics, Marketing, Research and New Product

Development, Finance, and Business Information Systems. The research will be conducted across all departments.

3.2 Research Design

This study employed a cross-sectional mixed-methods design to analyse workplace accidents at Dairibord Holdings Limited (DHL) from 2020 to 2024. To deliver a comprehensive examination of occupational health and safety (OHS) concerns, both quantitative and qualitative methods were integrated into the research.

Quantitative data was collected by reviewing secondary sources such as accident records and Human Resources documents to classify accidents based on their nature and timing. Additionally, structured questionnaires gathered numerical data on employees' socio-demographic characteristics, lifestyle factors, and their level of knowledge and attitude toward OHS, using a Likert Scale. Qualitative data was obtained through open-ended questions in the questionnaires, allowing employees to share their views and experiences related to workplace safety. To assess safety hazards at DHL, quantitative data were collected using an observation checklist, while qualitative data were gathered through interviews.

3.2.1 Classification of accidents by nature and time of occurrence.

In this study, the classification of accidents by their nature and time of occurrence was collected as quantitative data. A retrospective cross-sectional design combined with real-time incident tracking was implemented. Real-time incident tracking was done through supervisor's notifications, which are mandatory reports of incidents to department heads within 1 hour of occurrence, and daily safety logs, which are ongoing records maintained by safety officers during workplace inspections. The data was obtained from reviewing secondary data, including accident records from the clinic and Human Resources documents from 2020 to 2024. The types of accidents included physical (slips, falls, struck-by objects), chemical (spills), ergonomic (musculoskeletal injuries), and mechanical (equipment malfunctions). At the time of occurrence, the study focused on the day shift (whether the accidents happened before or after lunchtime).

3.2.2 Determination of socio-demographic and lifestyle characteristics of employees at Dairibord Holdings Limited.

Socio-demographic and lifestyle characteristics of employees were addressed through employing structured questionnaires with closed-ended questions to capture employee characteristics across all departments and interviews to supplement questionnaire data with understandings into employee characteristics. The structured questionnaires covered core demographics (age, gender, education level, department, job role) and lifestyle factors (alcohol consumption).

3.2.3 Determination of the level of knowledge and attitudes of employees towards occupational health and safety (OHS).

The level of employees' knowledge and attitudes toward OHS was evaluated through open-ended questions for qualitative surveys and a Likert Scale for quantitative surveys in the questionnaire. This approach aimed to assess both knowledge and attitudes toward occupational health and safety. For the knowledge assessment, a standardized OHS test (7 items, 1 point for each correct answer) was used. To measure attitudes, a 5-point Likert scale was employed, with anchors ranging from 1 (strongly disagree) to 5 (strongly agree). In the qualitative part, open-ended questions focused on barriers to safety compliance and its effectiveness.

3.2.4 Determination of safety hazards at Dairibord Holdings Limited.

To determine safety hazards at DHL, an observation checklist and semi-structured interviews were used. An observation checklist was employed to systematically record quantitative data on visible workplace hazards, for example physical risks (wet floors or unguarded machinery), ergonomic concerns (improper workstation setup), housekeeping issues and compliance with established safety protocols. Semi-structured interviews were conducted with managers and safety safety officers to collect qualitative data on perceived high-risk areas, near-miss incidents, and suggestion for hazard mitigation.

3.3 Study population

The population is made up of all employees at the DHL Harare RT factory (Permanent and Contract workers). The total number of employees is 500.

Inclusion criteria: All permanent and contract workers present at the plant at the time of study.

Exclusion Criteria: All permanent and contract workers not at the study plant at the time of the study, that is, either on leave or for any other reason.

3.4 Sampling Design and Sample Size

The study used a stratified random sampling approach to select participants from Dairibord Holdings Limited's workforce of 500 permanent and contract workers who are physically present at the plant during the data collection period, excluding those on leave or absent for other reasons.

For the questionnaire component, a sample size of 150 workers (30% of the population) was selected to ensure statistical reliability while considering resource constraints, consistent with methodological recommendations by Kiilunen (2009). The sample proportionally represented all nine departments (Administration, Production, Quality Control, Engineering, Procurement, Logistics, Marketing, Research and New Product Development, Finance, and Business Information Systems) using a fishbowl randomisation technique. The strata included Production (200), Admin (46), Engineering (55), Quality Control (10), Procurement (14), Logistics (50), Marketing (70), Finance (50), and Research and New Product Development (5). The fishbowl technique was used to select respondents in the study. Slips (30%) marked 'yes' and 70% marked 'no' were shuffled in a department-specific box. Each worker drew one slip from the box, and 'yes' respondents completed questionnaires. (Refer to Appendix 1)

The 30% questionnaire sample size is justified by Bartlett et al. (2001) for populations under 1,000, providing sufficient power to detect significant patterns in safety knowledge, attitudes, and hazard exposure across DHL's operational units.

Workplace observations systematically assessed every third production line or machine using a standardised observation checklist to identify environmental hazards. For a detailed and comprehensive understanding, 15 workers (3%), including safety officers and managers, were purposively selected for interviews, prioritising quality of responses over quantity. This multi-method sampling strategy balances data collected using questionnaires, interviews, and an observation checklist, while the stratified random approach ensures all departmental perspectives are captured equitably.

3.5 Data Collection

Four data collecting instruments were used to collect both quantitative and qualitative data, ensuring comprehensive analysis of occupational safety at DHL. The instruments used were reviewing of secondary data (accident reports and Human Resources documents), questionnaires (Open-ended, closed-ended questions, and Likert Scale), an observation checklist and interviews.

3.5.1 Secondary data

This analysis of DHL's accident reports (2020–2024) and Human Resources documents quantifies trends in incident types, departments affected, and corrective actions taken.

3.5.2 Questionnaires

The researcher administered questionnaires to 150 workers, representing 30% of the target population. The questionnaire was used to collect both quantitative and qualitative data. It included closed-ended questions, open-ended questions and a Likert Scale. The questionnaire consist 4 sections labelled Section A, B, C and D.

Section A was to collect demographic data. It contains closed-ended questions used to obtain quantitative data on employee characteristics, covering core demographics (age, gender, education level, department, job role) and lifestyle factors (alcohol consumption). Section B was to obtain level of knowledge of employees towards OHS. It contains a standardised OHS test to obtain the data. Section C was used to determine the attitude of employees towards OHS. A likert Scale was used. (Questionnaire refer to appendix 2)

3.5.3 Observational checklists

Kumar and Ranjit (2005) state that an observation yields information that people are normally unwilling or unable to provide. It is a type of primary data where data is gathered by the researcher's direct observation of relevant people, actions, and situations without interfering or asking the respondent. The observational checklist also serves as a record for verification for future references. The non-participant observation approach was used, recording data without

participating and using a checklist. An observation checklist was employed to systematically record quantitative data on visible workplace hazards, for example physical risks (wet floors or unguarded machinery), ergonomic concerns (improper workstation setup), housekeeping issues and compliance with established safety protocols. The checklist was used to observe hazards in each department. (Refer to Appendix 3)

3.5.4 Interviews

Interviews with 15 purposively selected participants, including safety officers, department managers, and workers involved in past accidents was conducted. An interview guide explored perceived barriers to safety compliance, the effectiveness of current training programs, and suggestions for improvement. Interviews were audio-recorded (with consent) and transcribed verbatim for thematic analysis.

3.6 Data Analysis

Data obtained from the review of secondary data and questionnaires were presented in tables and graphics in the form of bar graphs and pie charts using Microsoft Excel. Responses from the questionnaires were coded to enable analysis of qualitative data quantitatively through SPSS software. SPSS software was used to generate proportions, frequencies, percentages, and relations.

A knowledge assessment system was generated. Scores were graded using a format adapted from a study by Macias and Glasauer (2014) and Adebola (2014). Macias and Glasauer, in their study to measure the level of knowledge towards a nutrition problem, allocated a mark for each correct answer and did not allocate a mark for an incorrect answer. Scores on the level of knowledge were graded as indicated in Table 3.1

Table 3. 1 Grading scores on knowledge

Level of knowledge	Correct score	Percentage score
Poor	$x \leq 3$	(0-43)
Fair	$4 \leq x < 6$	(57-71)
Good	$6 < x \leq 7$	(86-100)

An attitude assessment system was generated using a 5-point Likert scale. Likert scales grade the intensity of the respondent's attitude. An attitude is an emotional, motivational, perceptive, and cognitive belief that positively or negatively influences the behaviour or practice of an individual (Macias and Glasauer, 2014). The Likert scale was adapted from Anon (2012) in a study to determine safety attitudes, safety climate, and employee health in the construction Industry.

Individual`s scores will be graded as shown in Tables 3.2 and 3.3.

Table 3. 2 Attitude grading scores

Attitude	Correct response	Percentage
Negative	$x<5$	40
Fair	$5\leq x\leq 8$	(50-80)
Good	$8<x\leq 10$	(90-100)

Table 3. 3 Attitude mark allocation

Attitude	Strongly agree	Agree	Fair	Disagree	Strongly disagree
Mark	5	4	3	2	1

3.7 Ethical Considerations

The study adhered to internationally recognised ethical principles for research involving human participants, following the guidelines of the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioural Research, 1979) and the Declaration of Helsinki (World Medical Association, 2013). Ethical approval was obtained from the relevant institutional review board before data collection.

3.8 Informed Consent

All participants received written and verbal explanations of the study's purpose, procedures, risks, and benefits in their preferred language (Shona or English). A signed consent form, adapted from the template by Creswell and Creswell (2018), was required for questionnaire respondents and interviewees. Participants was informed of their right to withdraw at any stage without penalty (Artal & Rubenfeld, 2017).

3.9 Confidentiality & Anonymity

Data was anonymised using coded identifiers ("P1" for Participant 1) to protect identities. Digital files were stored on password-protected devices, while paper records were kept in locked cabinets, accessible only to the researcher. These measures align with the Data Protection Act of Zimbabwe (2013) and GDPR recommendations for research data (European Commission, 2018).

3. 10 Risk Mitigation

To minimise psychological distress when discussing accident experiences, interviews avoided graphic details of injuries (DiCicco-Bloom & Crabtree, 2006). Counselling services were made available through DHL's employee assistance program.

3.11 Beneficence & Justice

The study design prioritises participant welfare by excluding vulnerable groups, for example, temporary workers under probation, ensuring equitable selection across departments, and also by sharing findings with DHL management to improve safety policies.

Chapter 4: Results

4.0 Introduction

This chapter presents the study's findings, which were collected through the use of a review of secondary data, questionnaires, observation checklists, and interviews. The data collected aimed to reveal factors contributing to accidents at Dairibord Holdings Limited (DHL). Research findings are represented in various formats, including graphs, tables, pie charts, narratives, frequencies, and percentages. Microsoft Excel and SPSS software were both used for data analysis.

4.1 Response Rate

Out of 150 questionnaires distributed, 140 questionnaires were collected and passed for analysis, giving a 93,3% response rate. For interviews, 12 out of 15 targeted populations were available, giving an 80% response rate. This figure was representative and enabled meaningful conclusions and inferences despite the failure to reach a 100% response rate.

4.2 Classification of accidents by nature

Accidents were categorised based on the type of injury or incident reported. The figure 4.1 below shows the nature of accidents at DHL.

The major accidents at DHL were mechanical-related accidents contributing 32%. Slips, trips, and falls contribute 25%, chemical exposure incidents contribute 18%, while other incidents, manual handling, and ergonomic contribute 10% and 15% respectively.

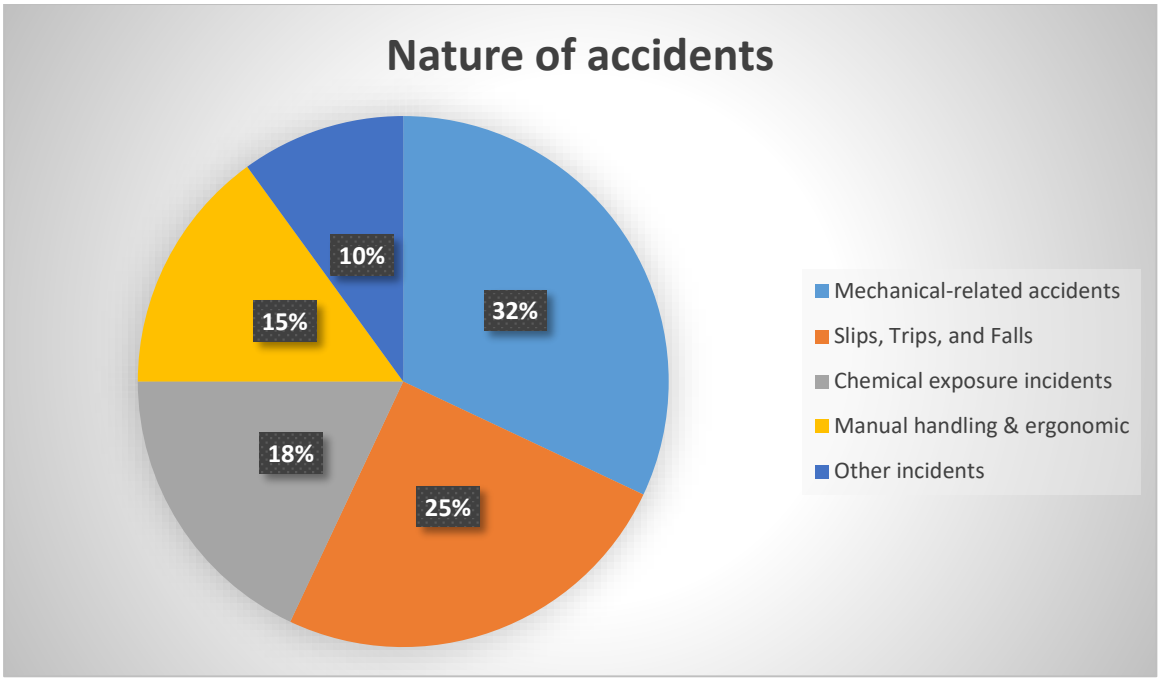

Figure 4. 1 Nature of accidents at DHL

4.2.1 Causes of accidents at Dairibord Holdings Limited.

Figure 4.2 below displays the trend of causes of accidents at DHL from the year 2020 to 2024. The majority of accidents were due to unsafe acts (negligence/ deliberately breaking safety rules) when compared to unsafe conditions.

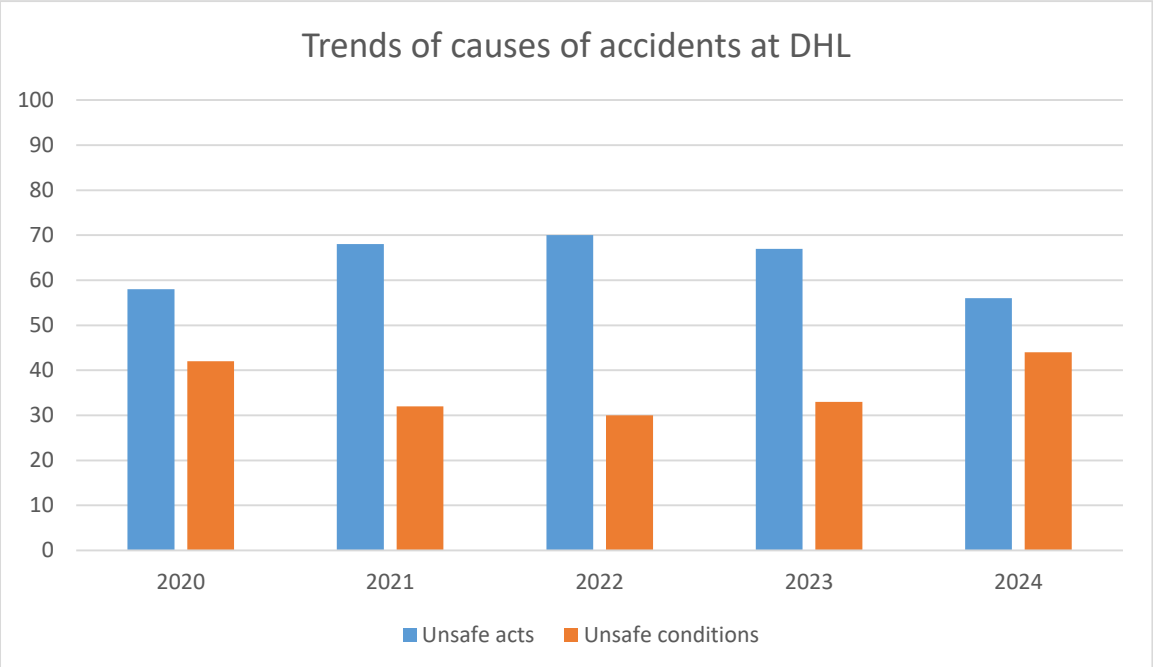

Figure 4. 2 Cause of accidents (2020-2024)

4.2.2 Status of employees prone to accidents at DHL.

Figure 4.3 below displays the frequency of employees prone to accidents. It shows the trend from 2020 to 2024.

Trends below show that contract workers are more prone to accidents than permanent workers.

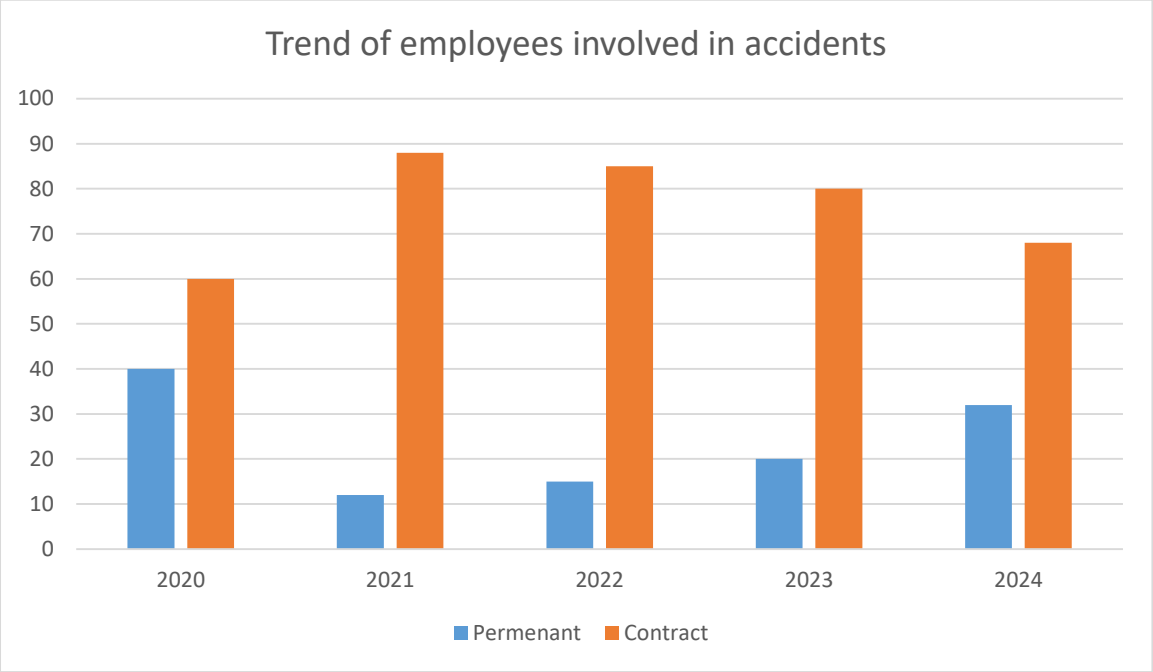

Figure 4. 3 Employees involved in accidents

4.2.3 Time of accident occurrence

At the time of occurrence, the study focused on the day shift (whether the accidents occurred before lunchtime or after lunchtime).

Figure 4.4 below shows trends in the time of occurrence of accidents at DHL. The majority of accidents from 2020 to 2024 occured after lunch, except in 2022.

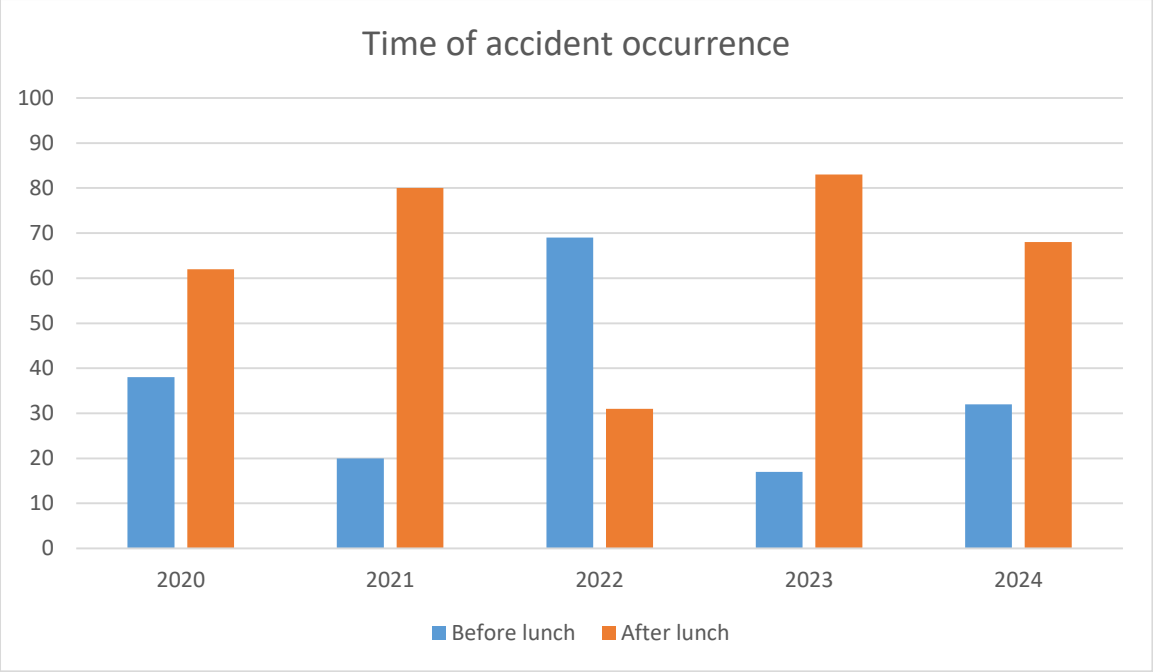

Figure 4. 4 Time of accident occurrence at DHL

4.4 Socio-demographic and lifestyle characteristics data

4.4.1 Socio-demographic characteristics of respondents

Frequency (n=152) is the total number of respondents who were interviewed (12) and those who answered the questionnaires (140).

The majority of the respondents were males, who accounted for 64.5%, compared to females, who made up 35.5%. Respondents above the age of 46 were the most dominant (36.2%), indicating a mature population at DHL.

As shown in Table 4.1 below, the majority (78,9%) of respondents were from the National Employment Council (NEC) grade. Employees from this (NEC) are directly exposed to hazards in the workplace because they are directly involved in the production process, compared to the middle management and senior management, who spend most of their time working from the office. In this study, middle managers and senior managers comprise 14,5% and 6,6% respectively. Amongst the respondents, 60,5% were contract workers while 39,5% were permanent workers.

Table 4.1 shows the different years of experience for the respondents. The majority of them indicated having worked for more than 10 years, with their numbers consisting of 35,5% of the respondent population. This highlights an experienced population at DHL.

The table below also shows the level of education attained by the respondents. The majority of the respondents (43,4%) have an ordinary level certificate, 23% reached an advanced level, whilst 33,6% of the respondents hold a tertiary certificate.

Table 4. 1 Socio-demographic characteristics of respondents

Variable	**Frequency (n=152)**	**Percentage (%)**
Sex		
Male	98	64,5
Female	54	35,5
Age group (Years)		
18-25	20	13,2
26-35	37	24,3
36-45	40	26,3
46+	55	36,2
Grade		
National Employment Council (NEC)	120	78,9
Middle management	22	14,5
Senior management	10	6,6

Employment Status		
Permanent	60	39,5
Contract	92	60,5
Years of Service		
Less than 1 year	22	14,5
1-5	46	30,3
6-10	30	19,7
10+	54	35,5
Level of education		
Ordinary	66	43,4
Advanced	35	23,0
Tertiary	51	33,6

4.4.2 Lifestyle characteristics of respondents

Table 4.2 below shows the distribution of respondents who consume alcohol and those who do not. The majority of the respondents (54,6%) take alcohol, with most of them (68,7%) drinking on weekends. The remaining 31,3% are those who drink alcohol daily. 45,5% of the respondents do not take alcohol.

Table 4. 2 Lifestyle characteristics of respondents

Variable	Frequency (n=152)	Percentage (%)
Alcohol consumption		
Yes	83	54,6
No	69	45,4
Days of consumption	**(n=83)**	
Weekends	57	68,7
Everyday	26	31,3

4.5 Knowledge levels and attitudes of respondents towards Occupational Health and Safety (OHS)

The pie chart (Figure 4.5) below displays the level of knowledge amongst respondents on Occupational Health and Safety (OHS). Only those who responded to the questionnaires gave an account of 140 respondents. Knowledge questions were used in a series of 5 closed-ended questions and 2 open-ended questions. A mark was allocated for every correct answer. Ranking scores were 0-3 for poor knowledge, 4-5 for fair knowledge, and 6-7 for Good knowledge on OHS.

The majority of respondents (48%) indicated having poor knowledge of OHS, 36% had good knowledge, while 16% had a piece of fair knowledge of OHS.

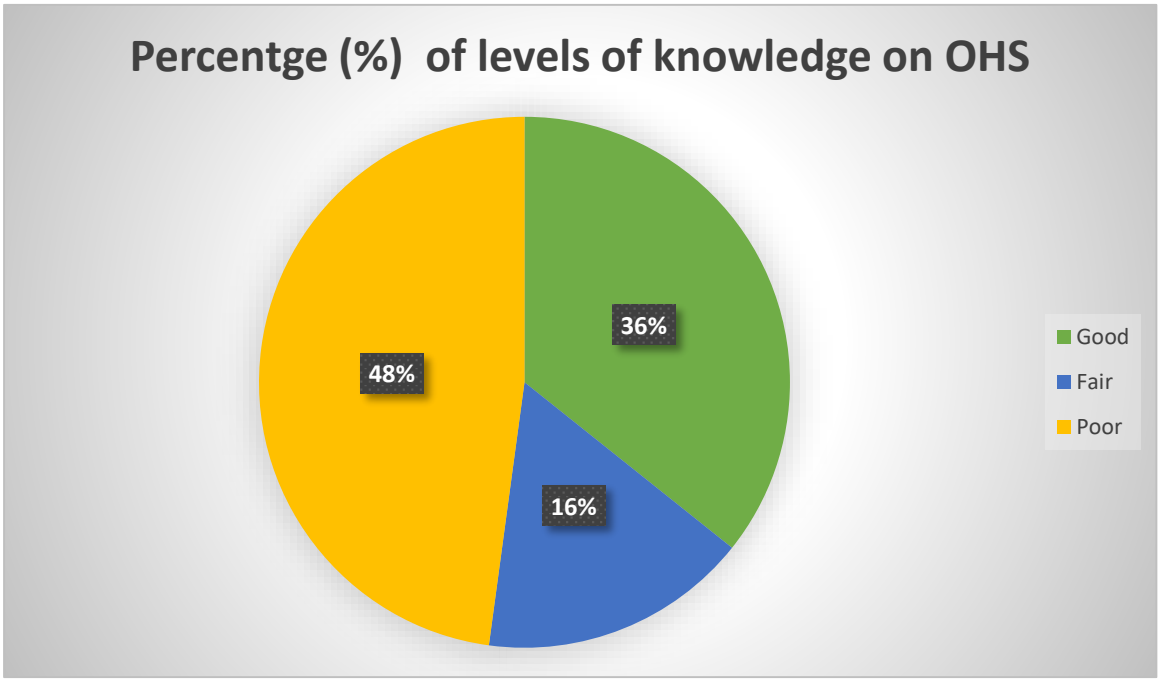

Figure 4. 5 Knowledge level on OHS of respondents at DHL

4.5.1 Level of knowledge of respondents by department

Figure 4.6 below displays the respondents' knowledge of OHS by department. The knowledge is distributed across all departments. 36 respondents from production have poor knowledge of OHS, and others are from logistics (10), engineering (4), procurement (2), marketing (2), and Finance (5).

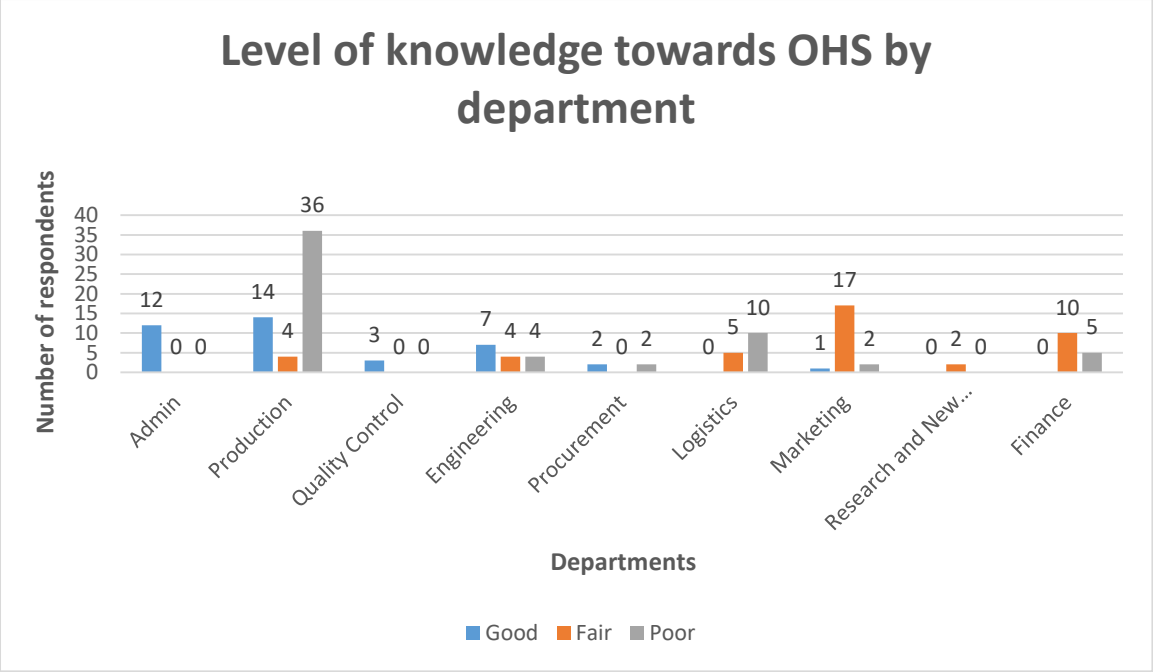

Figure 4. 6 Level of knowledge by department

4.5.2 Knowledge of respondents on safety slogan

Figure 4.7 below shows a relationship between department and knowledge of the safety slogan. The majority of respondents are knowledgeable, with a total percentage of 69,3%. All the respondents from Admin, Research and New Product Development, and Finance indicated that they were aware of the safety slogan. However, the respondents from Production (32%), Quality control (40%), Logistics (54%), and Marketing (18%) did not know about the workplace safety slogan.

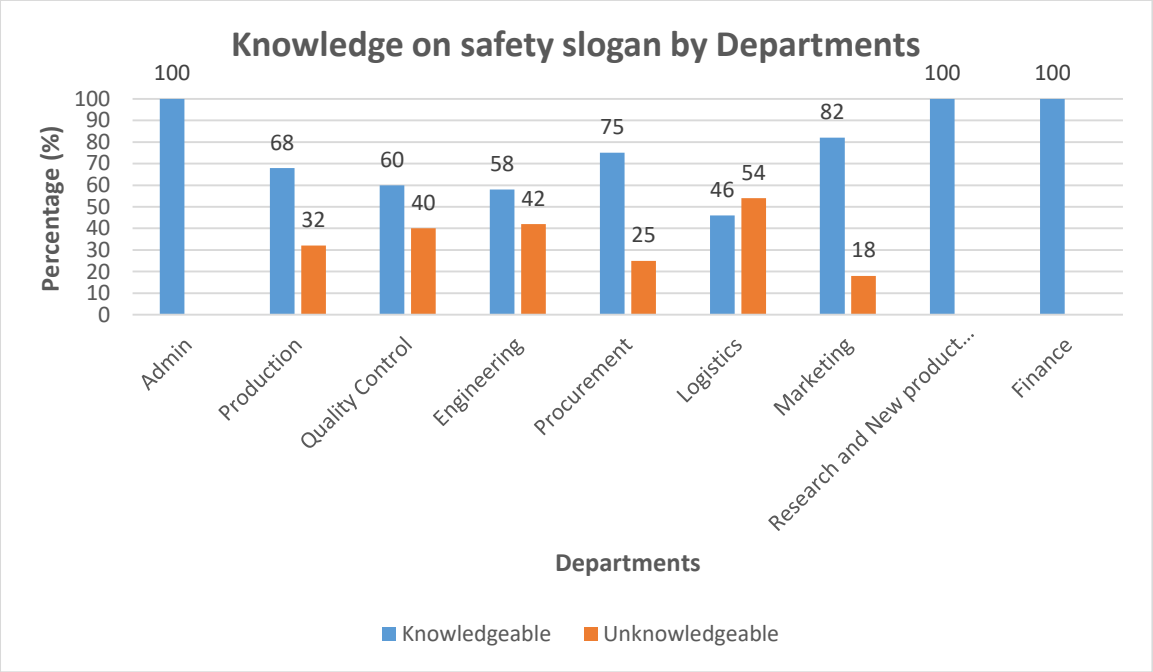

Figure 4. 7 Knowledge of respondents on safety slogan by department

4.5.3 Safety rule

The respondents were given three options to indicate the correct safety rule. The three options were: always carry out continuous risk assessment, always come to work on time, and always meet the target. About 112 (80%) respondents were able to select the correct safety rule. Only 28 (20%) were not able to pick the correct safety rule.

4.5.4 Frequency of conducting safety talks

According to the International Occupational Health and Safety program, safety talks are supposed to be conducted weekly. This is to reduce occupational hazards, thereby reducing the potential for accidents to occur.

Figure 4.8 below displays the frequency of conducting safety talks by each department. Respondents from the Admin, Procurement, Marketing, Finance, Research, and New Product Development indicated that they had never conducted a safety talk. 70% of the respondents from Production indicated that safety talks are never conducted, whilst only 30% indicated that safety talks are conducted once a month. The Quality Control Department's respondents indicated that safety talks are done once a month. Engineering and Logistics are the only departments that conduct their safety talks daily to weekly.

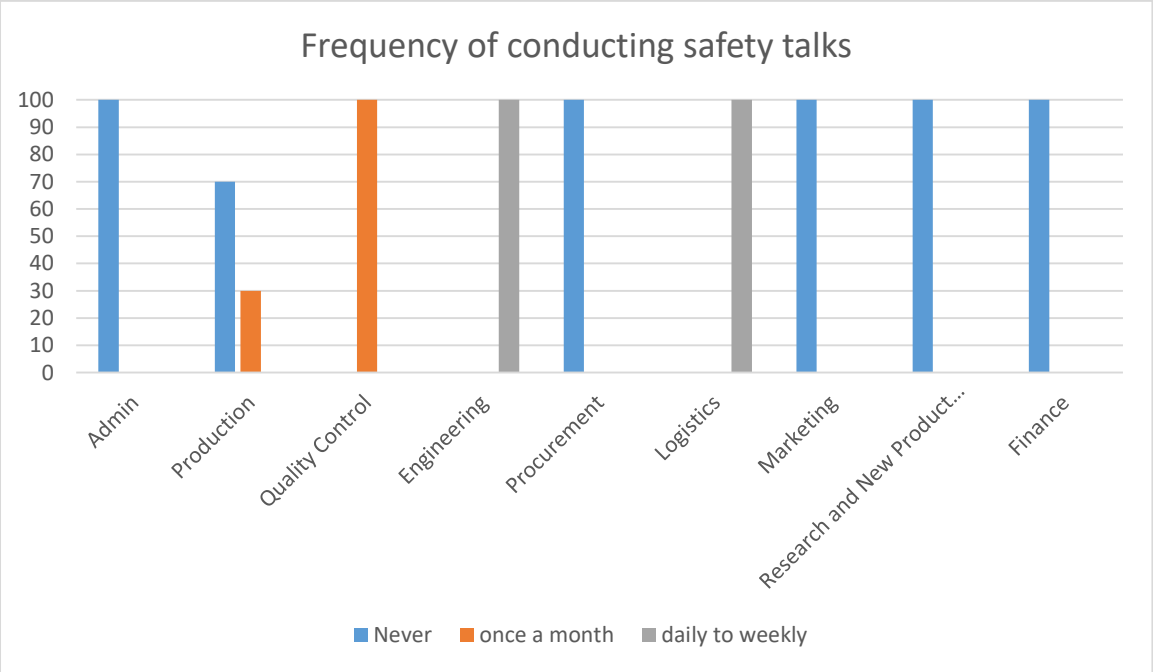

Figure 4. 8 Frequency of conducting safety talks by department

4.5.5 Respondents' views on causes of accidents

An open-ended question on the questionnaire was given to the respondents on their perceptions of the causes of accidents at Dairibord Holding Limited. Indicated causes were unsafe acts and unsafe conditions. The unsafe acts included not properly using personal protective equipment (PPE), task shortcuts (not following procedures), not reporting near misses, ignorance, lack of safety training, and not conducting safety talks. Unsafe conditions indicated were frequent mechanical faults, blind spots for traffic (forklifts), noise, falling pallets, work pressure, and slippery environment.

63 respondents (45%) indicated that during working hours, they are released to attend safety training. 77 (55%) indicated that they are not released to attend safety training.

4.5.6 Attitudes of respondents towards occupational health and safety (OHS)

Figure 4.9 below displays the results of respondents on their attitudes towards OHS. A 5-question Likert scale was used on OHS. Each respondent ticked an appropriate answer depending on their attitude.

Out of 140 respondents, none showed a negative attitude. 105 (75%) respondents indicated a positive attitude, while 35 (25%) indicated a fair attitude towards OHS.

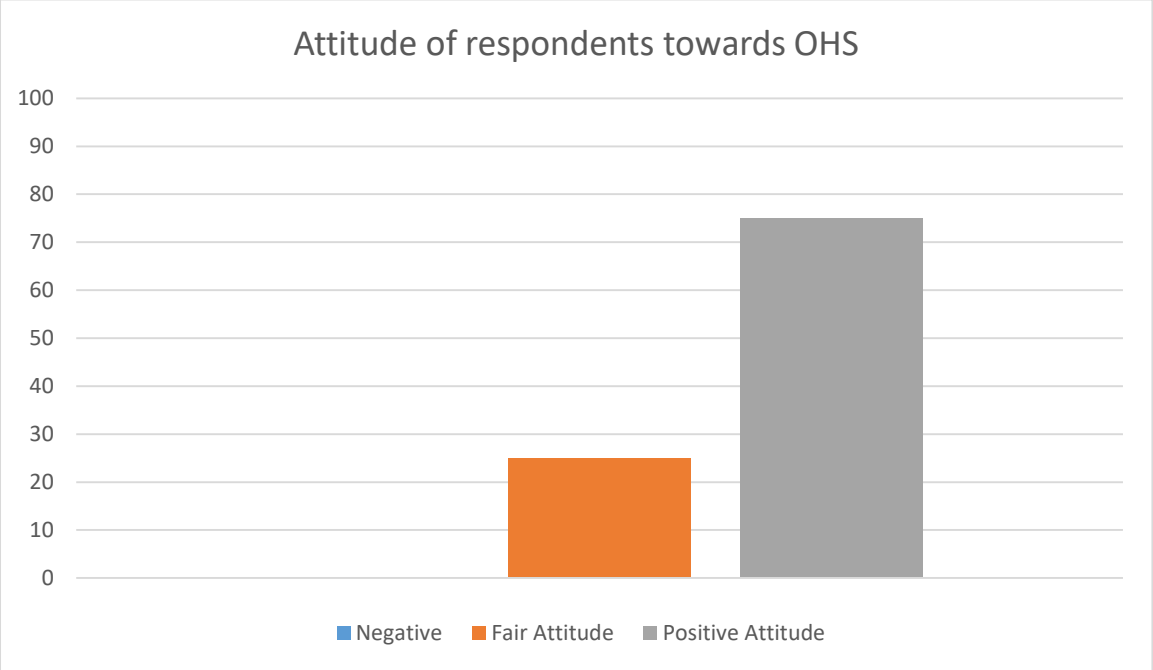

Figure 4. 9 Attitude of respondents towards OHS at DHL

4.5.7 Attitude of respondents on priotising their safety

In the age group of 18-25 years (20 respondents), 13 (65%) indicated not taking safety as their priority. 49 out of 55 (89%) of respondents aged above 46 indicated that to always consider their safety first before other interests.

The majority of the respondents with less experience (less than 5 years of working experience) indicated taking safety seriously. Most of the respondents from Finance, Marketing, and Procurement indicated not priotising their safety at work.

4.6 Safety hazards contributing to accidents or injuries

The findings on safety hazards at DHL are based on data collected through an observation checklist and interviews. The key safety hazards identified include physical, chemical, and ergonomic hazards.

4.6.1 Physical Hazards

Several physical hazards exist within the DHL workplace. This was particularly in the production section. Common physical hazards include machinery-related risks (unguarded moving parts on conveyor belts), slips, falls, and trips (wet floors from spills and improper drainage), and noise exposure.

4.6.2 Chemical Hazards

Chemical hazards were linked to cleaning agents and sanitisers. This resulted from improper handling of chemicals, with some workers misusing their protective equipment. Additionally, inadequate ventilation presents another chemical hazard, as certain chemical storage areas lack proper ventilation, thereby increasing respiratory risks.

4.6.3 Ergonomic Hazards

These are repetitive strain injuries and musculoskeletal disorders among workers. This includes poor working station design. The majority of workers (packing staff, office workers) experienced back pain as a result of prolonged standing, sitting, and improper lifting techniques. Manual handling hazards from the heavy lifting of raw materials and finished products without mechanical aids.

Chapter 5: Discussions

5.0 Introduction

This chapter discusses the findings presented in Chapter 4 and addresses the research objectives. The study aimed to assess factors contributing to accident occurrences at Dairibord Holdings Limited (DHL) by examining accident classifications, socio-demographic factors, and lifestyle characteristics of employees, as well as their knowledge and attitudes towards occupational health and safety (OHS) and workplace hazards. The discussion integrates empirical evidence from the study with theoretical frameworks, such as Heinrich's Domino Theory and the Fine Kinney Risk Assessment method, to contextualize the results.

5.1 To classify accidents by nature and time of occurrence at Dairibord Holdings Limited.

The study found that mechanical-related accidents (32%) were the most prevalent, followed by slips, trips, and falls (25%), chemical exposures (18%), and ergonomic strains (15%) (Figure 4.1). These findings align with global trends in the dairy industry, where machinery hazards and wet floors are common due to the labour-intensive nature of production (Tas & Olum 2020). The high incidents of mechanical accidents corroborate Ozbakir's (2023) study in a Turkish dairy factory, which identified unguarded machinery and outdated equipment as critical risks.

Unsafe acts, such as negligence or deliberate rule-breaking, were the primary cause of accidents (Figure 4.2). This supports Heinrich's Domino Theory, which postulates that human error is a foundational factor in accident causation (Heinrich et al., 1980). This theory is further validated by the underreporting of near misses, a finding echoed by Eskandari et al. (2017), who linked poor safety culture to procedural violations.

Contract workers were more prone to accidents than permanent employees (Figure 4.3), consistent with Wakjira's (2024) observation that temporary workers often receive less training and face higher exposure to hazards. This disparity highlights systematic gaps in safety training for non-permanent staff, a concern raised by Kapp et al. (2020).

Most accidents occurred after lunch (Figure 4.4), likely due to postprandial fatigue, which reduces alertness (Caruso et al., 2006). This trend aligns with Hamed Yeganeh et al.'s (2016) findings in construction, where fatigue peaks during mid-shift hours.

5.2 To describe the socio-demographic and lifestyle characteristics of employees at Dairibord Holdings Limited.

The workforce was predominantly male (64,5%) and aged above 46 (36,2%) (Table 4.1). Older workers' higher accident susceptibility aligns with Mullet et al. (2021), who attribute something to severe injuries among older employees to age-related physical decline. Conversely, younger workers aged between 18 and 25 years exhibited riskier behaviours, such as neglecting personal protective equipment (PPE), consistent with Smith and Johnson's (2021) findings on inexperienced-driven risk-taking.

Contract workers (60,5%) reported more accidents than permanent workers (39.5%), reinforcing Oliveira and Silva's (2023) argument that job insecurity undermines safety compliance. In addition, 54,6% of employees consumed alcohol, with 31,3% drinking daily (Table 4.2). Alcohol impairment is a known risk factor for workplace accidents, as noted by Ndlovu and Khumalo (2024), who linked substance use to reduced cognitive function and slower reaction times.

5.3 To determine the level of knowledge and attitude of employees towards Occupational Health and Safety.

Only 36% of employees demonstrated 'good' OHS knowledge (Figure 4.5), with the production department scoring the lowest (Figure 4.6). This aligns with Ozbakir's (2023) findings that frontline workers often lack hazard awareness, particularly concerning electrical safety and chemical handling. The poor knowledge scores correlate with infrequent safety talks (Figure 4.8), a significant gap considering that weekly safety meetings are recommended by international OHS standards (Macins & Glasauer, 2024).

Despite knowledge gaps, 75% of employees expressed positive attitudes towards OHS (Figure 4.9). However, younger workers aged between 18 and 25 years prioritised productivity over

safety (65%), resonating with Kim et al.'s (2002) finding that job dissatisfaction increases risk-taking behaviours.

5.4 To determine safety hazards at Dairibord Holdings Limited.

Physical hazards, such as unguarded machinery and wet floors, were widespread (Section 4.5.1), confirming Mahdjun's (2022) identification of poor equipment design as a recurring issue. Chemical hazards arose from improper PPE use and inadequate ventilation (Section 4.5.2), reflecting Johnson et al.'s (2022) warnings about respiratory risks from volatile organic compounds.

Ergonomic hazards, including repetitive strain injuries (Section 4.5.3), were common among packing staff, consistent with Ariyanto's (2021) research on musculoskeletal disorders in manual handling roles.

5.5 Theoretical contributions

The study authenticates Heinrich's Domino Theory in Zimbabwe's industrial context, emphasising human error and systematic failures in accident causation. It also extends the Fin-Kinney Method's applicability to dairy production, quantifying risks like mechanical hazards (risk score: 720) and chemical exposures (risk score: 540) (Gul et al., 2018).

5.6 Alignment with Sustainable Development Goals and National Policies

The study supports SDG 8 (Decent Work) by advocating for safer workplaces and aligns with Zimbabwe's National Development Strategy 1 (2021 -2025) through its emphasis on productivity-linked safety reforms.

5.7 Chapter Summary

The findings underline a many-sided accident causation at DHL, driven by mechanical hazards, knowledge gaps, and socio-demographic factors. Addressing these requires holistic intervention. This is from training to ergonomic redesign in order to achieve sustainable safety implications.

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

The study aimed to assess the factors contributing to accident occurrences at Dairibord Holdings Limited (DHL). It focused on the nature and timing of accidents, socio-demographic and lifestyle characteristics of employees, their knowledge and attitudes towards occupational health and safety (OHS), and workplace hazards.

The findings showed that mechanical-related accidents (32%) were the most prevalent, followed by slips, trips, and falls (25%), chemical exposures (18%), and ergonomic strains (15%). Unsafe acts, such as negligence or deliberate rule-breaking, were identified as the primary cause of accidents, aligning with Heinrich's Domino Theory.

Contract workers were more prone to accidents than permanent staff, showing gaps in safety training for non-permanent staff. Most accidents occurred after lunch, likely due to postprandial fatigue, which reduces alertness. The workforce was mostly male (64,5%) and aged above 46 (36,2%), with older workers showing higher susceptibility to severe injuries. Younger workers exhibit riskier behaviour. Alcohol consumption among employees (54,6%) further increases safety risks.

Even with 75% of employees expressing a positive attitude towards OHS, knowledge gaps were notable, particularly in the production department, where only 36% illustrated 'good' OHS knowledge. Infrequent safety talks and inadequate training programs were identified as key contributors to these gaps.

Physical, chemical, and ergonomic hazards were widespread, with unguarded machinery, improper PPE use, and repetitive strain injuries being major concerns.

The study substantiated Heinrich's Domino Theory and the Fine-Kinney Risk Assessment Method in Zimbabwe's industrial context, emphasising the need for systematic safety interventions. It also aligned with SDG 8 (Decent Work) and Zimbabwe's National Development Strategy 1 (2021-2025), underscoring the importance of workplace safety for economic growth.

6.2 Recommendations

- Implement mandatory, regular safety training for all employees, with a focus on high-risk departments
- Incorporate practiced demonstrations and hands-on sessions to improve hazard awareness and compliance with safety protocols
- Conduct weekly safety talks as per international OHS standards to reinforce safety knowledge and practices
- Introduce engineering controls such as machine guarding and anti-slip flooring to reduce physical hazards
- Ensure proper ventilation in chemical storage areas and provide adequate PPE to reduce respiratory risks

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APENDICES

Appendix 1

Stratified sampling method

Divide the total number of employees (500) into 9 departments

Production-200, Admin-46, Engineering-55, QC-10, Procurement-14, Logistics-50, Marketing-70, Research and New Development Management-5, Finance-50

Fishbowl technique per department

30% of the population per department is selected for participation

- Production- 30/100 x 200

  = 60 Workers (60 slips marked ‘yes’ and 140 slips marked ‘no’)

- Admin- 30/100 x 46

  = 13,8

Therefore, 14 workers were selected from the Admin

- Engineering- 30/100 x 55

  = 16,5

Therefore, 16 workers were selected from the Engineering

- Quality Control- 30/100 x 10

  = 3

3 slips marked ‘yes’ and 7 slips marked ‘no’ for Quality control

- Procurement- 30/100 x 14

  = 4,2

Therefore, 4 workers were chosen for participation from the Procurement

- Logistics- 3O/100 x 50

  = 15

15 slips were marked ‘yes’ and 35 slips were marked ‘no’ for Logistics

- Marketing- 30/100 x 70

  = 21

21 slips were marked ‘yes’ and 49 slips were marked ‘no’ for Marketing

- RnD- 30/100 x 5

  = 1,5

Therefore, 2 workers were selected for participation

- Finance- 30/100 x 50

  = 15

15 slips were marked ‘yes’ for participation, and 35 slips were marked ‘no’

Appendix 2

Questionnaire for Dairibord Holdings Limited employees

My name is MAFUSHE SHEUNESU H and I am a student at the Bindura University of Science Education. I am carrying out a research on the assessment of factors contributing to accidents occurrence at Dairibord Holdings Limited (DHL) as part of a requirement for the degree of Safety Health and Environmental Management. Results of the research will be strictly for academic purposes and will be treated with confidentiality. You will not be required to tell me your name and results will not be published. Truthfulness is required when answering questions. If you agree to the requirements of the study and willing to contribute, please sign below to show that consent was sought from you.

Signature……. Date…….

SECTION A: Demographic data

Please respond by filling or ticking on spaces provided

1. Sex: Female ☐ Male ☐
2. Age (years)……
3. Marital status: Single☐ Married ☐ Divorced ☐
4. Department……
5. Grade: NEC☐ Middle management ☐ Senior management ☐
6. Years of service at work……
7. Are you a permanent worker? YES ☐ NO ☐
8. What is the highest level of education you attained? (tick once)

Never went to school	Primary level	'O'Level	'A'Level	Tertiary(specify)

9. Do you take alcohol? YES ☐ NO ☐

   If yes, on which days of the week?.....

Section B: To determine level of knowledge of employees towards occupational health and safety at DHL

1. Do you know the safety slogan at your workplace? Yes ☐ NO ☐
   If yes, state the safety slogan……

2. When are you supposed to refuse work? (Tick were appropriate)

   When working under unsafe conditions ☐ when salary has delayed ☐

   When it is time to eat ☐ when the task is too much ☐

3. Does elimination and reducing risk prevent injuries? YES ☐ NO ☐
4. Which of the following is a safety rule? (tick were appropriate)

   always carry out continuous risk assessment ☐ always come to work on time ☐

   always meet the target ☐
5. Several unreported near misses become a potential accident True ☐ False ☐

6. Refresher trainings reminds employees on accident prevention measures

   True ☐ False ☐

7. What procedure do you do in time of emergency

Section C: To determine the attitude of employees towards occupational health and safety

Tick were appropriate

	Strongly agree	Agree	Fair	Disagree	Strongly disagree
Refusal to use PPE poses serious danger to one's health and safety.					
Several unreported near misses lead to an accident occurring, therefore near misses should be reported					
Observed unsafe acts done by colleagues at work should be reported to the supervisor					
Good housekeeping is one of the tools that prevent accident					
A stressed worker should get counselling					

Section D: Other

10. How frequent are your departmental safety talks conducted?

    Daily –weekly ☐ once a month ☐ never ☐

11. What do you think are causing accidents at your workplace, list any four causes?

    ……

    ……

    ……

    ……...

12. Is there adequate resources provided for the safety of workers? YES ☐ NO ☐

    If not state what is lacking,

    ……

    ……

13. Are you released to attend safety training programmes during working shifts?

YES☐ NO ☐

Appendix 3

SAFETY OBSERVATION CHECKLIST FOR DHL.

Site/location	Date	Observer

INSTRUCTIONS

This checklist is designed to conduct safety observations at the workplace. Carefully observe each item and mark the corresponding checkbox to indicate compliance or note any safety observations and potential hazards.

Use the "Notes/Observations" section to provide additional details, corrective actions, and any required follow-up.

If not applicable do not tick on any box

1. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Required PPE for the job task ☐ Yes ☐ No

Employees use PPE properly as needed ☐ Yes ☐ No

PPE is in good conditions and fits well ☐ Yes ☐ No

Additional PPE for specific tasks e.g acid proof aprons ☐ Yes ☐ No

Observations/ Notes / Corrective actions (if any)

2. HOUSEKEEPING AND CLUTTER

Work areas and walk ways are cear of clutter and obstructions ☐ Yes ☐ No

Clean and dry floors, and housekeeping is well maintained ☐ Yes ☐ No

Proper storage of tools and equipment not in use ☐ Yes ☐ No

Clean as you go and proper waste disposal ☐ Yes ☐ No

Observations/ Notes / Corrective action (if any)

3. MACHINE AND EQUIPMENT SAFETY

Machine guards and safety interlocks available ☐ Yes ☐ No

Easily accessible and clearly labeled emergency buttons ☐ Yes ☐ No

Following lockout/Tagout procedures during maintenance ☐ Yes ☐ No

Following safe working procedures and use of correct tools ☐ Yes ☐ No

Observations/ Notes/ Corrective actions (if any)

4. HAZARDOUS MATERIAL HANDLING

Proper procedures for handling hazardous materials. ☐ Yes ☐ No

Correct labelling of hazardous materials and proper storage ☐ Yes ☐ No

Readily available Material Safety Data Sheet (MSDS). ☐ Yes ☐ No

Spill response kits and containment measures are in place. ☐ Yes ☐ No

Observations/ Notes/ Corrective actions (if any)

5. ELECTRICAL SAFETY

Properly labelled, accessible, and not blocked electrical panels ☐ Yes ☐ No

Good conditioned electrical cords and pugs, without fraying ☐ Yes ☐ No

Extension cords appropriately used for temporary purposes only. ☐ Yes ☐ No

Observations/ Notes/ Corrective actions (if any)

6. WORK PRACTICES

Safe work practices and standard operating procedures being followed ☐ Yes ☐ No

Preventing strain or injury by proper lifting techniques ☐ Yes ☐ No

Following procedures for confined space entry. ☐ Yes ☐ No

Lockout/Tagout procedures are adhered to during equipment servicing. ☐ Yes ☐ No

Observations/ Notes/ Correction Actions (if any)

Observations/ Notes

Approval Statement

I hereby certify that I have conducted the above safety observation and that the information provided is accurate to the best of my knowledge.

Observer's Name:

Signature:

Approved by:

Signature:

Date: