

UNIVERSITY OF KWAZULU-NATAL

**Understanding of key drivers of Improving Occupational Health and Safety
performance: A case study of a Fast-Moving Consumer Goods
Manufacturing Company.**

BY

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degree of Master of Business Administration**

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DECLARATION

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ABSTRACT

The benefits of implementing good occupational health and safety management systems or programs are well documented. Simple improvements in occupational health and safety can increase competitiveness, profitability and motivation of employees. Reckitt Benckiser Group plc is the global leading consumer health and hygiene company driven by a purpose of providing innovative solutions for healthier lives and happier homes. The company recognized occupational health and safety of its employees as a priority and embarked on a number of key initiatives or programs to drive improvements of its occupational health and safety performance. The study assessed the impact or effectiveness of the key occupational health and safety initiatives or programs which have been implemented at the South Africa manufacturing site over the period Jan 2017 to May 2019. The effectiveness or impact of the various initiatives or programs was measured using a survey of the shop floor employees who have seen the transformation of their work environment brought about by the initiatives as well as participated in the initiatives or programs. A 100 employees participated in the study out of a total eligible population of 250 employees. Out of the 14 key initiatives or programs reviewed the most effective health and safety initiatives or programs which were confirmed by both cumulative analysis and average ratings are; Health and Safety Golden Rules, Permit to Work, Health and Safety Toolbox talks and Machinery Guarding Improvements while the least effective initiatives are; SHE Competitions, near Miss Reporting, Engagement with Team Leaders and SHE Recognition Activities. The study recommended that the company needs to pursue the implementation of the most effective initiatives or programs in their current form or reinforce them as they can be attributed to the turn-around in the recent improvement in occupational health and safety performance experienced by the company. These initiatives or programs can be adopted in similar manufacturing environments in turning around occupational health and safety performance. The company needs to review the least effective programs with a view of understanding the reason why they have not been very impactful and how they can be turned around or fine-tuned to be more effective. The continuation of these programs in their current form will most likely lead to poor participation from employees and lack of interest as they are perceived to be less effective by employees.

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Chapter 1: Overview of the Study

1.1 Introduction

The study seeks to understand of the key drivers of Improving Occupational Health and Safety performance in the Fast-Moving Consumer Goods manufacturing environment by looking at effectiveness of the key health and safety improvement activities or initiatives implemented at Reckitt Benckiser South Africa manufacturing facility during its health and safety transformation journey.

By establishing the most effective and least effective health and safety activities or initiatives, the company will be able to make some adjustments to its overall occupational health and safety program by reinforcing the most effective programs while also making adjustments to the least effective programs or initiatives in order to make them more effective. The study also aims to produce a model for improving or turning around occupational health and safety performance in similar Fast-Moving Consumer Goods manufacturing environments.

“Reckitt Benckiser Group plc is the global leading consumer health and hygiene company driven by a purpose of providing innovative solutions for healthier lives and happier homes. RB has operations in over 60 countries. From the foundations of wellness and infant nutrition, to the fundamentals of a hygienic home, its global brands help people live healthier, happier lives. RB has world leading Power brands which include household names such as Enfamil, Nutramigen, Nurofen, Strepsils, Gaviscon, Mucinex, Durex, Scholl, Clearasil, Lysol, Dettol, Veet, Harpic, Cillit Bang, Mortein, Finish, Vanish, French's, Calgon, Woolite and Air Wick. RB's unique culture is at the heart of its success. Its drive to achieve, passion to outperform and commitment to quality and scientific excellence is manifested in the work of over 40,000 employees worldwide. Reckitt Benckiser has five core values, namely; Responsibility, Ownership, Entrepreneurship, Achievement and Partnership. In 2017 Reckitt Benckiser had a Turnover of £11,5 Billion and operating profit of £2,7 Billion” (Share Magazine, 2017).

In South Africa Reckitt Benckiser has commercial and Supply Chain functions with a head office in Johannesburg. Commercial function consists of Sales, Marketing, Information Services, Finance and Human Resources. The Supply Chain operations consists of manufacturing and warehouse and distribution operations. In 2017

Reckitt Benckiser had a big drive to step up its occupational health and safety performance and introduced a lot of key initiatives or programs to improve its occupational health and safety performance. The study reviewed the effectiveness of these initiatives or programs. The study is focused on the South Africa manufacturing operations.

This chapter will look at the background of the study, the focus of the study, the problem statement, research questions, significance of the study, brief methodology and organization of the study

1.2 Background of the Study

Occupational Health and Safety is a crucial aspect in the overall performance of a company especially in the manufacturing sector where there are several high-risk activities. There has been a big drive to turnaround health and safety performance at Reckitt Benckiser sites globally over the past two years in line with the changes to the company's core values which made responsibility to be the number one value of the company. In line with drive several activities or initiatives have been implemented at Reckitt Benckiser South Africa manufacturing to turn around health and safety performance which produced good results. It is important to understand the effectiveness of each of the initiatives or programs which have been implemented in order to reinforce the most effective initiatives or programs while the least effective ones can be reviewed in order to increase their effectiveness. There has been a lot of resources dedicated by Reckitt Benckiser towards improving health and safety performance of the company which makes it very important to establish those activities which have produced a return on the investment. The establishment of the most effective activities also contributed to a health and safety turn-around model being developed which can also be applied to similar Fast-Moving Consumer Goods manufacturing companies for the purposes of turning around health and safety performance. The study focussed on shop floor employee's perspective of the effectiveness of the initiatives or programs based on the understanding that employees are the ones who interface the risks and therefore are more conscious of any impact brought about by the initiatives.

1.3 Focus of the Study

The study focused on the key drivers of improving occupational health and safety performance in the Fast-Moving Consumer Goods manufacturing sector from an

employee's perspective. The study assessed the impact of key occupational health and safety initiatives or programs which have been implemented at Reckitt Benckiser manufacturing site in South Africa over the period Jan 2017 to June 2018 after the company embarked on an occupational health and transformation program.

1.4 Problem Statement

Occupational health and safety is a very important aspect for businesses from both a social and business perspective. A lot of companies have recently been focusing on improving health and safety performance in their operations from a moral and business sustainability point of view. There are several activities required in order to drive improvement in occupational safety performance of manufacturing industries. Reckitt Benckiser recognised occupational health and safety of its employees as it's number one priority since the beginning of 2017 and has embarked on several key activities to drive improvement of its occupational health and safety performance. The initiatives implemented by Reckitt Benckiser were derived from the Du Pont Safety Model which has a total of 22 key safety initiatives or programs. In total 14 key occupational health and safety initiatives or programs aligned to the Du Pont Safety Model have been implemented at Reckitt Benckiser South Africa. Although the implementation of these key activities has resulted in improved health and safety performance over the past 30 months as noted on the improvement of Key Performance Indicators used by the company to measure occupational health and safety performance, this has consumed a lot of resources and also taken a long period of time to attain the desired results. Maintaining all the key initiatives or programs in place requires a lot of further additional resources which is very difficult for the business in light of margin and growth pressures. It is therefore important to understand the impact of the different key initiatives or programs implemented at Reckitt Benckiser in order to enable continued focus of the most effective drivers of improving occupational health and safety performance. understanding of least effective initiatives or programs is also equally important as this can enable these initiatives or programs to be fine-tuned, discarded or enhanced rather than continuing to consume additional resources on maintaining or sustaining these initiatives or programs with little or no benefit.

The establishment of the most effective activities also contributes to a development of a health and safety turn-around model being developed which can also be applied to similar Fast-Moving Consumer Goods manufacturing companies for the purposes of turning around health and safety performance. This can enable the companies to focus on the identified key initiatives or programs rather than deploying most or all the Du Pont safety model aligned initiatives or programs as done by Reckitt Benckiser. This will minimize the amount of resources required in turning around occupational health and safety performance as well as reduce the time spent in turning around occupational health and safety performance which ultimately reduces occupational health and safety costs and incidents at the company. Reducing the amount of resources required to turn-around occupational health and safety can particularly assist other smaller FMCG companies who do not have the same amount of resources such as international FMCG companies like Reckitt Benckiser. There is currently no leaner occupational health and safety model with fewer initiatives or programs which can and easier to implement which has been identified in current literature searches.

1.5 Research Objectives

The following are the objectives of the study;

- To determine the most effective key occupational health and safety programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing facility in driving improved health and safety performance according to employee perspectives.
- To determine the least effective key occupational health and safety programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing facility in driving improved health and safety performance according to employee perspectives.
- To determine effective key occupational health and safety programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing facility in driving improved health and safety performance according to employee perspectives.

1.6 Research Questions

- What are the most effective key occupational health and safety programs, or initiatives introduced at Reckitt Benckiser manufacturing facility which have resulted in improved occupational health and safety performance.
- What are the most effective key occupational health and safety programs or initiatives introduced at Reckitt Benckiser manufacturing facility which have resulted in improved occupational health and safety performance.
- What are the effective occupational health and safety programs or initiatives implemented at Reckitt Benckiser South Africa manufacturing facility which can be applied for improving occupational health and safety performance in the Fast-Moving Consumer Goods manufacturing sector.

1.7 Significance of the study

There is no current study of understanding drivers of occupational health and safety performance in the Fast-Moving Consumer Goods manufacturing sector in South Africa which has been established from journal and academic research papers searches. Most studies established in South Africa have been focused on Mining and Construction industries which are traditionally the highest risk sectors in terms of occupational health and safety. This study therefore will be able to provide new insights on occupational health and safety in the Fast-Moving Consumer Goods manufacturing sector from a South African perspective. Since Reckitt Benckiser embarked on an occupational health and safety turn-around journey in 2017 to ensure its manufacturing facilities are some of best and safest work environments, a large amount of financial resources have been spent on this. In the Reckitt Benckiser South Africa manufacturing plant in particular, millions of Rands have been spent as part of this health and safety transformation. The 14 key occupational health and safety programs or initiatives in particular have all taken a considerable amount of resources to implement in terms of health and safety specialists as well as time spent by production personnel participating towards these activities. Although results have been derived from these key programs and initiatives it is important for the organization to understand which initiatives in particular have contributed towards attainment of this results and also which initiatives have not contributed. Understanding of the least effective

programs or initiatives is very important as these will be adjusted in order to make them effective therefore ensuring that time is not wasted on driving programs or initiatives which are not effective. Reckitt Benckiser as a an organisation will therefore greatly benefit from this research in terms of understanding the return on investment from all the key initiatives or programs implemented as part of the occupational health and safety improvement program enabling the organisation to make decisions on which of the programs it must continue to invest time and financial resources in their current, which ones it must fine-tune in order to produce desired return as well which ones it needs to complete discard as they are providing little or no benefit at all to the organisation.

Establishing effective occupational health and safety programs or initiatives will help in providing a model for similar Fast-Moving Consumer Goods manufacturing companies wanting to drive improvement or turn-around in occupational and safety performance. The organisation will save financial and time resources by only focusing on those initiatives which have been found to be effective with the FMCG context rather than deploying resources for example on all 22 safety initiatives or programs in the Du Pont safety model which is one most referenced globally referenced safety models.

Occupational health and safety practitioners will also greatly benefit from this research as they will be able to focus on driving fewer effective initiatives or programs and therefore freeing up time to other key activities overall leading good performance and improved motivation.

1.8 Brief methodology

The survey method that was used in this study and a questionnaire was used to gather data. A questionnaire was used as it is an easier method to gather data in order to achieve the research objectives. Printed questionnaires were issued to participants and collected after the participants have completed. The study focused on direct employees of Reckitt Benckiser manufacturing operations based on the South Africa manufacturing facility who have been employed for at least 2 years and have witnessed the implementation of key health and safety initiatives or programs implemented over the past 2 years. The total number of direct employees is approximately 300 employees and the number of employees who have at the facility

for more than 2 years is approximately 200 employees, hence the target population was 200 employees. The census method was applied therefore the questionnaire was issued to the entire target population of 200 employees and they were all encouraged to complete by explaining the objectives of the study and how it can assist the company in further improving occupational health and safety at the site. A 100 employees successfully completed the questionnaires and returned fully completed questionnaires.

1.9 Organization of the study

The study consists of 5 chapters. The first chapter introduces the chapter, it gives an overview of the topic, the background to the study, the focus of the study and the problem statement. It also looks at the research objectives and research questions which will need to be answered in order to address the research objectives. The chapter also provides a significance of the study as well as an overview of the methodology which will be applied.

Chapter 2 is a review of the literature on the drivers of occupational health and safety performance. It looks at the importance of occupational health and safety for corporate organizations, the background to Reckitt Benckiser as an organization and why decided to focus on occupational health and safety improvement. It then zooms into the occupational health and safety programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing site from a literature perspective in terms expected implementation ways and what was actually done at the site.

Chapter 3 explains the research methodology implemented in this study. Included in this chapter are issues like research methods, population, methods and collection of data, as well as interviews.

Chapter 4 covers the discussions and findings of the study. This chapter also includes the interpretations of the findings.

Chapter 5 is the final chapter providing the conclusion of the research. The chapter also includes the recommendations, as well as suggestions for further studies or research.

1.10 Conclusion

Chapter 1 has provided the background of the study. The motivation of the study and focus of the study as well as the objectives of the study were also discussed in this chapter. The chapter also gives a brief research methodology, as well as the chapter outline. In Chapter 2, the importance of occupational health and safety for corporate organizations, the background to Reckitt Benckiser as an organization and why decided to focus on occupational health and safety improvement as well as he in-depth review of the occupational health and safety programs or initiatives implemented at Reckitt Benckiser South Africa manufacturing site.

Chapter 2 Literature Review

2.1 Introduction

The aim of the literature review was to outline the importance of occupational and health in the context of a Fast-Moving Consumer Goods manufacturing company like Reckitt Benckiser. It also sets to outline the background to occupational health and safety management at Reckitt Benckiser South Africa manufacturing facility and the occupational health and safety transition journey the site embarked on since the beginning of 2017.

The chapter also reviews in detail each of the key occupational health and safety programs or initiatives introduced at Reckitt Benckiser South Africa's manufacturing facility making reference to the theoretical benefits of each of these. The review looks at the theoretical benefits of each of the initiative or program from journal articles as well key occupational health and safety research papers or intellectual bodies which has been conducted before. In this chapter a description of each key occupational health and safety implemented is outlined as well as the theoretical reference to why it was introduced i.e. what the theory outlines as the benefits of implementing each of the key occupational health and safety initiatives. An outline of how the program or initiative should be implemented is also provided from a theoretical point of view as well as how it was actually introduced at Reckitt Benckiser South Africa

2.2 The Fast-Moving Consumer Goods Industry

"The fast-moving consumer goods (Fast-Moving Consumer Goods) sector, also called the consumer-packaged goods (CPG) sector, is one of the largest industries worldwide. Fast-Moving Consumer Goods are generally cheap products that have a short shelf life and are purchased by consumers on a regular basis. Profit margins on these products are usually low for retailers, who try to offset this by selling large volumes". (KPMG sector report, 2014). "With cut-throat competition and little help from the macroeconomic environment, Fast-Moving Consumer Goods companies are prioritizing cost control and operational efficiencies" (PWC, 2015)

2.2.1 Occupational Health and Safety in Fast-Moving Consumer Goods Industry

“Occupational safety and health (OSH) is generally defined as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers, taking into account the possible impact on the surrounding communities and the general environment” (Ali, 2008). The ILO; “estimates that 2.78 million workers continue to die each year from work-related injuries and illnesses, the overwhelming majority (2.4 million) from work-related diseases”. “The global economic impact is estimated to amount to 3.94 percent of annual global GDP. Such numbers, along with the growing body of evidence of the benefits of sound Occupational Safety and Health practices, have resulted in a steadily increasing demand for qualitative improvement in the safety and health for all at work” (ILO, 2018).

There are several benefits of a good occupational health and safety management systems. “Occupational safety and health (OSH) is good for business as well as being a legal and social obligation. Simple improvements in occupational health and safety can increase competitiveness, profitability and the motivation of employees” (European Agency for Safety and Health at Work, 2007). “There is increasing and compelling overseas evidence that providing a healthy and safe working environment has the potential to increase labor productivity and in turn increase company profits” (Lamm, Massey and Perry 2007).

Some of the benefits of effective management of occupational health and safety include;

(a) Helps demonstrate that a business is socially responsible

“There is a simple moral imperative that everyone has the right to safe and healthy working conditions as referred to in the Universal Declaration of Human Rights” (British Safety Council, 2014). Recently there has been an increase in consumer consciousness demanding businesses to be socially responsible. “Large organizations are expected to demonstrate ever-higher standards of corporate governance and greater transparency in reporting practices. The combination of operating in a market driven economy alongside a society that is more aware of risks means that many enterprises now realize the significant gains that can be made from integrating OSH performance into

their wider business model” (European Agency for Safety and Health at Work, 2007).

(b) Legal Compliance

South Africa has a robust legal occupational health and safety framework which defines minimum standards of occupational health and safety that needs to implement by businesses operating in South Africa. The main statute which covers occupational health and safety requirements in South Africa is the Occupational Health and Safety Act which was promulgated in 1985 and contains a comprehensive set of regulations covering the different aspects of occupational health and safety. There are significant penalties under this statute for failing to comply with the requirements set and provisions empowering the health and safety inspectors to issue orders to stop non-compliant companies for certain breaches under the act. These stoppages in production can have severe consequences especially for a Fast-Moving Consumer Goods manufacturing plant as it operates in an environment where there is stiff competition for market share by the different players. This can also lead to severe reputational risks which can threaten the viability of the business. It is therefore imperative that Fast-Moving Consumer Goods companies adhere to the legal requirements for occupational health and safety as it ensures business sustainability.

(c) Productivity and Efficiency

“The cost of accidents at work and occupational diseases in the EU-15 ranges from 2.6% to 3.8 % of gross national product” (European Agency for Safety and Health at Work, 2007). No specific data on cost of accidents in South Africa can be established. ILO, 2013 highlights that “work-related accidents or diseases are very costly and can have many serious direct and indirect effects and outcomes on both the lives of workers, their families and also on the financial status of the enterprises”.

“The costs to employers of occupational accidents or illnesses can be enormous and can include, payment for work not performed, medical and compensation payments, repair or replacement of damaged machinery and equipment, reduction or a temporary halt in production, increased training expenses and administration, insurance & pension costs, possible reduction in the quality of work and negative

effect on morale in other workers” (Aviva, 2011). “In addition to these costs, there can also be costs related to the following; the injured/ill worker has to be replaced; a new worker has to be trained and given time to adjust, it takes time before the new worker is producing at the rate of the original worker, time must be devoted to obligatory investigations, to the writing of reports and filling out of forms and accidents often arouse the concern of fellow workers and influence labor relations in a negative way” (Aviva, 2011). All these impact on the productivity and efficiency of companies threatening their viability if occupational health and safety is not properly managed. “The fifth Aviva Health of the Workplace Report demonstrates that nearly two-thirds of workers said that they would work harder for an employer that invested in their health”. (Aviva, 2011). A research by HESAPRO in 2013 clearly established that that, “health and safety measures have a positive impact not only on safety and health performance but also on company productivity”.

(d) Reduced Workman Compensation Premiums

“In line with the Compensation for Occupational Injuries and Diseases Act all employers in South Africa have to register by the Compensation Fund and pay assessment fees annually which are in effect insurance premiums” (Department of Labor, 2008). The Compensation Fund is meant for compensation of workers who are affected by occupational injuries and diseases. The Department of Labor states that; “assessment fees may increase or decrease according to an employer’s accident costs and employers with low costs may qualify for assessment fee rebates”. (Department of Labor, 2008). Reduction in Compensation Fund costs is therefore a direct benefit which can be attained by any employer who improves health and safety performance in their work environment.

(e) Return on Investment

“Although with limited evidence due to most organization not properly collecting financial data relating to health and safety, studies have shown that a business case to support well-managed OSH can be made, for example in ISSA’s research that found a return of 1:2.2 for investment in OSH” (British Safety Council, 2014). “In two case studies are highlighted, firstly, an OSH intervention to prevent MSDs led to a net saving of £47,000 per annum. Using the payback method, the organizations calculated that payback was achieved in a little bit over a month. The second case

study found that a rehabilitation intervention costing £16,000 per year led to savings of £192,000; that is, for every £1 invested the organization saved £12” (British Safety Council, 2014).

2.3 Reckitt Benckiser South Africa Manufacturing Operations

Reckitt Benckiser South Africa manufacturing operations commenced in 1984 in Jet Park Elandsfontein. The facility has since undergone several expansions and upgrades and currently consists of 21 manufacturing lines manufacturing the following category of products; Polishes which manufacturers floor and shoe polishes, Liquids which manufactures floor, tile, bathroom and kitchen cleaners, Aerosols which manufacturers insecticides and air fresheners, Powders which manufacturers fabric and dishwashing detergents and Pharmaceuticals which manufacturers Dettol Antiseptic Liquid. The manufacturing facility employees approximately 530 employees across the different stages of manufacturing such as Mixing, Packaging, Quality Control and Plant Maintenance.

2.3.1 Health and Safety at Reckitt Benckiser

There has been always been some focus on occupational health and safety at Reckitt Benckiser South Africa manufacturing operations since the inception of the site in 1984. (Reckitt Benckiser, 2016) Historically occupational health and safety performance has been focused on compliance to local legal requirements as well the Reckitt Benckiser global health and safety standards. A fully-fledged health and safety department was also introduced in 2013 consisting of Safety Health and Environmental Manager as well as a Safety Health and Environmental Coordinator, to drive occupational health and safety activities. The site was certified to the occupational health and safety standard; OHSAS 18001:2007 in January 2015 (Reckitt Benckiser, 2016)

2.3.2 Safety Performance Indicators used at Reckitt Benckiser

The two main indicators used by Reckitt Benckiser to measure occupational health and safety performance are; Total Recordable Frequency Rate (TRFR) and Lost Work day Incident Rate (LWDIR).

Lost Workday incident Rate measures the rate of Lost-working day incidents per every 2000 000 hours worked. Reckitt Benckiser defines Lost Work Day (LWD) Accidents are defined as; an accident which resulted in an employee being unable to complete their duties on their scheduled next working day/shift and Includes all

severe accidents. If employee is working a partial shift next, but leaves early due to same injury, it should be reported as a LWD. Include all permanent, temporary/contract workers and contractors who visit the site for a short time to complete a specific work task, “permanent” on-site contractors who manage their own area and staff (e.g. restaurant staff) and visitors to the site. Accidents and fatalities which occur during business travel by Reckitt Benckiser full time employees should also be included. A lost work day accident is a recordable accident. (Reckitt Benckiser, 2018)

Total Recordable Frequency Rate is a rate which measures the rate of recordable incidents for every 200 000 hours worked. Recordable incidents include, fatalities, Lost workday incident, Restricted Work-day incidents and Off-site Treatment Incidents or treatment beyond first-aid incidents. Reckitt Benckiser, “defines Restricted Work Case (RWC) incidents as incidents where the injured party cannot fulfil her/his normal work day activity following an incident but is able to; undertake a temporary job; work at his normal job but not full-time; work at a permanently assigned job but is unable to perform all the duties normally assigned to it” (Reckitt Benckiser, 2018). “It includes all permanent, temporary/contract workers and contractors who visit the site for a short time to complete a specific work task, “permanent” on-site contractors who manage their own area and staff (e.g. restaurant staff) and visitors to the site” (Reckitt Benckiser, 2018). “An Offsite Medical Treatment (Treatment Beyond First Aid) is a work-related case for which medical treatment exceeds what is covered by a 1st aid but does not result in LWD or RWC; visits to hospital/health-care providers solely for observation, counselling or administration of diagnostic procedures (e.g., X-rays), including the administration of prescription medication used solely for diagnostic purposes (e.g., eye drops to dilate pupils) are not considered Offsite Treatment Accident”. (Reckitt Benckiser, 2018).

Since there is a generally lower number Lost Workday incidents and Lost Workday Incident Ratio is basically a more or less static indicator another which is not normally tracked by Reckitt Benckiser, Total Incidents will also be reviewed for the purposes of this study.

Total incidents refer to all incidents; recordable and non-recordable incidents. Non-recordable incidents are basically First-Aid incidents. Reckitt Benckiser defines

First-Aid incidents as; “incidents resulting in the one-time treatment of minor scratches, cuts, burns, splinters, or other minor industrial injury which do not require medical care. The injury resulting from such an injury is likely to be minor in nature and treatment can be carried out by application of a band aid, cold compress or any other content of a first aid kit”. (Reckitt Benckiser, 2018).

2.3.3 Reckitt Benckiser Occupational Health and Safety Performance

As previously outlined, the three main key performance indicators for occupational health and safety used by Reckitt Benckiser are; Lost Work-day Incident Ratio, Total Recordable Incident Ratio as well number of Total Incidents. Accurate monitoring has been obtained for the period Jan 2012 to May 2019. The trends of the indicators are shown in the graphs below;

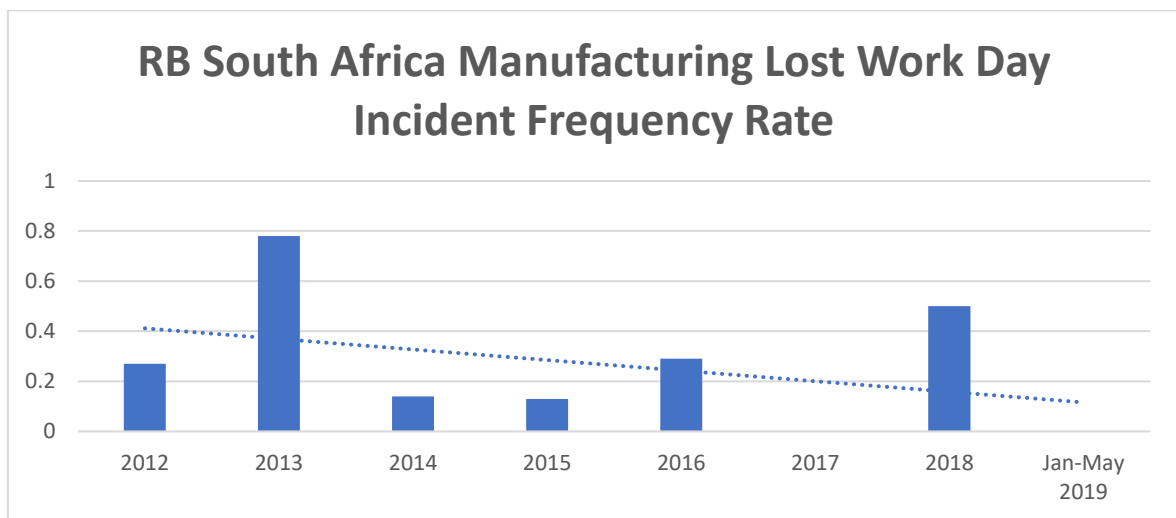


Figure 2.1: RB South Africa Manufacturing Lost Work Day Incident Frequency Rate

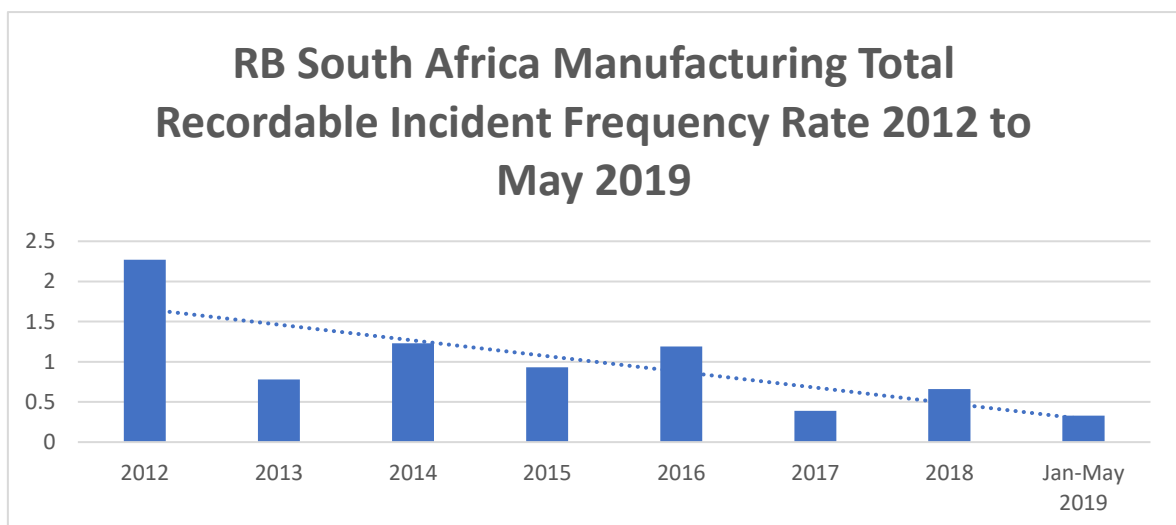


Figure 2.2: RB South Africa Manufacturing Total Recordable Incident Frequency Rate 2012 to May 2019

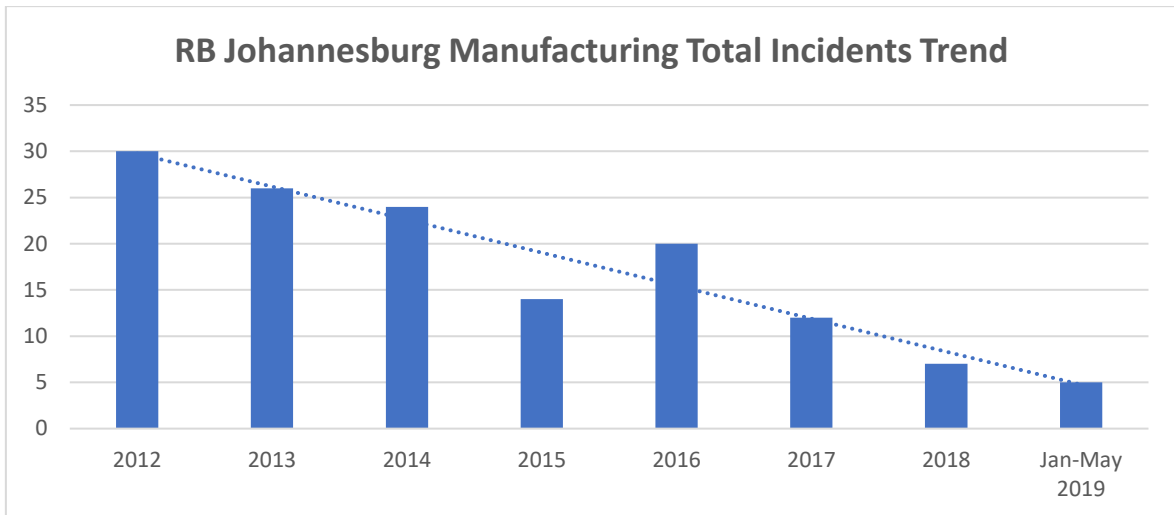


Figure 2.3: RB South Africa Manufacturing Total Incident Trend 2012 to May 2019

The TRFR and Total Incidents show a clear downwards trend during the period under review i.e. Jan 2012 to May 2019. 2017 was the best year across all the 3 indicators, LWDIR, TRFR and Total incidents. This coincided with the introduction of several key occupational health and safety initiatives. Although 4 recordable incidents have been recorded in 2018 resulting in higher LWDIR and TRFR compared to 2017 the Total Incident trend continued to decline in 2018 as most of the initiatives which had somewhat been downscaled have been revamped again. The decline across the 3 indicators, LWDIR, TRFR and Total Incident has continued into the current period of Jan-May 2019.

2.3.4 Occupational health and safety Programs or initiatives at Reckitt Benckiser group

“In March 2001, RB acquired Oxy Co. Ltd to become Oxy RB. In 2011, the Korean Centre for Disease Control (KCDC) released an announcement on the results of a study which suggested a link between HS products and reported lung and respiratory injuries and deaths. Following the KCDC announcement, Oxy RB began to voluntarily withdraw its HS product from the market”. (RB, 2016). In 2016 RB offered an apology in which it said, “We have accepted full responsibility for the role that this product played in these health issues, including deaths, in Korea and while we acknowledge that we cannot repair the harm that has been done, we have stated our continuing intention to do whatever we can to provide full resolution to these cases” (RB, 2016). “We have announced today our intention to establish a Compensation Fund for those directly impacted, to be administered by independent experts, and a Humanitarian Fund for all others who believe they have been affected

by the HS issue” (RB, 2016). “RB continues to assist and support investigations into this issue, RB has made improvements to its safety teams and has introduced new processes which will signal any potential issue as soon as possible, so corrective action can be taken. We want to reassure consumers we have taken significant steps to ensure the safety of our products and to avoid any possibility of recurrence” (RB, 2016).

Immediately after the South Korea incident Reckitt Benckiser implemented a raft of measures to improve its consumer and employee safety. Responsibility was introduced as a new core value for Reckitt Benckiser. Reckitt Benckiser explained responsibility core value by outlining, “We always do the right thing even when it is hard, we always put the safety of our people and consumers first and We lead and act with integrity”. (RB, 2017).

As far as employee safety was concerned the occupational health and safety implementation site teams were strengthened and a group occupational health and safety compliance organisation was implemented towards the end of 2016 to enforce compliance to RB global occupational health and safety standards as well develop new standards. Sites were given rating in terms of their compliance status. The ratings were scale has Red (Unacceptable), Amber (Requires Significant Improvement), Yellow (Requires Improvement) and Green (Good). The sites which were below green had to come up with a clear plan of action to turn around their occupational health and safety compliance within the next year, 2017 or at least within the next two years i.e. by end of 2018. RB South Africa manufacturing site attained a Green rating for the first time ever in December 2019.

2.4 Occupational Health and safety Improvement Initiatives or Programs implemented at Reckitt Benckiser South Africa Manufacturing facility

Although Reckitt Benckiser South Africa manufacturing facility did not formally adopt the Du Pont safety improvement model, the occupational health and safety improvement initiatives or programs implemented at Reckitt Benckiser South Africa were in line with the Du Pont safety excellence model.

2.4.1 The Du Pont Safety Excellence model

“To establish a strong foundation for safety excellence, including reducing the number of incidents and injuries, a safety management system is essential, DuPont

has developed and uses a 22-element safety management system that addresses both the hard, technical aspects of safety management, as well as the soft, people aspects” (Du Pont, 2016). “The hard elements relate to the critical aspects of a company’s core technology as well as its facilities, these elements are absolutely essential to an effective safety management system for a hazardous industry while the soft aspects address the critical people-related issues associated with leadership for safety performance, organization for critical support and leverage and implementation in a way that drives worker involvement and continuous improvement” (Du Pont, 2016). “The 22-element system from DuPont is a powerful approach encompassing leadership, organization and operational components that guide organizations on a journey to zero injuries and incidents”. (Du Pont, 2016).

“The 22 elements of the Du Pont safety excellence model are; Strong, visible management commitment (VMC), Clear, meaningful policies and principles (MPP), Integrated organization structure (IOS), Line management accountability and responsibility (LNA), Challenging goals, objectives and plans (CGP), Supportive SHE personnel (SHSP), High standards of procedures and performance (HSP), Continuous training and development (CTD), Effective two-way communication (ETC), Progressive motivation and awareness (PMA), Behaviour and observations and audits (BOA), Thorough investigations and reports (TIR), Personnel changes, Contractors safety management, Quality assurance, Pre-start-up reviews, Mechanical integrity, Changes in facilities, Process information, Changes in technology, Risk assessment and process hazards analysis and Emergency response and preparedness” (Du Pont, 2016).

The following occupational health and safety interventions were implemented at Reckitt Benckiser South Africa manufacturing since Jan 2017 to drive occupational health and safety performance improvements in line with the Du Pont model for Safety;

2.4.2 Safety Golden Rules

Safety Golden rules are defined as a set of key safety rules that define minimum standards of behaviour and performance for everyone (Brickell, 2015). “The logic behind Golden Rules is sensible; identify the biggest risks of fatal or serious injuries and create an absolute non-negotiable rule for their control” (Sharman, 2016). “If these messages are well thought-out, they can form the foundation for a shared

safety culture, the golden rules are a fundamental reference point and can serve as a guideline and provide the framework for everyday actions” (The Institute for an Industrial Safety Culture, 2013).

Reckitt Benckiser South Africa manufacturing site introduced safety golden rules in January 2017. The site implemented 6 golden safety rules namely; Bypassing of safety critical equipment is not allowed, e.g. safety switches, No hands in moving machinery, Full lockout required when working on energised equipment, No work without a valid work permit when required, Follow site working at heights procedure and No cell phone use, open flames/sparking equipment in flammable areas or hazardous locations.

The safety golden rules were communicated through the monthly townhall sessions and health and safety toolbox sessions. They were also incorporated into the site’s safety induction program and clearly displayed across different prominent point across the site. It was clearly outlined during the communication that these were the most important health and safety rules on the site and any breach of the Golden Safety Rules could lead to dismissal from the site following a disciplinary process.



Figure 2.4: Health and Safety Golden Rules

2.4.3 Management Health and Safety Inspections (Red light Audits)

“Health and safety inspections are a common element of safety management

systems, controlling hazards by early detection and correction” (Woodcock, 2013). “Health and safety inspections by management are seen as part of participative management which is defined as a series of interrelated activities such as managers' personal involvement in safety activities and frequent, informal communication between employees and management” (Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017).

“Managers can demonstrate this personal involvement by attending and contributing to safety seminars and training courses, participating in safety inspections, and/or regularly visiting the workplace to enquire about working conditions” (Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017).

Research by Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017 showed that; “safety leadership has a direct, negative effect on work pressure, and a direct, positive effect on environmental conditions and occupational hazards and on safety incentives and likewise, safety leadership has an indirect effect on co-worker support via environmental conditions and occupational hazards”.

RB Elandsfontein introduced management health and safety inspections or red-light audits in Jan 2017. The purpose of the inspections is to identify unsafe conditions and unsafe acts in the factory so that they can be corrected and make the factory safer and thereby reduce or eliminate any occupational health and safety incidents. Management health and safety inspections or red-light audits also serve as a mechanism to show visible leadership a very important aspect in driving health and safety cultural change and entrenching the right behaviours in a workplace. The initial format of the management health and safety inspections or red-light audits was based on a weekly cycle and managers were paired and allocated to different areas of the factory. Safety tags were raised for each unsafe condition identified and this would be given to the team leader and Business Unit Manager responsible for the area for actioning. All areas of the factory were being covered every two weeks and therefore after every two a follow-up audit was conducted to check if the issues picked in the first round had been attended to. The management health and safety inspections or red-light audits were revamped in May 2018 to bring about more effectiveness. Under the new format all managers would all conduct the

management health and safety inspections or red-light audits in a single area and the cycle was also changed to a bi-weekly cycle i.e. 2 areas would be visited each week. A follow-up inspection is now conducted after 20 weeks or 4 months. The changes were brought about by the need to make the audits more robust and ensure that all the issues are exhausted during each inspection. Inspection reports are then issued which allocated the identified findings to an action owner who will be responsible for attending to the identified issue.




Description of Findings	Picture	Gap Rating	Corrective action	Person responsible	Date Raised	Comments	Deadline	Status	No of weeks Open after due date	Gap Escalated?
Mixing/ Gantry										
No access control at the gantry dispensing room		Requires Improvement	Install biometrics access control for the area	Pieter	28 May 2018	Quotation received, still waiting for PO approval	1 Month	Open		
Inspection for 2 fire hose reels at gantry floor were observed to be due in February 2018		Require significant improvement	Arrange inspection for all outstanding equipments	Enocenta	28 May 2018	In progress for the whole site	14 Days	Open		
Eye wash bottle at the lab obstructed by a table and a scale		Require significant improvement	Reposition the eye wash station	Freddie	28 May 2018		14 Days	Open		

Figure 2.5: Red Light Audit Report

2.4.4 Safety Behavior Observations

“Behaviour-based safety emerged from several well documented and used fields of study outside of safety, and the approach to building safety culture enhanced with BBS is not an entirely new solution. It originates in works of H. W. Heinrich published in 30s and 40s of the 19th century, proving that only 10% of accidents and occupational diseases were caused with inappropriate working conditions, while 88% of them were a consequence of dangerous behaviour of employee”. (Malgorzata et al, 2015) Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017)

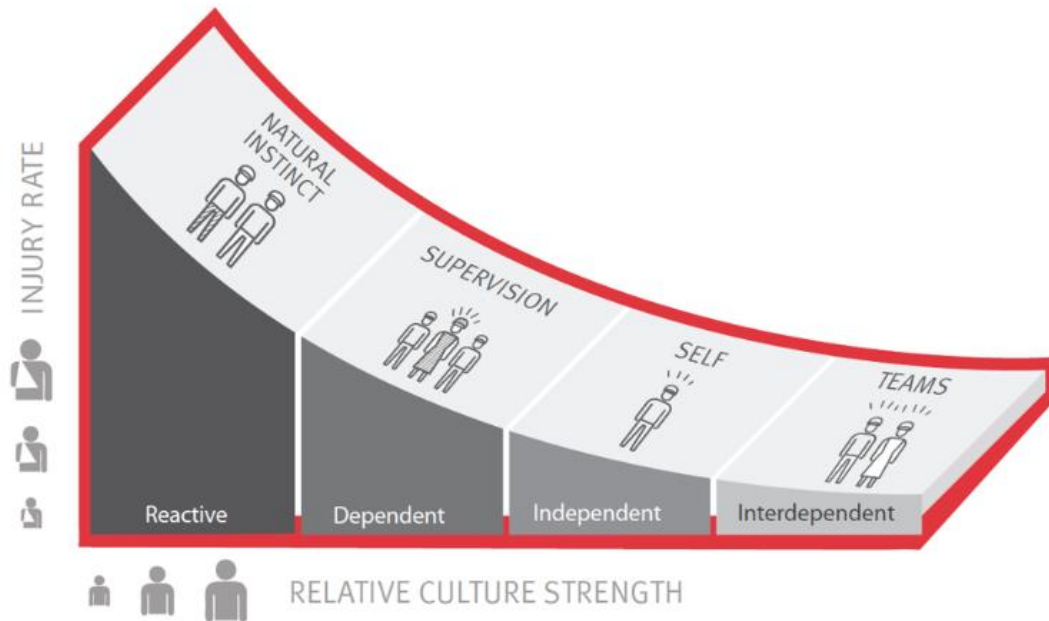
“BBS safety involves the practical application of safety procedures based on the real-world behaviours of employees in work situations, everyone is considered responsible not only for their own safety, but for the safety of others. Identifying common workplace safety issues enables a company to assess the problem areas and create behavioural-based safety guidelines. It involves observing behaviour and detecting at-risk or unsafe activities, followed by directing or modifying behaviour to achieve safe operation. Primary techniques in BBS include peer observation and

feedback, training and education sessions, behaviour-based incentives, prompts, and goal setting”. (Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017)

“BBS claims to equip companies with the tools they need to change employees’ behaviours and attitudes toward safety. Behaviour-based safety systems educate employees to search for the root causes of their accident-prone behaviour. It teaches them to realize trends of behaviours that cause them to succumb to safety hazards. It transfers the control of the incident into the hands of the employee. The employee then becomes proactive toward his own safety and less of a victim of the circumstances of his surroundings”. (Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017)

“BBS implementation examples presented in the literature prove numerous benefits. The most often mentioned include: improvement of commitment and awareness of employees in the area of safety and hygiene of work, decrease in number of accidents, occupational diseases and potentially dangerous incidents, as well as improvement of working environment by optimization of procedures and modification of equipment (machines, devices, tools)” (Fernández-Muñiz, B., Montes-Peón.J.M and Vázquez-Ordás, C.J., 2017)

Safe Behaviour Observation has been part of Reckitt Benckiser’s minimum health and safety standards since around 2008 as part of the initiatives by the company to move safety culture from reactive to an interdependent state in line with the principles outlined by the Du Pont Bradley Curve shown in Figure 2.6 below;



Source: Du Point, 2019

Figure 2.5: Du Pont Bradley Curve

In February 2017 the Reckitt Benckiser Behaviour Safety Observation program was rejuvenated to improve its effectiveness. The improvements brought about 6 different types of Safety Behaviour cards for observations for the following tasks or aspects; Personal Protective Equipment, Machinery Operation, High Risk work activities and Contractors, Laboratory Safety, Manual Handling Equipment and Manual Handling. There are a set of questions on each card with helps to identify if there is any unsafe behaviour being exhibited while performing the task in question. When employees perform a Safe Behaviour Observation, they will go to an employee performing the task in question with the applicable observation card and they will answer all the questions on the card as well as the date, time, shift when the task was completed before submitting the completed card to the safety department. The safety department will then capture all the cards received onto an excel spreadsheet for analysing the data. The analysis looks at the top unsafe acts which were reported for the month and the areas where these were reported. Actions are then drawn up to address the identified unsafe acts.

JUNE Behavioural Safety trends

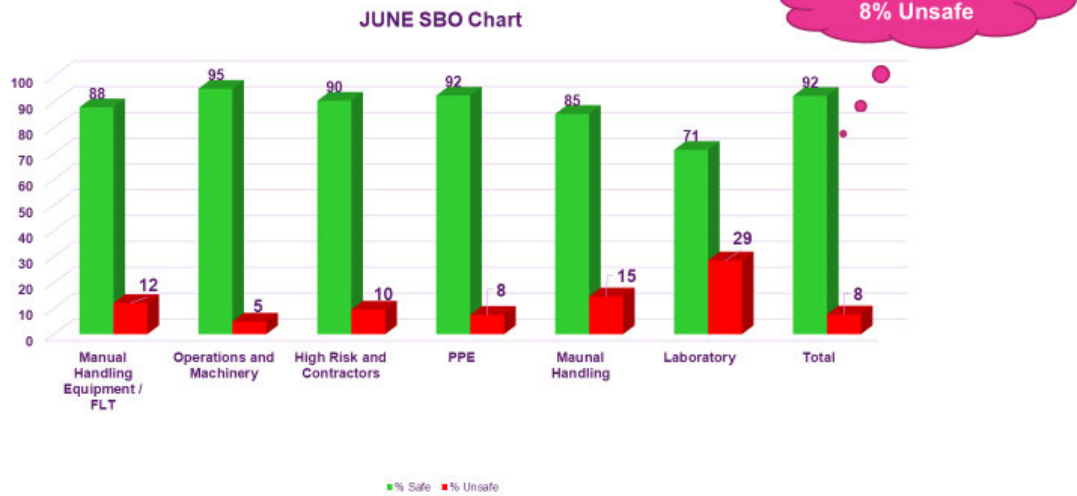


Figure 2.6: Example of a Safety Behaviour Observation Trend Analysis

2.4.5 Unsafe Conditions Reporting

According to the Occupational Health and Safety Act 85 of 1994, an unsafe condition or hazard is defined as; “a source of or exposure to danger”. “In the seminal Domino Theory (Heinrich, 1931), unsafe behaviour and unsafe conditions were identified as key causes of accidents”. “According to Heinrich, among the direct causes of accidents, 88% are unsafe behaviour, 10% are unsafe conditions, and 2% are unpreventable” (Guo, B.H.W., Goh, Y.M. and Wong. K.L., 2018.). This implies that by proactively identifying and addressing unsafe conditions health and safety incidents can be reduced by 10%. This makes unsafe condition reporting or hazard spotting to be a very important aspect of any occupational health and safety improvement initiatives.

“One of the root causes of workplace injuries, illnesses, and incidents is the failure to identify or recognize hazards that are present, or that could have been anticipated. A critical element of any effective safety and health program is a proactive, ongoing process to identify and assess such hazards” (OHSA, 2018). “Hazards can be introduced over time as workstations and processes change, equipment or tools become worn, maintenance is neglected, or housekeeping practices decline. Setting aside time to regularly inspect the workplace for hazards can help identify shortcomings so that they can be addressed before an incident

occurs". (OHSA, 2018).

OHSA, 2018 recommends that, "to effectively control and prevent hazards, employers should involve workers, who often have the best understanding of the conditions that create hazards and insights into how they can be controlled and identify and evaluate options for controlling hazards, using a hierarchy of controls."

Unsafe condition identification and reporting at RB Elandsfontein has been an existing initiative but the program was fine-tuned in Q1 2017 to enhance its effectiveness. Under the new initiative unsafe condition reporting cards were developed and awareness was created around the importance of reporting unsafe conditions through the factory townhall sessions. A competition was also introduced for the awarding the employee who reported the best quality unsafe condition for each month with a product hamper. In June 2018 the Unsafe Condition reporting campaign expanded from not only recognizing individual employees but to award the department which reported the most number of near misses for that particular month as focus shifted from quality to quantity which are kept at a central place in the factory to ensure every employee who wants to report an unsafe condition has access. An employee who notices an unsafe condition will complete the details on the unsafe condition reporting card or safety tag in duplicate and leave one copy at the location of the unsafe condition while taking the other one and placing it back on the board. Displaying the safety tag at the area where the hazard is enables visibility of the hazard to other employees who might want to work in the same area as well to the maintenance personnel who will need to address the reported unsafe condition. All safety tags that are submitted to the safety board will be collected by the maintenance planner who will assign them to the responsible person in order to put in place the required corrective action to eliminate the hazard. This is done through the maintenance planning software. Open tags are tracked by the safety department at the beginning of which and follow-ups are conducted with the relevant personnel to ensure that these tags are closed out.

2.4.6 Near Miss Reporting

"A near miss is an unplanned event that did not result in injury, illness or damage – but had the potential to do so" (National Safety Council 2013). "A faulty process or

management system invariably is the root cause for the increased risk that leads to the near miss and should be the focus of improvement” (National Safety Council 2013). A near miss presents an opportunity for an organisation to proactively address risks in the work environment before an actual incident occurs. It is therefore a very important leading indicator in health and safety management which should be focused on in order to improve occupational health and safety performance in the work environment. “History has shown repeatedly that most loss producing events (incidents), both serious and catastrophic, were preceded by warnings or near miss incidents. Recognizing and reporting near miss incidents can significantly improve worker safety and enhance an organization’s safety culture” (National Safety Council, 2013).

“For an effective near-miss reporting system, leadership must establish a reporting culture reinforcing that every opportunity to identify and control hazards, reduce risk and prevent harmful incidents must be acted on” (National Safety Council, 2013). This must be centred around a no-blame and non-punitive culture around near misses reported in order to encourage employees to report near-misses. All near-misses reported need to be investigated to identify the root-cause and implement corrective and preventative measures to prevent recurrence as a recurrence can lead to an actual incident. Near miss reporting targets need to be set-up and near reporting can be incentivised in cases where there is uptake of the program is not good. “Near Miss reporting should capture sufficient data for statistical analysis, correlation studies, trending, and performance measurement (improvement over baseline)” (National Safety Council, 2013).

Near miss reporting has always been of the occupational health and safety programs at RB South Africa manufacturing facility. In Feb 2017 Near Miss reporting was rejuvenated through a near miss reporting drive or campaign which was launched. During this relaunch employees were informed about the importance of reporting near-misses and the examples of typical near-misses which can be experienced at the site. A competition was also introduced for the awarding of the employee who reported the best quality near miss for each month with a product hamper. In June 2018 the Near Miss reporting campaign expanded from not only recognizing individual employees but to award the department which reported the

greatest number of near misses for that month as focus shifted from quality to quantity. In 2018 RB Global introduced a new key performance indicator for near misses based on the amount reported for man-hours worked by employees. This applies to all global factories and the target is 50 near misses for every 200 000 hours worked. Near Misses are reported through a near miss reporting card and submitted to the SHE department where they are logged to the near miss register or tracker. The root causes and the required actions is captured on this tracker.


 Reckitt Benckiser	
Health and Safety Near Miss Report/Card <i>To be completed by an employee or contractor reporting a near miss.</i>	
Date and time of near miss incident:	
Name, Surname and Signature of person reporting the near miss:	
Company name / Employer:	
Department where employed / Line:	
Description of near miss (What, Where and Who)	
Corrective action: (What, How, Where and Who)	
Person corrected: Name and Surname, Signature	

Figure 2.7: Near Miss Reporting Card

2.4.7 Health and Safety Toolbox Talks

“Toolbox talk is a very short informal safety talk and all about sharing best practice” (MOSAIC, 2016). It is normally delivered at the work sites or stations and is for a specific or subject or topic, with the overall objective to create awareness around that specific subject or topic (MOSAIC, 2016). The topic or subject is mainly by the

risks in the work environment i.e. it creates risk awareness around identified risks in the work environment. “Safety meetings and toolbox talks are important to building a strong safety culture and reinforcing your company’s commitment to protecting your workers and holding regular safety meetings and toolbox talks can prevent workers from getting complacent and avoid taking safety for granted” (Jones, 2018). “These meetings and talks are also the perfect time to introduce new safety policies and procedures you are implementing as well as to provide training on new safety rules and regulations in order to stay compliant with state and federal OSHA standards” (Jones, 2018). Toolbox talks also serve a forum to receive essential feedback on health and safety from employees.

Health and Safety toolbox were introduced at RB Manufacturing site in January 2017. An initial schedule with about topics covering the key safety in the factory was drawn-up. The topics included; Hot Work, Working at Heights, Aerosol Safety, Hazardous Chemicals, Electrical Safety, Machine Guarding, Confined Space Entry and Occupational Health. Refreshers are then done for each topic at the end of the cycle which implies that each topic or subject is presented approximately twice during each calendar year. Toolbox talks can also be done by use of health and safety videos on the topic or subject. Toolbox talks are scheduled on a weekly basis to cover all factory employees in line with the shift pattern. The first 20 minutes of the session is usually based on a presentation of custom-made training on the topic while the remaining 10minutes are used for question and answers and getting feedback from employees on any issue of concern in their work areas. Feedback typically consists of hazards that have been identified in their respective areas and have not resolved by the operational teams and therefore require escalation to the health and safety department. Toolbox talks registers are completed and filed at the end of each session for maintenance of evidence as required by the company standards.

2.4.8 Safety and Health (SHE Reps) Representative Engagements

The Occupational Health and Safety Act requires that every workplace in South Africa with more than 20 employees elects and appoint health and safety representatives. The Act outlines the duties of health and safety reps as; “reviewing the effectiveness of health and safety programs, identifying potential hazards and

potential major incidents at the workplace, examining causes if accidents in collaboration with the employer, investigating complaints by employees relating to health and safety, bringing any health and safety matters of concern to the health and safety committees or the health and safety inspector if the issues are not resolved, conducting health and safety inspections at the workplace at agreed intervals with the employer, participating in consultations with the employer and accompanies inspectors on inspections of the workplace and receiving information from health and safety inspectors” (OHS Act 85 of 1993).

At RB South Africa manufacturing facility health and safety representative have always been part of the health and safety structures but in 2017 the coverage of health and safety representatives was enhanced to ensure that health and safety representatives are nominated to cover every business unit across the different shifts to ensure adequate coverage. All health safety representatives are formally appointed in line with the legal requirements. SHE reps are required to conduct a health inspection using a standard checklist which has been adopted. They are also required to sit in the health and safety committee where they present their health and safety inspection reports and highlight any health and safety issues of concern identified in their business units or reported to them by employees in their business unit. Health and Safety reps can also bring to the attention of the health and safety department at any time, any issue which they might have identified, or which has been reported to them. Health and safety representatives also take part in the investigation of incidents which might have occurred within their business unit. Other activities which safety and health representatives are involved include; driving the reporting of safety behavior observations, near miss and unsafe condition reporting as well as taking part in the health and safety audits.

2.4.9 Permit to Work System

The Health and Safety Executive defines a PTW system as; “a formal recorded process used to control work which is identified as potentially hazardous, and also a means of communication between site/installation management, plant supervisors and operators and those who carry out the hazardous work”. “A permit-to-work system is an integral part of a safe system of work and can help to properly manage

the wide range of activities which can take place close together in a small space, such as in a storage area or process plant” (HSE Executive, 2005). “A permit-to-work is not simply permission to carry out a dangerous job. It is an essential part of a system which determines how that job can be carried out safely and helps communicate this to those doing the job. It should not be regarded as an easy way to eliminate hazard or reduce risk” (HSE Executive, 2005).

The Permit to Work System at Elandsfontein has been working for some time covering job task such as; all contractor work activities, working at heights, hot work, Line/Process break-in, Confined space Entry and Electrical work activities. Confined space permit and work permits were combined as Special Work Permits while activities such as, Hot work, Line/Process Break-in and Electrical work were covered as standalone work permits. General work activities as well as tasks carried out contractors which are outside the distinguished permit categories were covered under the general work permit. In 2018 all the work permits were reviewed, and the content was updated to ensure they are more robust. An excavation work permit was also established while the confined space work permit and working at height permit were removed from the special work permit to be stand-alone work permits. In 2018 new Permit to Work was developed by an experienced contractor and all site personnel who are required to issue work permits were retrained and competence evaluations were conducted. All people who successfully completed the training were then appointed as permit to work issuers. A permit to work issuers matrix was also developed which also shows the different Permit to work issuers as well as the areas and different types of work permits, they can issue. This matrix is displayed throughout the site to ensure that all personnel are clear on the permit to work issuers as well as the different types of work permits, they can issue on site.

2.4.10 Machinery Guarding Improvements

“Moving machine parts have the potential to cause severe workplace injuries, such as crushed fingers or hands, amputations, burns, or blindness. Safeguards are essential for protecting workers from these preventable injuries” (OHSA, 2019). “Any machine part, function, or process that may cause injury must be safeguarded if the operation of a machine or accidental contact injure the operator or others in the

vicinity, the hazards must be eliminated or controlled” (OHSA, 2019)

There were several incidents due to machinery guarding related issues at Elandsfontein before 2017 therefore improvement of machinery guarding was one of the priority areas. In 2017 there was a new RB Global machinery guarding standard which had new requirements that all RB sites needed to comply with such as; all machines were to have 360 degree guarding which prevents any access including deliberate access to moving machinery parts, all fixed guard to be bolted by torx bolts, frequent access guards to be interlocked and Lock Out Tag Out warning stickers to be displayed on all guards.

An audit of the guarding on site was undertaken to identify any guarding gaps on the machinery with regards to the new standard. After all the gaps were identified a significant amount of CAPEX spend was authorized at RB Elandsfontein to upgrade all machinery guarding to comply with the new standard and contractors were appointed to supply and install the required machinery guarding. After the upgrading of the guarding another audit was undertaken to verify that all the identified gaps had been sufficiently addressed.

2.4.11 Safety Awareness Sessions (Using guest presenters)

“Safety awareness is a constant realization every employee must have at all times. It goes beyond what they learn in the safety training classroom and at morning safety meetings” (EHS Insight Resources, 2018). “Being constantly aware of how they’re operating at work and being able to recognize hazards is critical in mitigating safety-related risks. In addition, safety awareness goes beyond the obvious hazards like machines, ergonomics, and electrical safety as the term ‘safety’ broadly covers a variety of ways a disaster or accident can occur, from physical hazards to occupational, natural, and social risks” (EHS Insight Resources, 2018).

One of the activities introduced at RB Elandsfontein site to improve safety engagement has been safety awareness sessions using external guest speakers. In 2017 a safety engagement session was conducted by renowned South African health and safety speaker Jurgen Tienz under the theme; The Mirror Technique. The session also involved the use of the mirror where real unsafe conditions in the

work environment are shown to employees to bring awareness of these and encourage them to act against in future.

The second awareness was conducted in 2018 using the same speaker; Jurgen Tienz; Zero Tolerance to critical “Red” conditions. During this session employees were shown critical “Red” unsafe conditions from different areas of the plant and they were encouraged to stop working if they come across similar unsafe conditions in the plant and have these reported to plant management to ensure that they can be urgently addressed or eliminated. Both sessions were highly interactive sessions with very good feedback from employees.

2.4.12 Engagement with Team Leaders/Supervisors

The duties of supervisors in terms of health and safety include; “Instructing workers to follow safe work practices, Enforcing health and safety regulations, Correcting unsafe acts and unsafe conditions, Continues risk assessment, Ensuring that only authorized, adequately trained workers operate equipment, Reporting and investigating all accidents/ incidents, Inspecting own area and taking remedial action to minimize or eliminate hazards, Job observations, Ensuring equipment is properly maintained, Promoting safety awareness in workers, On the job training, Toolbox talks and Managing contractors or other persons at the workplace”. (Boshoff, 2019). Supervisors are critical element in driving health and safety standards in any manufacturing environment as they are the first line of contact with operational or shop floor staff. Supervisors also communicate the company’s standard and also help in ensuring adherence to the standards by the shop floor.

There was realization that there was generally lack of awareness of RB health and safety standards among the supervisors and in H1 2017 training sessions were conducted for all supervisors on RB health and safety standards. There also assessments for all the standard after every training session. During the training supervisors were encouraged to spread awareness of the company health and safety to shop floor employees and increase their levels of engagement with shop floor employees within their respective areas. Supervisors were taken through legal liability training in terms of the occupational health and safety Act 85 of 1993 to clarify on their legal responsibility in order for them to play a more prominent role in

terms of enforcement of health and safety standard. All supervisors were appointed as Occupation Health and Safety section 85 of 1993 section 8 (2) appointees.

2.4.13 Engagement with the SHE Department

The SHE department plays an important role on site as far ensuring that health and safety are communicated and compliance to these is maintained. The SHE department also coordinates all health and safety activities or the occupational health and safety management system. Engagement of employees with the health and safety department is a key aspect in as far ensuring that health and safety are developed at any site.

At RB Elandsfontein site their health and safety organization was very lean consisting of only 2 people a Safety Health and Environmental Manager as well as a Safety Health and Environmental Coordinator. This is resulted in less interactions of employees with health and safety practitioner and subsequently poor health and safety compliance and performance. As part of the drive to improve occupational health and safety performance of the site the health and safety department structure was changed in January 2017 to increase the number of health and safety professionals to 4 i.e. a SHE manager and 3 SHE coordinators thereby improving the interaction of employees with health and safety practitioners. The skill levels of the health and safety practitioners was also greatly improved by having much more experienced professionals in the structure.

2.4.14 SHE Recognition Activities e.g. 1 million hours without Lost Workday

According to the Health and Safety Executive, 2012; “reward and recognition is Incentives and rewards for employees and workers are just one of the ways in which you can encourage good health and safety on site”.

“Incentives and rewards can be useful to: encourage people to follow health and safety procedures; reward those who achieve, outstanding health and safety performance; reward those who actively, support a good culture on site; encourage participation in safety, initiatives such as surveys, encourage, reward and reinforce specific safe behaviours” (HSE, 2012).

“Having a reward and recognition program is essential to reinforcing positive health and safety behavior in the workplace. Rewards and recognitions improve employee

satisfaction and contribute to engagement by making employees feel that they, and the work they do, are very important to the company” (Dion, 2017).

The most important points to consider for any reward scheme are; “It is communicated fully to workers – everyone should know what it takes to achieve a reward and what observers will be looking for, by making your reward scheme part of your site daily routine, you will encourage participation, you should avoid rewarding the absence of unsafe behaviour, focusing instead on the reward of observable safe behaviours, you should include subcontractors, as well as employees, you may want to consider giving different, group awards” (HSE, 2012).

Reward and recognition of good health and safety performance is recognized as a good stimulator to drive good health and safety performance. There was historically no reward and recognition of good health and safety performance at RB Elandsfontein.

In November 2017, the first formal site wide recognition of good health and safety performance activity was conducted at RB Elandsfontein. The event was to recognize the attainment of 1 million man-hours worked without a lost working day. During this recognition event all employees were issued with T-shirts which and the RB logo and were also marked “Recognition of 1 million hours without Lost-time Incident”. A special townhall was conducted where the purpose of the event was outlined and the T-shirts were issued to all employees. A free lunch meal was also issued to all employees to commemorate the event.

2.4.15 SHE Competitions

SHE competitions were introduced at RB Elandsfontein in 2017. The first competition rewarded the employee who had reported the most critical Unsafe Act, Unsafe Condition or Near Miss with a staff shop hamper worth R200 each month. These hampers were presented during the monthly townhall to create awareness around the competition as well to encourage participation in these initiatives.

The competition was later modified in 2018 to be at a line and shift level to drive reporting of these leading indicators as opposed to just driving quality. Under the

new format the Line with the highest participation across all these 3 initiatives i.e. Unsafe Act, Unsafe Conditions and Near Misses were awarded with a braai for all the employees from the area. This was also done to increase team-work among the different units or areas.

2.5 Conclusion

The chapter outlined the importance of occupational and health in the context of a Fast-Moving Consumer Goods manufacturing company like Reckitt Benckiser. It also outlined the background to occupational health and safety management at Reckitt Benckiser South Africa manufacturing facility and the occupational health and safety transition journey the site embarked on since the beginning of 2017. An in depth review of each of the key occupational health and safety programs or initiatives introduced at Reckitt Benckiser South Africa's manufacturing facility making reference to the theoretical benefits as well as why it was introduced, the form in which the program or initiative was introduced as well as the anticipated impact of the initiative or program in the context of turning around occupational health and safety performance.

From the theoretical research, it could be established that all the key occupational health and safety initiatives implemented by Reckitt Benckiser South Africa derived from the Du Pont safety model are supposed to be highly effective at transforming occupational health and safety performance. It is therefore imperative to investigate if these initiatives or programs have been good at bringing about these desired theoretical positive impacts for Reckitt Benckiser South Africa. This will enable Reckitt Benckiser to continue to focus of the most effective initiatives or programs while on the other hand the least effective initiatives or programs is also equally important as this can enable these initiatives or programs to be fined-tuned, discarded or enhanced rather than continuing to consume additional resources on maintaining or sustaining these initiatives or programs with little or no benefit.

The next chapter looks at how the research into the effectiveness of occupational health and safety programs or initiatives was conducted. It looks at the target population, sampling method applied, the research instrument and the analysis of data and validity and reliability.

Chapter 3 Research Methodology

3.1 Introduction

The chapter seeks to outline the participants and location of the study, research methodology and data collection techniques used in this study of Understanding of the key drivers of improving Occupational Health and Safety performance in the Fast-Moving Consumer Goods Manufacturing Sector from an employee's perspective

3.2 Research Design

“Research design is the overall plan for connecting the conceptual research problems to the pertinent (and achievable) empirical research i.e. the research design articulates what data is required, what methods are going to be used to collect and analyze this data, and how all of this is going to answer your research question” (Van Wyk, 2012)

According to Creswel, 2013, “there are 3 approaches to research namely; qualitative, quantitative, and mixed methods”.

“Quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures”. (Creswell, 2013) The 2 main types of research designs under Quantitative approach are; “Survey research and experimental research. Survey research provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population and includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection—with the intent of generalizing from a sample to a population” (Fowler, 2008). “Experimental research seeks to determine if a specific treatment influences an outcome”. (Creswell, 2013)

“Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (Riessman, 2008). “The research designs under qualitative approach are; Narrative research, Phenomenology, Grounded theory, Ethnographies and Case study. Narrative research is a design of inquiry from the humanities in which the researcher studies the lives of individuals and asks one or more individuals to provide stories about

their lives” (Riessman, 2008). “Phenomenological research is a design of inquiry coming from philosophy and psychology in which the researcher describes the lived experiences of individuals about a phenomenon as described by participants” (Charmaz, 2006; Corbin & Strauss, 2007). “Grounded theory is a design of inquiry from sociology in which the researcher derives a general, abstract theory of a process, action, or interaction grounded in the views of participants and this process involves using multiple stages of data collection and the refinement and interrelationship of categories of information” (Charmaz, 2006; Corbin & Strauss, 2007). “Ethnography is a design of inquiry coming from anthropology and sociology in which the researcher studies the shared patterns of behaviours, language, and actions of an intact cultural group in a natural setting over a prolonged period. Case studies are a design of inquiry found in many fields, especially evaluation, in which the researcher develops an in-depth analysis of a case, often a program, event, activity, process, or one or more individuals”. (Creswell, 2013)

“Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks”. (Creswell, 2013)

The Quantitative approach was selected for this study as it best for the understanding the relationship between variables in this case the different occupational health and safety programs or initiative and their effectiveness. Data collected in quantitative research is measurable and can be analysed making use of statistics and other representations. A quantitative design makes it easier for the findings to be easily quantified. In this case the cumulative frequency as well as the average score on the rating scale of the effectiveness of each of the key initiatives or programs was calculated and analysed.

The survey research design was used in this study with a questionnaire being used to gather data. The survey design was selected as it provides a quantitative or numeric description of trends, in this case the effectiveness of the different occupational health and safety programs or initiatives

3.3 Target Population

“A Population is a collection of objects and individuals who form part of the scientific phenomenon to be studied” (Patton 2005).

The study focused on direct employees of Reckitt Benckiser manufacturing operations based on the South Africa manufacturing facility who have been employed for at least 2 years and have witnessed the implementation of key health and safety initiatives or programs implemented over the past 2 years. The total number of direct employees is approximately 300 employees and the number of employees who have at the facility for more than 2 years is approximately 200 employees, hence the target population was 200 employees.

3.4 Sampling Method

“A sample is a sub-set of a population that has been chosen to be studied. The sample should represent the population and have enough size so a given innovative or thesis or prosthesis can be subjected to a fair statistical analysis” (Lunsford and Lunsford, 1995).

“There are broadly 2 types of sampling methods, probability and non-probability sampling; In probability sampling each individual in the population has an equal chance of being selected in the study. The different types of probability sampling are; Simple random sampling, Systematic random sampling, stratified random sampling, Cluster sampling, Multiphase sampling and Multistage sampling” (Acharya et al, 2013).

“Non-probability samples are those in which the probability that a subject is selected is unknown and results in selection bias in the study. They include the most commonly used convenience/purposive sampling, quota sampling and snowball sampling” (Acharya et al, 2013).

“A census involves collecting the desired information under study from every member of a population. This is extremely difficult, if not impossible, with large populations, however is required in extremely small populations”. (Draugalis and Plaza, 2009).

Given the relatively low target population size of 200 people and also because in previous safety surveys conducted at the company some employees had not

participated giving very low response rates of around 30%, the census method was selected to be the appropriate method to be applied in order to gather representative data.

The questionnaire was issued to the entire target population of 200 employees and they were all encouraged to complete by explaining the objectives of the study and how it can assist the company in further improving occupational health and safety at the site. A 100 employees successfully completed the questionnaires and returned fully completed questionnaires giving a 50% response rate.

3.5 Data Analysis

The study is quantitative, and a questionnaire was used to collect the information. Data collected from the questionnaire was first exported to electronic spread sheet software called Microsoft Excel. Electronic spread sheets possess many benefits ranging from data listing, sorting, recording, graphing and performing what if scenarios thereby enabling the researcher to quickly and easily organize and analyze the large amounts of data. The data was converted into numerical data in excel by assigning numbers to the recorded scores on the Likert scale. (Leedy and Ormrod, 2010). The numerical data was then imported into a statistical software package called SPSS for easy and quick performance of multiple statistics.

“A Likert scale is composed of a series of four or more Likert-type items that represent similar questions combined into a single composite score/variable and Likert scale data can be analysed as interval data, i.e. the mean is the best measure of central tendency”. (St Andrew’s, 2019).

“The most appropriate measure of is the mode the most frequent responses, or the median and the best way to display the distribution of responses i.e. (% that agree, disagree etc) is to use a bar chart”. (St Andrew’s, 2019).

Cumulative Frequency Analysis was therefore used to analysis by combining the higher extreme responses of the scale used i.e. Effectiveness=Very Effective + Effective).

The average score across the entire rating scale scoring (1-5) were also calculated to confirm the effectiveness of each program or initiative across the entire scale.

3.6 Research instruments

“Research Instruments are measurement tools (for example, questionnaires or scales) designed to obtain data on a topic of interest from research subjects”. (Des moines University, 2019). The 2 most common research instruments used in quantitative research are test and questionnaires.

As previously indicated that this research follows a survey design the questionnaire was used as it is an easier method to gather data in order to achieve the research objectives. “A questionnaire is a tool that consists of questions or open-ended and closed-ended statements to which participants are anticipated to react”. (Arezes, 2015). A questionnaire consisting of 14 closed-ended questions was developed for this survey. A Likert-scale with 5 measures of effectiveness i.e. Very Effective, Effective, some-what effective, slightly effective and not effective at all was used for the questionnaire.

3.7 Administration of research instrument

Printed questionnaires were issued to the 200 participants. A 10 minutes slot during the monthly safety toolbox session which was allowed for by the company was used to explain the intention of the survey and the importance of the study to all employees in order to ensure high participation levels. Employees were instructed to submit completed questionnaires back to the Safety Health and Departmental office where a locked box was placed with a slot which allows for the questionnaire was placed.

3.8 Validity and Reliability

“The term validity refers to whether or not the test measures what it claims to measure” (Professional Testing Inc, 2003).

“Internal validity refers to whether the effects observed in a study are due to the manipulation of the independent variable and not some other factor i.e. there is a causal relationship between the independent and dependent variable” (McLeod, 2013)

“Internal validity can be improved by controlling extraneous variables, using standardized instructions, counter balancing, and eliminating demand characteristics and investigator effects” (Mc Leod, 2013)

In this study internal validity was ensured by ensuring the questionnaire was evaluated by the supervisor being used and the same questionnaire was given to all participants at the same time without any changes being done. Participants also completed the questionnaire on their own without any influence from the researcher.

“External validity refers to the extent to which the results of a study can be generalized to other settings (ecological validity), other people (population validity) and over time (historical validity) and external validity can be improved by setting experiments in a more natural setting and using random sampling to select participants” (McLeod, 2013). To ensure external validity in this study, the census method was applied to cover the entire eligible population thereby eliminating any sampling biases.

“**Reliability** refers to whether scores to items on an instrument are internally consistent (i.e. are the item responses consistent across constructs?), stable over time (test-retest correlations), and whether there was consistency in test administration and scoring” (Creswell, 2013).

To ensure consistency in test administration the same questionnaire was given to all participants at the same time without any changes being done. Issuing of all questionnaires was managed by the researcher himself.

The reliability of the survey questionnaire was measured using a Cronbach's Alpha. “Cronbach's alpha measures internal consistency i.e. the extent to which the instrument is a consistent measure of a concept” (Cronbach, 1951). Cronbach's alpha was calculated by correlating the score for each scale item with the total score for each observation and then comparing that to the variance for all individual item scores. The Cronbach's Alpha coefficient of reliability (α) provides the measure of reliability and has got values that range from 0 to 1. A minimum coefficient value of 0.65 is recommended (Malhotra, 2015; DeVellis, 2003). The Cronbach's Alpha coefficient of reliability (α) for this study was calculated as 0,84. A low alpha number could be due to the low number of questions or poor interrelatedness between items

or heterogeneous constructs. A too high number could be due to too much redundancy i.e. some items testing the same question but in a different way.

3.9 Ethical considerations

A gate pass letter was issued by the organization allowing for the research to be conducted at the organization. The UKZN ethical clearance application was also completed and submitted for ethical clearance before the research was undertaken. After this individual consent was sought for from all potential participants prior to commencing the survey. Since the census method was applied all potential participants were issued with the questionnaire and encouraged to participate in the survey however it was highlighted that those who are not willing to complete are not forced to do so. Also, those who didn't bring back completed questionnaires were not followed up on since this was a voluntary exercise. All the electronic data collected was saved & stored in data base accessible by the researcher only. Once data gathering and analysis was done all documents relating to this research were kept securely locked at the researcher's home in a password protected safe.

3.10 Conclusion

The methodology used for the current study was outlined in this chapter. The researcher chose to use quantitative data-collection methods for the research due to the advantages of the quantitative data-collection strategy. The census method was selected to as the method to be applied in order to gather representative data as the entire population was small and manageable.

The questionnaire design was aligned to meet the research objectives. The numerical data obtained from the questionnaires was then imported into a statistical software package called SPSS for easy and quick performance of multiple statistical analysis. The discussion and data presentation are contained in the next chapter.

Chapter 4: Presentation of the results

4.1 Introduction

Data presentation and discussion is the most important aspects of any research as this is the section where raw data are converted into meaningful information to address the research objectives. The interpreted research information can then add value to the purpose for which the research was conducted.

The aim of this chapter is to present and discuss the results obtained from the safety initiatives or programs effectiveness survey conducted at Reckitt Benckiser Elandsfontein site. The survey participation outcomes are presented, also highlighting certain respondent statistics. The detailed analysis of key safety initiatives or programs introduced at Reckitt Benckiser Elandsfontein and their effectiveness is outlined.

4.2 Response Rate

A total of 200 questionnaires were issued to entire target population of the study, but only 100 respondents completed the self-administered questionnaire. The response rate was therefore 50%

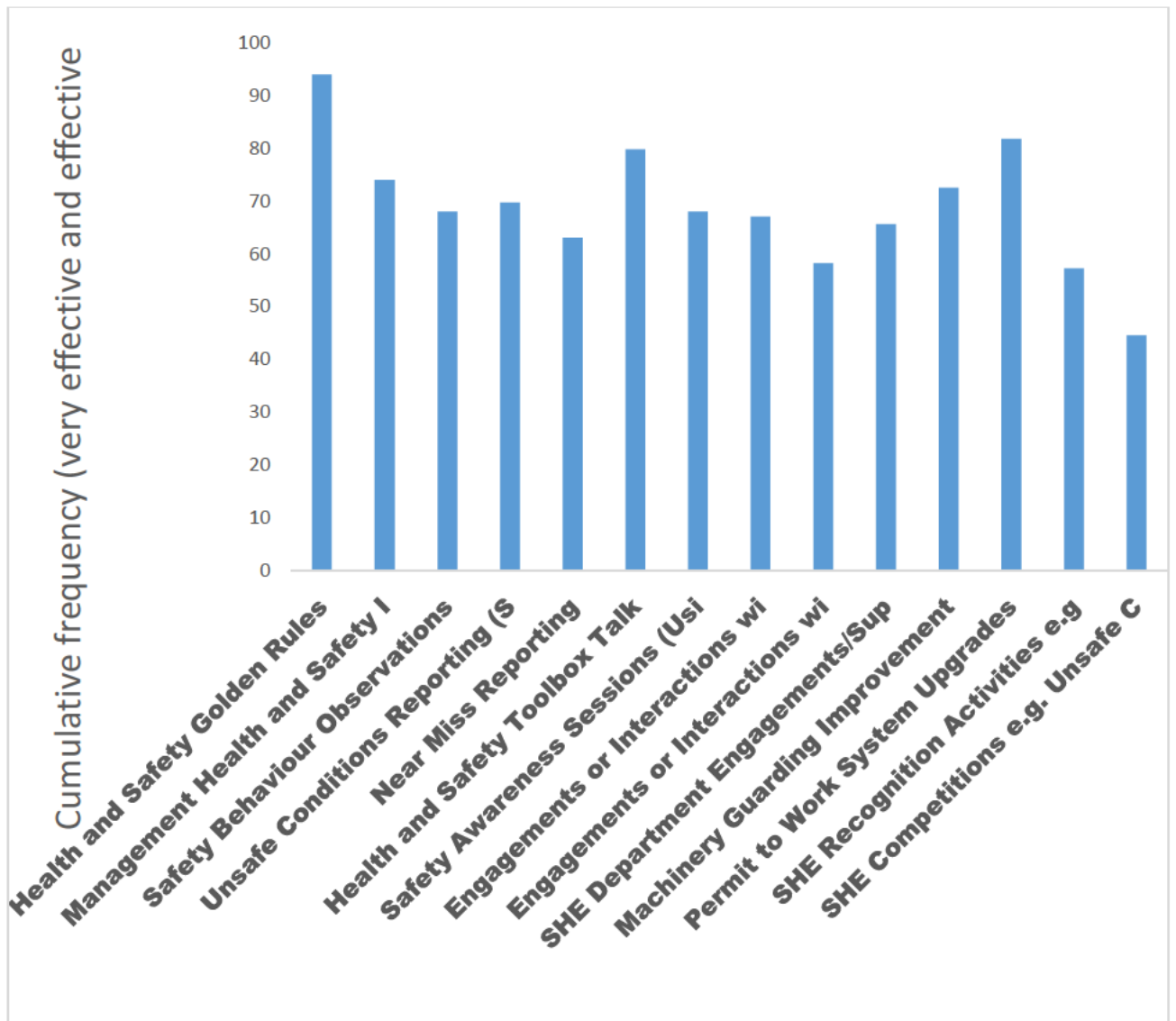


Figure 4.1: Cumulative Frequency Analysis of Effectiveness of Key Health and Safety Initiatives or Programs introduced by RB South Africa Manufacturing

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
0,837	0,838	14

Table 4.1: Reliability Statistics

Occupational Health and Safety Initiative or Program	N	Minimum	Maximum	Mean	Std. Deviation
Health and Safety Golden Rules	100	1.00	5.00	4.4700	.71711
Management Health and Safety Inspections (Red-light Audits)	100	1.00	5.00	3.9400	1.14433
Safety Behavior Observations (SBOs)	97	1.00	5.00	3.9072	1.30769
Unsafe Conditions Reporting (Safety Tags)	98	1.00	5.00	3.9694	1.03997
Near Miss Reporting	100	1.00	5.00	3.6600	1.31210
Health and Safety Toolbox Talks	99	1.00	5.00	4.2020	1.13371
Safety Awareness Sessions (Using guest presenters)	99	1.00	5.00	3.8384	1.13125
Engagements or Interactions with Safety and Health (SHE Reps) Representatives	100	1.00	5.00	3.7200	1.23975
SHE Department Engagements/Support	99	1.00	5.00	3.9394	1.13226
Engagements or Interactions with Team Leaders/Supervisors	98	1.00	5.00	3.7245	1.11947
Machinery Guarding Improvements	98	1.00	5.00	4.0612	1.04355

Permit to Work System Upgrades	99	1.00	5.00	4.1111	1.01909
SHE Competitions e.g. Unsafe Conditions reporting competition (braai)	99	1.00	5.00	3.1010	1.54190
SHE Recognition Activities e.g. 1 million hours without Lost Workday	98	1.00	5.00	3.7041	1.19457

Table 4.2: Descriptive Analysis of the key Health and Safety initiatives or Programs introduced at RB South Africa Manufacturing

4.3.1 Results aligned to Objective 1: Most Effective Occupational health and safety programs or Initiatives

The most effective programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing facility in driving improved health and safety performance according to employee perspectives were determined by an analysis of the cumulative frequency of the effectiveness ratings. The most effective occupational health and safety programs or initiatives introduced at RB Elandsfontein according to shop floor employee perceptions which had the highest cumulative frequency ratings are; Health and Safety Golden Rules (94%), Permit to Work (81,8%), Health and Safety Toolbox talks (79,8%), Management Health and Safety Audits (74%) and Machinery Guarding Improvements (72,5%). A cumulative frequency rating 'cut-off of 70% was put as a cut-off in order to determine the most effective programs or initiatives.

A review of the average ratings across the entire 5-rating scale for the perceived effectiveness across all the 14 initiatives or programs reviewed during the study show that the 5 most effective programs or initiatives are; Health and Safety Golden Rules (4,47), Health and Safety Toolbox Talks (4,20), Permit to Work System Upgrades (4,11), Machinery Guarding Improvements (4,06) and Unsafe Conditions Reporting (3,96). The most effectiveness programs or initiatives is further confirmed by applying a 75% overall effectiveness threshold equivalent or an average overall effectiveness rating score of 3.75 as they are all below this threshold.

The effectiveness of 4 of these activities is confirmed by both cumulative frequency analysis and average ratings; Health and Safety Golden Rules, Permit to Work upgrades, Health and Safety Toolbox talks and Machinery Guarding Improvements as shown in figure 10 below. These 4 most effective programs can therefore be applied in similar Fast-Moving Consumer Goods manufacturing environments where a quick turn-around in occupational health and safety performance is desired.

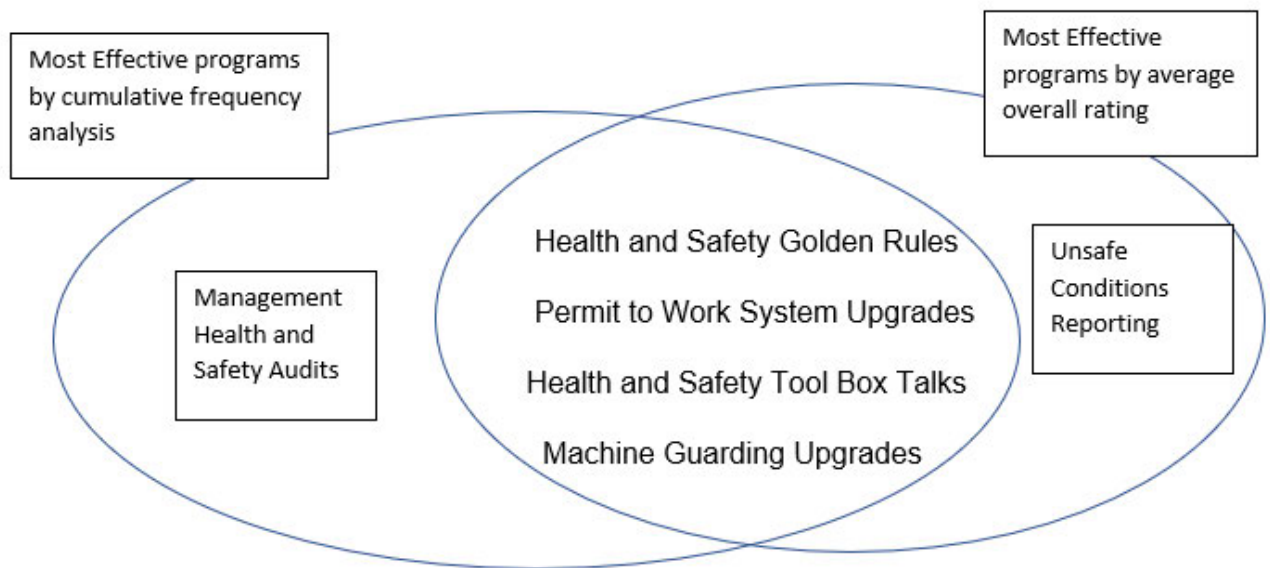


Figure 4.2: Venn Diagram showing Most Effective programs by cumulative frequency and average overall rating analysis

According to Du Pont (2016), “the 22 elements of improving occupational health and safety are; Strong, visible management commitment (VMC), Clear, meaningful policies and principles (MPP), Integrated organization structure (IOS), Line management accountability and responsibility (LNA), Challenging goals, objectives and plans (CGP), Supportive SHE personnel (SHSP), High standards of procedures and performance (HSP), Continuous training and development (CTD), Effective two-way communication (ETC), Progressive motivation and awareness (PMA), Behaviour and observations and audits (BOA), Thorough investigations and reports (TIR), Personnel changes, Contractors safety management, Quality assurance, Pre-start-up reviews, Mechanical integrity, Changes in facilities, Process information, Changes in technology, Risk assessment and process hazards analysis and Emergency response and preparedness”. The 4 activities or initiatives

confirmed to be the most highly effective programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing are all part of the Du Pont model for safety excellence.

The corresponding Du Pont elements for the Reckitt Benckiser safety improvements initiatives or programs are shown below;

Reckitt Benckiser Occupational Safety Improvement initiative or program	Corresponding Du Pont Safety Excellency Model Element
Health and Safety Golden Rules,	Clear, meaningful policies and principles (MPP)
Permit to Work upgrades	High standards of procedures and performance (HSP)
Health and Safety Toolbox talks and	Continuous training and development (CTD)
Machinery Guarding Improvements	Mechanical integrity and Changes in facilities

Table 4.3 Reckitt Benckiser most effective Safety Improvement Programs or Initiatives with corresponding Du Pont Safety Excellency Model Elements

4.3.2 Results aligned to Objective 2: Least Effective key occupational health and safety programs or initiatives

The least effective programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing facility in driving improved health and safety performance according to employee perspectives were determined by an analysis of the cumulative frequency of the effectiveness ratings. The 5 least effective occupational health and safety programs or initiatives introduced at RB Elandsfontein according to shop floor employee perceptions which had the lowest cumulative frequency ratings are; SHE Department support (65%), Near Miss Reporting (63%), Engagement or Interaction with Team Leaders/Supervisors (58,2%), SHE Recognition Activities e.g. 1 million hours without Lost Workday (57,2%) and SHE Competition (44,5%).



Figure 4.3: Venn Diagram showing the least effective health and Safety by Cumulative Frequency and Average Overall Ratings Analysis

The ineffectiveness of 4 these least effective programs or initiatives is also confirmed by both cumulative frequency analysis and average ratings. These are; as shown in the table below; SHE Competitions, Engagement with SHE reps, Near Miss Reporting and Engagement with Team Leaders.

According to Du Pont (2016), “the 22 elements of improving occupational health and safety are; Strong, visible management commitment (VMC), Clear, meaningful policies and principles (MPP), Integrated organization structure (IOS), Line management accountability and responsibility (LNA), Challenging goals, objectives and plans (CGP), Supportive SHE personnel (SHSP), High standards of procedures and performance (HSP), Continuous training and development (CTD), Effective two-way communication (ETC), Progressive motivation and awareness (PMA), Behaviour and observations and audits (BOA), Thorough investigations and reports (TIR), Personnel changes, Contractors safety management, Quality assurance, Pre-start-up reviews, Mechanical integrity, Changes in facilities, Process information, Changes in technology, Risk assessment and process hazards analysis and Emergency response and preparedness”. The 4 activities or initiatives confirmed to be the ineffective programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing are all part of the Du Pont model for safety excellence. This ineffectiveness of these programs implies that they have not been properly deployed or implemented.

The corresponding Du Pont elements for the Reckitt Benckiser safety improvements initiatives or programs are shown below;

Reckitt Benckiser Occupational Safety Improvement initiative or program	Corresponding Du Pont Safety Excellency Model Element
SHE Competitions	“Effective two-way communication (ETC)/, Progressive motivation and awareness (PMA)”
Engagement with SHE reps	Effective two-way communication (ETC)
Near Miss Reporting	Thorough investigations and reports (TIR)/ Progressive motivation and awareness (PMA)
Engagement with Team Leaders	Effective two-way communication (ETC)/ Line management accountability and responsibility (LNA)

Table 4.4 Reckitt Benckiser least effective Safety Improvement Programs or Initiatives with corresponding Du Pont Safety Excellency Model Elements

4.3.3 Results aligned to Objective 2: Effective health and safety programs or initiatives

In order to determine effective programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing facility in driving improved health and safety performance according to employee perspectives an analysis of the cumulative frequency and average ratings across the entire rating scale of the effectiveness ratings was applied. These are programs deemed to be effective in their current form and can therefore be applied to similar Fast-Moving Consumer Goods manufacturing environments. Out of the 14 programs or initiatives reviewed 10 of these were confirmed to be effective by applying the overall effectiveness threshold of 75% or 3,75 average score can be applied in similar environments and are expected to generate a positive impact on occupational health and safety performance. These 10 programs are; Health and Safety Golden Rules, Management Health and Safety Inspections (Red-light Audits), Safety Behavior

Observations (SBOs), Unsafe Conditions Reporting (Safety Tags), Near Miss Reporting, Health and Safety Toolbox Talks, Safety Awareness Sessions (Using guest presenters), SHE Department Engagements/Support, Machinery Guarding Improvements, Permit to Work System Upgrades.

According to Du Pont (2016), “the 22 elements of improving occupational health and safety are; Strong, visible management commitment (VMC), Clear, meaningful policies and principles (MPP), Integrated organization structure (IOS), Line management accountability and responsibility (LNA), Challenging goals, objectives and plans (CGP), Supportive SHE personnel (SHSP), High standards of procedures and performance (HSP), Continuous training and development (CTD), Effective two-way communication (ETC), Progressive motivation and awareness (PMA), Behaviour and observations and audits (BOA), Thorough investigations and reports (TIR), Personnel changes, Contractors safety management, Quality assurance, Pre-start-up reviews, Mechanical integrity, Changes in facilities, Process information, Changes in technology, Risk assessment and process hazards analysis and Emergency response and preparedness”. The 10 activities or initiatives confirmed to be effective programs or initiatives introduced at Reckitt Benckiser South Africa manufacturing are all part of the Du Pont model for safety excellence.

The corresponding Du Point elements for the Reckitt Benckiser safety improvements initiatives or programs are shown below;

Reckitt Benckiser Occupational Safety Improvement initiative or program	Corresponding Du Pont Safety Excellency Model Element
Health and Safety Golden Rules,	Clear, meaningful policies and principles (MPP)
Permit to Work upgrades	“High standards of procedures and performance (HSP)”
Health and Safety Toolbox talks and	Continuous training and development (CTD)
Machinery Guarding Improvements	Mechanical integrity and Changes in facilities
Management Health and Safety Inspections (Red-light Audits)	Strong, visible management commitment (VMC),
Safety Behavior Observations (SBOs)	Behaviour and observations and audits (BOA),
Unsafe Conditions Reporting (Safety Tags)	Mechanical integrity, Changes in facilities
Near Miss Reporting	Thorough investigations and reports (TIR),
Safety Awareness Sessions (Using guest presenters)	Continuous training and development (CTD)/ Progressive motivation and awareness (PMA)
SHE Department Engagements/Support	Supportive SHE personnel (SHSP),

Table 4.5 Reckitt Benckiser effective Safety Improvement Programs or Initiatives with corresponding Du Pont Safety Excellency Model Elements

4.4 Conclusion

The results of the survey on the effectiveness of occupational health and safety programs or initiatives established that, Health and Safety Golden Rules, Permit to Work upgrades, Health and Safety Toolbox talks and Machinery Guarding Improvements as the 4 most effective programs or initiatives. These 4 most effective programs can therefore be applied in similar Fast-Moving Consumer Goods manufacturing environments where a quick turn-around in occupational health and

safety performance is desired. The results of the survey on the effectiveness of occupational health and safety programs or initiatives established that, SHE Competitions, Engagement with SHE reps, Near Miss Reporting and Engagement with Team Leaders are the least effective programs or initiatives. These programs will therefore need to be immediately fine-tuned in order to bring about the desired level of effectiveness. In terms of programs which can bring about change or improvement in occupational health and safety the following 10 programs or initiatives were determined to be effective; Health and Safety Golden Rules, Management Health and Safety Inspections (Red-light Audits), Safety Behavior Observations (SBOs), Unsafe Conditions Reporting (Safety Tags), Near Miss Reporting, Health and Safety Toolbox Talks, Safety Awareness Sessions (Using guest presenters), SHE Department Engagements/Support, Machinery Guarding Improvements, Permit to Work System Upgrades. The next chapter summarizes the outcomes, with respect of the research questions that were developed in this study.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the outcomes, with respect of the research questions that were developed in this study. The chapter does not restate the research questions and further outlines them in the discussion. The chapter combines the discussion and findings of the study, together clearly indicating where an outcome arises. Among other things, the following are highlighted in this chapter: Summary of findings, the most effective and least effective safety initiatives or programs according to shop floor employees' perspective and recommendations for future research. In addition to that, the chapter also presents the limitations of the study and the areas identified for further study or researching. Prior to discussing these issues, it is essential to reiterate what the study was all about. In essence, Chapter 1 gave an overview of the study, Chapter 2 reviewed literature, and chapter 3 gave the methodology of the study followed by chapter which discussed the findings. In view of that, this chapter concludes that study by proving the conclusion, as well as the recommendations of the study. The following section highlights the summary of findings.

5.2 Conclusions

RB Elandsfontein site introduced a number of key initiatives or programs to turn around its occupational health and safety performance in 2017 after a period of poor occupational health and safety performance as shown by the key performance indicators used by the company. After a period or more than two years since the introduction of these key health and safety initiatives it was important to conduct a review of the impact or effectiveness of these key occupational initiatives or programs. Among the various health and safety initiatives and program introduced at RB Elandsfontein there are some which have been very effective and others not very effective as confirmed by the shop floor employees.

5.2.1 Conclusions aligned to objective 1: Most Effective Occupational health and safety programs or Initiatives

It can be concluded that out the 14 key occupational health and safety programs or initiatives introduced at RB South Africa manufacturing facility, 4 of these have been the most effective in driving improvement to the occupational health and safety

performance of the site as confirmed by both cumulative analysis and average ratings of employees' perspective surveys. These programs or initiatives are; Health and Safety Golden Rules, Permit to Work, Health and Safety Toolbox talks and Machinery Guarding Improvements. These programs or initiatives need to continue to be driven and sustained by the company in order to maintain the good occupational and health safety performance. Other sites or companies in similar Fast-Moving Consumer Goods manufacturing environments wishing to turn-around occupational health and safety performance can adopt these programs or initiatives in their current form as they guaranteed to produce required improvements.

5.2.2 Conclusions aligned to objective 2: The least effective key occupational health and safety programs or initiatives

It can be concluded that out the 14 key occupational health and safety programs or initiatives introduced at RB South Africa manufacturing facility, 4 of these have not been effective in driving improvements to the occupational health and safety performance of the site as confirmed by both cumulative analysis and average ratings of employees' perspective surveys. These programs or initiatives are;

SHE Competitions, near Miss Reporting, Engagement with Team Leaders and SHE Recognition Activities. These least effective initiatives or programs were all below the 75% overall effectiveness cumulative frequency and 3,75 average rating score. RB South Africa manufacturing site needs to review these programs as they are not effectively contributing to the overall effectiveness of the occupational health and safety program. Continuing these programs in their current form will not be efficient utilization of the company resources.

5.2.3 Conclusions aligned to Objective 3: Effective health and safety programs or initiatives

It can also be concluded that out the 14 key occupational health and safety programs or initiatives introduced at RB South Africa manufacturing facility, 10 of these can be deemed to been effective in driving improvements to the occupational health and safety performance of the site as confirmed by both cumulative analysis and average ratings of employees' perspective surveys.

The 10 programs or initiatives confirmed to be effective by applying the overall effectiveness threshold of 75% or 3,75 average score. 4 out of these 10 programs

or initiatives are highly effective as outlined in the first objective while the 6 are overlay effective. The 6 programs don't need to be necessarily adjusted and can be pursued in their current form but there is room for further enhancement of these programs or initiatives from a continuous improvement point of view. The 10 effective programs or initiatives can be applied in similar Fast-Moving Consumer Goods manufacturing environments and are expected to generate a positive impact on occupational health and safety performance. These are; Health and Safety Golden Rules, Management Health and Safety Inspections (Red-light Audits), Safety Behaviour Observations (SBOs), Unsafe Conditions Reporting (Safety Tags), Near Miss Reporting, Health and Safety Toolbox Talks, Safety Awareness Sessions (Using guest presenters), SHE Department Engagements/Support, Machinery Guarding Improvements, Permit to Work System Upgrades

5.3 Implications

The main purpose of this study was to establish the effectiveness or ineffectiveness of the various health and safety initiatives or programs introduced at RB Elandsfontein site. The most effective initiatives or programs were determined to be Health and Safety Golden Rules, Permit to Work, Health and Safety Toolbox talks and Machinery Guarding Improvements. The company needs to reinforce these programs in their current forms as they are viewed to be impactful by employees on the ground where their impact is experienced or felt. These initiatives or programs can also be adopted in their current forms to other similar manufacturing which are looking at turning around their occupational health safety performance as they have been demonstrated to be very effective or impactful.

The 10 programs confirmed to be effective by applying the overall effectiveness threshold of 75% or 3,75 average score can be applied in similar environments and are expected to generate a positive impact on occupational health and safety performance. These 10 programs are; Health and Safety Golden Rules, Management Health and Safety Inspections (Red-light Audits), Safety Behaviour Observations (SBOs), Unsafe Conditions Reporting (Safety Tags), Near Miss Reporting, Health and Safety Toolbox Talks, Safety Awareness Sessions (Using guest presenters), SHE Department Engagements/Support, Machinery Guarding Improvements and Permit to Work System Upgrades.

The least effective initiatives or programs which are SHE Competitions, near Miss Reporting, Engagement with Team Leaders and SHE Recognition Activities need to be reviewed with a view of understanding the reason why they are not very impactful and how can they be turned around or fine-tuned to be more effective. Benchmarking can also be done other RB manufacturing sites to establish how these initiatives or programs are being administered and similar models can be applied by RB Elandsfontein.

5.4 Limitations of the Study

The main limitation encountered in the study was that there was no uniform participation across all the departments. Although the questionnaire was distributed to the entire eligible target population or all shop floor employees some of the employees did not complete the questionnaire despite being encouraged to complete. There was uneven distribution of responses across the different departments with some department showing higher showing higher participation or response rates while other had lower participation or response rate.

There was also no allocated time off production lines for employees to complete the questionnaires as a result they had to complete the questionnaires whilst on their respective work stations which might have resulted in employees who operate machinery which requires constant attention being unable to get time to complete the questionnaire.

It also took time to get all the completed questionnaires back from participant and several follow-ups had to be done

5.5 Recommendations

As from the conclusions above the study showed that out of the 14 occupational health and safety programs or initiatives introduced at RB Elandsfontein manufacturing site there are some of these programs which have made a good impact or are very effective as experienced by shop floor employees on the ground where these initiatives or programs are administered. These highly effective initiatives or programs include; Health and Safety Golden Rules, Permit to Work, Health and Safety Toolbox talks and Machinery Guarding Improvements. The company need to pursue the implementation of these initiatives or programs in their current form or reinforce them as they can be attributed to the turn-around in the

recent improvement in occupational health and safety performance experienced by the company. These 4 most effective programs can therefore be applied in similar Fast-Moving Consumer Goods manufacturing environments where a quick turn-around in occupational health and safety performance is desired.

As from the conclusions above the study also shows that some of the interventions or programs have not been as effective as desired as experienced by shop floor employees on the ground where these initiatives or programs are administered. These programs include; SHE Competitions, near Miss Reporting, Engagement with Team Leaders and SHE Recognition Activities. Bearing in mind that the study concluded that these programs or initiatives are not effective in driving occupational health and safety performance in their current form, they need to be reviewed with a view of understanding the reason why they are not very impactful and how can they be turned around or fine-tuned to be more effective. Continuation of these programs or initiatives in their current form will most likely lead to poor participation from employees and lack of interest as they are perceived to be less effective by employees. Continuing these programs in their current form will also not be efficient utilization of the company resources due to the little benefit they bring.

As from the conclusions above the study also confirmed 10 initiatives or programs out of the 14 reviewed to be effective by applying the overall effectiveness threshold of 75% or 3,75 average score. These initiatives or programs can be applied in similar environments and are expected to generate a positive impact on occupational health and safety performance. These 10 programs are; Health and Safety Golden Rules, Management Health and Safety Inspections (Red-light Audits), Safety Behaviour Observations (SBOs), Unsafe Conditions Reporting (Safety Tags), Near Miss Reporting, Health and Safety Toolbox Talks, Safety Awareness Sessions (Using guest presenters), SHE Department Engagements/Support, Machinery Guarding Improvements, Permit to Work System Upgrades. 4 out of 10 programs or initiatives are highly effective as already outlined above while the other 6 are effective. These programs or initiatives need to continue to be driven and sustained by the company in order to maintain the good occupational and health safety performance. Other sites or companies in similar Fast-Moving Consumer Goods manufacturing environments wishing to turn-around occupational health and safety performance

can adopt these programs or initiatives in their current form as they are guaranteed to produce required improvements.

5.6 Recommendations for further studies

The key area which requires further study is a review of the least effective occupational health and safety initiatives or programs at RB Elandsfontein. A deep dive into this through focus groups or interviews will lead to more insights into why they haven't yielded the desired impact. A program like SHE Competitions for example might not have yielded the desired due to the rewards e.g. team braai not being motivational enough for the employees to drive the required participation. An individual reward or prize might be more desirable. Focus groups or personal interviews will be able to shed more insights into these issues.

5.7 Summary

The study managed to identify the initiatives or programs which are currently the most effective according to shop floor employees' perspective from all the initiatives or programs introduced at Reckitt Benckiser South Africa manufacturing site as part of the occupational health and safety turn-around program. These initiatives or programs are; Health and Safety Golden Rules, Permit to Work, Health and Safety Toolbox talks and Machinery Guarding Improvements. The company needs to continue to spearhead these programs in their current form as they are indeed making a great impact in the workplace. The most effective programs can also be adopted by other similar sites who also need to turn-around their occupational health and safety performance.

The study also confirmed 10 initiatives or programs out of the 14 reviewed to be effective by applying the overall effectiveness threshold of 75% or 3,75 average score. These initiatives or programs can be applied in similar environments and are expected to generate a positive impact on occupational health and safety performance. These 10 programs are; Health and Safety Golden Rules, Management Health and Safety Inspections (Red-light Audits), Safety Behaviour Observations (SBOs), Unsafe Conditions Reporting (Safety Tags), Near Miss Reporting, Health and Safety Toolbox Talks, Safety Awareness Sessions (Using guest presenters), SHE Department Engagements/Support, Machinery Guarding Improvements, Permit to Work System Upgrades

The study also managed to identify the initiatives or programs which are currently the least effective according to shop floor employees' perspective from all the initiatives or programs introduced at Reckitt Benckiser South Africa manufacturing site as part of the occupational health and safety turn-around program. These initiatives or programs are SHE Competitions, near Miss Reporting, Engagement with Team Leaders and SHE Recognition Activities. The company needs to review these initiatives or programs to enable them to bring the desired effectiveness. Pursuing these programs in their current form will not yield the desired benefit due to lack of employee participation in these initiatives or programs.

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APPENDICES

Appendix 1

Informed Consent Letter 3C

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP**

Dear Respondent,

MBA Research Project

Researcher: Lloyd Manhivi [REDACTED]

Supervisor: Professor Muhammad Hoque 031 260 8690

Research Office: Ms P Ximba 031-2603587

I, **Lloyd Manhivi** an MBA student, at the Graduate School of Business and Leadership, of the University of KwaZulu Natal. You are invited to participate in a research project entitled **Understanding Drivers Occupational Health and Safety performance: A case study of a Fast-Moving Consumer Goods Manufacturing Company**. The aim of this study is to: **To determine the effectiveness of key occupational health and safety activities introduced at Reckitt Benckiser manufacturing facilities in driving improved health and safety performance according to employee's perspectives and to produce a model for improving occupational health and safety performance which can be applied in the Fast-Moving Consumer Goods manufacturing sector**

Through your participation I hope to understand **the most effective programs or activities which can drive occupational health and safety performance in the Fast-Moving Consumer Goods manufacturing sector**. The results of the focus group are intended to contribute to **development of a model for improving occupational health and safety performance which can be applied in the Fast-Moving Consumer Goods manufacturing sector**.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey/focus group. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The survey should take you about **10 minutes** to complete. I hope you will take the time to complete this survey.

Sincerely

Lloyd Manhivi

Investigator's signature _____ Date _____

This page is to be retained by participant

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP**

MBA Research Project

Researcher: Lloyd Manhivi [REDACTED]

Supervisor: Professor Muhammad Hoque 031 260 8690

Research Office: Ms P Ximba 031-2603587

CONSENT

I..... (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

.....

This page is to be retained by researcher

Appendix 2

Understanding Drivers of improving Health and Safety Performance Questionnaire

There are number of key safety interventions that have been implemented at RB Elandsfontein over the past 24 months to improve health and safety performance. This questionnaire seeks to measure the degree of effectiveness of some of the key interventions implemented based on employees' perceptions.

Can you please indicate the most appropriate response based on your view on how each of the intervention has been effective in creating a safe work environment at RB Elandsfontein.

Name of Employee.....Department.....

Please Indicate how long you have been employed here

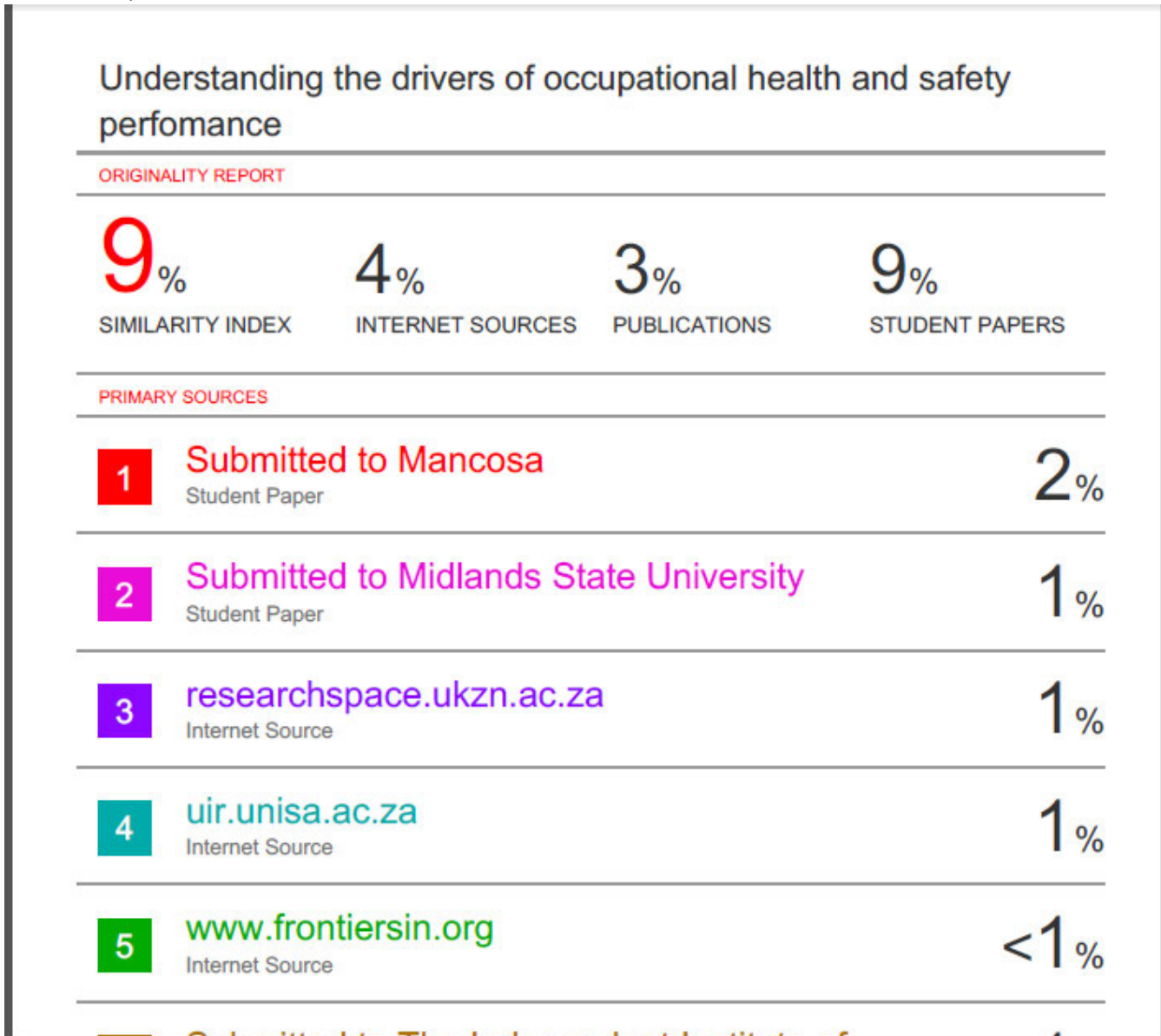
Less than 1 year 1-2 years >2 years

(Please only select 1 response per element)

		Very Effective	Effective	Moderately Effective	Slightly Effective	Not at all Effective
1	Health and Safety Golden Rules					
2	Management Health and Safety Inspections (Red-light Audits)					
3	Safety Behaviour Observations (SBOs)					
4	Unsafe Conditions Reporting (Safety Tags)					
5	Near Miss Reporting					
6	Health and Safety Toolbox Talks					
7	Safety Awareness Sessions (Using guest presenters)					
8	Engagements or Interactions with Safety and Health (SHE Reps) Representatives					
9	Engagements or Interactions with Team Leaders/Supervisors					
10	SHE Department Engagements/Support					
11	Machinery Guarding Improvements					
12	Permit to Work System Upgrades					
13	SHE Recognition Activities e.g. 1 million hours without Lost Workday					
14	SHE Competitions e.g. Unsafe Conditions reporting competition (braai)					

Please state any other key safety activity/intervention you feel has been effective in driving safety performance improvement at RB Elandsfontein;.....

Appendix 3
Turnitin Report



Protocol reference number : HSS/0163/019M

New Project title : Understanding of key drivers of Improving Occupational Health and Safety performance: A case study of a FMCG Manufacturing Company.

ACKNOWLEDGEMENT:- BREACH OF ETHICAL PROCESSES AT UKZN

I, the undersigned,

Student Name (Student Nr) : Lloyd ~~Mabwini~~ *MANHINI*
School : Graduate School of Business & Leadership
Campus : Westville

as the Principal Investigator ("the Applicant") in the above stated project, do hereby acknowledge that:

1. The University of KwaZulu-Natal's (hereinafter "UKZN") Research Ethics Policy (V) does not make provision for Retrospective Ethics Approval;
2. All researchers (both students and staff) at UKZN are obliged to be familiar with this policy;
3. I have been informed that research cannot be done without obtaining full ethical clearance as per the policy and guidelines of the University;
4. Research for the above project was undertaken by myself without final ethical clearance being obtained;
5. The University reserves its right to, at any stage and time, withdraw the relevant degree obtained by myself if:
 - 5.1 It becomes known to UKZN that there was an additional ethical breach during any field work or whilst collection data for the above stated project, and / or
 - 5.2 I fail to apply for ethical clearance for any future research projects.
6. In addition to point 5 above, the appropriate disciplinary processes will follow should this occur again.

I further acknowledge that should there be any legal implications/actions emanating from the research in terms of any ethical violations, I will be personally liable and hereby indemnify UKZN against any legal action that may arise from my failure to adhere to the University Research Ethics Policy (V).

Signed at *JHB* on the *15* day of *SEPTEMBER* 2020

Signature of applicant: _____

Signed at *WESTVILLE* on the *4* day of *SEPTEMBER* 2020

Signature of Chair (HSSREC): _____

Date: *4/9/2020*