



**The Perceived Knowledge and Attitudes of Administrative Staff Working in
Supply Chain Management in a South African Provincial Department of Health**

By

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Supply Chain Management in a South African Provincial Department of Health**

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**Submitted in fulfilment of the requirements for Masters of Management
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DECLARATION

I hereby declare that this dissertation, submitted for Masters of Management Science in Administration and Information Management in the Department of Information and Corporate Management at the Durban University of Technology, is my own original work and has not previously been submitted to any other institution of higher education. I further declare that all sources were cited, referenced, and acknowledged as highlighted in the references.

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Ms Nontobeko M. Ngobese

.....

Date

ABSTRACT

The Provincial Department of Health envisions an optimal status of health for all persons in the Province, and its mission is to develop a sustainable, co-ordinated, integrated and comprehensive health system at all levels, based on a primary health care approach, and operating through the District Health system. However, for the Department to achieve its vision and mission, it requires more than health professional staff. It requires effective and efficient supporting programmes which are non-core services, but crucial to its efficient functioning. The study focused on the Supply Chain Management (SCM) administrative staff and their end-users. The SCM section supports all departmental programmes in terms of facilitating the procurement process of assets, medical equipment and all other goods and services required to provide services to the public. The study only targeted the following SCM sub-sections: Acquisitions and Quotations Management, Demand Management and Contract Management. All end-users in the Department were targeted. The researcher believed that the study was necessary in order to identify critical factors apparently negatively affecting the work of the SCM administrative staff in facilitating the procurement of the goods and services required by the end-users.

The purpose of the study was therefore to examine the perceived knowledge and attitudes of administrative staff towards their work within SCM with the aim of contributing to the achievement of the goals for the Department. A lack of knowledge and skills could be responsible for certain negative attitudes encountered or perceived from these administrators. The following problems had been identified: loss and misplacement of procurement documents; a lack of proper accountability; Provincial hospitals not receiving goods timeously due to SCM inefficiencies; staff attitudes to service quality and commitment to stakeholders being experienced as poor; and frequent under-expenditure by various sections often due to SCM staff not implementing and adhering to the correct policies and procedures. However, the problem statement indicated that in the Department of Health, the perceived level of knowledge, skills and attitudes of SCM staff was still unknown in terms of their procurement activities for various programmes and within different sections.

The conceptual framework for the study was drawn from du Toit and Vlok's Supply Chain Management Theoretical Framework (2014:33). A mixed-methods research approach was adopted, which enabled the researcher to collect both qualitative and quantitative data. The researcher designed two sets of questionnaires, one for SCM end-users and one for SCM administrative staff. Both questionnaires had closed-ended, structured questions and one open-ended question. The Statistical Package for Social Sciences (SPSS) and content analysis were used for analysing the data. The data revealed a range of factors that affect SCM administrative staff in their work, as well as SCM end-users' dissatisfaction with the service received from the SCM section. The failure of the Department to obtain a clean audit record for departmental expenditure was also noted.

The study therefore concluded that a relationship does exist between staff knowledge and attitudes and their performance in the work place. Recommendations included that training sessions and workshops should be provided by the Department to equip employees with the relevant skills for the SCM to function more effectively, and also that team-building exercises be offered to improve staff attitudes. It was also recommended that an online system such as LOGIS be introduced for the tracing of all SCM functions. The researcher also advised the Department to create a post at Deputy Director level to monitor the SCM section, and, lastly, she suggested that skills audits should be conducted before the approval of internal employee transfers.

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CHAPTER 1: INTRODUCTION

1.0 BACKGROUND OF THE STUDY

The Department of Health envisions a status of optimal health for all persons in the Province and their mission is to develop a sustainable, co-ordinated, integrated and comprehensive health system at all levels based on the primary health care approach operating through the District Health system (Department of Health, 2017). For the department to achieve its vision and mission, it requires more than health professional staff. It requires effective and efficient supporting programmes which are non-core services but crucial for the functioning of the Department. The study will focus on administrative staff employed in the Supply Chain Management (SCM) section. SCM has the following sub sections: Acquisition & Quotation, Risk management, Demand, Contract, Logistics and Assets Management. The study will focus on the following three sub-sections: Acquisitions & Quotations Management, Demand Management and Contract Management. This choice was determined because the researcher, who is employed in the Department, interacts almost daily with these sections due to the nature of her work. Also these sections were chosen because end-users communicate daily with them. The excluded sections communicate only quarterly with end-users. The researcher believes that the study is required in order to identify factors apparently affecting negatively the work of these SCM administrative staff in terms of facilitating procurement activities within the Department.

The activities for these sub-sections are facilitated by the administrative staff at SCM, who therefore play a critical role in the provision of Health Care Services to the public. Every year, the Department is audited by the office of the Auditor General. The declaration in the Public Audit Act 25 of South Africa (2004) states that an ethical committee is required to perform the audit in order to obtain reasonable assurance about whether the financial statements are free from material misstatement. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether this is due to fraud or

error. In making those risk assessments, the Auditor considers internal controls relevant to the Department's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

It has been reported that in the Department of Health, particularly Supply Chain Management, was unable to obtain a clean report from the office of the Auditor General. According to the latest South African Annual Report available (Department of Health 2012/13: 261), various investigations are being conducted into SCM involving a probe into the awarding of certain contracts, leading to accusations of theft within the Department. Hans (2013:1) states that there is an unconfirmed report stating that two Provincial Department of Health senior managers, who were in strategic positions, were suspended due to a number of activities regarding issuing of contracts and the use of public money at SCM.

The Supply Chain Management section in the Department of Health supports all departmental programmes in terms of facilitating the procurement process of required assets, medical equipment and all other goods and services required to provide services to the people. The procedure that needs to be followed by all end-users in the Department requires each section to have a procurement plan (PP) that has a list of all items that need to be purchased during that financial year. The PP needs to have an estimation of the costs of each item for each quarter, indicating for SCM when the item is required, and this must be submitted to the Finance Section for the purpose of budgeting for items to be procured before the start of the new financial year. The PP also needs to be submitted to SCM for administrative staff in order to allow them to use it for monitoring all received requests/non stock items (NSI) for purchasing the required items.

It is necessary that the required goods and services are provided on time and that they meet the required performance standards, and therefore it is critical that the

administrative staff at SCM implement a process geared to assist the Department to achieve the objectives of providing quality health care services.

On a number of occasions, the Department of Health has been in the media for poor service delivery relating to supply chain issues. The following are some of the examples of such stories published in the media:

- patients having to bring their own sleep wear, toilet paper and bed linen to hospitals because hospitals cannot provide these;
- medical supplies not being available;
- written materials required for campaigns not arriving on time, or not at all. For example, the pamphlets to be used for Department events not being received on time, including, for instance, the Information Educational Communication (IEC) materials for World Breast Feeding Week and for National Nutrition Week. Also the supply of condoms has been inadequate.

Often these mistakes come with no valid explanations and are accompanied by a negative attitude from SCM administrative staff, despite the fact that SCM has administrative personnel that are specifically employed to implement the process of procuring the required resources by end users.

The research therefore aims to examine the perceived knowledge and attitudes of administrative staff towards their work within SCM, with the aim of contributing to the achievement of the goals of the Department, and making recommendations to assist with improved administration in the future. The literature reveals that South African procurement processes often indicate a lack knowledge, skills and capacity amongst staff, and there is frequent non-compliance with SCM policies and regulations (Ambe, 2012). Therefore, the researcher believes that SCM administrative staff often require additional training and they could also contribute towards keeping management in line, and make it more difficult for them to make mistakes, if SCM principles are regularly applied correctly, and orders are processed in time.

1.1 RATIONAL FOR THE STUDY

The purpose of SCM is to sense and respond quickly to changes and capitalise on new opportunities, and also to offer a common information framework that supports

communication and collaboration and meets customers' needs; to track and monitor compliance, and to lower operational expenses with more timely planning for procurement, followed by an improvement in performance and quality (Eresourceerp, 2011). Mathew, John and Kumar (2014) reveal that there is a lack of SCM education, and even the awareness of the concept of SCM, particularly within hospitals, is low. Healthcare supply chains in hospitals should maximise patient care by considering the availability of products. Gupta and Singh (2012) add that the health sector provides products and services required by the clinical department. It must therefore integrate the chain of non-clinical and clinical operations (Acharyulu, 2012) cited in Shekbar (2014). Ma (2017:151) provides information from an International Conference on Science and Social Research (ICSSR) which explains that the purpose of SCM in hospitals involves both the internal supply chain, including the patient care unit, hospital storage, and patients – and the external chain, including vendors, manufacturers and distributors. Ambe and Badenhorst-Weiss (2011) clarify that the purpose of SCM in the public sector is to coordinate all parties involved in delivering the combination of inputs, outputs or outcomes that will meet the specific public sector requirements.

Problem statement

In the Department of Health, the perceived level of knowledge/skills and attitudes of Supply Chain Management administrative staff is still unknown in terms of the procurement activities for various programmes and sections within the Department. It could be that a lack of knowledge and skills will be found responsible for certain negative attitudes and perceptions attributed to these administrative staff members.

In the Department of Health, the following problems have been identified by the researcher as an employee with long-term experience within the Provincial Department of Health:

- Loss or misplacement of procurement documentations.
- Lack of proper accountability.
- Non – renewal of contracts on time
- Provincial hospitals not receiving goods timeously due to SCM inefficiencies.
- Staff attitudes to service quality and commitment to stakeholders being poor.

- There is frequent under-expenditure by departments, often due to SCM staff not implementing and adhering correctly to policies and procedures.

This was evident from a study conducted by Zwelihle and Garbharran (2015: 1) from a South African public sector found that the staff skills in the supply chain division was a major problem that hindered performances.

1.2 RESEARCH AIMS, OBJECTIVES AND DESIGN

The aim of the study was to examine the perceived knowledge and attitudes of administrative staff towards their work within SCM with the aim of contributing to the achievement of the goals for the Department by recommending how SCM administrative staff might be fully equipped with the relevant skills to run the SCM section efficiently, should this be found to be necessary.

The research objectives of the study are to:

- Identify and discuss the critical factors affecting the attitudes of administrative staff working in SCM towards their work.
- To examine to what extent these factors appear to affecting the competence of SCM administrative staff to perform their work.
- To determine whether a relationship exists between the knowledge and skills of SCM administrative staff and their attitudes, and the practice of their duties at a Department of Health Provincial Office.

This study employed a mixed-methods approach, that is, a combination of quantitative and qualitative research techniques. Mixed method research is defined as a procedure for collecting, analysing and mixing both quantitative and qualitative data at some stage of the research process, within a single study, to understand a research problem more completely (Creswell, 2009). Brannen (2017) explains that the term “mixing” indicates that the data or findings are integrated or connected at one or several points within the study. Clark and Ivankova, (2015) also define mixed method as a process of research in which researchers integrate quantitative and qualitative methods of data collection and analysis to best understand a research purpose as it unfolds.

Both quantitative and qualitative methods were applied because behaviour can be explained in causal, deterministic ways, in a quantitative survey and it is possible that people can be manipulated and controlled by the use of fixed response options (quantitative methods) only. Therefore, in addition to the quantitative surveys, some semi-structured interviews were scheduled (although the latter, as explained below, were replaced by the use of one important open-ended question being appended to each questionnaire). In addition, observations and reviews of records or documents for numeric information were analysed.

1.3 SIGNIFICANCE OF THE STUDY

Good administration of SCM is an essential element in achieving operational efficiency. SCM can be applied to a wide range of industries and service providers and is increasingly necessary for customer satisfaction and company success across a range of operations including societal settings, medical missions, disaster relief operations and other kinds of emergencies and it can therefore help to improve the quality of life (Fhyzics, 2018).

The benefit of employing effective and efficient SCM Administrative officers within the Department of Health is hard to overstate as SCM is taken as the heart of the Department. All the required equipment, goods and services for the Department need to be obtained through SCM. SCM administrative staff therefore have a heavy responsibility to ensure that their administrative services are effective and efficient. The importance of SCM is to sense and respond quickly to changes and capitalise on new opportunities, offering a common information framework that supports communication and collaboration and meets customers' needs, to track and monitor compliance, and lower operational expenses with timelier planning for procurement followed by improvement in performance and service quality (Sheridan College, 2018).

1.4 OVERVIEW OF CHAPTERS

1.4.1 Chapter one: Introduction

Chapter one is an introduction that provides a rationale for the study. This chapter also indicated the aim and objectives for the study and explains how the research was designed to identify critical factors affecting SCM administrative staff when executing their daily duties of provision of services to SCM end-users within a provincial Department of Health.

1.4.2 Chapter two: Literature Review

Chapter two provides a literature review that is an evaluative report of information found in literature related to the selected study (Suresh, 2014). The chapter summarizes, evaluates and clarifies the literature. In chapter two, different literature sources are used to comprehend what has been found by different authors regarding the supply chain management (SCM) functions in general and at a public sector in particular. The study focused on the following three sub-sections: Acquisitions & Quotations Management, Demand Management and Contract Management. The chapter also discusses the knowledge, skills, attitudes and competencies required from administrative staff working in these targeted sections, and issues that affect SCM end-users within a Provincial Department of Health.

1.4.3 Chapter Three: Research Methodology

Chapter three discusses the research design and methodology adopted in the study. The discussion includes the research design, target population, sampling techniques, ethical considerations, data collection instruments and the process of dissemination of the questionnaires. The reliability and validity of this study are also discussed.

1.4.4 Chapter Four: Data analysis and interpretation of end-users' responses

Chapter four presents the results and discusses the findings obtained from the structured questionnaires for the SCM end-users. It also discusses the findings from

the open-ended (qualitative) responses from end-users within the Provincial Department of Health.

1.4.5 Chapter Five: Data analysis and interpretation of SCM staff responses

Chapter five presents the results and discusses the findings obtained from the structured questionnaires for the SCM Administrative staff. It also discusses the findings from the open-ended (qualitative) responses from the administrative staff within the Provincial Department of Health.

1.4.6 Chapter Six: Conclusion and Recommendations

Chapter Six concludes the study and makes recommendations arising from the findings, also providing a brief discussion of the limitations of the study, along with suggestions for further research.

1.5 Conclusion

This chapter provided an outline and context of the research, including the reasons motivating the researcher to conduct the study and a summary of all chapters covered in the study. The following chapter will be a detailed review of the literature that is relevant to the study.

CHAPTER 2: LITERATURE REVIEW

2.0 INTRODUCTION

The previous chapter discussed the purpose, outline, plan, objectives and research questions of the chosen research study. According to the Boell and Cecez-Kecmanovic (2015) a literature review is defined as an evaluative report of information found in literature related to the selected study. It summarizes, evaluates and clarifies the literature. In this chapter, different literature will be discussed in order to comprehend what has been found by different authors regarding supply chain management (SCM) functions in general, and at a public sector facility in particular. SCM in the Provincial Department of Health has the following important chain of sub sections: Acquisition and Quotation, Risk Management, Demand, Contract, Logistics and Assets Management, all of which support departmental programmes in terms of facilitating the procurement process of required assets, medical equipment and all other goods and services required for the Department of Health to provide these services to the people. The study will focus on the following three sub-sections: Acquisitions and Quotations Management, Demand Management and Contract Management. Furthermore, it will discuss the knowledge, attitudes and competencies required from the administrative staff working in these departments.

The chapter is divided into three sections: the first section provides an overview of SCM in South Africa; the second section discusses the knowledge, attitude and competencies of the administrative staff responsible for SCM activities, while the third section will focus on the conceptual framework for the study.

2.1 DEFINITION OF SUPPLY CHAIN MANAGEMENT

According to Kolenko (2018) the term Supply Chain Management (SCM) appeared in the early 1980's in an article of The Financial Times, although it was not until the mid-1990's that the concept achieved mainstream recognition. Supply Chain Management refers to a system of organizations, people, activities, information and resources involved in moving a product or service from the supplier and through each intervening stage to a final customer while controlling the relevant inventories

(Toit and Vlok 2014). It also incorporates planning and management of all activities including demand management, sourcing and procurement of goods and services for the organisation. SCM therefore manages all integrated activities with the aim of satisfying the customers or end-users (Lysons and Farrington 2016). Ambe and Badenhorst-Badenhorst-Weiss (2011:437) add that in most cases SCM represents a significant change in the way that organizations view themselves, witnessing values being created through the integration and coordination of supply, demand and relationships, in order to satisfy customers in an effective manner. Therefore, the purpose of SCM is to improve supply chain efficiency in the transformation of raw material components into final products (Emeka, 2015). SCM thus consists of all the stages involved, directly or indirectly, in fulfilling customers' requests. It may not only include the manufacturers or suppliers, but also warehouses, transporters, retailers and end-users (Shodhganga, 2018).

SCM should therefore consider the following when rendering their service to their end-users: that the right items are delivered, at the right cost, at the right place, at the right time, and in the right condition (Shodhganga, 2018). According to Mariani, Quasney and Raynor (2015) supply chain efficiency can be improved by electronic links which make supply chain management communication faster, not only for getting products faster, more cheaply, and of better quality, but also providing managers with the right information at the right time, so that they can make better informed supply chain decisions. The following section discusses the procurement process for effective SCM activities within the Department of Health.

2.2 PROCUREMENT PROCESS IN THE PUBLIC SECTOR

According to the Department of Health (2014:17) procurement is a process of acquiring goods, works and services within the supply chain. Bashuna (2013) explains that procurement in the public sector is the business management function that ensures the documentation, sourcing, access and management of the external resources that an organization needs in order to fulfil its strategic objectives. Blood-Rojas (2017) provides the following six steps to effective procurement management in the public sector.

- *To determine what needs to be procured* by ensuring that goods and services are acquired in line with the service delivery requirements of the department.
- *Choosing a procurement strategy*, where demand management in the public sector should research the market, or test the market, and determine the best strategy to meet their procurement needs.
- *Soliciting bids* should be based on defined policies and procedures provided by the department where suppliers have access to procurement opportunities. This would include advertising them in the gazette/mainstream media, and bidders should be given the appropriate amount of time to respond.
- *Evaluate bids received*, where fairness of the system should be applied.
- *Award the contract*, where a service level agreement (SLA) should be established for all work awarded in order to define the level of service and quality of standards to be provided.
- *Administration of the contract and verification that all contract requirements are met* by monitoring the performance of service providers against contract specifications, and taking remedial action whenever a service provider does not deliver.

2.3 SUPPLY CHAIN MANAGEMENT OVERVIEW IN SOUTH AFRICA

SCM is one of the key mechanisms enabling government to implement policy but its strategic importance has not been recognized and it has been under-capacitated according to the (National Treasury of South Africa 2015). Supply chain management in South Africa has been introduced primarily as a result of the globalisation of manufacturing since the mid-1990s, particularly the growth of manufacturing in China (Colombo and Lanka 2013). Keane, Herbohn and Slaughter (2011) add that SCM usually starts from gathering the raw materials or goods, and finishes when goods are supplied to the ultimate end-users, the customers. The

effective and efficiency management of SCM is challenging and requires clear understanding of the components of SCM.

In 1996, the government of Republic of South Africa introduced a constitution that guided the three spheres of government, namely, National, Provincial and Local governments. The constitution imposed a system of procurement for SCM that is fair, equitable, transparent, competitive and cost-effective and SCM managers in the public sector are compelled to comply with these standard elements in order to function properly (Constitution of Republic of South Africa, 1996). Furthermore, the National Treasury of the Republic of South Africa (2004) also issued General Procurement Guidelines as a basis for transformation of procurement practices by providing revised guidelines and policies that need to be implemented within the public sector to enhance government's commitment to render a good service to the end-users or customers

2.4 THE CONCEPT OF SCM IN THE HEALTH SECTOR

Dzuke and Nuade (2017) indicate that the concept of SCM was developed first in the private sector and then applied to public services to insure better use of public funds. Public Health views the supply chain concept as one among a number of different inter-dependent systems for service delivery, for information, for human resources, for finances, for communication and for behavior change that together comprise an integrated health system (Global Gateway to Health Supply Chain Management, 2018). According to Shou, (2013) the SCM concept in the Healthcare sector can be seen as a key measure leading to patient satisfaction, and that customer satisfaction in the health industry is positively related to SCM. It has been indicated that the SCM concept has a significant influence on the organisation's performance (Mensah, Diyuoh and Oppong 2014).

Supply Chain Management is a concept, strategy and approach that is proving its worth in hospital management all over the world. The pressures on hospital supply chains are changing, and in response to these pressures some hospitals have initiated "green supply chain management" (GSCM) practices that provide opportunities for effectiveness, including environmental effectiveness, of supply

chain performance (Dwevedi 2016:242). Handfield (2016:83) explains, however, that many healthcare organisations are not focused on managing SCM themselves, but rely on an external group purchasing organisation to negotiate all of their contracts, while focusing on insuring compliance amongst the physician community.

2.5 IMPORTANCE AND PURPOSE OF SCM IN THE HEALTH SECTOR

The importance of SCM is to sense and respond quickly to changes and capitalise on new opportunities; to offer a common framework of information that supports communication and collaboration and meets customers' needs; to track and monitor compliance and lower operational expenses with timelier planning for procurement, followed by improvement to performance and quality (Eresourceerp 2011). Gupta and Singh (2012) add that the health sector provides products and services required by the clinical departments. It must integrate and link in with the chains of non-clinical and clinical operations (Acryulu and Shekbar 2012). Findings from the International Conference on Science and Social Research in 2013, explained that the purpose of SCM in hospitals involves the internal chain (including the patient care unit, hospital storage, and the patient) and the external chain (including vendors, manufacturers and distributors). Furthermore, Ambe and Badenhorst-Weiss (2011) define the purpose of SCM in the public sector as being to coordinate all parties involved in delivering the combination of inputs, outputs or outcomes that will meet the specific public sector requirement. Whewell (2016) emphasises that the importance of supply chain processes, and the techniques required to deliver them to patients, will require careful design. In order to do that, the fuller the understanding of the product by SCM and its use, the more effectively patients will benefit from the treatments they receive.

2.6 THE DIAGRAM BELOW ILLUSTRATES THE ELEMENTS OF SUPPLY CHAIN MANAGEMENT THAT ADD VALUE IN EACH PHASE OF THE PROCESS:

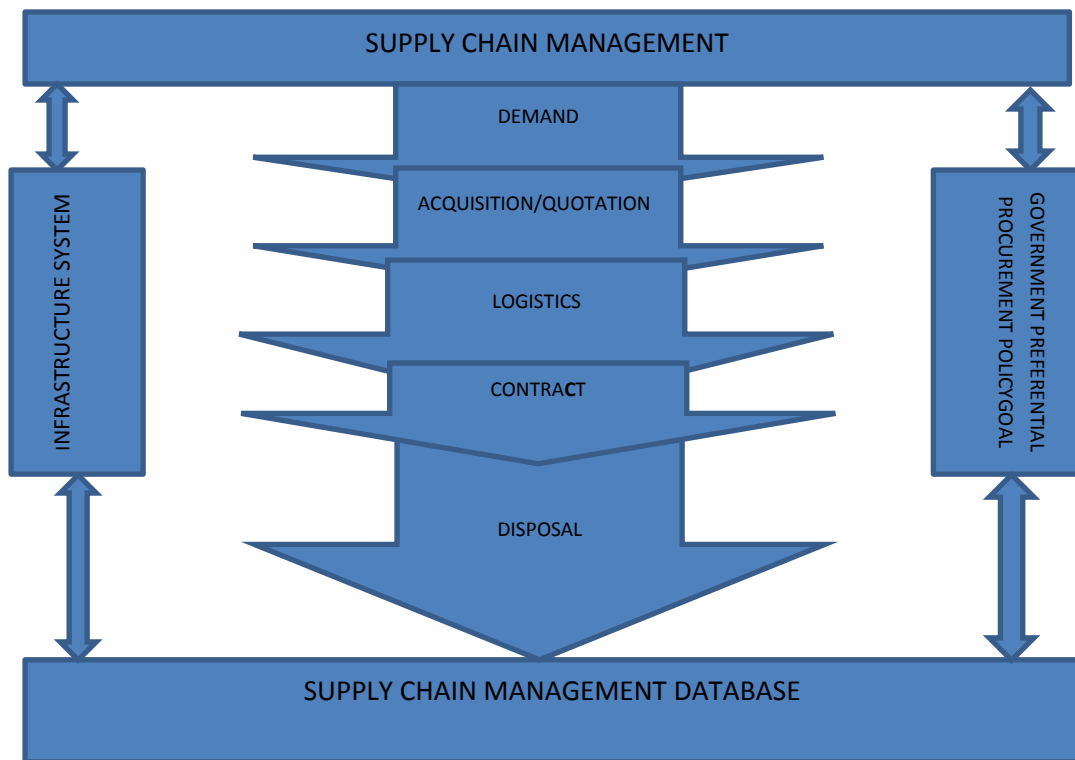


Figure 2.1.: Supply Chain management model 2005 in the Republic of South Africa

Below the researcher provides an overview of the different elements of Supply Chain Management models provided by the National Treasury Guide for Accounting Officers or Authorities:

2.6.1 Demand Management

According to the National Treasury Annual Report Guide (2016:85) demand management is the beginning of the supply chain where there is a need for assessment to ensure that goods and services are acquired in order to deliver the agreed services, specifications are linked to the allocated budget, and the supplying industry has been analysed. Doing this at the demand management phase brings the supply chain management practitioner close to the SCM end-user to ensure value for money and service delivery. Demand management is often perceived more narrowly as a set of business functions concerned with customer management, forecasting, product or brand management marketing, sales and order management (Ross, 2015:247). Chen (2015:144), adds that demand

management attempts to satisfy customer demand with an acceptable quality and level of service, at a satisfactory level of delivery, efficiency, and cost effectiveness. The need is also for assessments to be made in consideration of future needs, frequency of need, and linking the requirements to the budget, as well as conducting an analysis of expenditure, the commodity and the industry. Kersten (2014:345) claims that a good demand management process can enable the organization to be more proactive in anticipating demand, and more reactive to unanticipated demand.

2.6.2 Acquisition/Quotation management

Moroka (2012) explains Acquisition Management as ensuring that acquisition delegations are in place in the organisation, that the market is assessed, a procurement strategy is determined, bid documents are compiled, and responses are received and evaluated for the assessment of the Bid Adjudication Committee. However, in the provincial health sector being researched, there is an ongoing problem with the appointment of suppliers on time as a result of committees not meeting quorum requirements. As a result, in 2014 the Provincial Department of health introduced an INTENDA System that could be used to link in all administrative staff to enable them to download the latest status of all orders sent through the SCM process, and to view the turnaround times for each item. However, this system was launched unsuccessfully, and was never functional with no reason being provided to the SCM end-users.

2.6.3 Logistic management

According to Venus (2014) logistical management is the supply chain management function that plans, implements and controls forward and reverse flow and storage of goods and services and related information, between the point of origin and the point of consumption, in order to meet customers' needs. In the Provincial Health sector there are Central Provisioning Stores (CPS) within the Department where all stocked items are kept and also made available to end-users for placement and collection of their orders. This ensures that there is an effective flow of goods stored from the point of origin to the point of consumption. Christopher (2015:29) also explains that logistics is the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory through the

organisation and its marketing channels in such a way that current and future profitability are maximised through the cost-effective fulfilment of orders.

2.6.4 Contract management

Ochonma (2015:23) explains contract management as the planning, implementing and controlling of all activities involved in the successful delivery of a contract from contract agreement to contract “close out”. In addition, contract management activities should include contractor mobilization, harmonization of technical specifications, supervision of contract implementation, contract monitoring, and inspection measurement of work done, and also managing claims and variations and job completion. Contract management refers to negotiations, and the need to manage the contract to ensure that suppliers and users are in compliance with established contract terms such as pricing, and also aware of non-performance criteria (Surajbali 2016).

2.6.5 Disposal Management

The Disposal Management stage should involve maintaining a data base of redundant material, inspecting material for potential re-use, determining a disposal strategy and executing the physical disposal process (National Treasury Annual Report 2004).

2.7 SCM AND PROCUREMENT IN THE HEALTH SECTOR

According to LaPointe (2016) healthcare supply chain management involves obtaining resources, managing suppliers and delivering goods and services to providers and patients, and to the SCM employees responsible for stocking products and managing inventory. In addition, patients should be allowed to have a voice in the healthcare (SCM) process as the organisation should, where appropriate, order specific correct items for them and keep them in stock.

Rego, Claro and Sousa (2014:17) indicate that procurement is a process of acquiring goods, works and services in the supply chain and that the health procurement process in the public sector is a business management function that

ensures documentation, sourcing, access and management of the external resources that the organization needs, or may need, to fulfil its strategic objectives. However, Dlamini (2016) explains that procurement goes further than buying goods and services, as it covers planning, strategic sourcing, purchasing, order management and on-going cost and supplier performance management. Therefore, as a key responsibility of the Department of Health, Hospital Management should be conducted with integrity and transparency and achieve value for money.

2.7.1 The consequences of SCM not being in compliance with regulations in a Provincial Health Department

The Public Sector Supply Chain Management Review Report (2015) highlighted the following principles that should guide an effective SCM procurement within the public sector: value for money, open and fair competition, risk management and transparency and accountability. However, the Destiny Report (2015) claims that unethical procurement systems were used by a Provincial Department of Health in that cost-effective measures were not considered when appointing Shabeer Ahmed Essa (Trading as Financial Excellence) on contract to work with the Department. The report alleges that the company was paid R 274 165 per month (a larger sum than is earned by the President of the Republic). This, and similar incidents, can be referred to as “fruitless expenditure” which is contrary to the Constitution of Republic of South Africa (1996) in that it imposes a system of procurement for SCM that is not cost-effective. The theoretical framework of Supply Chain Management is discussed below.

2.7.2 The Theoretical Framework of Supply Chain Management

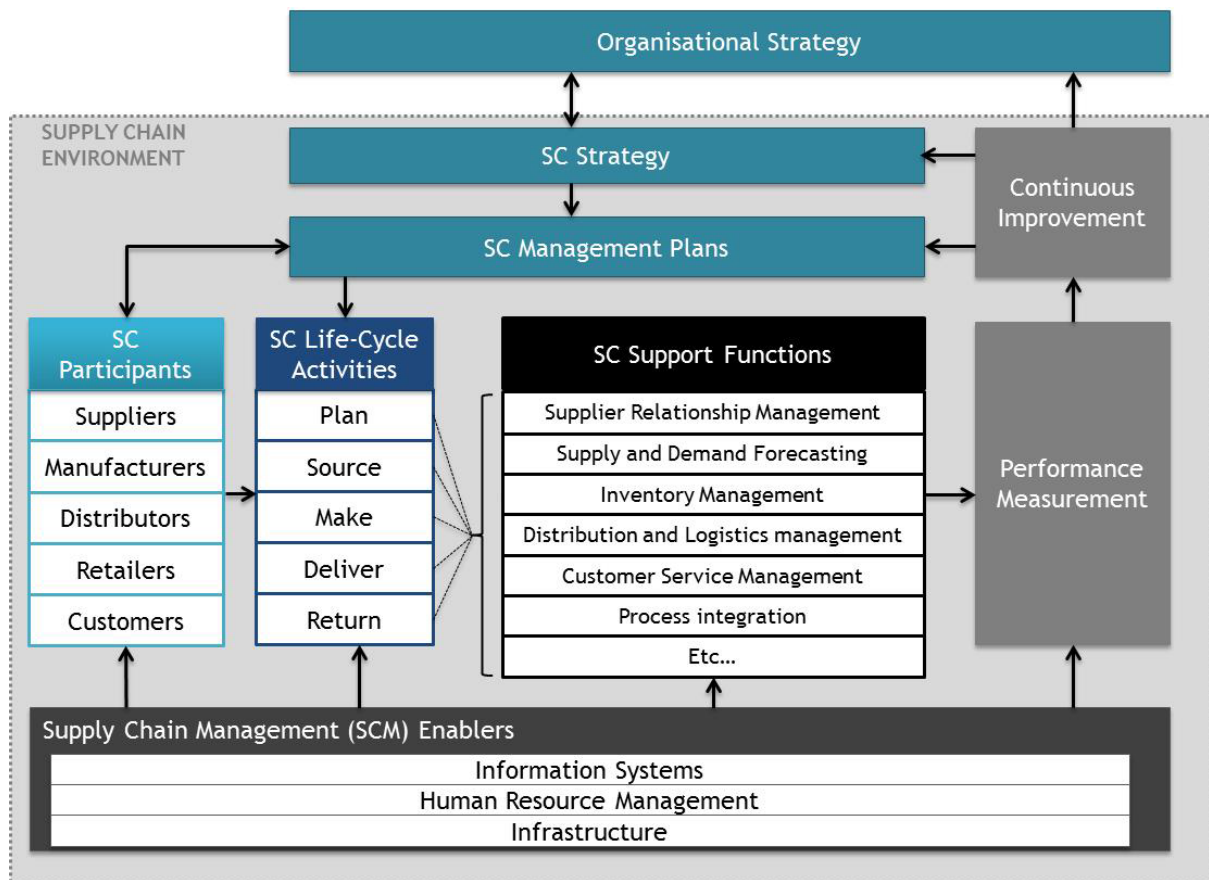


Figure 2.2.: Supply Chain Management Theoretical Framework (Source: du Toit and Vlok, 2014:33)

Toit and Vlok (2014), proposed the above Theoretical Framework for a Successful Supply Chain Management section in an organisation. The above figure starts by illustrating the Organisational Strategy which flows into a Supply Chain (SC) strategy because it is crucial to align SC strategy with organisational strategy. Strategies are implemented through management plans. These consist of the following SC participants which are linked to plans and involved in life cycle activities and support functions. Performance management forms a part of the above framework as it acts as a feedback loop into continuous improvement which affects SC strategy and management. The proposed framework therefore includes arrows representing interaction between the organisational strategy and SCM Plans. The SCM strategy refers to interaction between different supply chain processes. Participants are entities or units that play a part or are involved in a particular SC. “Life cycle activities” refers to all activities involved in the upstream

and downstream flows of products and all activities in delivering a product and purpose of the proposed framework, activities are referred to as life cycle activities, and are categorised according to the following: plan, source, deliver and return. The delivery process includes all activities between manufacturer and the customer, including order management processes, managing customer relationships, determining prices, supporting financial activities, transportation and warehousing. In addition, support functions include many different components: warehousing, inventory management and tracking, order management, distribution, logistics and customer services. Lastly performance measurement in the context of the proposed framework forms part of the loop that links the SC support functions, SC strategy, and management.

Samaranayake (2005:55), explains the steps in development of a supply chain framework as the integration of individual networks where the supply chain is the combination of individual networks in manufacturing and distribution environments. Managing a supply chain requires that a number of planning and execution steps are carried out. Individual processes and elements need to be considered with a view to extending individual networks into the development of the supply chain. Further it is also necessary to identify the benefits of individual networks and to implement those benefits when integrated to make a single supply chain framework.

2.7.3 Supply Chain Management Systems Theory

It has been argued that, for a holistic perspective, Systems Theory (ST) must be employed to understand the internal and external factors that shape an organization's supply chain performance (Tukamuhabwa, Stevenson et al 2015). Therefore, this theory underpins this study as it is perceived to be an appropriate theory to address supply chain management issues generally, and therefore also in the South African context with specific reference to the internal issues facing an organization such as the Health Department. According to Liu et al (2017) 1), a good system has to ensure the long-term competitiveness and survival of organisations by implementing new strategies, and these are based on collaboration with business partners, advanced IT and work services. Kushwaha and Barman (2010:127-142) believe that the framework will help decision-makers in making comparisons among both broad categories of organization with regard to their competitive advantage, and

organizational performance by pursuing good practices and quality supply chain management (QSCM).

Furthermore, Koster and Delfmann (2005:93) explain that systems theoretical perspectives on the risk issue in a supply chain can summarise the problem to an issue of design, and that the systems must be designed to minimise the relevant risks. Perceiving the supply chains as a complex systems facility, facilitates the description and analysis of the problem in relation to structure and process as theory.

Below are the key activities of SCM that are targeted in the research

2.8 THE KEY ACTIVITIES OF SCM THAT ARE TARGETED IN THE RESEARCH

The SCM activities in the Provincial Health Department which were targeted by the researcher are presented in the table below. This clarifies and refers to the “SCM role and information that needs to be made publicly available for public or stakeholders for compliance” (Public Sector Supply Chain Management Review Report, 2015).

<i>Phase</i>	<i>Publication and participation</i>
Demand Management	Annual procurement plans, specifications and allow comments
Acquisition Management/Quotations	Bidding documents and neutral contact addresses Written clarification sent to all participants Public register, public bid opening, price read aloud and allow observers into BEC/BAC public sector Summary of Bid Evaluation report
Contract Management	Amendment notices Financial and physical performance

Table 2.1.: SCM role and information for compliance (Public Sector Supply Chain Management Review Report, 2015).

2.9 GOVERNMENT PROCUREMENT POLICIES AND HOW THESE LINK TO SCM IN HEALTH

The South African National Treasury (2015) clarifies that the South Africa government has started to value the strategic importance of SCM to service delivery, value creation and socio-economic transformation. The legislative frameworks listed below that guide procurement practices, are provided by the Government, and are also used by the Health Sector (Public Sector Supply Chain Management Review, 2015):

- Constitution Section 217(2)
- Public Finance Management Act 1 of 1999(PMFA)
- Preferential Procurement Policy Framework Act (PPPF Act) No 5 of 2000(PPPFA): According to Elegbe, (2012:74) this stipulates that regulations provide for the use of a preferential procurement policy, and it prescribes the points system government agencies must use to determine whether a contract meets these contract criteria. The PPPF Act is seen as one of the tools to remedy past injustices in a country where black people were disadvantaged (Migiro, 2010:01). The aim of the PPPF Act is to increase participation in public procurement by SMEs and historical disadvantaged individuals.
- Broad-based Black Economic Empowerment Act 53 of 2003
- Prevention and Combating of Corrupt Activities Act No 12 of 2004
- Municipal Finance Management Act 56 of 2003
- Promotion of Administrative Justice Act No3 of 2000
- Promotion of Equity and the Prevention of Unfair Discrimination Act no 4 of 2000
- Constitution Industry Development Board Act no 38 of 2000, (Migiro & Ambe 2008)

2.10 CHALLENGES IN THE SOUTH AFRICAN CONTEXT AT PRESENT

According to Achtenhagen and Brundin (2017:05) South Africa has been a leading African country in introducing supply chain management in terms of expanding its real business throughout Africa, but challenges based to the following processes, practices and performance, remain. Bejoy and Groundup (2016) report on a survey

conducted in the South African health care facilities which showed a shortage of TB and ARV medication in clinics. The reported reason for these shortages was primarily given as poor supply chain management. The report proposed that the Department should fast-track approval with the Medicines Control Council (MCC) to secure essential medicines for the benefit of public health.

Kreowski, Scholz-Reiter and Thoben (2013:487) note the following SCM challenges experienced in SA: the lack of an integrated computerised system to link with suppliers; difficulties experienced in finding local suppliers; a lack of financial resources; poor management practices in documentation and data information handling; a lack of commitment, willingness and ability to invest in an effective supply chain; a lack of willingness to work together; a lack of the necessary skills/competencies; and a lack of good management practices especially in managing documents. Time delays are also mentioned.

Further Ambe (2012) recommends the development and training of competencies for Bid Committee Members for them to function effectively and appoint suppliers in time to avoid under-expenditure. Kumar (2013) claims that in South Africa technology is not embraced across the board, particularly in the logistics sector, to track and trace orders for end-users, which means that the history of turnarounds for orders is not available to SCM, since there are no existing online systems. Furthermore, it is explained that another major problem with the traditional healthcare supply chain is that each stage of the chain operates independently, causing misaligned incentives and conflicting goals that prevent the supply chain from operating as a system. This causes unclear procedures for the use of end-users.

AMBE (2012) further confirms that South Africa is still faced with many challenges in supply chain management such as lack of proper knowledge, skills and capacity; non-compliance with SCM policy and regulations; inadequate planning and linking of demand to the budget; lack of accountability, fraud and corruption, and also inadequate monitoring and evaluation of SCM, unethical behavior, too much decentralization of the procurement system, and the ineffectiveness of the Black Economic Empowerment (BEE) policy. Furthermore, it has been reported that

there is continuous poor policy implementation and operational flaws in institutional SCM understanding, including the inability of staff to interpret and apply SCM policies and standards (Supply Chain Management Review 2015). In addition, the following challenges were revealed: poor demand and procurement planning resulting in large deviations and price escalation; and poor development of specification and contract management.

Tshamaano (2012) argues that, to improve service delivery, public officials should know how to interpret the rules, acts, regulations and policies governing supply chain management. This also implies that monitoring and evaluating of entire contracts from the start to the end of contract, should be done in the Health Sector as elsewhere. However, in the Provincial Department of Health this is still a concern since there is the challenge of the updated contract register being unavailable to assist SCM administrative staff to monitor the performance of contractors, and to provide recommendations on the time for improvement of services provided by companies.

According to Rondganger (2015) the dissatisfaction of patients due to medicine shortages, or their being out of stock, was highlighted by the Chairman of the SA Medical Association. He alleged that these shortages had been happening for more than 10 years. Pharasi and Miot (2012) adds that the Ministerial Task Team on Procurement (2009) also identified the following challenges:

here is high use of single source medicine of which there were no generic equivalents, high level of buyouts, outside of the nationally determined tenders, high usage of medicines that were not cost effective and not listed on the national Essential Medicines List (EML) and there is high usage of expensive medicine, particularly in oncology.

2.11 CHALLENGES OF SUPPLY CHAIN MANAGEMENT IN THE KWAZULU-NATAL HEALTH DEPARTMENT

Kumar (2013) claims that in South Africa technology is not embraced across the board particularly in the logistics sector where it is needed to track and trace orders for end-users. Turnaround times for orders are not set for the current system used

by SCM end-users to check and trace their submitted requisitions. Furthermore, it is explained, as noted above, that another major problem with the traditional healthcare supply chain is that each stage of supply chain operates independently, causing misaligned incentives and conflicting goals which prevent the supply chain from operating as a coherent system for the use of SCM end-users (Mathew *et al* 2013). Wijenayeke (2017), notes that there is lack of SCM education in the Healthcare system, where the concept of SCM, particularly within hospitals, is low. Therefore, managers are not properly equipped to control the supply of medication.

Other challenges within the selected SCM sub-sections exist in Demand and Contracts Management. All contracts for services, including provision of security, maintenance of gardens and grounds, and cleaning of buildings, are arranged at the Provincial Health Department. All these contracts have long expired and have not been renewed. The services are currently being provided on month-to-month contracts in the health facilities. The number involved is large, and can be estimated at over 300 contracts expired and not renewed. Therefore, no updated contract register is available to assist SCM administrative staff in monitoring the performance of contractors, or in monitoring the expiry dates of all contacts within the Department, or to enable them to provide recommendations timeously for improvement of services provided by companies.

In addition, there are other times where decisions by the Department are not consistent with the good practice expected. As an example, reference could be made to the leasing of Mobile Unit vehicles by the Department from Mzansi Life Care, which has resulted in a huge cost to the Department. The cost of leasing at the end of the contract was far above what would have been the purchase cost of the vehicle if the Department had taken that option. Fin24 News (2015) reported concerning this incident that the tender claim (ZNB 9281/2012) indicated that a School Health Team bus, as an outright purchase, would cost R4.9m, whilst the Mobile Hospital was on a three-year lease at a monthly rental of R1.5m. This undoubtedly does not assist the image of the Department. Therefore, issues like this need Demand and Contract management officials to be equipped with financial skills. This also includes the monitoring and evaluating of entire contracts from the start to the end of contract.

2.12 CUSTOMER PERCEIVED SERVICE QUALITY

It has been said that customer value can be derived from the customers' reaction when involved in the purchasing of products. This means that customer satisfaction represents the customers' positive reaction to the perceived value received as a result of using particular products or services (Barve 2011). According to Chin *et al* (2014), firms need to be able simultaneously to increase efficiency through good supply chain practices, and at the same time to be innovative through operational capability. Service quality includes responsiveness, trust and safety dimensions that deal with procedures and specific systems established to provide the service. This means that there must be a positive interaction with customers, and that staff attitudes and behaviour, when interacting with customers, is important (Abu-Kharmeh 2012).

2.13 Knowledge competencies and attitudes

According to Webster *et al* (2015) knowledge is information or understanding or skills acquired from experience or education. Featherstone *et al* (2014) point out that knowledge is the theoretical conception of a subject, that is, employees might have knowledge about something but do not necessarily know how to implement it. On the other hand, skills can be defined as a proficiency or practical understanding of the subject, meaning that employees are able to apply the skills in the implementation of any activity delegated to them in the workplace. Competency profiling refers to a method for identifying specified skills, knowledge, attitudes and behaviour required for the fulfilment of a task or activity. In most commercial organizations its ultimate purpose is to provide value to the external customer (Sanghi 2016.)

Furthermore, The Economic Times News (2018) explains that behavioural competency refers to behavioural attributes such as knowledge, technical know-how, teamwork and leadership skills which contribute to an individual's competence in the workplace. The concept is used to enhance the competence of employees at all positions in an organisation for the smoother transition of workflows. It includes the following competencies: individual, interpersonal, motivational, managerial and analytical. According to Jacobs and Chase (2010), competencies/knowledge are divided into two sets which they describe as "technical" and "behavioural"

competence factors. Therefore, it is very important that employers understand the level of knowledge and skills of their workers. The Public Sector Supply Chain Management Review (2015) states that SCM practitioners normally do not have adequate skills, knowledge and experience needed, and competency assessments show significant gaps in SCM skills and knowledge.

There is a similar challenge in other African Countries, for instance, Olumbe (2011) claims that the key administrative competence of procurement officers in Uganda emanates from the process of procurement, and that this involves a procurement plan and budget, procurement requisition, confirmation of the available funds, review of specifications, procurement evaluation criteria, potential supply market, procurement method approval, preparation of bidding documents, approval of bidding documents, advertisement and invitation. It was identified in this research that in Uganda a lack of individual competence also affects SCM administrators in the processing of orders on time, and here also training was recommended for administrators to improve their performance.

Ambe (2012:249-250), also concluded that South Africa still faces many challenges around supply chain management such as lack of adequate knowledge, skills and capacity; non-compliance with SCM policies and regulations; inadequate planning and linking of demand to the budget; and lack of accountability along with issues of fraud and corruption, inadequate monitoring and evaluation of SCM; unethical behaviour; too much decentralization of the procurement system and the ineffectiveness of the black economic empowerment (BEE) policy. This applies to procurement officers in the public sector such as Health Department officials, who do not have a sufficient level of training, and have been found to lack competence, with a failure to exhibit accountability which has negatively affected internal service quality. This lack of competencies, along with low levels of dedication and accountability could explain the poor perception of service quality often attributed to procurement administrative officers. It has been observed that no one is held accountable if procured items are not received on time. There are different administrative grades within procurement including Principal Procurement Administrative Officer, Senior Procurement Administrative Officer and Procurement Administrative Officer, each having a cluster of behaviours, skills and knowledge

(competences) which are indicated as necessary for undertaking their jobs effectively.

In categorizing competence, some organizations make a distinction between competencies which refer to desired personal attributes, and behavioural competencies, which are the knowledge and skill required to bring about improved performance. In addition, Vazirani (2010) sees competency as the capability to apply or use a set of related knowledge, skills and abilities required to successfully perform critical functions or tasks in a defined work setting. In this regard the administrative staff at SCM have been found to lack clarity about what roles each should play. This means that the specific skills required are too often not identified in order to select and grow individuals appropriately (Gilley *et al* 2008)

2.14 CONCEPTS OF KNOWLEDGE AND COMPETENCIES

Makhura (2012) sees competency as the ability to perform activities on the job within an occupation, to the standards expected in that employment. Different authors define competency in terms of attributes of an individual being able to perform given tasks effectively (Knowledge and Competencies 2015), and, seeing the concept of competency as referring to a person's being qualified in a broader sense, not merely that a person is able to master specific professional skills.

According to Adombent and Hoffmann (2013), competencies are the positive combination of knowledge, ability and willingness of the individual to cope successfully and responsibly with changing situations. Furthermore, a competency is any attitude, knowledge, skill, ability or other characteristic that contributes to successful job performance. This is interpreted as a behavioral competency that is observable and measurable and includes behaviors, knowledge, skills, abilities, and other factors that contribute to individual success in the organization, for example, team work and cooperation, and good communication skills. In this regard, Christopher (2016) points out that supply chain excellence in the global market place can only be achieved through excellence in skills and competencies of administrative employees.

2.14.1 Skills training

Webster (2011) describes skills as proficiencies developed through training or experience. Skills can be developed through the transfer of knowledge. The Chartered Institute of Procurement and Supply knowledge (2013) highlights that well qualified professionals are equipped with skills, are competent and have the knowledge required in the work place, involving an ability to manage customer relationships both internal to the organisation, and external to it. This is fundamental to success in supply chain management.

2.15 PROBLEMS AND CHALLENGES IN GOVERNMENT DEPARTMENTS CONCERNING KNOWLEDGE, SKILLS AND ATTITUDES

As noted above, according to the Public Supply Chain Management Review (2015) SCM practitioners normally do not have the skills, knowledge and experience that is needed, and competency assessments show significant gaps in SCM skills and knowledge. In addition, Cloete, *et al* (2014) describe gaps in skills and technology awareness seeing poor skills and low technology usage as key obstacles in achieving supply chain efficiencies. The research project conducted in 2013 to benchmark supply chain skills in South Africa against BRICS nations showed that South Africa is under-skilled.

Furthermore, Cho *et al* (2012) highlight the significance in the health care industry, and specifically in hospital performance and quality of care, of the knowledge, competencies and attitudes of administrative staff working at SCM. These are still perceived as a challenge where all factors affecting performance and quality of their work need to be identified and addressed in order to achieve improved organizational performance.

2.16 GAPS IN THE LITERATURE WHICH THE STUDY WILL HELP TO FILL

According to Heyns and Luke (2012), some previous studies conducted emphasize that there are a number of critical issues in the supply chain skills and competencies in today's economy. The importance of SCM is discussed (usanfranonline.com for SCM 2014) as an essential element to operational efficiency. Because of the vital role SCM plays within organizations, employers seek employees with SCM skills and knowledge. However, a gap in the literature is noted in that most studies focused on the technical aspects of SCM without considering training of employees

who are performing the activities for SCM. Especially in the Provincial Department of Health no study was conducted to check skills and knowledge of SCM administrative staff as well as other critical factors affecting them when executing their duties. The Supply Chain Management section is a critical section in most companies as it deals with procurement of all the required items or services for any company or department to run efficiently. Therefore, SCM administrative staff require training on the implementation of acts and policies within the department, an electronic system is also required for their section to function efficiently. According to Khan, Hussain and Ajmal (2016:46) Sustainable Supply Chain Management (SSCM) allows monitoring of performance across all stages but also ensures that critical areas of the supply chain, which require immediate attention, are attended to.

This study therefore serves to confirm other literature on this topic and adds to the literature in that there is a lack of research linking skills and competencies to performance, and none conducted in South Africa on the impact of poor SCM management within a Provincial Department of Health.

2.17 DEFINITION OF ATTITUDE

According to Chamber and Forlin, (2010) and Nel *et al* (2011) attitude is the tendency of an individual to react to a certain object, it can be a person, idea or situation. The reaction can either be positive or negative and will be based on previous experiences. Attitude can change as the experience of the individual changes (Nel *et al*, 2011). Attitudes are regarded as peoples' outlook on life, how people respond to other people or events. Attitudes are extremely important because they drive behaviour (Bohner and Dickel 2011:3). In addition, attitude is a manner of acting or reacting under a general set of circumstances. Although Festiger's theory of "cognitive dissonance" was developed during late 1950s, it is still one of the best known and most researched frameworks relating to attitude change (Nel *et al*, 2011). Dissonance occurs when there is a logical gap between what appears to be the case and what a person experiences. Festiger's theory (1957) examined people's drive to have accurate evaluations of their own behaviour. The theory proposed that people need their thoughts and behaviour to be consistent.

This is relevant as it indicates that the attitudes of SCM administrative personnel in the Health Department can be affected, based on the working environment and on the daily activities that they execute, which may not be consistent with their ideas of what should happen. Furthermore, Christian *et al* (2011), highlight that employees' attitudes determine their degree of engagement in their work and therefore determine an individual's performance (provided that they have appropriate job knowledge). Employees that have a negative attitude towards their work are far more likely to be disengaged, fulfilling their jobs with the least amount of work possible and at the lowest quality level. This attitude of disengagement, disconnection and lack of concern for the company's well-being is costly to employers by way of lost productivity. Employees with the same competencies and skill levels are likely to be many times more productive if they have a positive attitude towards work, and feel connected, committed and invested in success of the department (Kirsch, *et al.* 2009).

2.17.1 Concepts of attitude

Deal *et al* (2011) describes the concept of attitudes in the working environment, claims that the success of large and small companies across South Africa lies in the attitudes and behaviour of the people working for them. Therefore, it is important to understand the attitudes of employees at all levels of an organisation because these affect organizational performance and employers need to take advantage of every opportunity to improve employees' commitment, support, and job satisfaction, as these are related to decreased absenteeism, lower turnover, and better job performance, all of these issues being critical to an organisation's "bottom line". SCM members therefore need to project an image of efficiency and effectiveness in order to be able to collaborate effectively with other colleagues in other departments of the organisation (Ochonma, 2015:222). Further, the workplace employs people with many diverse attitudes and mindsets as people come from diverse backgrounds and cultures, and therefore workers should develop and maintain an attitude that will promote positive energy (Lo, 2016:33). According to Fritz (2012:105) positive attitudes create a climate of success, and will help to drive achievement and success in business.

2.18 THE INTEGRATION OF KNOWLEDGE, COMPETENCIES AND ATTITUDES IN THE WORKPLACE

According to Czarnecki (2013), the new KASH model, devised by Tom Chandler, was introduced to focus on the four distinct characteristics to an organisation: knowledge, skills, attitudes and habits, all of which affect the performance and success of the individual employee. Below is the KASH box clarification for successful organisation:

Most organisations and people spend their time and money developing the left half of the kashbox	K Knowledge	A Attitude	Most terminations and business failures are due to weakness in the right half of the kashbox
	S Skills	H Habit	

Table 2.2: KASH box clarification for successful organisation Czarnecki (2013)

The above diagram illustrates the following: knowledge of how to do things (both theoretically and practically); and attitude, or how the employee comes across to others while carrying out any given task. Skills, referring to capabilities and competencies of the individual, and habits, referring to what is repeatedly and consistency done without any effort that reflects what truly defines capability to perform. Therefore, if SCM administrative staff were to have more positive attitudes and good habits, this would lead to greatly improved performance in the Health Department. In addition, research indicates that a focus on SCM job training of employees brings confidence and competency in their job performance (Bajorn et al 2012).

CHAPTER 3: RESEARCH METHODOLOGY

3.0 INTRODUCTION

The previous chapter provided the background literature underpinning the study. This chapter describes and explains the research methodology adopted. The discussion will include the research design, target population, sampling techniques, data collection instruments and the process of disseminating the questionnaires. Furthermore, ethical considerations, and the reliability and validity of the study will also be discussed.

As indicated in Chapter One, the main aim of this study was to examine the perceived knowledge and attitudes towards their work of administrative staff in a Provincial Department of Health working within Supply Chain Management (SCM). The study also intended to determine whether a relationship exists between their knowledge base and the attitudes to their work shown by SCM administrative staff. The following section focuses on the research design used to carry out the study.

3.1 RESEARCH DESIGN

According to Malhotra (2011) and Creswell (2014:12) a research design provides a framework or blueprint for conducting the research project by specifying the procedures necessary for obtaining the information needed to solve the research problem of the study. Chawla and Sodhi (2011:48) concur that research design is based on a structure and provides a direction to the investigation being conducted, in the most efficient manner to obtain answers to the research questions or problems. Punch and Oancea (2014) add that a research design is the basic plan for a piece of research that is normally concerned with the tools and procedures to be used for collecting and analysing data, and most importantly, the question of who or what will be studied. Therefore, this means that, a research design can be seen as a type of enquiry within qualitative, quantitative or mixed methods approaches that provide specific direction for procedures in a research project (Krishnaswamy, Sivakumar and Mathirajanm, 2009:24; Creswell 2013:11).

In order to uncover, and have in-depth understanding of, SCM processes and the involvement and satisfaction of SCM staff and end-users within the Provincial Department of Health, the study used mixed methods. The reason for selecting both quantitative and qualitative approaches was to enable the researcher to gather both types of data from the participants to address the objectives of this study.

As explained in Chapter 1, SCM has the following sub sections: Acquisition & Quotation, Risk management, Demand, Contract, Logistics and Assets Management. The study will focus on the following three sub-sections: Acquisitions & Quotations Management, Demand Management and Contract Management. This choice was determined because the researcher, who is employed in the Department, interacts almost daily with these sections due to the nature of work that the researcher is doing. Also these sections were chosen because end-users communicate daily with them. The excluded sections communicate only quarterly with end-users. The researcher believes that the study is required in order to identify factors apparently affecting negatively the work of these SCM administrative staff in terms of facilitating procurement activities within the Department. In ensuring that the researcher obtained comprehensive data from the participants, a convenience, or judgemental, sampling method was adopted for the selection of the administrative staff who were respondents for the study, while a census approach was appropriate for the SCM end-users within the Department as they were easily available to take part in study.

3.2 MIXED METHODS

According to Creswell (2009:121) and Pattern (2009), there are two fundamental types of research, namely, qualitative and quantitative research approaches. Landy and Conte (2010:61) explain that qualitative methods will rely on observation, interview, or case studies, and can involve the analysis of diaries or written documents and may produce flow diagrams and narrative descriptions of events or processes. Furthermore, the qualitative method recognises the value of collecting and interpreting data from a variety of sources of evidence as part of a particular study and it does not generally involve the use of fixed instruments, procedures and samples (Yin 2015:34). Ritchie *et al* (2013:04) add that a qualitative method is often associated with specific kinds of data, usually involving words or images rather than

numbers. Therefore, the use of a qualitative research approach produces a wealth of details through direct quotation from participants and careful description of situations, events, interactions and observed behaviours (Klenke 2016:33). The researcher included open-ended questions in both data collection instruments to gather qualitative data from the participants. The open-ended questions allowed participants to share their own experience of the factors that affect both SCM administrative staff and SCM End-Users when involved in their daily activities within the Department. The reason for collecting qualitative data was that it was going to assist the researcher to make valid recommendations since qualitative data provides intimate details of the research problem.

Quantitative research methods, on the other hand, typically seek to produce precise and generalizable findings (Rubin and Babbie 2010: 34). Saunders, Lewis and Thornhill (2012:162) explain that quantitative research sets out to examine the relationship between variables. The variables can be measured, typically on instruments so that numbers can be easily analysed using statistical procedures (Rosentreter 2012:49). The research also adopted a quantitative research method. This was used to quantify problems by way of generating statistical data that could be transformed into useable statistics (Wyse 2011:1). In this study the researcher formulated structured questions that guided participants to provide the required information to address the research objectives. This method enabled the researcher to involve many participants for the study, and the responses were easy to analyse as they could be coded for interpretation.

Using a mixed research approach benefits and strengthens a research study in many ways (Heppner *et al* 2015:409). A mixed methods approach assisted the researcher in obtaining in-depth information and understanding of SCM challenges and critical factors that affect staff attitudes when executing their duties, and also in ascertaining the perceptions of end-users regarding the service rendered by SCM staff. Hence, a mixed method provided greater evidence than restriction to one research method could have achieved.

It should be noted that during the proposal stage, both questionnaires and interviews were considered as data collection instruments. However, the interviews were

forfeited due to the sensitivity of the study. The researcher found that participants were not comfortable with the idea of being interviewed and preferred only to answer the open-ended question that was included in both questionnaires for the collection of additional qualitative data. Some of the participants indicated that they were worried that interviews might put their jobs at risk. They believed that in recordings of interviews their voices could be recognised, while they knew that the questionnaires would remain anonymous. Other participants had a problem with being interviewed as the researcher was their colleague, and participants wanted confidentiality to be maintained since the study was sensitive. The open-ended questions within both the SCM and end-users' questionnaires were formulated to collect the participants' perceptions concerning ways that would improve SCM practices and processes. As stated by Wilson (2012:154) open-ended questions allow the respondents to provide their experiences, perceptions and views and do not restrict respondents to preselected opinions.

Closed questions require the respondents to choose from a limited number of potential answers (Wilson 2010:154). The closed questions within the SCM questionnaire were used to investigate whether SCM administrative staff fully understood all acts, policies and procedures that needed to be applied in the implementation of their work; to check if management provided orientation to all SCM administrative staff members and also to investigate what other factors contribute to their attitudes to work. They were also formulated to gather information about how SCM procedures, policies and legislation are communicated to them and to determine their level of understanding towards applying SCM processes efficiently.

3.3 TARGET POPULATION

According to Rajender (2011:109) the target population identifies the population of interest for the study. Whitley and Kite (2013:485) concur that the target population refers to a group of people whom we want the result of the research to relate to, and consists of members of the population who fit the particular research. The target population is the entire group of interest to which the results of the study may be generalised (Anastas 2012:39). The target population for this study were both SCM

administrative staff and all SCM end-users from a South African Provincial Department of Health.

3.4 SAMPLING

Sampling is defined as a procedure that uses a small number of elements of a given population as a basis for drawing conclusions about the whole population (Vogt, Gardner and Haefelle 2012: 219; Nelaankavile 2015: 240). The goal of sampling is to characterise the targeted population and use appropriate methods that fall under either of these categories, namely, probability or non-probability (Hussain and Tehil 2011). According to Neenkalavile (2015:240) probability, or 'random' sampling allows the researcher to obtain a more precise sample and to make more reliable projections to the target population. Non-probability sampling on the other hand does not use random sampling as the population may not be easily identifiable and it does not permit accurate generalisation of results (Krysik and Finn 2013:123). In order to identify the target population from the five SCM sub-components, the researcher evaluated the components that deal directly with end-users on a daily basis and identified the following sub-sections, namely, Demand Management, Acquisition/Quotation Management and Contract Management. These sections were all selected as they carry out procurement processes within the Department and they were able to provide the required information to cover the objectives of the study. They were also the sections with which the researcher is most familiar. Thus, the researcher excluded two SCM sub –sections, neither of which are involved in day-to-day dealings with end-users.

A census approach was possible and deemed appropriate for SCM end-users as all were available to be included in the study. According to Bali (2016:23) and Okazaki (2012) a census method is where the researcher selects all members of the target population for inclusion in the study. In a census, the survey design deals with the thorough and comprehensive studying of the selected population, instead of a portion drawn from it, and ensures that the relevant data are collected from every individual that constitutes the population (Kpolovie, 2016:32; Lodico, Spaulding and Voegtli 2010: 29). A census thus avoids sampling bias (Okazaki, 2012). It enabled the researcher to analyse the target population thoroughly and to ensure that the population shared the same characteristics, conditions and elements.

The SCM end-users were selected by looking at each section within the Department who place requisitions through SCM. It includes the following staff members: Office Managers, Office Administrators, Personal Assistants, Office Assistants and all staff members responsible for requisitions in the absence of administrative staff in other components. These people place/send their requisitions to SCM to process. Depending on the nature of the item or service required they may need these selected SCM departments to assist them. The end-users' database was used to identify these participants, and the researcher discovered that in other sections not only administrative staff deal with SCM requisitions so that these staff members were also targeted as they were also going to provide the required information, and were in a position to share their perceptions about the services rendered by the selected SCM components. As the researcher is one of the employees at the Provincial Department of Health it was easy for her to identify these respondents.

The SCM administrative staff were chosen as they were in a position to provide insights about SCM processes which would address the research objectives. In order for the researcher to understand the level of service provided by these SCM administrators, end-users were also targeted as they liaise directly with the selected SCM sections in order to procure items required for their sections to function efficiently. Studying these specific groups would also reveal insights into other unknown critical factors that could affect the knowledge and attitudes of SCM administrative staff from the selected selections. The researcher believed that end-users could share their experiences regarding the services provided and that they would be able to provide appropriate information that could lead to useful recommendations being made to improve SCM services within the Department should these be shown to be needed.

3.5 DATA COLLECTION INSTRUMENTS

According to Colton and Covert (2009:15) a data collection instrument is a mechanism for measuring phenomena, which is used to gather and record information about a specific subject. The data collection instrument is also used to obtain realistic information that supports observations, or assesses the attitudes and opinions of participants. Mligo (2016:78) adds that a data collection instrument enhances the process of collecting research information to answer a particular

question, or questions, relevant to a research study. A questionnaire was used as the data collection instrument for this study. This enabled the researcher to uncover critical factors affecting SCM administrative staff as they execute their daily work activities, and also to assess their skills and knowledge regarding SCM processes and procedures. The end-users' questionnaire was designed to gather the perceptions of that group towards the services rendered.

The collection of data for this research study took place between September 2016 and March 2017. It must be explained that the data collection took longer than expected because there was a poor response rate at first as most of the respondents were reluctant to participate due to the sensitivity of the study. However, due to perseverance and numerous reminders to participants, a good response rate of 94% was achieved.

3.6 QUESTIONNAIRE DESIGN

According to Neelankavil (2015:161) questionnaire design is a process that starts with the research objectives and ends with a final set of questions, the guiding force in the design of a questionnaire being the original research objectives. As discussed above there are two types of questions in a research questionnaire, namely, open-ended where respondents are given the opportunity to express their views, and closed questions where participants only choose from the predetermined responses provided by the researcher. Hence, these questions produce primarily quantitative data (Johnson and Christensen 2012:169).

The closed questions were documented in a statement form, using a Likert scale. According to Tang and Logonnathan (2016) a Likert scale is an ordinal measurement of attitudes, beliefs and opinions whereby each question or statement is presented in which the respondent must indicate a degree of agreement or disagreement in a multiple-choice format. The purpose of using a Likert scale was to enable the respondents to understand and answer the questions easily without writing or providing information outside to what was being questioned. Also the Likert scale makes it easier to provide consistent answers and it is easy to analyse. However, as mentioned above, open-ended questions were also made available at the end of the questionnaire and were used to collect qualitative data. In the

absence of interviews, for reasons also discussed above, the design was therefore largely a quantitative design – with a single open-ended question within each questionnaire, which provided qualitative data.

In the open-ended responses the majority of the participants for both questionnaires highlighted the factors that affect the relationship between SCM administrative staff and SCM end-users and the SCM staff themselves appeared to agree with the end-users across a range of issues: that there is a lack of training within the Department; that acts of parliament and policies, if known, are not practically implemented; that turnaround times are not applied, that suppliers are not appointing in time; and that insufficient information is provided by the end-users when submitting their requisitions for processing. Therefore, the open-ended questions were very insightful as they provided rich and comprehensive information that might not have been obtained in the structured questions. The open-ended questions allowed the respondents to provide their own suggestions or recommendations pertaining to the study.

Both questionnaires of SCM end-users and SCM administrative staff were divided into 3 sections, namely, Section A: Biographical information/data; Section B: structured questions; and Section C: one open ended question. Section A discovered information on the gender, age, level of study, rank and number of years' service of the participants within the Department. Section B focussed on the services provided by SCM administrative staff and also addressed knowledge and attitude issues, while section C was formulated to request participants to provide recommendations for all issues they think were not addressed in the closed-ended questions. The participants were asked to complete the questionnaire on a voluntary basis, and were informed that, throughout the study, their identity would be kept strictly confidential and that they could withdraw at any time.

3.7 PILOT STUDY

A pilot study is a process that provides an opportunity to assess the appropriateness of data collection methods and other procedures and to make changes if necessary (Ary, Jacobs, Sorensen and Walker 2013:109). Furthermore, it permits the preliminary testing of hypotheses and gives an indication for refinement if it is

required. O'Reilly and Parker (2007: 74) advise researchers to conduct a pilot study as it can raise fundamental issues related to the research process and can help researchers to obtain the required information and check if the questionnaires are valid. Again Blessing and Chakrabarti (2009:114) confirm that the aim of a pilot study is to try out the research approach in order to identify potential problems that might affect the quality and validity of the results. The researcher conducted a pilot study after obtaining the gate keeper's permission for the research to go ahead and she was then able to make revisions as required.

The researcher conducted a pilot study with 10% of each of the targeted groups of respondents. The questions were found to be largely valid in both questionnaires, however there was an amendment to the SCM administrative staff questionnaire. The change was made to one question, as follows: "The Department of Health (DoH) has a tracking system for all orders received by SCM" - the word order was changed to requisitions as this term is always used by SCM. The new question read: "The Department of Health (DoH) has a tracking system for all requisitions received by SCM". The SCM End-Users questionnaire was found to be valid, no amendments were required. In addition, both questionnaires were also given to the researchers' principal and co-supervisor to check as to appropriate information and layout before the piloting. The outcome of the pilot study was submitted to the Institutional Research Ethics Committee (IREC) for full clearance before collecting data for the main study.

3.8 DISSEMINATION OF THE QUESTIONNAIRE

According to Rose, Spinks and Canhoto (2015:232) the method selected for questionnaire distribution must fit the nature of the sampling frame being used, and the type of contact details of the participants (i.e. whether the researcher has access to emails, telephone and other contact details) as well as being appropriate for the sampling method. The researcher distributed the questionnaires by email to all the end-users and to the selected SCM administrative staff and followed this up by telephoning all respondents to ensure that emails had been received. Respondents were given five days to complete and return the questionnaires. As mentioned above, unfortunately most of the participants were reluctant to participate, or to fill the consent form, due to the sensitivity of the study and the nature of the work

environment. This concern was reported to both supervisors. In these circumstances the researcher decided that it would be necessary to visit the respondents individually at their work stations. During these follow-up visits hard copies of questionnaires were prepared and distributed and all participants were reassured that the collected data would be kept confidential. Eventually the researcher persuaded the participants and they started to fill in the questionnaire though the process was very slow. As mentioned above, the collection was done over a period of several months.

The researcher also distributed the following documents during the dissemination of the questionnaire: a letter of approval from the Department of Health, a Letter of Information and Consent form for the study, and the questionnaire. Those questionnaires that were sent via email went together with a covering email that included an introduction to the researcher, and information on the background of the study. The researcher emphasized to the respondents that all comments were going to be treated as confidential, and all respondents would remain anonymous.

3.9 ETHICS IN RESEARCH

According to Meyers (2013:49), research ethics can be defined as an application of proper principles, planning, conducting and reporting the result of the research study. Hegde (2015:216), explains that ethics in research is about proper conduct related to the processes and consequences of the research, that it helps to promote the aims of the research, and promotes the values which are essential for collaborative research work. In this study, the researcher considered ethical procedures for the study by requesting permission from the Provincial Department of Health to conduct the study with SCM administrative staff and end-users and she also received ethical clearance from DUT. Approval was granted on the 12th of December 2015 by DoH (Appendix B and Appendix D).

The procedure to obtain the gate keeper's permission took six months to be finalised for the following reasons: the correspondence "to Request Permission to Conduct a Research Study within the Supply Chain Management (SCM) Section in a Provincial Department of Health" was prepared and submitted. The Departmental Research Committee advised the researcher to liaise with SCM heads before the committee

would consider the request and, as advised, this letter was also prepared. On the 18th August 2015 the correspondence was sent to the SCM Head of Department who was away for a month and, when he came back, he was unfortunately too occupied and was working out of office. Despite numerous follow-ups made with his personal assistant, a response was only received on 28th September 2015.

On receiving this response the researcher was referred to another superior official, the Departmental Chief Financial Officer (CFO), for his decision, since the SCM Head was not comfortable about taking the decision alone, when SCM deals with confidential matters. The researcher then requested both supervisors to intervene in obtaining the gate keepers letter, and they drafted a letter which was sent on the 23rd August 2015, explaining that the study was not intending to criticise or tamper with the Department in any way, but that the findings would be shared with the Department in the interests of improving the job satisfaction and productivity of SCM employees. Furthermore, the department was given an assurance that the name of Province was going to be removed on the final report preventing any disclosure of issues that could make them feel uncomfortable. This amendment was also communicated to the DUT Research Office. On 06 October 2015, the letter of support from the CFO was approved for the Departmental Research Committee to consider the request.

The proposal and all documents requested by the Departmental Research Committee were then sent for their perusal, and their next meeting was planned for the first week of December 2015 where gatekeeper's permission was finally granted and signed on the 08th December 2015 (with this reference number KZ_2015RP28_420). It was received by the researcher on the 12th December 2015. In this letter of permission, the researcher was advised to make arrangements with the relevant SCM Operational Managers before proceeding with the piloting. This took until the end of January 2016.

To summarise, the following documents were required in order to obtain ethical clearance for the study:

- A letter to request permission to conduct the research study at Provincial Health office (Appendix: A),

- A letter to request permission to conduct the research study within the SCM section and a letter for Chief Financial Officer (Appendices: B and C),
- DUT Ethical Clearance letter (Appendix: D),
- The Letter of Information and Consent form (Appendix E),
- Questionnaires of end-user's and SCM administrative staff to be submitted (Appendix F).

Thereafter, IREC provided a full clearance before data collection (Appendix G).

3.10 DATA PREPARATION

According to Abdulai and Owusu-Ansah (2014), data collection preparation is one of the essential elements for a research study. After the researcher had collected all questionnaires, a qualified statistician assisted with the analysis of the data. Hair (2015:294) emphasises that after data has been collected, and before it is analysed, the researcher should examine it to ensure its completeness and validity. The process involves the coding of data collected and the researcher allocated a number for each questionnaire returned. Rubin and Babbie (2012:322) explain that data coding involves transferring different code numbers to each category of each variable in a research study. Furthermore, data coding includes the definition of concepts specific enough to identify relevant phenomena, collect relevant data and assign values, such as names, to variables in order to prepare them for analysis (Vogt, Gardner, Vogt and Haeffele 2014:06)

3.11 DATA ANALYSIS

According to Babbie (2016:22) data analysis is a process of inspecting, cleaning, transforming and modelling data with the goal of discovering useful information, suggesting conclusions and supporting decision making. Furthermore, data analysis involves breaking up, separating, or disassembling of research material into elements, or units, the aim of this process being to assemble or reconstruct the data in a meaningful or comprehensive fashion (Boeijie 2010:76). Monette, *et al* (2011:432) add that data analysis is important as it creates meaning by using raw data to learn something more abstract and general. The statistician used SPSS version 23.0 to analyse the data obtained from the structured questions. Cronk

(2017) explain that SPSS version 23.0 is designed to be relatively comprehensive data analysis package for use in research. It comprises factor analysis, descriptive and frequency analysis, and presentation is in the form of graphs, tables and pie charts.

Klenke (2016:95) explains that content analysis is a family of procedures for studying the contents of written or transcribed texts which enables the researcher to include large amounts of written information and systematically identify its properties such as frequencies of the most frequently used words. Naoum (2012:95) also clarify that open-ended questions can be analysed by coding the information in terms of ideas and themes to reduce a large number of individual responses to a few general categories of answers. Therefore, the qualitative data responses were grouped into similar categories of response for analysis.

3.12 STATISTICAL ANALYSIS

As noted above, the data collected from participants was analysed using SPSS 23.0. The results were presented in a form of descriptive statistics as graphs and figures.

3.13 RELIABILITY

According to Ember (2009:153) reliability refers to consistency or stability in measurement as there are many aspects of reliability such as test-retest reliability which should give the same result if individuals are retested. Trochim, Donnelly and Arora (2015:119) concur that reliability relates to the probability that repeating a research procedure or method would produce an identical or similar result, and it also provides a degree of confidence that replicating the process would ensure consistency. Furthermore, Wilson (2012:173) emphasize the importance of considering the reliability of the collection tools, consistency across different samples, and across different measures of the same underlying construct, by using two groups that are closely matched for variables and relevant to the study. The researcher piloted both questionnaires to the SCM administrative staff and SCM end-users, and the results received indicated the consistency and reliability of the collection tools.

3.14 VALIDITY

Kimberlin and Winterstein (2008) defines validity as the extent to which an instrument measures what it claims to measure, including the interpretation or meaning of the scores obtained from the instrument. Furthermore, the method researchers use to test the validity of the scores from a survey can be used to predict related behaviours (McBride 2015:80). It also ensures that research findings, readings and interpretations are accurate, reasonable and supported by first-hand data, and also concerned with the relevant theoretical basis of the research. Ary *et al* (2010:225) consider that validity is the most important consideration in developing and evaluating measuring instruments. Therefore, the researcher checked the validity in the questionnaires that were distributed for the pilot study and the findings did represent the phenomenon that the researcher was claiming to measure as all answers for both questionnaires were found valid. Both SCM administrative staff and SCM end-users understood the questions and provided information that was relevant to the objectives of the study.

3.15 AUTONOMY AND CONFIDENTIALITY

The Letter of Information and Consent (Appendix E) assured the participants of their anonymity, confidentiality and the protection of their rights. The letter of information gave a brief introduction and purpose of the study, explained the procedures of the study, and informed participants that participation was voluntary and that they could withdraw from the study if they chose to do so. Respondents were assured that they need not fill in the form if not comfortable. Their names did not appear in any document pertaining to the study. The researcher further assured the participants that their responses would be kept confidential throughout the course of the study.

The researcher, the statistician and the supervisors were the only people who had access to the returned questionnaires, no one else having access to the research data, and no one was able to identify individuals from information cited in the research report. All data collected was kept in a secure place and participants' identities were not revealed during the study and will not be revealed when publishing the results. The materials obtained are stored and will eventually be disposed of after 5 years.

3.16 LIMITATION AND DELIMITATION OF THE STUDY

According to Hussain (2011:61) limitations are possible shortcomings or influences that either cannot be controlled, or are the result of restrictions imposed by the investigator. The number of questionnaires distributed consisted of everyone from three SCM sub-sections and all SCM End-users within the department. In addition, the delimitations in this study was that, the study was limited to the employees of one Department of Health Provincial office. Only SCM End-users and SCM administrative staff participated in the study.

3.17 CONCLUSION

This research methodology chapter provided information concerning all the methods that were applied to gather the information, enabling the researcher to answer the research questions and to make recommendations from the data obtained from the targeted participants of the study. It explains how the investigation was carried out, and the following were discussed: mixed methods, target population, sampling, sampling frame and size, the data collection instrument, questionnaire design, the procedure followed to obtain the gate keepers' permission, the pilot study, dissemination of the questionnaires, reliability, validation, data analysis and ethics in research. The next chapter will focus on data analysis and interpretation of the results and will provide an analysis and interpretation of the results of the study.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF END-USERS' RESPONSES

4.0 INTRODUCTION

The previous chapter presented the research methodology and research design and also explained how the data was collected. The discussions also included the target population, sampling techniques, ethical considerations, data collection instruments and the process of disseminating the questionnaires as well as the reliability and validity of the study.

This chapter presents the results and discusses the findings obtained from the data collected from end-user respondents. This was analysed using SPSS version 22.0. The results will be presented as descriptive statistics, in the form of frequency graphs, cross tabulations and other figures for the presentation of the quantitative data collected. The open-ended questions were grouped into category themes for analysis and discussion of this qualitative data.

4.1 STATISTICAL ANALYSIS

According to Myers, Well and Lorch (2013:15) statistical analysis is performed after data has been collected. The analyses should be planned before the data is collected as part of the process of evaluating the suitability of the research design. The analysis of the data then consists of two phases – a descriptive phase which is used to describe the features of the data in the study and an inferential phase when inferences are drawn. This pattern has been followed in this chapter.

4.1.1 Descriptive analysis

According to Anastas (2013:433) descriptive analysis refers to summarising and simplifying the information provided by sets of numbers whereas inferential statistical analysis focuses on generalisation from samples to populations, or answering questions about how specific variables may relate to each other. Privitera (2015:05) adds that descriptive statistics are procedures used to summarise, organise and make sense of a set of scores or observations and they are often presented graphically, or in a table form. Raykov and Marcoulides (2013: 07) also explains that

descriptive statistics include methods that accomplish various graphical displays providing valuable insights to the scientist, or use numerical data descriptions via summary indexes that can contain important information about research questions of interest. Descriptive statistics is a practical guide to producing the several categories of statistics that form the foundation of quantitative research using tables, charts and graphs. Graphic tools can improve the readability of research reports (McNabb, 2015). In addition, descriptive statistics summarize and describe sample data, which can be generalised to the population. Descriptive statistical analysis is also defined as a science to help the researcher to collect, organise, analyse and interpret realistic data (Vieira 2017:07).

4.1.2 Inferential statistics and Chi-square

According to Privitera (2013: 04) inferential statistics are used to analyse and evaluate the data drawn from the targeted population. The Chi-square (χ^2) may be defined as the sum of the squared difference of observed and expected frequencies divided by the expected frequency (Calmorn 2010:183).

4.1.3 Reliability

According to Neuman (2011), reliability refers to the degree to which a result of the measurement or specification can be depended upon to be accurate. The researcher consulted a qualified statistician to assist with accurate analysis of the data and the SPSS program that was used for analysis. Cronbach's alpha measures how well a set of variables relate to one another. The results below indicate that an acceptable result was obtained.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.543	.536	7

Table 4.1: Reliability Statistics

4.1.4 KMO and Bartlett's test

Results of the KMO and Bartlett's test of appropriateness are presented in the table below:

KMO and Bartlett's Test

Kaiser-Meyer- Olkin Measure of Adequacy.		Sampling	.445
Bartlett's	Test	of Approx. Chi-Square	69.483
Sphericity		df	6
		Sig.	.000

Table 4.2: KMO and Bartlett's Test

The results indicated that all collected data from SCM end-users were appropriate for the purpose of factor analysis (BTS = 69.483, sig. = 0.000, sampling adequacy = 0.445. The result indicated that there are sufficient items for each factor (See Appendix G). Factor analysis is the statistical method used to describe variability among observed variables, correlated in terms of a potentially lower number of unobserved variables.

4.2 RESPONSE RATE

The researcher administered a total number of 97 questionnaires to the end-users who receive services from SCM administrators. Out of the total number of distributed questionnaires, 88 questionnaires were returned by the participants and the response rate was therefore 91%.

4.3 PRESENTATION OF THE FINDINGS FROM END-USERS

In order to provide a clear overview of the findings, the presentation of the findings for both SCM administrative staff and end-users were analysed separately. This section only focuses on the analysis of the end-users' data. The results will be presented in a form of graphs and cross tabulations. Qualitative data from SCM end-users is analysed and discussed later in this chapter. Data gathered from SCM administrative staff will be analysed and discussed separately in Chapter 5.

The presentation of the findings starts with the analysis of biographical information taken from Section A. Sections B involves structured questions and Section C has one open-ended question.

4.4 THE RESEARCH INSTRUMENT

The research instrument consisted of 19 items and, as stated above, was divided into 3 sections, namely A, B and C. These sections required the following data from the participants:

Section A: Biographical data

Section B: The understanding of the role of supply chain management functions in the Provincial Department of Health.

Section C: One open-ended question for general comments

4.4.1 Biographical data

This section presents descriptive statistics of biographical data collected from the end – users.

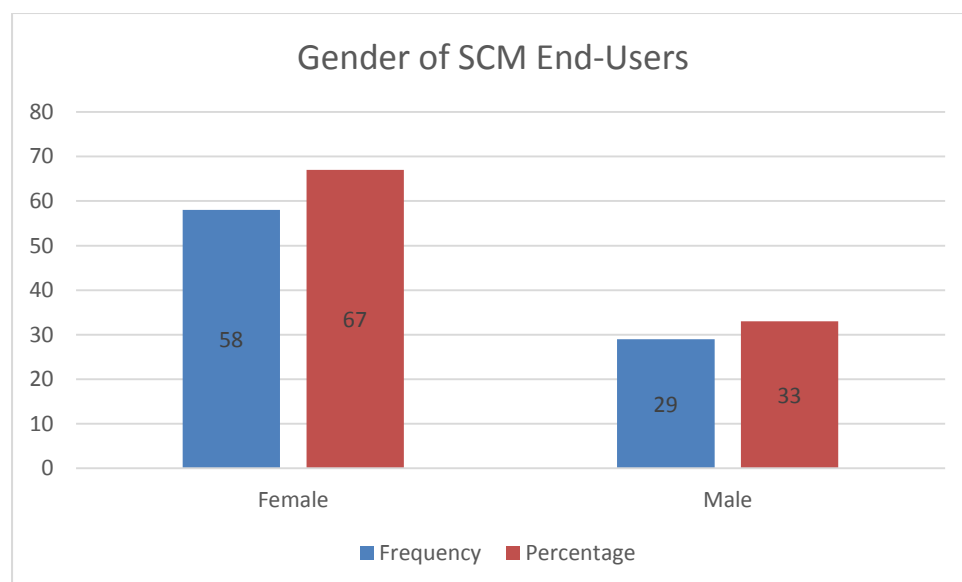


Figure 4.1: Gender of SCM end-user respondents

The majority of the respondents (35 or 67 percent) were females and 18 (33 percent) were males. This is a true reflection of the fact that administrative positions are most

likely to be held by females. As also reflected by Privitera (2015:42) most administrative professional work is still performed by women.

4.4.2 Age group of end-users

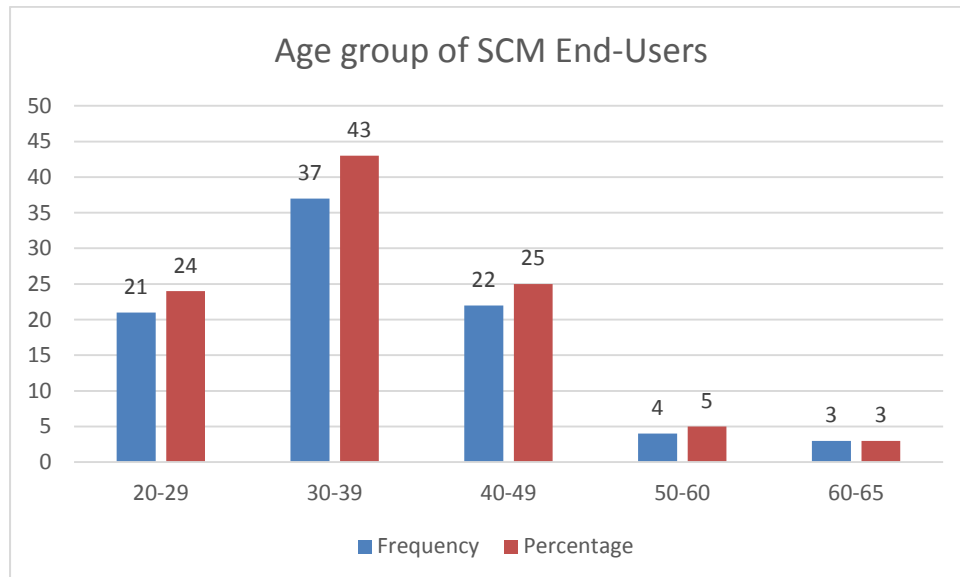


Figure 4.2: Age Group of end-users

The majority of the respondents: 37 (43 percent) were between the age of 30-39 years, followed by 22 (25 percent) of respondents that were between the age of 40-49 years. 21 (24 percent) of the respondents were between the age of 20-29 years while 4 (4 percent) of respondents were between the age of 50-59 years. Only 3 (3 percent) of respondents were between 60-65 years. All age-groups therefore participated and it can be noted that 71 percent of participants were between the ages of 30 and 49, and could therefore be presumed to be knowledgeable about their work, and able to provide the required information.

4.4.3 The graph below presents a cross- tabulation between employment positions and years of experience

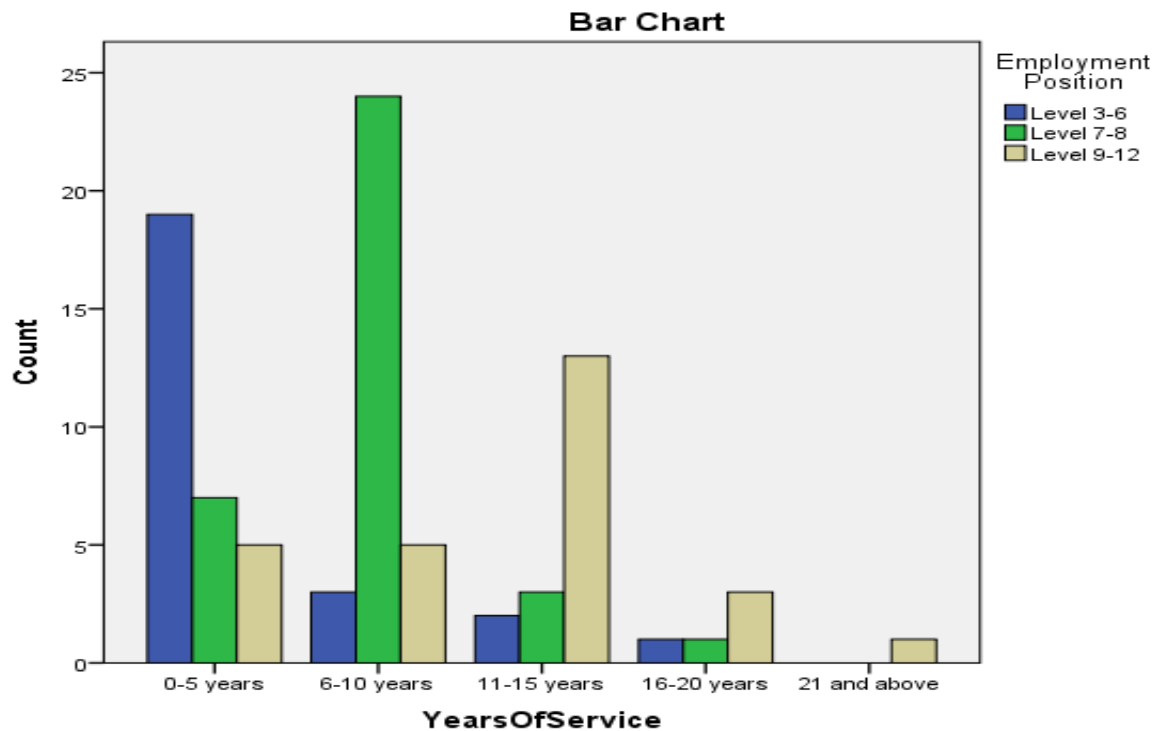


Figure 4.3: Years of Service

The above figure revealed that participants were from all the different levels of employment and so could be presumed to have appropriate work experience to participate in the research study. The researcher was therefore able obtain the required information during data collection.

4.4.4 The graph below presents a cross- tabulation between employment positions and years of experience

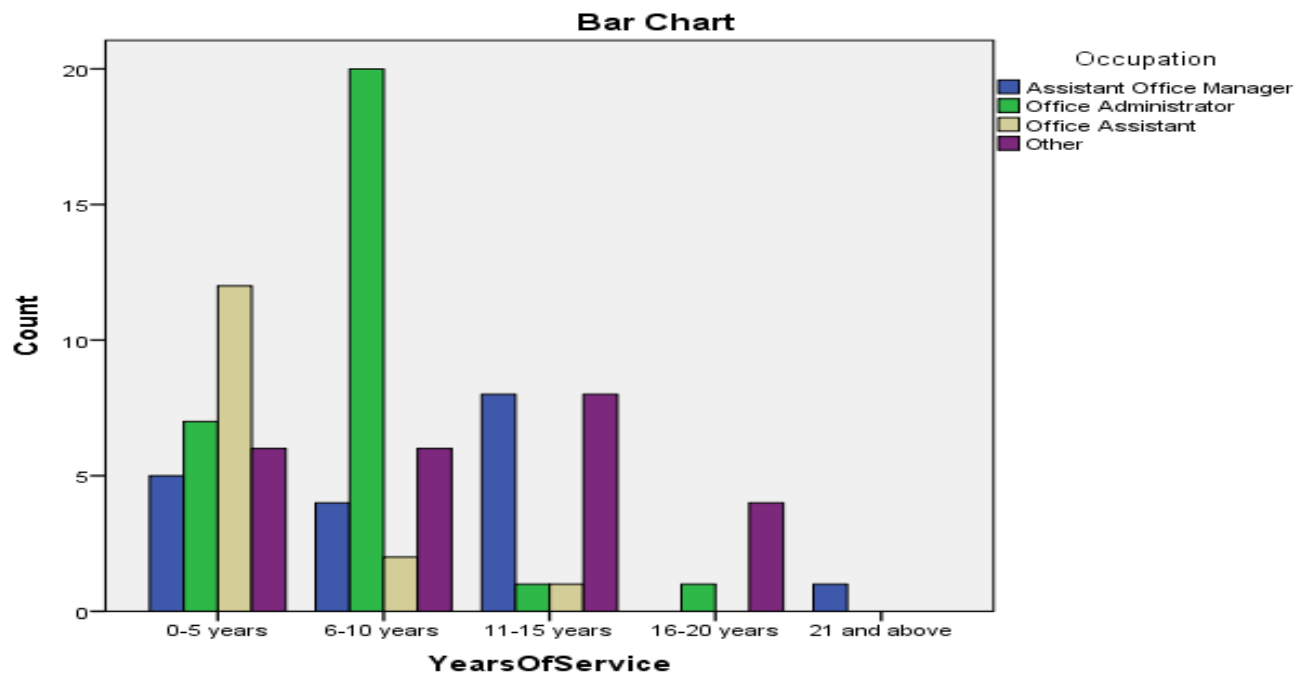


Figure 4.4: Years of Service

The figure above shows that participants from different positions of employment with a range of experience levels participated and gave their views about the service rendered by the SCM section. The researcher therefore believes that the information obtained from these participants will assist in recommendations as participants were sharing their experiences from a range of different experience levels.

4.5 SECTION B: EVALUATES THE LEVEL OF UNDERSTANDING OF THE ROLE FOR SUPPLY CHAIN MANAGEMENT IN THE HEALTH DEPARTMENT

This section evaluates end-users' level of understanding of SCM practices and processes. Below are graphs representing the response rate of every statement that was provided by the data collection tool for participants to select a suitable answer from the structured questions.

4.5.1 I fully understand the role of Supply Chain Management functions in the department of Health

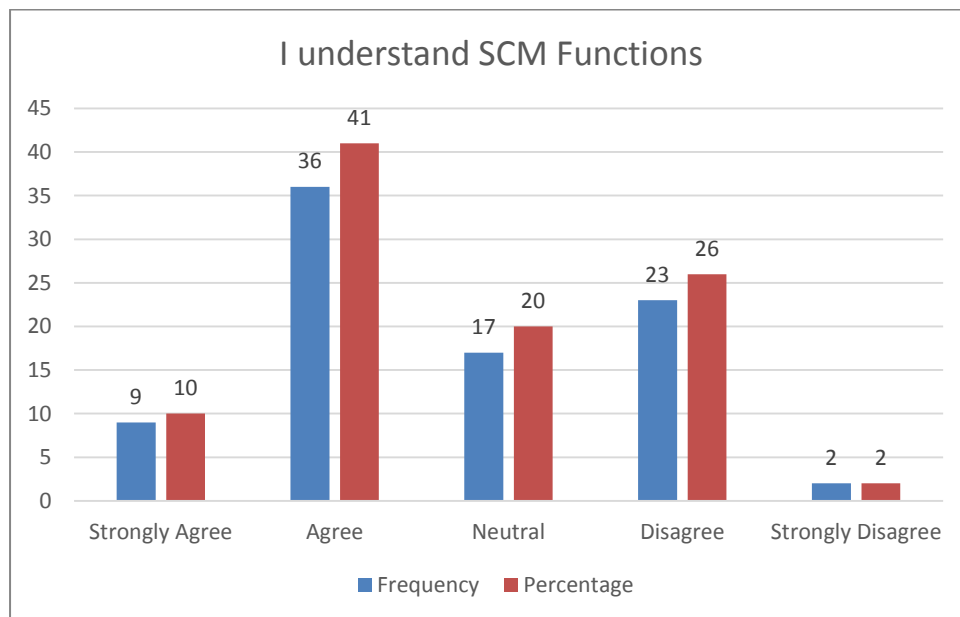


Figure 4.5: Understanding of SCM functions

The largest group of the respondents 36 (41 percent) agreed that they had a satisfactory understanding of the functions performed by SCM within their respective Departments. However, 23 (26 percent) of the respondents disagreed with the statement, while 17 (20 percent) of respondents were neutral. 9 (10 percent) of the respondents strongly agreed with only 2 (2 percent) strongly disagreeing with the statement. It is therefore, important to note that a fairly large portion of the respondents either disagreed with the statement or were unsure whether they understood the functions and activities performed by SCM. This raises concerns as the majority of the respondents had considerable experience and one would assume that they would have adequate knowledge of the functions performed by SCM.

4.5.2 SCM communicate their policies with staff in the Department adequately

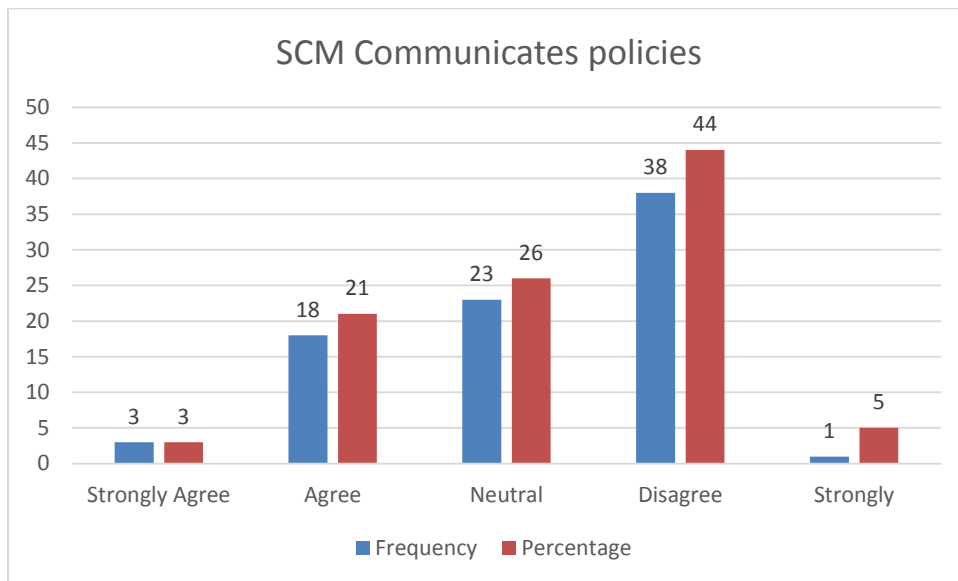


Figure 4.6: SCM Communicates policies

The largest number of the respondents 38 (44 percent) indicated that SCM policies were *not* communicated adequately to end-users, while 23 (26 percent) of the respondents were neutral to the statement. Therefore, 75 percent of respondents were either unsure or disagreed that communication is good between SCM staff and end-users, while only 24 percent agreed.

The results therefore indicate a large gap that needs to be addressed by SCM management to ensure that SCM policies are well known by all staff, especially end-users, to avoid any confusion that may stall the effectiveness of SCM processes. Groschl and Bendl (2016:318) highlight that communication in the implementation of policies is important as employees' perceptions of organisational policies are not simply determined by the practices as designed - but also by the way they were implemented and communicated. Non-communication of policies leads to non-compliance with SCM functions, as other activities will not be done correctly by both SCM administrative staff and end-users. Furthermore, refusal to clarify policies and procedures can lead to confusion. When something is documented, at least everyone has a referral to the same document in order to resolve confusion. Hence, managers need to ensure that better communication takes place (Duck and McMahan, 2013:214).

4.5.3 There is a good relationship between SCM administrative staff and End-Users

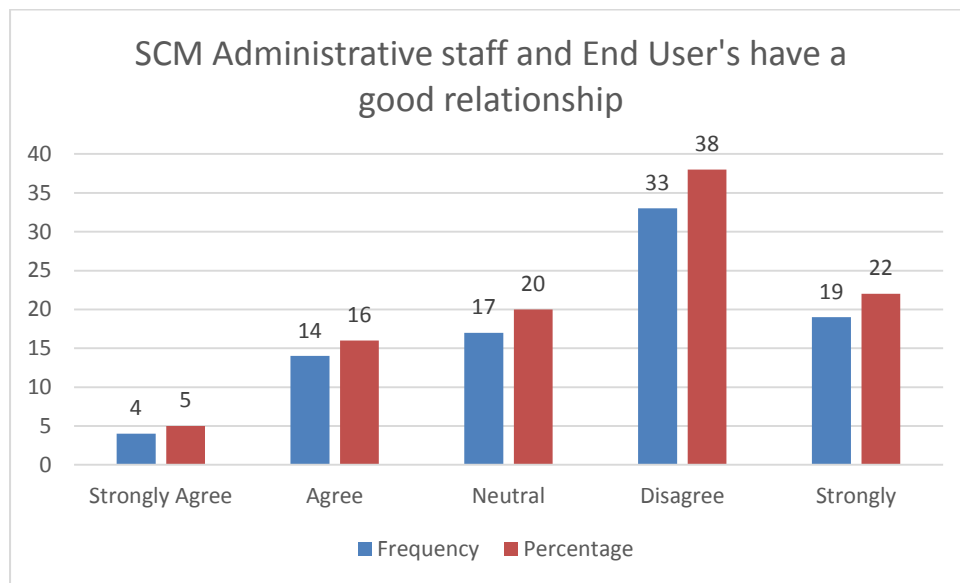


Figure 4.7: SCM have a good relationship with End-Users

The largest number of respondents 33 (38 percent) disagreed that SCM end-users and SCM administrative staff have a good relationship and 19 (22 percent) of respondents strongly disagreed with the statement, while 17 (20 percent) of respondents were neutral about the relationship. 14 (16 percent) of respondents agreed to the statement which confirms that there was some positive relationship between SCM and end-users, but only 4 (5 percent) of respondents strongly agreed about the good relationship between SCM administrative staff and SCM end-users.

The graph therefore shows that the relationship is generally not good between SCM end-users and administrative staff as a very large proportion (80%) of respondents either disagreed or were not prepared to say that the relationship was good. This could be the result of the experiences noted by end-users that SCM often fail to deliver, with no good reasons given, thus seriously undermining end-users' ability to meet the necessary requirements. SCM end-users, on the other hand, rightfully expect delivery from SCM irrespective of the situation. In the experience of the researcher, this is the fundamental reason for the continued strained relationship between SCM and the end-users. This is often demonstrated when urgent purchases or preferred brands are required.

4.5.4 Lack of SCM knowledge and skills can affect customer services provided by the Department

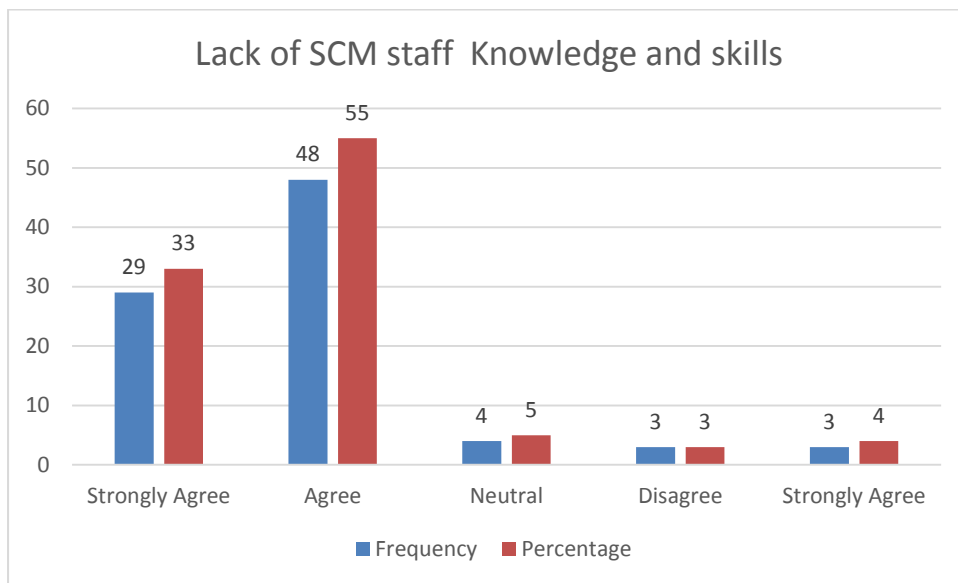


Figure 4.8: Lack of knowledge and skills among staff members can affect service provided

The majority of the respondents 48 (55 percent) agreed that lack of knowledge and skills amongst SCM staff can affect the services rendered to end-users and 29 (33 percent) strongly agreed with the statement. 4 (5 percent) of the respondents were neutral while only 6 (4 percent) of respondents either disagreed or strongly disagreed. As stated by the Public Sector Supply Chain Management Review (2015) SCM practitioners normally do not have the adequate skills, knowledge and experience that is needed, and competency assessments show significant gaps in SCM skills and knowledge.

4.5.5 The attitude of SCM administrative staff has an impact on end-users

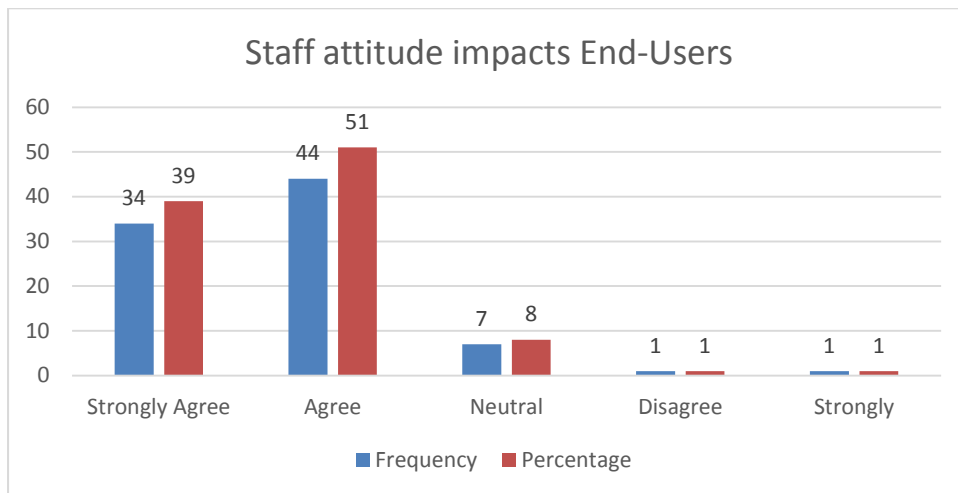


Figure 4.9: SCM staff attitude have an impact on end-users

The great majority of respondents (90%) either agreed or strongly agreed that the attitude of SCM administrative staff has an impact on end-users, while 7 (8 percent) were neutral. This clearly is a concern as it is of paramount importance that SCM end-users and SCM staff work together to promote a positive attitude which can lead to efficiency and productivity. Kirsch, et al (2009) argue that employees with the same competencies and skill levels are likely to be many times more productive if they have a positive attitude toward work, and feel connected, committed and invested in success of the department. Therefore, employees' positive attitudes enable engagement with their work (Harrel, 2009).

Kirsch, et al. (2009) further highlight that when the end-user embarks on a process towards acquisition of goods or services, information related to the process becomes critical, especially if the project is time-based. SCM is often in a position to provide such information. If SCM demonstrates an attitude that is not positive, such as not feeding information back to the end-user, not assisting if there are problems experienced in the process, or if care is not shown by SCM staff to the end-user, a poor working relationship becomes inevitable.

4.5.6 A lack of effective communication systems within the SCM section affects end-users

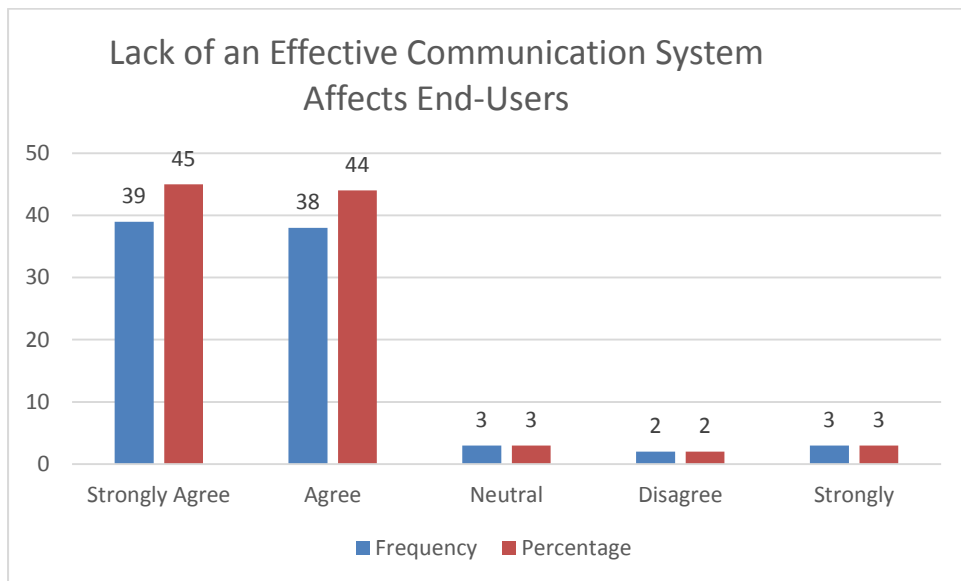


Figure 4.10: Lack of effective communication system at SCM section affects SCM end-users

The majority of the respondents 39 (45 percent) strongly agreed that lack of an effective communication system affects end-users. 38 (45 percent) of the respondents further agreed to the statement, while 3 (3 percent) were neutral. Only 5 (5 percent) of the respondents disagreed or strongly disagreed with the statement. This indicates that there is a lack of any effective communications system and that this affects these employees' daily operations and productivity. Emeka (2015) finds that effective communication in the working environment enables employees to work with purpose and with greater ease, leading to employee/customer satisfaction. Shou (2013) explains that if a better communication system could be made available all requisitions forwarded to SCM could be obtained and monitored on the system.

The above figure therefore indicates that 89 percent of participants agreed that the lack of an effective communication system at SCM affects the end-users reflecting that it is not easy to be updated about the submitted requisitions. In this regard it is interesting to note that in the year 2015 the SCM section introduced the "Intenda" system which, however, was never formally implemented after training all SCM end-users and SCM administrative staff. The findings strongly indicate that SCM

managers should create such a system for the Provincial Department, that can be updated on a daily basis, for SCM end-users to be able to check the update of requisitions submitted. It would be necessary for someone to be appointed to take responsibility for the system. Currently, there is no system that assists with updates to the end-users, who end up relying entirely on person-to-person updates. Given the poor relationship that generally exists between SCM staff and end-users, that person-to-person update is far from ideal.

4.5.7 Most end-users are satisfied with the service provided by the SCM section

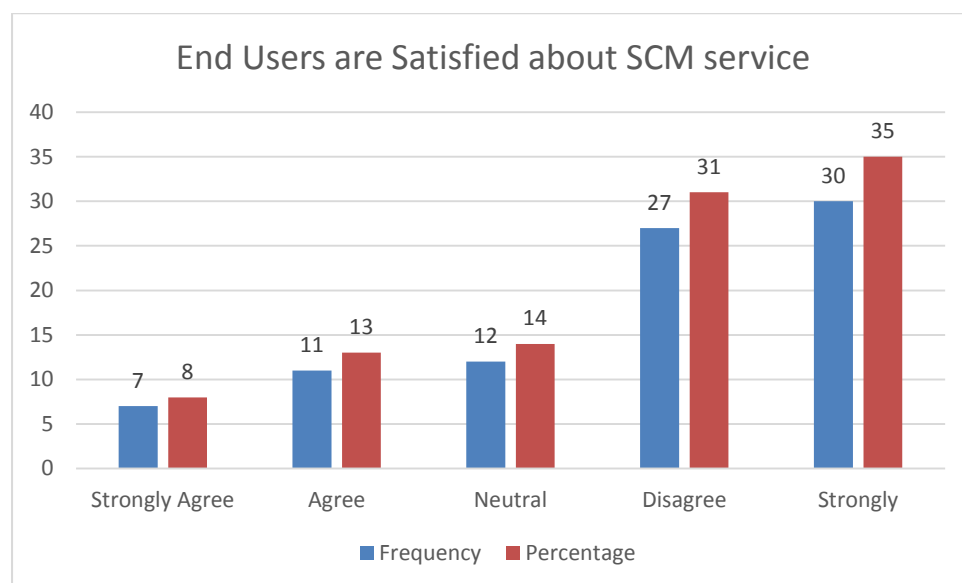


Figure 4.11: Satisfaction of service delivered by SCM to the end-users

This indicates that a large number of the respondents (30, or 35 percent) strongly disagree that they were satisfied with the service provided by the SCM section and 27 (31 percent) of respondents also disagree with the statement. 12 (14 percent) were neutral. There were therefore only 11 (13 percent) of respondents who confirmed their satisfaction with the service and only 7 (8 percent) of respondents strongly agreed that they were satisfied. Therefore, an overview of the results, indicates that 80 percent of respondents were not fully satisfied, clearly indicating that there is much that needs to be done to improve SCM services. These results are confirmed by some of the comments from the open-ended questions where several respondents complained about the lack of a better system at SCM, with some respondents emphasising that there were no turnaround times for requisitions, and

that sometimes they take a whole year to be processed, or are never processed at all, with no valid reasons given.

It therefore appears that SCM systems have not transformed to accommodate to up-to-date requirements and trends. A manual system, that is obsolete in this era, is still used. The fact that the system is manual also places a large responsibility on officials who sometimes fail to cope with the volume. Respondents also noted that most of the required goods are not delivered on time. This affects projects that need to be completed, very negatively.

4.6 SECTION C: THE RESPONDENTS WERE ASKED TO INDICATE THE ISSUES THEY PERCEIVE AS BEING THE MOST IMPORTANT CONCERNING SCM SERVICES DELIVERED BY THE PROVINCIAL DEPARTMENT

The responses below have been grouped by the respondent into different categories

4.6.1 Communication of policy guidelines to the end-users

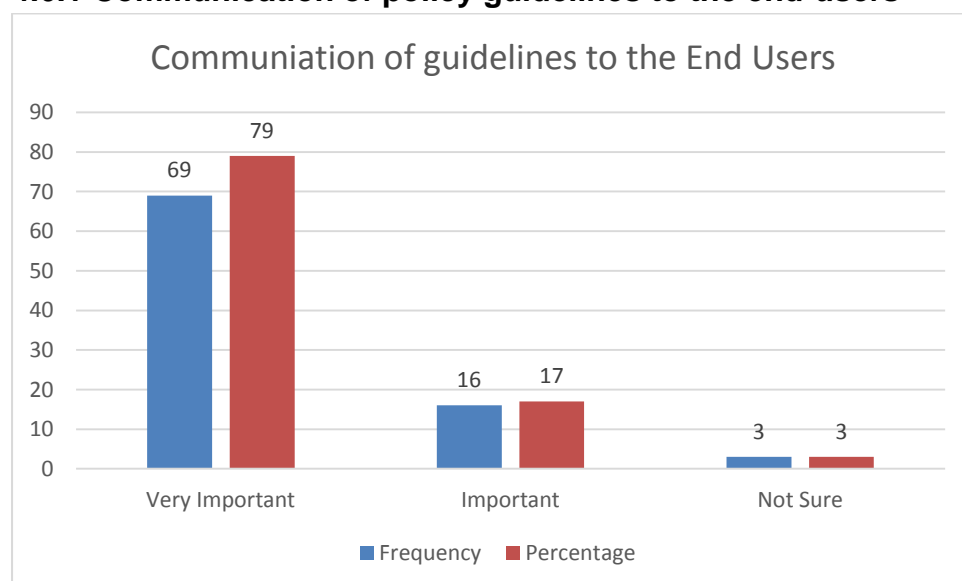


Figure 4.12: Communication of policy guidelines to the End- User's

The majority of respondents 69 (79 percent) perceived that it is very important that SCM communicates their policy guidelines to the end-users and 16 (17 percent) of respondents also believe that it is important to communicate all new policies for easy implementation. It is known to the researcher that the SCM policy guidelines are

available via the Departmental intranet, to which all staff members have access, but some of them do not have intranet access and some of the policy guidelines are not clear to them. End-users therefore require SCM to provide them with orientation concerning every new policy guideline before it is posted on the intranet.

SCM processes are guided by policies, and processes and decisions are informed by such policies. Communication of policies to all stakeholders is therefore important. End-users, for example, must know when there is a product that can only be purchased locally, and they must know how the Preferential Procurement Policy Framework Act (PPPFA) works, as explained in Chapter 2 (page 20).

4.6.2 Turnaround time of customer request of stock for their respective office/ section is:

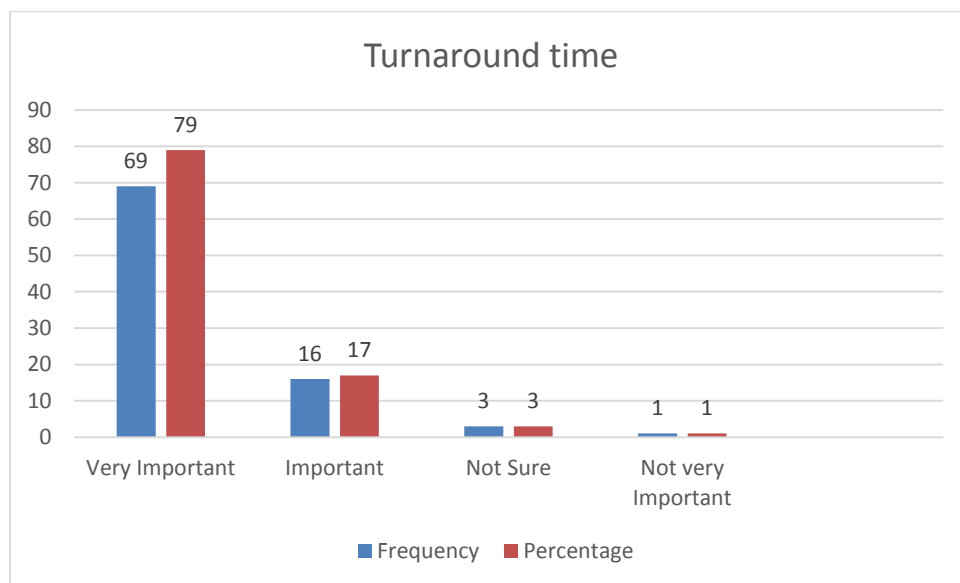


Figure 4.13: Turnaround times

The great majority of respondents 67 (79 percent) believe that it is very important to have turnaround times for every requisition sent to SCM and 16 (17 percent) of respondents also considered that it is important to have turnaround times for customers' requests. Only 1 (1 percent) thought it was not important. Most end-users do not have warehouses, and therefore prefer to start the procurement process to coincide with the beginning of a project. It therefore becomes necessary that there

are no delays in the process as such will affect a planned project that is why turnaround times are required.

4.6.3 Availability and accessibility of policy guidelines to the end-users of the SCM section is accessible

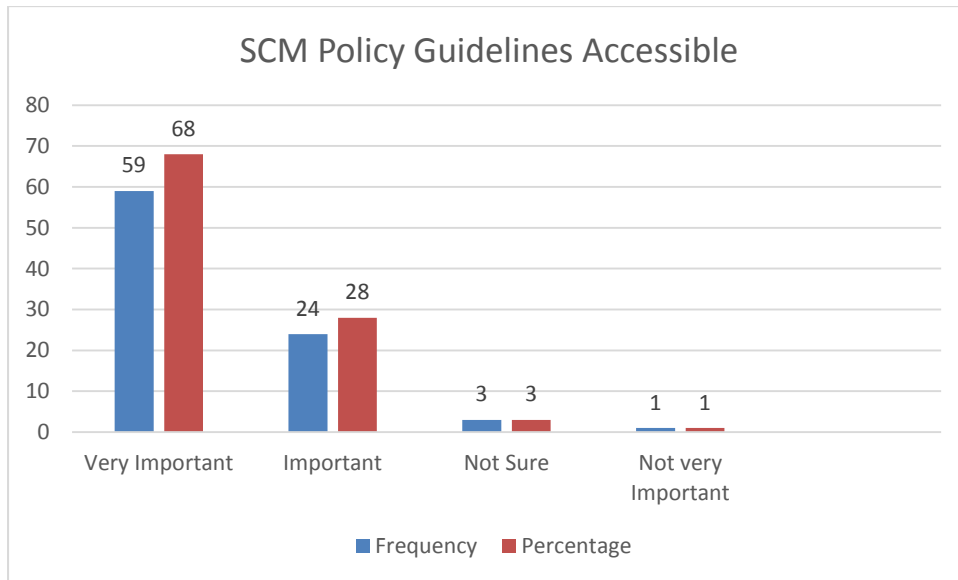


Figure 4.14: Availability and accessibility of SCM Policy guidelines

Most of the participants 59 (69 percent) believe that it is very important to have access to policy guidelines within the Department and 24 (28 percent) further believe that it is important. Therefore, a great majority (96%) see this as important while only 1 (1 percent) respondent thought it not important.

4.6.4 Day-to-day job descriptions with regard to our SCM section are:

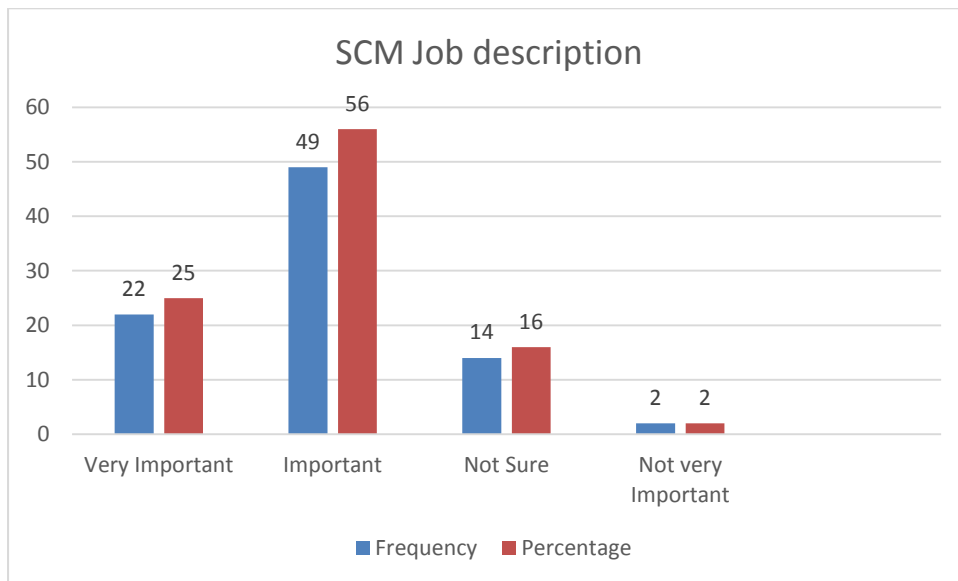


Figure 4.15: Day-to-day job descriptions with regard to our SCM section are:

The majority of respondents 49 (56 percent) perceived that SCM job descriptions were an important document that needs to be available to SCM administrative staff and 22 (25 percent) consider that it is very important to have job descriptions as a guideline to the employees, as it contained all activities that need be done. Therefore 80 percent of respondents considered job description as important. However, there were 14 (16 percent) of respondents who were not sure if it is important to have day-to-day job descriptions and only 2 (2 percent) thought that it was not very important to have job descriptions available.

4.6.5 For the SCM staff to have relevant skills in their job is:

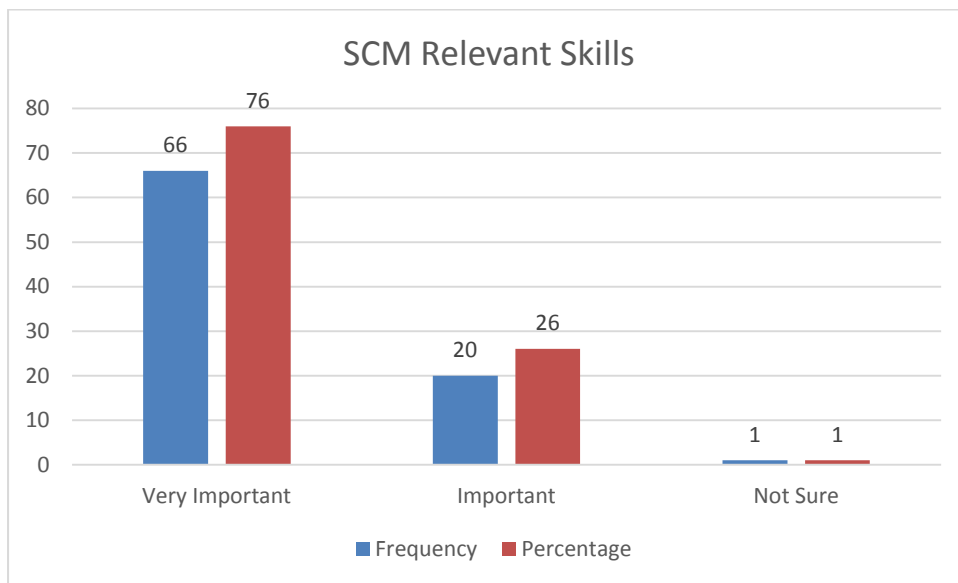


Figure 4.16: SCM staff have relevant skills

The results indicate that 66 (76 percent) of respondents believe it is very important for SCM Administrative staff to have relevant skills for their job and 20 (26 percent) of respondents also think that it is important. Only 1 (1 percent) of the respondents were not sure. Ambe (2012) highlights that South Africa is still faced with many challenges of supply chain management such as lack of proper knowledge and skills therefore the SCM management needs to equip their employees with the required skills.

4.7 QUALITATIVE DATA ANALYSIS OF END-USERS' RESPONSES TO THE OPEN-ENDED QUESTION

4.7.1 INTRODUCTION

The previous section presented the findings of the quantitative data collected from the end-users' questionnaires. This section presents qualitative data analysis for SCM end-users. According to Klenke (2016:33) qualitative data analysis produces a wealth of details through direct quotation from participants and careful description of situations, events, interactions and observed behaviours. The responses to the open-ended questions were grouped into category themes for analysis by the researcher. These themes were created and prepared based on the information gathered from the participants. Bias was avoided by ensuring that both SCM end-users and SCM administrative staff participated in order to get the views of each group as to whether SCM functions efficiently. (Responses from SCM staff are presented in the following chapter)

As stated in Chapter 3 above, the researcher had planned to conduct interviews with both end-users and SCM staff to gain a more comprehensive understanding about the services offered by SCM staff. However, these interviews were cancelled due to the sensitivity of the study as the participants felt uneasy about being interviewed. The researcher therefore included open-ended questions as an alternative to gather additional information as to the perceptions of end-users and SCM staff. The use of open-ended questions allowed the respondents to expand about issues and challenges pertaining to services offered by SCM administrative staff without any fear of being identified, as all responses were anonymous.

Both the questionnaires had only one open-ended question: ***"If you would like to add anything further please explain briefly what can be done to improve the efficiency of Supply Chain Management in your opinion"***. Thus, it can be seen that this question was optional, but the good response rate indicated that respondents were engaged with the question and keen to give their views. The findings presented below were gathered from 38 end-users.

4.8 LEADERSHIP AND DELEGATION

Below are the raw data collected from the SCM end-users concerning leadership and delegation

- *There must be more official that are task to do certain job than one person because if that person resigns, off sick, on leave the work is affected.*
- *SCM units need a strong leadership who would be able to give clear directions to the staff as well as end users regarding SCM processes, policies, procedures and circulars.*
- *A strong element of monitoring is necessary to ensure SCM staff takes accountability.*
- *SCM to stop giving serious task to interns because sometimes no one assist after they left the department*
- *The integration between SCM and finance can be improved as sometimes they there are issues conflicting instructions and circulars*
- *SCM should further develop standard operating procedures so that the staff in the department can use the step by step guide and also guide on how to complete NSI and procurement process required.*
- *Increase delegation to district minimising items that must referred to province i.e. catering.*
- *To improve the efficiency and effectiveness of SCM by clearing of processing bottlenecks within the section*
- *SCM officials will not take responsibilities for their own functions – they would rather return the function to the individual requesting the service rather than do what is expected of him/her.*

These responses indicate that lack of leadership is a serious issue mentioned by several of the respondents which also affects the attitudes of SCM administrative staff towards their work. The respondents stated that it is challenging to understand how tasks are delegated to SCM administrative staff as it is difficult to get someone to account for requisitions received when a follow-up is made. End-users highlighted that it is not known who is responsible for all enquiries and sometimes SCM staff refuse to update SCM end-users about certain tasks if another person was doing it and that person is on leave or off sick. End-users are sometime asked to wait for that

individual to return to work. The suggestion from SCM end-users is that tasks must be shared and the delegation should be clear for the purposes of accountability and effectiveness of the SCM department. The respondents also mentioned that serious tasks should not be delegated to interns. Interns may be unable to deal with enquiries about the procedures that must be followed for items that are delayed. Other respondents were concerned that no one from permanent staff is responsible for the work given to interns and it becomes a huge problem to get someone to be held to account if things are done wrongly. SCM units therefore need strong leadership able to give clear directions to the staff as well as end-users regarding SCM processes, policies, procedures and circulars. SCM should develop Standard Operating Procedures(SOP) to guide SCM end-users on SCM issues.

4.9 LACK OF AN SCM SYSTEM

Below is the raw data collected from the SCM end-users on the lack of any electronic system:

Lack of an automated SCM system

- *Proper system to be put in place where they are able to monitor step what is going on with procurement.*
- *SCM in department of Health can be improved by electronic systems in the whole department this will improve turnaround time will decrease fraud out activities in general.*
- *There should be an easy way of communicating with suppliers.*
- *SCM staff should be easily accessible to assist on any enquiries or may be a central place for enquiries and resolving issues.*
- *Automated system needed where people can check on progress*
- *Creating an effective working system within the unit*
- *Less political tenders*
- *SCM must develop a system where end users can track their orders in terms of stages in the process i. e electronic system*
- *Creation of an electronic system for end users, suppliers and SCM.*
- *Proper follow ups on orders placed and speedy delivery to end users.*

The end-user respondents therefore highlighted their concern about the lack of an automated system operating in the SCM section. They clearly wanted an automated system to allow them to check and monitor the progress of procurement items and processes for all requisitions sent to SCM. Other respondents believed that such a system could improve SCM staff performance and could also improve turnaround times and decrease fraudulent activities. End-users also suggested that an effective system must always be updated for outstanding orders. However, the researcher believes that some of the respondents who felt that the manual system that is used is adequate may have been referring to the fact that SCM does have clear rules but these are often poorly followed and enforced, and often due to interference from corrupt officials (note the reference to 'less political interference' in tender issuing). It is therefore important for SCM to create an environment that eliminates such interference by enforcing the principles of good governance.

4.10 TURNAROUND TIMES AND TIME MANAGEMENT

SCM Evaluation and Adjudication Committees

In order to explain the context of the comments below the following background is provided: All requisitions that are sent by SCM end-users to the SCM section for procurement purposes are forwarded to the Bid Evaluation and Bid Adjudication Committees. The Bid Evaluation Committee will look at all bids received from the suppliers, and make recommendations as to the suppliers that best meet requirements. Those recommendations are then sent to the Bid Adjudication Committee to appoint the supplier that will provide the required service or item.

The SCM tendering process is where the need is identified by the end-user and placed in the procurement plan and a budget will then be provided. Demand Management, after consolidating the Departmental Procurement Plan, stipulates dates when purchases will be made in accordance with when the goods are required, then the end-users prepare and submit the specification and confirmation of funds to SCM. SCM then arranges for the Specification Committee to be appointed (members are appointed by the Head of Health in line with Treasury

Regulations). The mandate is to ensure specifications are open, fair and unbiased and also to ensure the availability of funds.

After approval of specifications, SCM compile a bid document, and the advertisement is thereafter made, to close after about 21 days. After closing, all offers are prepared for the Evaluation Committee to evaluate (these members are also appointed by the Head of Health), and to make recommendations and submit to the Adjudication Committee to approve for validation. If there are appeals the successful bidder receives a letter. SCM prepares a contract for signing by the successful bidder and the Department. The contract stipulates a delivery period, for instance, “after receipt of order delivery must be within two weeks”. When the contract is signed an order will be issued.

Below are the raw data collected from the SCM End Users in relation to these processes:

4.11 SCM EVALUATION AND ADJUDICATION COMMITTEES

- *SCM should appoint companies on time*
- *SCM to check why there is a delay in the appointment of suppliers with no valid reasons given to end users*
- *SCM to take note companies that always withdraw and not allow them to quotes again.*
- *Improve advertisement method to certain goods or specialised instead of putting all things in the notice board and sometimes get wrong providers responding rather fax to specialised services to quotes and also avoids under quoting of suppliers that ends up withdrawing their services and delays process.*
- *SCM to have committee meetings frequently. It is not acceptable for the committee not to meet if a staff member off sick or leave.*
- *Quotations for items that are not more 10 000 should close within a day not 5 days.*

- *People to sit in SCM committees must include end users and committees to be orientated.*
- *Ensuring that committees sit at the set dates*
- *When award tenders they need to check the company and be more specific on items requested by the end users because sometimes we ended up returning items which is wrong.*
- *The SCM committees need to sit more often so that the orders /NSI of end users can be finalised sooner.*
- *Less political tenders*

Most respondents highlighted that SCM should have committee meetings frequently and appoint more members to avoid non-quorate meetings, which often happens due to people being on leave or being delegated to other tasks. When committees do not sit it affects service delivery and delays the process of appointing suppliers. When the committees award tenders they need to check the company and be more specific as to the items required by the end-users because incorrect items have to be returned. As one respondent points out, SCM should take note of companies that always withdraw and not allow them to quote again.

Below is the raw data collected from the SCM End Users

4.12 TURNAROUND TIMES AND TIME MANAGEMENT:

- *Perhaps there should be data element on a DHIS [District Health Indicator's System] to assist SCM with monitoring their performance and evaluation therefore; these data elements should include turnaround time's measures.*
- *Timelines must be clearly communicated.*
- *Time management – SCM must act in a way that the supplier cannot be able to come back to the end users for clarity, documents should be clear and understandable to suppliers to save time to produce required item.*
- *Improvement of turnaround time*
- *The turnaround times for request need to be addressed, this has a big impact to end users.*

The respondents clearly indicated that the issue of turnaround times is also considered as a critical factor due to companies not being appointed on time, sometimes contracts are also not renewed on time, and items not delivered on time. The respondents were concerned that all these delays are happening without any valid reasons being provided. Time management was also flagged as a critical factor since there were delays in most activities that were performed by SCM, and this delayed service provision. The respondents also stated that sometimes suppliers require clarity regarding the specifications provided to them and that takes a lot of time, and sometime leads to re-advertising due to under-quoting for the job.

End-users want SCM to provide suppliers with all the information required so that suppliers cannot come back to the end-users for clarity. When SCM award tenders they need to check the company and be more specific on items requested by the end-users. The turnaround times for requests need to be addressed as this has a big impact to end-users. Perhaps there should be data element on a District Health Indicator's system (DHIS) to assist SCM with monitoring their performance and evaluation and these data elements should include turnaround time measures.

4.13 STAFF ATTITUDES

Below is the raw data collected from the SCM End Users on Staff Attitudes

- *The attitude of employees at SCM need a huge improvement and they should try and understand that when responding to other people they might not have knowledge of SCM procedures and processes.*
- *Attitudes of SCM staff will also determine the attitude of end users towards them.*
- *Proper consultation and communication between SCM staff and End Users would make the component efficient and effective.*
- *SCM to ask for clarity to end users if they do not understand received requisition than to do wrong things.*
- *SCM stop being defensive when follow up made.*
- *SCM officials are very unfriendly and not approachable or supportive.*

- *It will help tremendously if SCM staff are available after 4h00 pm, try phoning from 15h55 onwards and no – one will pick up the telephone or answers emails.*
- *To improve staff attitude*
- *Better communication i.e. documents required to complete the request.*

Most respondents stated their concerns regarding the attitude of employees at SCM, feeling that it needs a huge improvement. End-users felt that SCM staff should try to understand, when responding to other people, that they may not have much knowledge of SCM procedures and processes. Other respondents highlighted that SCM administrative staff should stop being defensive when follow-ups are made, and some end-users found SCM officials to be very unfriendly and not approachable or supportive. Other end-users indicated that the attitudes of SCM staff will also determine the attitude of end-users towards them.

4.14 STAFF RECRUITMENT

Below are the raw data collected from the SCM End Users on Staff Recruitment

- *SCM should recruit staff that has relevant qualification and experience*
- *SCM must ensure that official rotate in doing their duties so that every section is supported even in times of staff shortages. Must remember that they are the back bone of the department because for all of us to perform our duties we depend on them in terms of ensuring that required stock is always available.*
- *Competent staff with proper SCM training to be appointed in future*
- *SCM staff's doing a very good job, suggest hiring more people to work because there is too much load, form 14 to be reviewed. [Form 14 is the certificate that is authorised by a Responsibility Manager on the end-users' side to confirm the following: that the service was rendered in a satisfactorily way, that goods were received according to specification and quantities, that all records have been updated including returns and short deliveries, that end-users are satisfied with charges and tariffs, that necessary invoices and other documents are attached for payment processes, and that the payee is entitled to the payment. This certificate is sent to SCM and the finance section to process payment].*

- *SCM play a crucial role in service delivery*

Some respondents wished that SCM could recruit more staff members that have relevant qualifications and experience in Supply Chain Management. Furthermore, end-users also indicated that SCM staff needed to ensure that there is an official rotation of duties so that every section is supported, even in times of staff shortages. Some of the respondents mentioned that SCM administrative staff should remember that they are the backbone of the Department and every service within the Department requires their support by performing their duties well – as all programmes depend on them in terms of ensuring that the required stock is always available.

4.15 TRAINING AND ORIENTATION

Below is the raw data collected from the SCM End Users on Training and Orientation

- *Regular training on SCM processes are recommended to all admin support staff in the department.*
- *SCM should conduct workshops to staff in other components so that they understand how SCM policies should be followed.*
- *End Users will appreciate crash course on SCM processes i.e. what is required from the end user.*
- *A workshop/short courses would assist end user to understand policy/procedure with regards to requirements.*
- *SCM officials to be trained on all programmes related to all projects*
- *SCM staff should communicate before giving feedback and need training.*
- *SCM staff needs to update the end users regarding the Non Stock Item (NSI) progress.*
- *At least on annual basis SCM should conduct workshops for staff to orientate on SCM policies and guidelines.*
- *SCM personnel need to be orientated on users programme to understand the importance of life threading items.*
- *Proper record keeping and document management*

The respondents believe that SCM officials needed to be trained in all programmes related to all projects. End-users require orientation and workshops regarding new SCM policies, as some of SCM staff are not clear about these procedures. SCM should conduct workshops to staff on other components of end-users' requirements so that they understand how SCM policies should be followed. The following issues were also pointed out by respondents: at least on an annual basis SCM should conduct workshops for staff to orientate them on SCM policies and guidelines; all Departmental staff members involved in any SCM procedures, to be orientated on SCM procedures, prescripts and policies.

SCM staff need to update the end-users regarding the NSI progress. Regular training on SCM processes is recommended for all administrative support staff in the Department and regular workshops should therefore be conducted – updating end-users concerning the latest SCM processes. Proper record-keeping and document management was also recommended.

4.16 POLICIES

Below are the raw data collected from the SCM End Users on Policies

- *Changing policy – SCM to ensure that end users are aware of policy changes to void delays and that can guide end users.*
- *End Users require orientation and workshops regarding new SCM policies*
- *Most SCM policies and communication is done in isolation – we as users will only get to hear about these if we approach SCM for service.*
- *The SCM systems has clear rules but are often poorly enforced due to policies interference, that has lead SCM and Corruption perceived as inseparable twins. It is therefore important for SCM to create an environment that eliminates such interference by enforcing the principles of good government the in pursuit of influencing clean administration.*
- *Regular workshops should be conducted – addressing end users on the update pertaining SCM processes.*
- *Some of SCM staff are not clear about their procedures when clarity required.*

- *Current staff in SCM to be orientated and kept informed on a regular basis with regard to prescripts and policy changes.*
- *All Departmental staff members involved in any SCM procedures to be orientated on SCM procedures prescripts and policies.*

The respondents recommended that when changing policy, SCM should ensure that end-users are aware of policy changes to guide end-users and avoid delays. The SCM system has clear rules but these are often poorly enforced due to policy interference, which has unfortunately led to SCM and corruption sometimes being perceived as inseparable twins. It is therefore important for SCM to create an environment that eliminates such interference by enforcing the principles of good governance in pursuit of influencing clean administration. Respondents suggest that current staff in SCM be orientated and kept informed on a regular basis with regard to prescripts and policy changes. All Departmental staff members involved in any SCM procedures should be orientated on SCM procedures, prescripts and policies.

Timelines must be clearly communicated and SCM must develop a system where end-users can track their orders in terms of stages in the process, that is, an electronic system. SCM should further develop standard operating procedures so that the staff in the Department can use a step-by-step guide, and also be guided as to how to complete the required information. Furthermore, SCM should ask end-users for clarity, if they do not understand a received requisition, rather than complete the work incorrectly.

4.17 CONCLUSION

This chapter provided the SCM end-users analysis and findings of the data collected for both quantitative and qualitative data. The next chapter will present the analysis and findings of quantitative and qualitative data collected from SCM Administrative staff.

CHAPTER FIVE: DATA ANALYSIS AND INTERPRETATION OF SCM STAFF RESPONSES

5.0 INTRODUCTION

This chapter presents the results of the SCM administrative staff questionnaire responses. Both the quantitative and the qualitative data are analysed and discussed. The SCM responses are presented here separately from those of SCM end-users since the researcher distributed two sets of data collection tools. As with the analysis of the results from the end-users' questionnaire above, the data collected from the respondents and the results will be presented as descriptive statistics in the form of graphs and other figures for the quantitative data collected. The qualitative data have been grouped into themes by the researcher and these will be discussed and analysed after the quantitative data discussion.

5.1 SCM RELIABILITY

The overall reliability of the SCM administrative staff questionnaire was tested by Cronbach's Alpha which, as explained at the beginning of the previous chapter, is a measure of internal consistency, that is how closely related a set of items are as a group. Reliability means that whatever conclusions that are drawn from the results of the data are considered to be reliable, are to be trusted, and considered factual.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.910	.905	18

Table 5.1: Reliability Statistics

5.1.1 KMO and Bartlett's test

Results of the KMO and Bartlett's test of appropriateness are presented in the table below:

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		Approx. Chi-Square	.837
Bartlett's Test of Sphericity	df	714.012	
		153	
	Sig.		.000

Table 5.2: KMO and Bartlett's Test

The results indicated that all collected data from SCM administrative staff were appropriate for the purpose of factor analysis (BTS = 714.012, sig. = 0.000, sampling adequacy = 0.837). The result indicated that there are sufficient items for each factor (See Appendix F).

5.2 THE RESEARCH INSTRUMENT

The research instrument consisted of 26 items and was divided into 3 sections, namely A, B and C. These sections required the following data from the participants:

Section A: Biographical data

Section B: The understanding of the role of supply chain management functions in the Provincial Department of Health.

Section C: One open-ended question for general comments

5.2.1 Biographical data

This section presents descriptive statistics of the biographical data collected from SCM administrative staff.

5.2.2 Gender of respondents

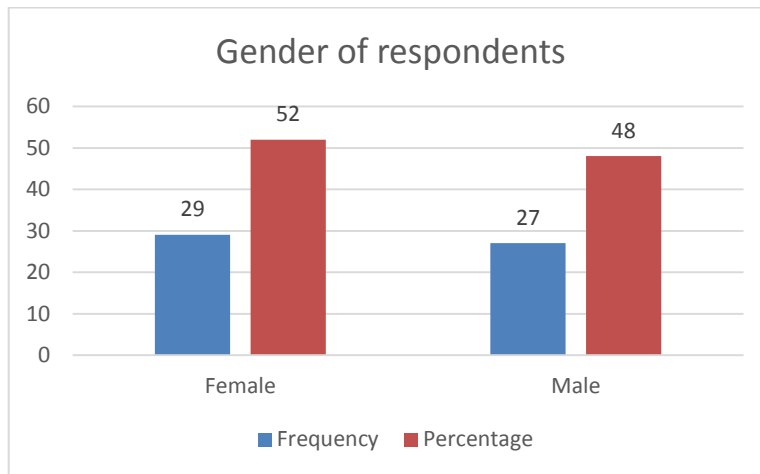


Figure 5.1: Gender of respondents

The findings show that 29 (52 percent) of respondents were females and 27 (48 percent) were males. These results indicate a reasonable balance between genders within the Provincial Department of Health in the SCM section.

5.2.3 Age group of SCM Administrative staff

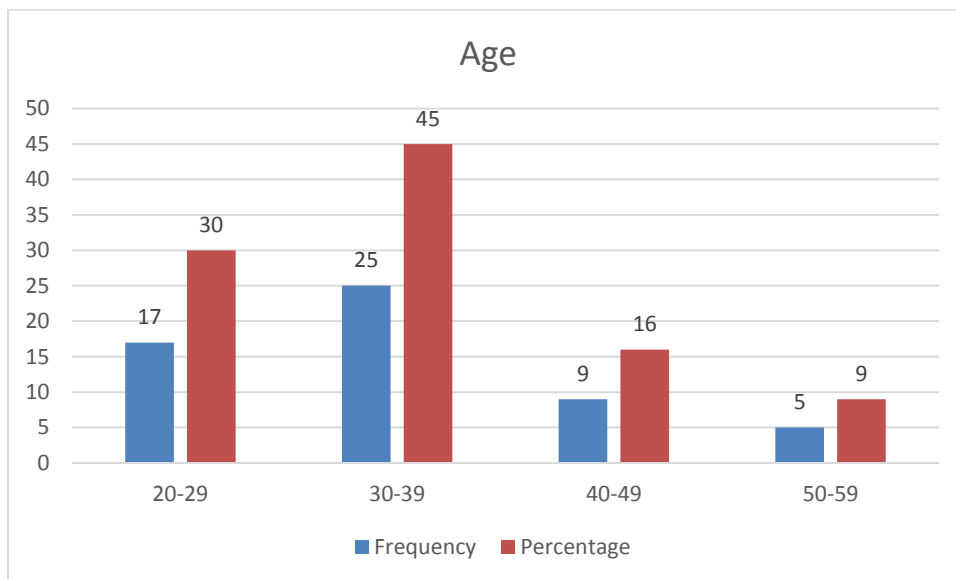


Figure 5.2: Age group of respondents

The above figure shows that 25 (45 percent) of respondents were between the ages of 30 – 39 years and 17 (30 percent) were between 20 – 29 years of age, while 9 (16

percent) of respondents were between 40 – 49 years of age and only 5 (9 percent) of respondents were between the age of 50 – 59 years.

5.2.4 Employment Years of Service

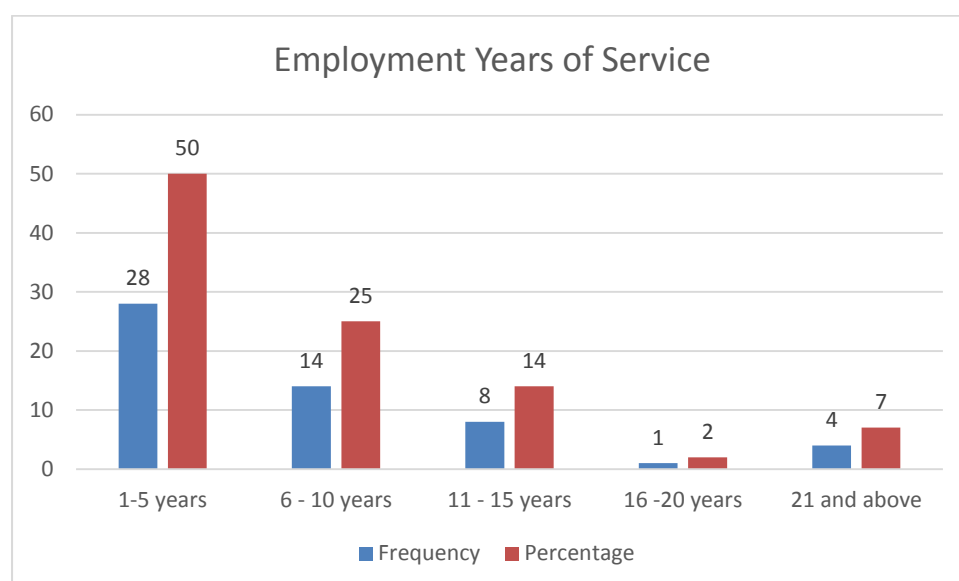


Figure 5.3: Employment Years of service

The above figure shows that half of the respondents – 28 (50 percent) had only 1-5 years of working experience, that 14 (25 percent) of the respondents had 6-10 years' experience while 8 (14 percent) had 11 – 15 years, and 1(2 percent) had 16-20 years of experience. Only 4 (7 percent) had 21 years of working experience and above. Although there were a number with limited experience, the results show that half of the respondents had sufficient working experience. This means that one may assume that they were fairly aware of the Department's processes and procedures.

5.2.5 Employment Section

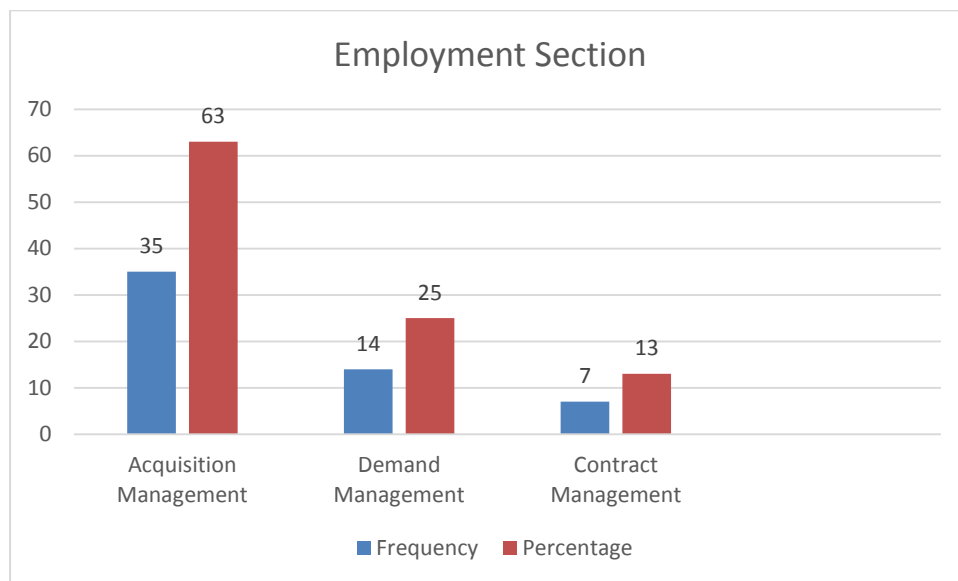


Figure 5.4: Employment Section

The above figure shows that the majority of respondents, 35 (63 percent) were employed under the Acquisition Management section, while 14 (25 percent) were within the Demand Management section and only 7 (13 percent) were employed under the Contract Management section. The reason for the higher number of employees under the Acquisition Management section is that they are responsible for receiving requisitions, for claims and for the processing of documentation received from the Provincial Department Health SCM end-users and external suppliers.

5.3 THE UNDERSTANDING OF THE ROLE OF SUPPLY CHAIN MANAGEMENT FUNCTIONS AMONGST SCM EMPLOYEES

5.3.1 SCM staff advertise for potential suppliers to bid for contracts

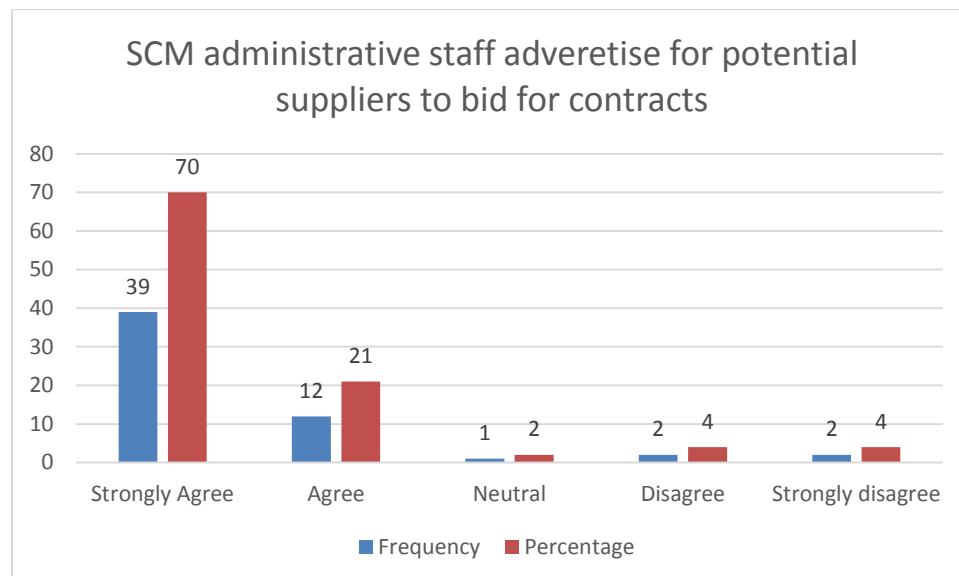


Figure 5.6: SCM staff advertise for potential suppliers to bid for contracts

The majority of the respondents, 39 (70 percent), strongly agreed that SCM do advertise for potential suppliers to bid for contracts and another 12 (21 percent) were also in agreement with the statement. Only two (4 percent) of the respondents indicated that they disagreed with the statement and another two (4 percent) strongly disagreed with the statement. It is therefore noted that a large portion of the respondents were confident that SCM administrative staff do advertise for potential suppliers to bid for contracts. However, there is a slight concern over the other 8 percent of respondents that disagreed with the statement. This indicates that there are unforeseen factors that need to be verified as to the cause of the small portion of respondents that disagreed with the statement. Irregularities here can affect the performance of SCM administrative staff from the Contract Management section.

5.3.2 The handling of appeal processes always follows proper procedures

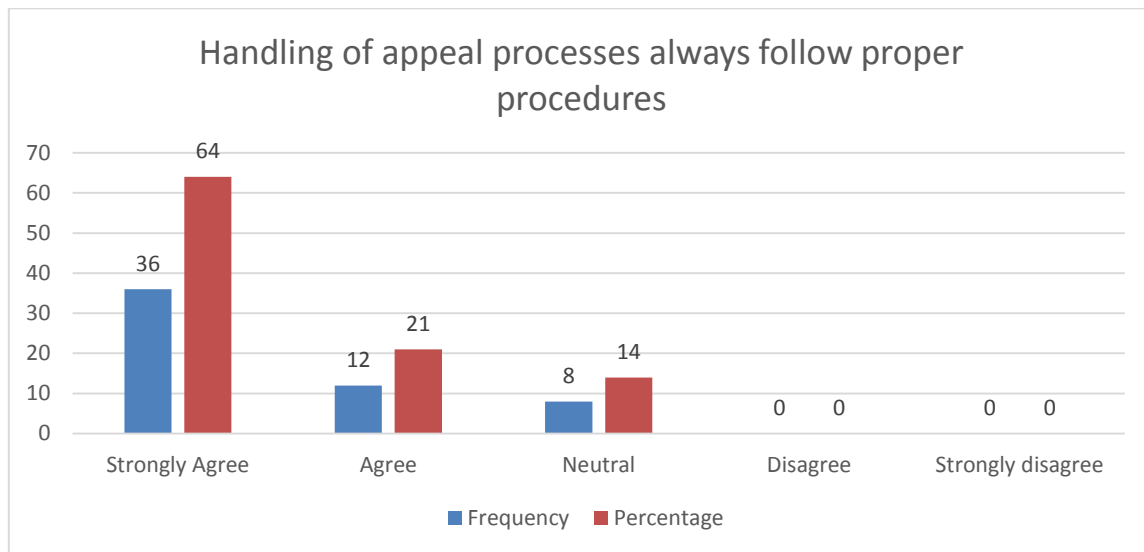


Figure 5.7: Handling of appeals always follows proper procedures

The majority of the respondents, 36 (64 percent), strongly agreed that the handling of appeals does follow proper procedures, and 12 (21 percent) of the respondents also agreed with the statement. Only 8 (14 percent) of respondents were neutral and none disagreed. Based on the results, it is clear that SCM administrative staff were confident that they were following proper procedures which were stipulated by Treasury Department when handling bidding appeals.

5.3.3 All names of awarded companies are published

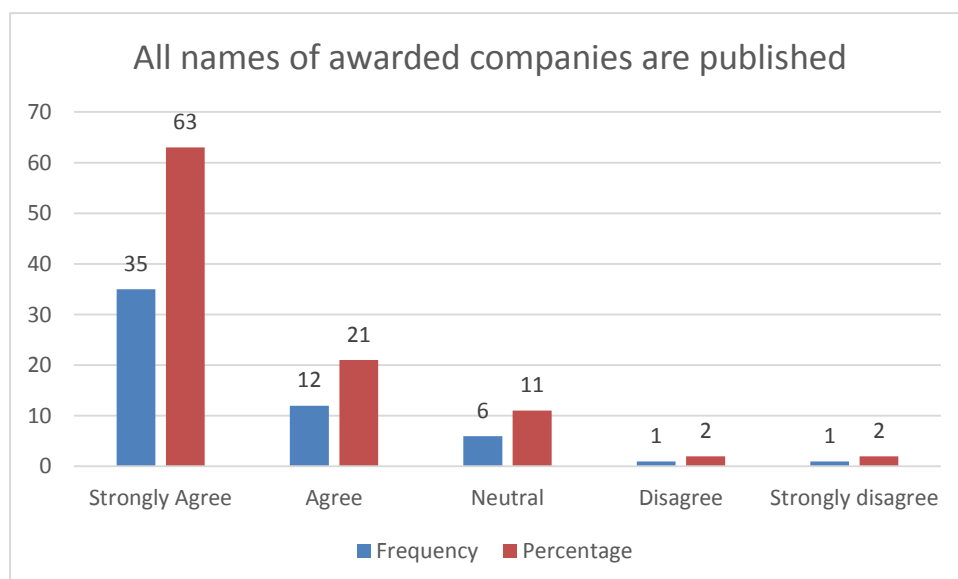


Figure 5.8: All names of awarded companies are published

The majority of the respondents 35 (66 percent) strongly agreed that all names of awarded companies are published and 12(21 percent) of respondents also agreed with the statement. 6 (11 percent) of the respondents were neutral about the statement while one (2 percent) disagreed and another (2 percent) strongly disagree with statement.

This requirement ensures transparency as embedded in the relevant legislation, and it is again an issue that would undoubtedly invite concerns from oversight bodies such as Treasury and Auditor General if it were to be disregarded.

5.3.4 The Provincial Department of Health provides training including on-going workshops for all SCM staff

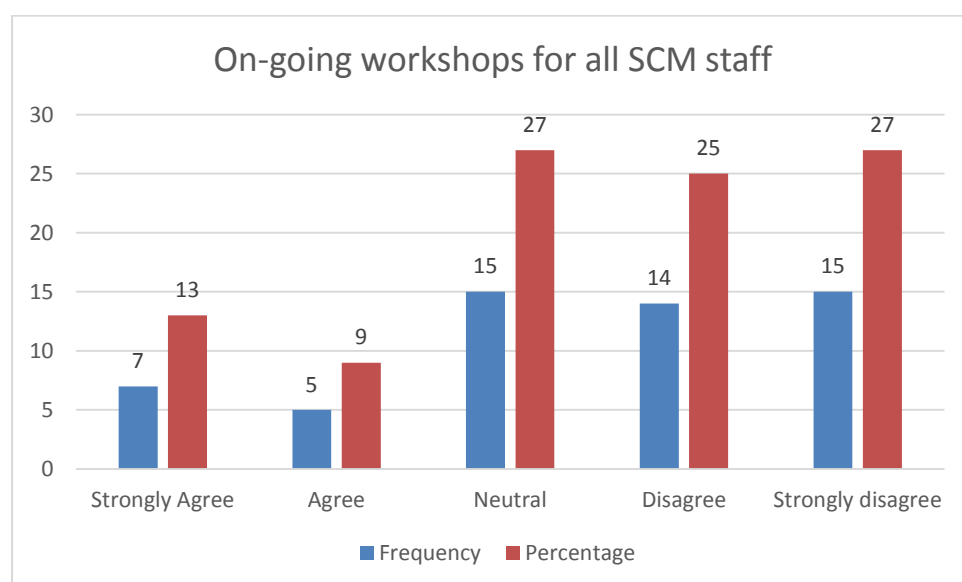


Figure 5.9: The Provincial Department of Health provides training including on-going workshops for all SCM staff

These results indicate that 52% of respondents confirmed that trainings and on-going workshop were not provided while 27% were neutral, which suggests that these respondents were not trained, as, if they had been trained, they would be unlikely to forget it. There were 22% however who believed that training was offered. This response clearly shows overall that capacity development with staff is not happening, and this is supported by the requests for training from SCM respondents in the open-ended questions. It can also be observed that the end-users are not

happy with the cooperation they get from SCM staff, and this could also be linked to a lack of training.

5.3.5 Our department provides us with customer care training in the SCM section

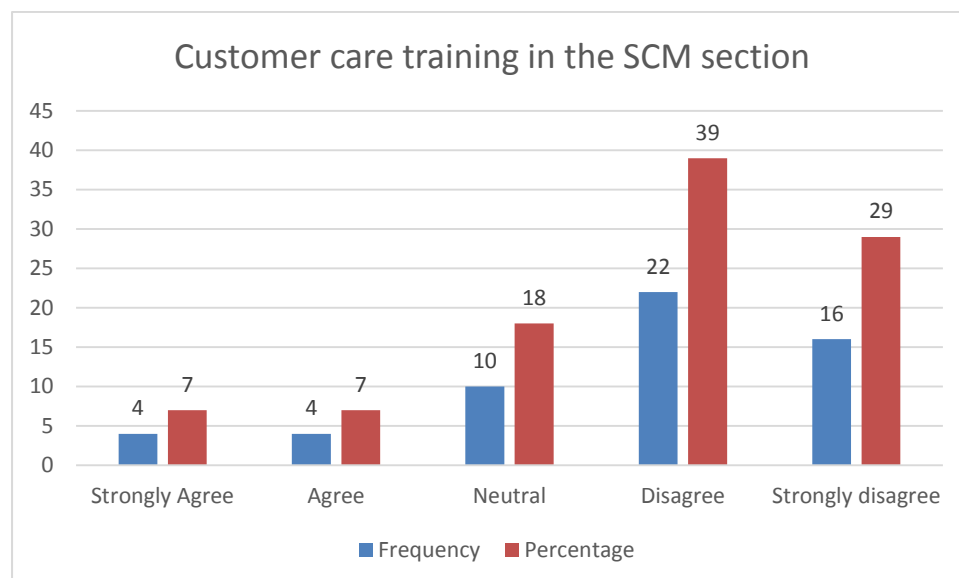


Figure 5.10: Our department provides us with customer care training in the SCM section

The great majority of respondents, 86 percent, either disagreed that customer care training is provided or were neutral, and only 14 percent indicated that it is provided. These findings strongly suggest that SCM administrative staff are not provided with customer care training to ensure that customers get the level of service that is required when they deal with different suppliers and end-users. Gilligan and Lowe (2018: 13) emphasise that customer care training is very important to equip organisational administrative staff with relevant skills. SCM staff also engage with the public, especially during the issuing of bid documents, and reviews from the public show that these departmental staff members often fail to demonstrate relevant knowledge, including necessary skills in engaging with the public. This poses a serious concern as it influences the operations of the Department.

5.3.6 We are provided with extra training with regard to purchasing and financial controls in the SCM section

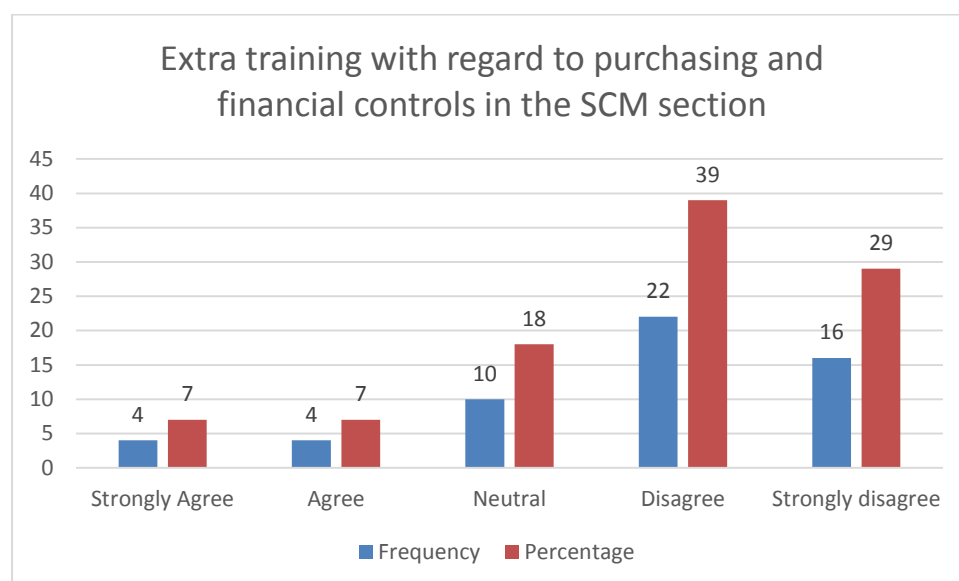


Figure 5.11: We are provided with extra training with regard to purchasing and financial controls in the SCM section

Most respondents (64 percent) disagreed that the department provides extra training with regards to purchasing and financial controls, while 12 (21 percent) were neutral. Therefore, the results indicate that the great majority of respondents (85 percent) felt that the Department does not provide adequate training on purchasing and financial controls, which can be seen as essential for SCM employees who process requisitions on a daily basis. It is clear that staff require management to support them in this way to run the SCM component of the Department's work efficiently. Having this training could assist the SCM section to meet their deadlines, and also to work according to the budget available, to avoid the overspending that is always reported in the Audit report from Treasury Office. This report allows the public to see the annual performance of the Provincial Health Department. According to the Department of Health Annual Report (2015/16:23) SCM incurred an irregular expenditure of R708,803 million which is disclosed in notes to the financial statements. Furthermore, the Department also incurred deviation to the value of R117 million.

These are critical components in the functioning of the SCM section and it would seem reasonable to expect that a sufficient number of workshops and training should

be provided to meet the ever-changing business dynamics. This again is a critical area in which the Department needs to be investing, and it is evident that this is not taking place. The reasons for these deficiencies could perhaps be attributed in part to the high turnover at managerial level. It could also be because of other more pressing needs, but the results show capacity building has been neglected in many areas including financial controls.

5.3.7 The SCM management orientates the staff concerning all the acts, policies and procedures that can be applied in the implementation of their work, and provides hard copies for reference.

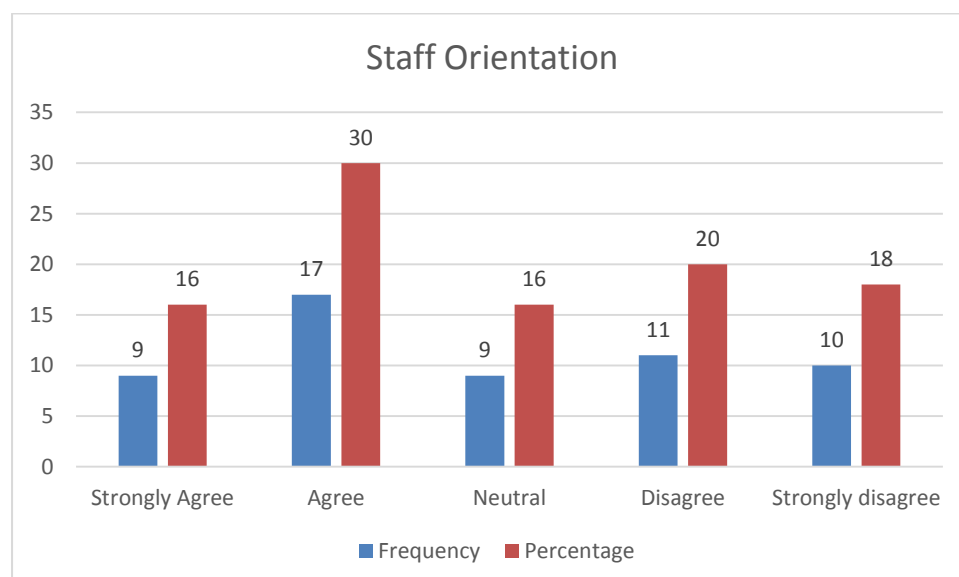


Figure 5.12: The SCM management orientates the staff concerning all the acts, policies and procedures that can be applied in the implementation of their work, and provides hard copies for reference.

The largest number of respondents, 17 (30 percent), agreed that the Department provides orientation with regards to policies and acts that guide them in the implementation of their work and copies are also provided for reference. The largest number of participants indicated that there is a gap that needs to be looked at, as 54% either disagreed or remained neutral concerning the existence of orientation about the implementation of policies, and management also needs to monitor the group of SCM administrative staff that are not aware of the existing policies and acts that should guide their work. Respondents that agreed with the statement may be

referring to the policies that are placed on the Departmental intranet, but the researcher, who works in the Department, can confirm that no orientation is provided to the staff directly.

5.3.8 The SCM administrative staff fully understand all acts, policies and procedures that need to be applied in the implementation of their work and provides hard copies for references

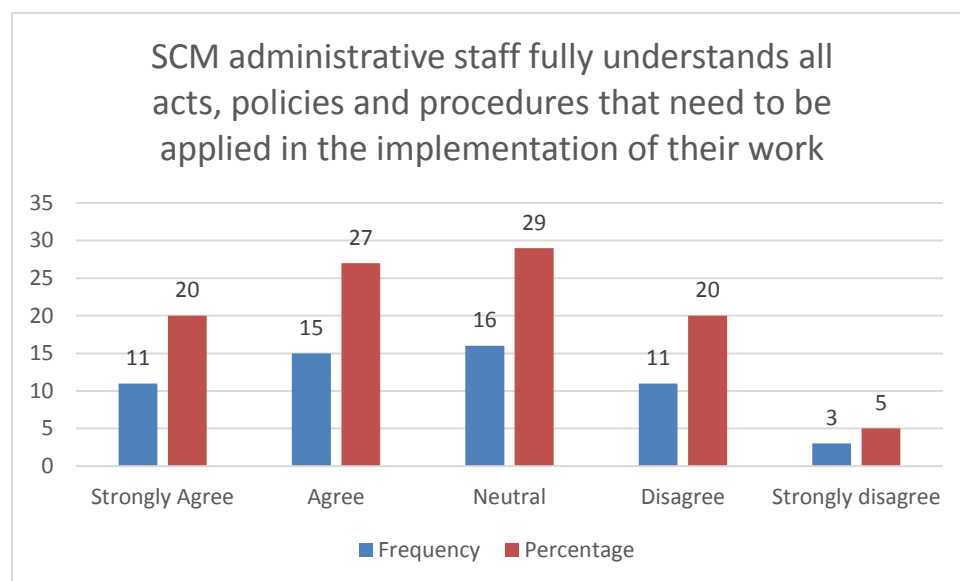


Figure 5.13: The SCM administrative staff fully understands all acts, policies and procedures that need to be applied in the implementation of their work.

The largest number of respondents, 16 (29 percent), were neutral about the above statement whereas 15 (27 percent) of respondents agreed with the statement. The results indicated that some of respondents require training. Those who agreed may be partly accounted for as these policies are placed on the intranet which some of SCM administrative staff explain to their junior staff and some fail to explain, so that many SCM staff do not fully understand these acts and policies.

5.3.9 The updated database for specifications is available to all SCM staff and end-users in the Department

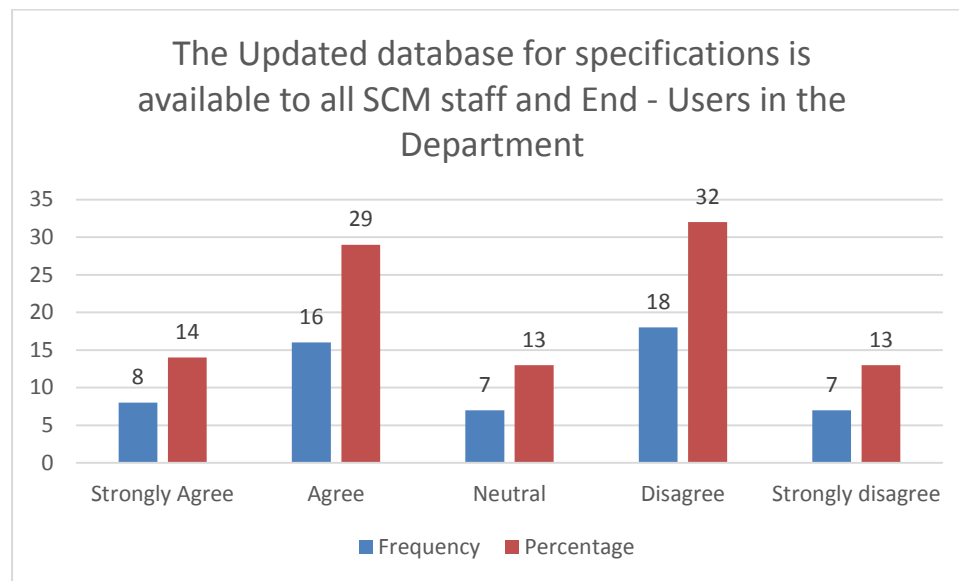


Figure 5.14: The updated database for specifications is available to all SCM staff and end-users in the Department

Most respondents indicated that there is no updated database of specifications within the Department, or were neutral about it, which suggests that they do not find this updated database. This clearly results in delays in getting required items if Acquisitions and Quotations personnel are not clear about the specification when inviting quotes.

Although specifications are primarily the responsibility of the end-user, SCM, and Demand Management within SCM, as a result of their mandate with the acquisition process, play a vital role in assisting end-users where help is required. This includes offering guidance on development of specifications and compilation and safe keeping of such for future use and referencing.

5.3.10 The Department of Health has a tracking system for all received requisitions by Supply Chain Management

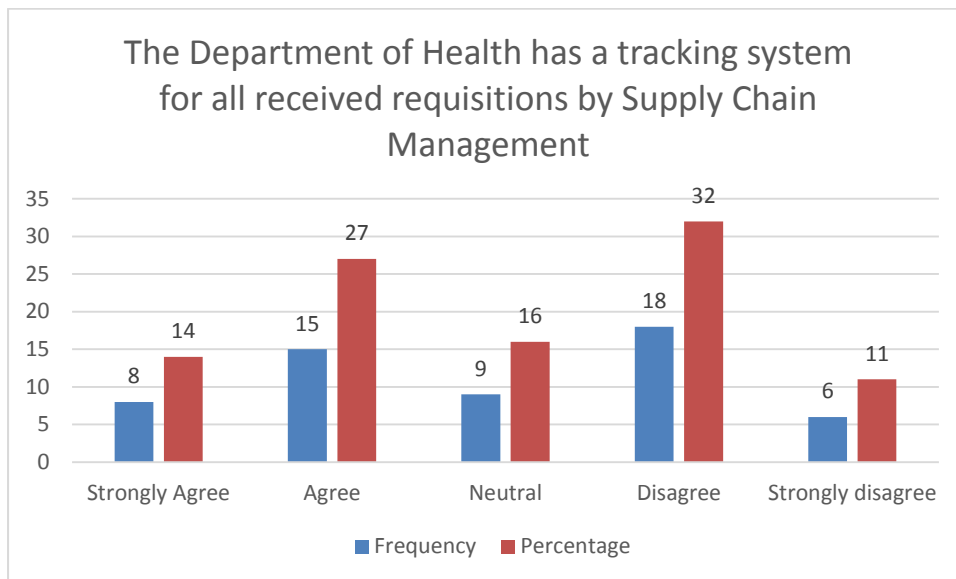


Figure 5.15: The Department of Health has a tracking system for all received requisitions by Supply Chain Management

Responses indicated that SCM do not have a system that constantly gives information on the status of the acquisition process, and this is not assisting the institution or the end-users. This is a critical issue that SCM needs to address as institutions rely on the provision of goods and services, the acquisition of which is facilitated by SCM. If communication is poor, or institutions or end-users do not have the required information at any given point as to the status of the purchase, it compromises proper planning for end-users. Some of the respondents who agreed with the statement may be referring to the manual system (record books) that is currently operative. However, it has flaws as documents and requisition status are difficult to track within this system.

5.3.11 SCM ensures that contracts are renewed on time

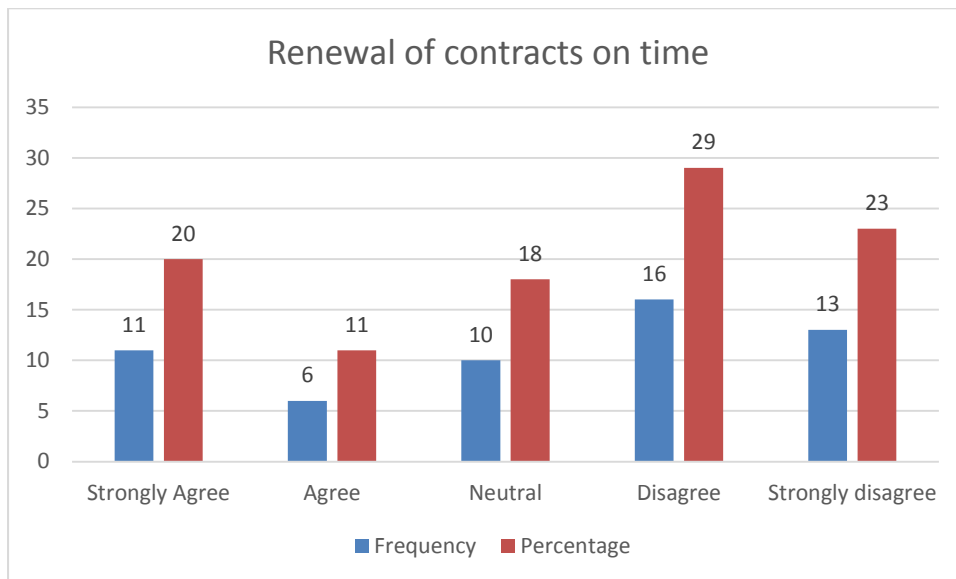


Figure 5.16: SCM ensures that contracts are renewed on time

The majority of respondents (70%) indicated that contracts are not renewed on time (if the neutral responses are added to those that disagree) and that effects service delivery within the Department as a whole. This is an indication of a lack of monitoring of expiry dates of all contracts.

The monitoring of all contracts is essential because renewal of contracts ensures continued supply and therefore continuous provision of services. The impact to the contractor is mostly on costing. Often the previous supplier, if the contract is extended, continues with the previous prices which may not benefit the contractor. For those not contracted, it robs them of a legitimate opportunity to participate in the economy and sell their goods.

5.3.12 The SCM administrative staff always respond to emails to provide feedback to end-users

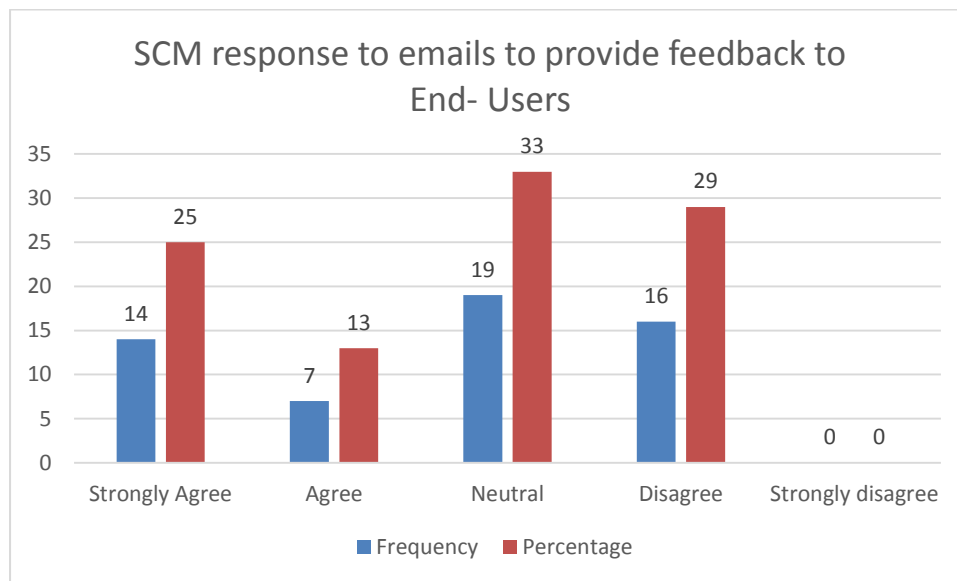


Figure 5.17: The SCM administrative staff always respond to emails to provide feedback to end-users

These results would seem to indicate that there is lack of good email communication between SCM administrative staff and end-users. When requisitions are submitted to SCM to process, end-users do the follow up with SCM to check how far the process of placing an order of the items required has progressed. The SCM administrative staff are thus responsible for providing an update to the end-users by responding to their emails or attending to telephonic inquiries. The response should be provided to end-users as soon as they are asked to provide a status update of procurement processes. The above statistics appear to show that this is not happening, as 33 percent of participants were neutral about the statement and 29 percent disagreed with the statement. The results therefore indicate that there is a lack of accountability on the part of the SCM section. Furthermore, the findings obtained from the end-users also indicated that SCM does not provide valid reasons if required items are not provided on time, and it is also not clear who should take responsibility for such things. The impact of not responding on time does affect SCM end-users negatively as service delivery is lacking.

5.3.13 The bid committees meet from time to time to deal with SCM issues

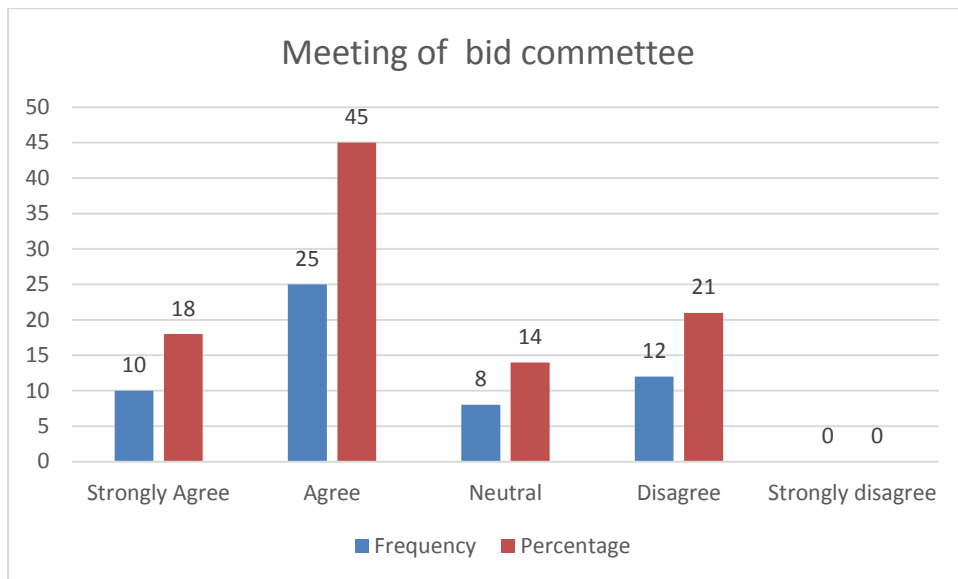


Figure 5.18: The bid committees meet from time to time to deal with SCM issues

63% agreed that bid committees do meet from time-to-time to deal with SCM issues, while 22 (21 percent) of respondents disagree. Some respondents indicated in the qualitative data collected that sometimes committee do not meet. If members do not form a quorum then meetings are cancelled and have to sit the following week since the bid meetings are scheduled to sit on a weekly basis. If committees do not sit that delays the process of procuring the required items, it affects service delivery since other projects will be affected as they rely on the availability of resources ordered from SCM section. SCM needs to have an online system that provides end-users with up to date details of the procurement status of items ordered.

5.3.14 The appointment of suppliers is always conducted on time by the SCM section

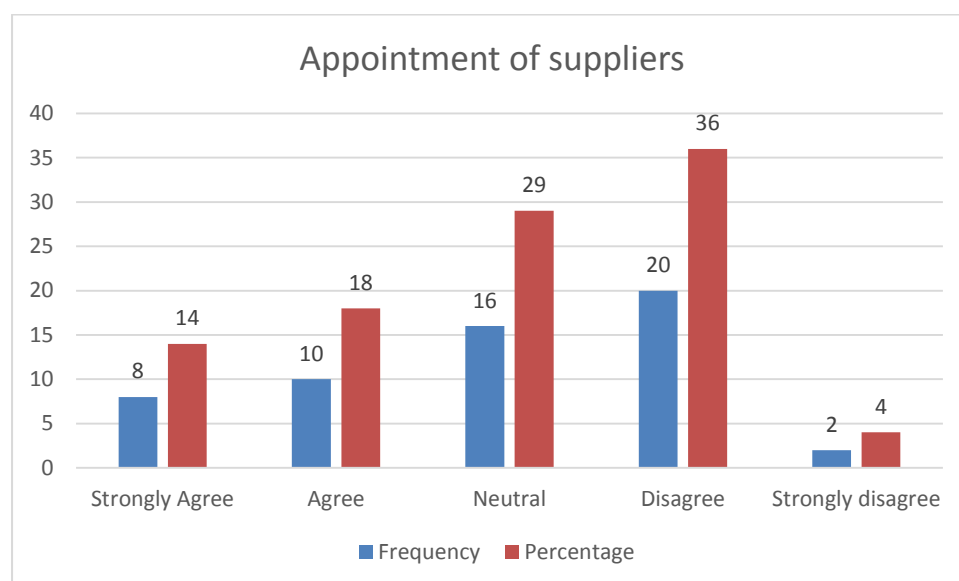


Figure 5.19: The appointment of suppliers is always conducted on time by the SCM section

40% disagreed that the appointment of suppliers is conducted on time, and 16 (29 percent) were neutral. However, 32 percent agreed with the statement. The majority of respondents (69 percent) therefore indicated that the appointment of suppliers is not conducted on time or they were not prepared to make a judgement. Again the qualitative findings reveal that, due to the frequent unavailability of committee members, this ends up causing a delay in the appointment of suppliers. The SCM section supports all departmental programmes that provide services to the Province's citizens. The resources that are ordered from SCM are used for different activities such as campaigns, training, and patients' foods. All of those are affected if suppliers are not appointed on time.

5.3.15 SCM staff perceive their customers as the most important aspect of business success

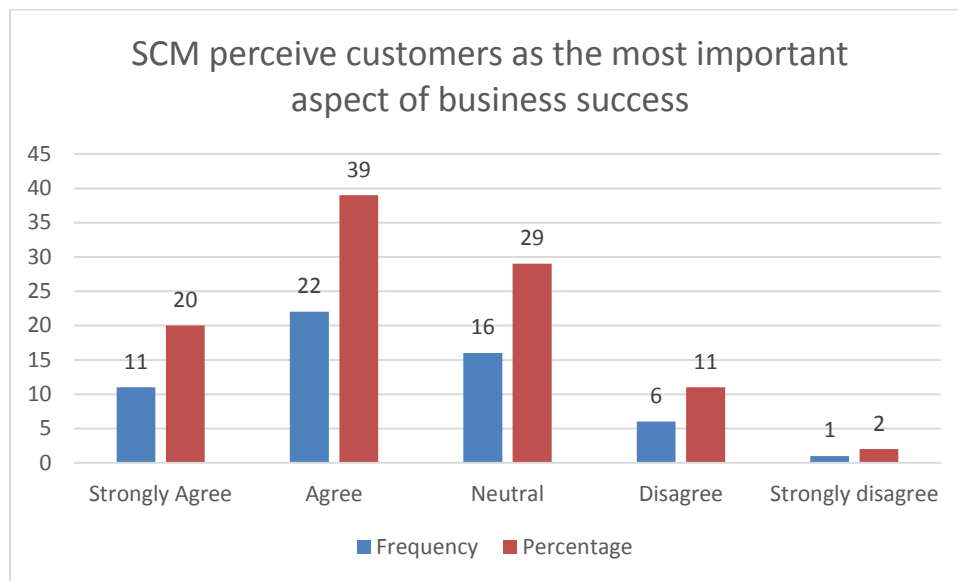


Figure 5.20: SCM staff perceives their customers as the most important aspect of business success

The largest number of respondents, 22 (39 percent), agreed with the statement while 11 (20 percent) respondents strongly agreed. Therefore, most participants perceived their customers, or end-users, as the most important aspect of business success. However, 29 percent remained neutral and 13 percent disagreed. Therefore, while it could be expected that most respondents would attempt to provide the service required, it is also clear that many were not fully committed to customer service.

5.3.16 SCM staff see team work as the only way to succeed in meeting demand for the customers

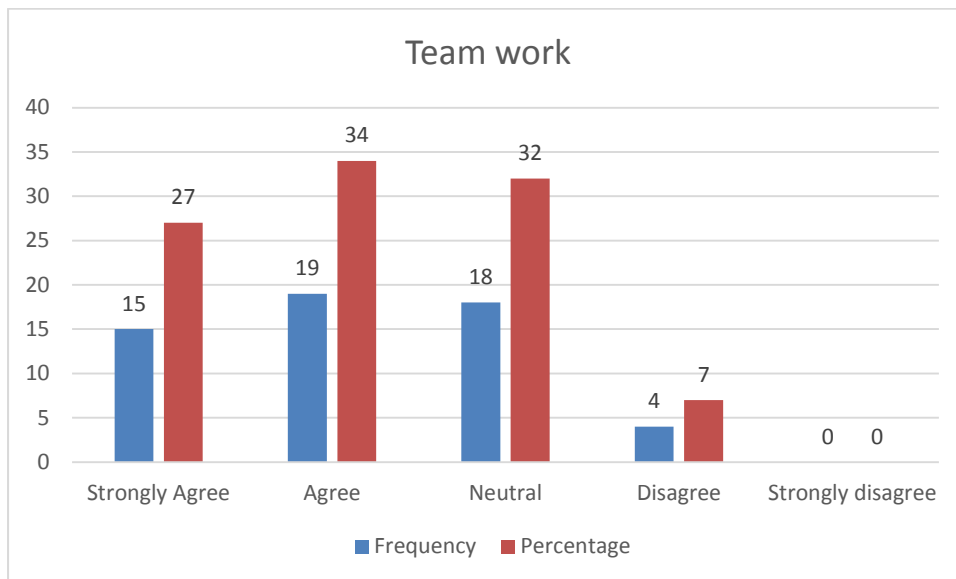


Figure 5.21: SCM staff see team work as the only way to succeed in meeting demand for the customers

These findings indicate that although the majority of the respondents agreed with the statement, a significant number of respondents remained neutral. This is a concern as team work is considered as pivotal to any business. Hence, it could be argued that team building workshops need to be conducted for all SCM administrative staff. Hartley and Chatterton (2015 :256) explain that many organisational analysts relate the success of an organisation to its levels of teamwork, and even suggest that teams are going to be the primary building blocks of company performance in the organisations of the future. Therefore, companies worldwide have invested in team training for staff.

5.3.17 SCM staff believe in sharing the workload in their section in order to be able to achieve customer satisfaction

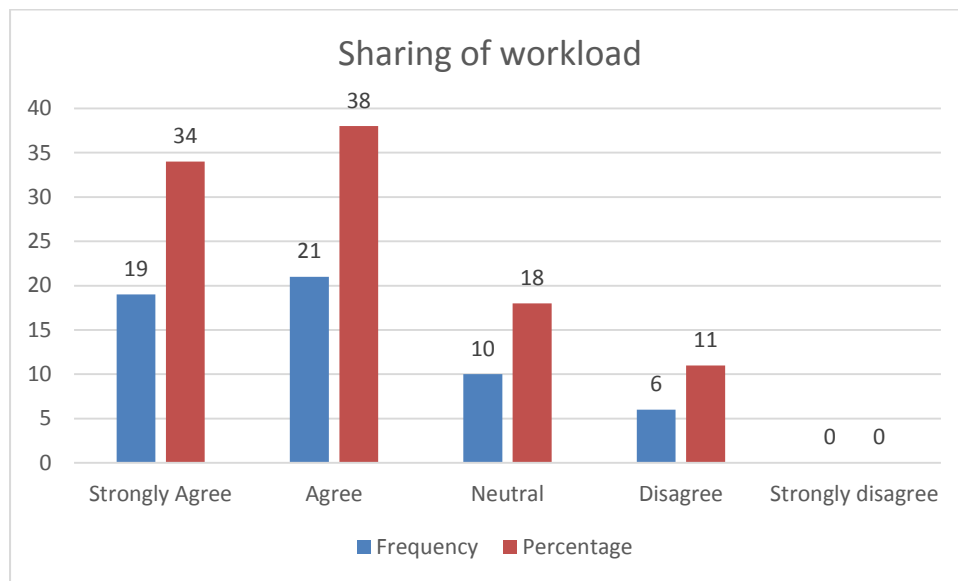


Figure 5.22: SCM staff believe in sharing the workload in their section in order to be able to meet customer satisfaction

The largest number of respondents 21(38 percent) agreed that SCM staff believe that sharing of workloads is required to meet SCM End-Users needs and 19 (34 percent) of respondents also strongly agreed, while 10 (18 percent) of the respondents were neutral and only 6 (11 percent) of respondents disagreed with the statement. The largest number of respondents indicated that sharing of workload is crucial to satisfy SCM End- Users as it can fast track their daily activities. This implies that in order for any organisation to succeed, there needs to be cohesiveness and team work amongst its employees. This relieves the burden of work overload and promotes efficiency and effectiveness in organisational processes.

5.3.18 SCM staff believes that everybody involved in the SCM section is important and can fast track customer services

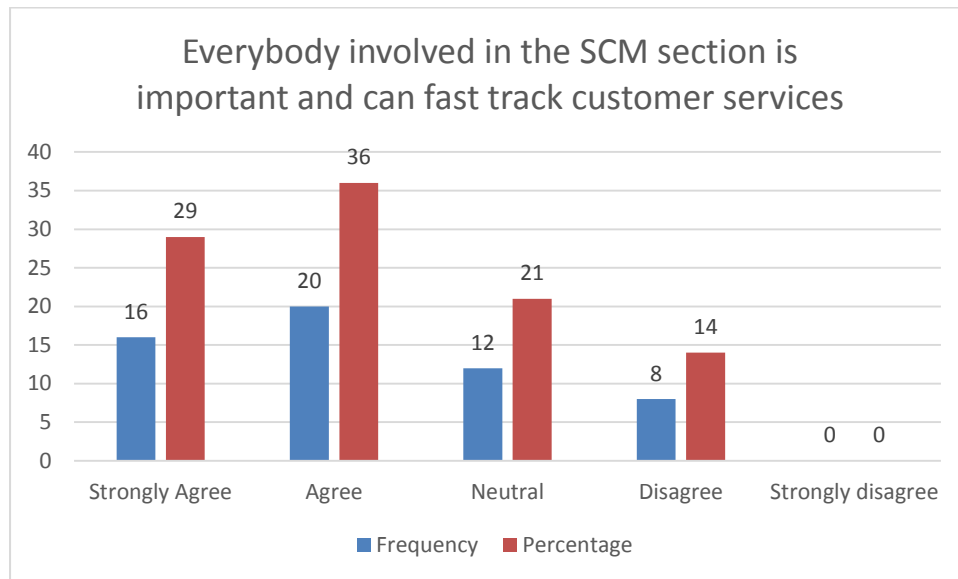


Figure 5.23: SCM staff believes that everybody involved in the SCM section is important and can fast track customer services

The largest number of respondents 20 (36 percent) agreed that SCM staff believe that everybody involved in the SCM section is important and can fast track customer services and 16 (29 percent) of respondents also strongly agreed with the statement while 12 (22 percent) of respondents were neutral. Only 8 (14 percent) of respondents disagreed with statement. Staff need to be motivated when doing their work.

In conclusion it can be said that the findings obtained from SCM end-users results overall indicated that they are not satisfied with the service provided by SCM staff, as they often fail to appoint suppliers on time, nor do they assist when clarity is required about their internal procedures. It was suggested that management needs to provide customer care training for them to understand the importance of their role within the Department.

SECTION B: QUALITATIVE DATA RECEIVED FROM SCM ADMINISTRATIVE STAFF RESPONSES

5.4 INTRODUCTION

This section discusses the findings obtained from the open-ended questions answered by SCM administrative staff. 25 SCM administrative staff responded thus providing the following qualitative data.

Below are the raw data collected from the participants

5.5 CUSTOMER CARE TRAINING AND BATHO PELE PRINCIPLES REFRESHER TRAINING

- *Training required*
- *Training of SCM staff*
- *Training is crucial for DoH development and success. It is fruitful to both employers and employees of the organization.*
- *An employee will become more efficient and productive if he/she is trained well.*
- *Request training for the staff*
- *Training of staff*
- *Giving training*
- *Training of staff*
- *Regular training on importance of good customer service and the treatment of one another at most professionalism at all times*
- *SCM staff needs refresher courses on Batho Pele principles.*
- *Staff need more training*
- *To provide training every quarter*
- *Management skills are lacking in some of the managers as they speak any how to their staff it is unacceptable.*

It is therefore clear that participants felt strongly that current management should facilitate staff development training, and staff rotation in the work place. This mirrors the findings from end-users. The staff also appreciated that they needed more

training on how to maintain confidentiality, and that the bid committees, when doing evaluation and adjudication, need to meet deadlines and to consider items required for emergencies. Hence, SCM staff also appreciated the need for urgency in responding to queries.

Some respondents noted that training is fruitful for both employers and employees allowing employees to become more efficient and productive. Trained will also improve morale, ensure that less supervision is needed, that fewer accidents happen or errors are made, and that employees become eligible for promotion while productivity is increased. It was recommended that SCM administrative training should be provided at least every quarter. Participants believed that regular training on the importance of good customer service is needed involving professionalism in the treatment of one another at all times.

5.6 TIME FRAMES

- *Staff be trained on new technical procedures and SCM management to improve turnaround strategies with SCM components*
- *SCM to improve turnaround times*

Most participants also felt that SCM Management needs to develop strategies to improve turnaround times.

5.7 TRACKING SYSTEM

- *The DoH has a tracking system of all received requisition not orders for SCM.*
- *Installation of tracking system*
- *To have an electronic system, that will make work easier to meet deadlines.*

Some participants indicated that currently SCM has a tracking system but only for requisitions and not for orders. The participants suggested that an electronic tracking system should also be installed for orders. It is believed that such a system could greatly assist SCM in meeting deadlines.

5.8 FILING SYSTEM

- *SCM should improve filing system, I strongly believe that all document in SCM are very confidential however the filing and place of keeping their documents must be proper and easy to track documents if they have to pull them out for any purpose, SCM is doing better need to keep it.*

Respondents indicated that SCM should improve its filing system. While some participants understood that all documents in SCM are confidential, nonetheless the filing system and document storage place must be appropriate to enable easy tracking of documents if they are needed.

5.9 TEAM BUILDING EXERCISE

- *Team building exercise required*
- *It also improves morale of employee, less supervision, fewer accidents/errors, employees become more eligible for promotion and increased productivity.*
- *Staff support to understand individual needs and provides where required and necessary.*
- *Current management to invest in the building team spirit within staff.*

The participants highlighted the issue of team building exercises and suggested that current management should invest in team building adventures and activities to help improve staff morale. Most importantly, this would assist in creating a cohesive group that works efficiently and effectively with tolerance.

5.10 STAFF ROTATION

- *Staff rotation in the work place.*
- *Staff in SCM should be rotated on yearly basis to allow all staff to gain knowledge in all spheres of SCM.*

As with the end-users, participants also mentioned their concerns regarding the issue of staff rotation in SCM. Keeping an official in the same function for too long can allow for them to develop undesirable behaviour. The other reason of course is

that rotation always helps for personal development. Staff in SCM should therefore be rotated on a yearly basis to allow all staff to gain knowledge in all spheres of SCM.

5.11 COMMITTEES MEETINGS

- *Committees to meet twice a week to fast track appointment of suppliers*
- *Committees to meet regularly*

Participants also highlighted that it is critical that committees sit regularly to help finalise quotations and the awarding of bids. Officials serving on these committees must prioritise committee commitments equally with their normal job activities, and should meet twice a week to fast-track the appointment of suppliers. This was also seen by the end-users as speeding up orders and processes.

5.12 ADDITIONAL STAFF REQUIRED

- *Additional staff required*
- *Additional of staff will help SCM*
- *To employ more staff if there is a need*

The issue of additional personnel was also highlighted as one of the improvements that would contribute to the smooth execution of administrative processes. The SCM administrative staff therefore suggested that the department should employ additional staff members as the workload keeps on increasing.

5.13 STAFF PROMOTIONS

- *Staff development and staff be promoted based on their performance*
- *Upgrading lower levels in the section should be the priority as they have qualification and experience needed.*
- *Current management to facilitate development of current staff to be better prepared to produce.*

The participants also felt that staff promotions and upgrading lower levels staff should be prioritised as many have the qualifications and experience needed. Staff should be developed and promoted based on their performance.

5.14 TRAINING ON POLICIES

- *On-going staff training in terms of the SCM prescript and policies including the customer care training.*
- *Regular training of staff workshops interpretation of SCM policies to staff,*
- *Staff should be give orientation/training concerning all act, procedures and policies that covers SCM in the implementation of their work.*
- *I want to stress and encourage staff training on acts, policies and procedure, most staff are not knowledgeable on them.*
- *Propose workshops on new policies*
- *Regular auditing of internal policies to monitor compliance minimize risk and identify gaps*
- *More time to be spent on alerting staff to the importance of compliance to policy.*

The SCM administrative staff proposed regular training and workshops for end-users on SCM policies and administrative procedures. On-going staff training should also be considered in terms of the SCM prescripts and policies including customer care training. Staff should be given orientation/training concerning all acts, procedures and policies that apply to SCM in the implementation of their work.

Respondents also indicated that regular auditing of internal policies to monitor compliance will minimize risks and identify gaps that need to be rectified. Other participants indicated that orienting end-users on SCM procedures and processes will promote a much more productive and efficient relationship between the SCM administrative staff and the end -users.

5.15 IMPROVING PERFORMANCE

- *SCM staff must understand the importance of their work and must do it to the best of their ability as quickly as possible because some people are out their lives depends on what on SCM staff procure.*

The majority of the participants mentioned that SCM staff should understand the importance of their work and must use their ability to do their best as quickly as possible because people in other facilities depend upon the goods and services that the SCM staff procure.

5.16 SUMMARY

This chapter presented the results of data collected through open-ended questions from both SCM end-users and SCM Administrative staff. Overall the findings from both groups are remarkably similar. The SCM end-users indicated the importance of SCM providing them with orientation about SCM procedures and policies. They also noted that relations are not good between themselves and SCM staff members, and that they are therefore dissatisfied with the service provided by SCM. Specifically mentioned were that no turnaround times for requisitions are submitted by SCM. The issue of delaying the appointment of suppliers was also highlighted as a major concern and the need for committees to meet more often to speed up the process and meet deadlines was stressed by both groups. The lack of a tracking system for requisitions sent to SCM was also noted, while SCM administrative staff felt dissatisfied that staff members' promotions are not prioritised.

The qualitative findings for both groups also highlighted the need for training and orientation in SCM policies, Batho Pele and customer care principals, the need for additional staff, team building exercises required for SCM staff members, an automatic tracking system and the sitting of committees more often in order to meet deadlines. Customer Care training was also recommended to improve work relations between SCM end-users and SCM administrative staff.

The following chapter will discuss the recommendations and conclusions of the study.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.0 INTRODUCTION

Chapters four and five presented the results and discussed the findings obtained from the quantitative and qualitative data collected from both SCM end-users and SCM administrative staff. The main gaps that were identified in their administrative practices were identified and will be discussed in this chapter along with recommendations for addressing these issues. This chapter will therefore provide evidence of the achievements of the research objectives, and will provide recommendations as to what could be done as a result of the findings. The limitations of the study will also be presented along with opportunities for further research.

6.1 THE ACHIEVEMENT OF THE OBJECTIVES ON KEY FINDINGS

As discussed in Chapter 2, there are problems and challenges in the administration of government departments. Specific challenges have been identified concerning the knowledge, skills and attitudes of SCM administrative staff when executing their duties in a Provincial Department of Health Head Office. Through this research the researcher has identified shortcomings that appear to require a management intervention in SCM sections to enable them to function efficiently. It should be noted that the SCM questionnaire included a range of questions pertaining the different skills and the relevant training that could be considered essential for SCM administrative staff to function efficiently. Better monitoring and evaluation of the performance of the SCM section is another issue that has been identified as necessary, some of SCM activities not being done correctly due some critical factors that will be discussed below in the recommendations of each objective. The identified shortcomings and recommendations of the study for each research objective follow.

6.2 OBJECTIVE 1: IDENTIFY AND DISCUSS THE CRITICAL FACTORS THAT AFFECT THE ATTITUDES TOWARDS THEIR WORK OF ADMINISTRATIVE STAFF WORKING IN SCM.

6.2.1 Lack of training programmes for SCM administrative staff

The research has proven that the DoH SCM administrative staff do not receive adequate training to bridge the gap between knowledge and practical skills. The results obtained from both groups of respondents to this research on statements about training revealed more than 70% on average concurring that training is not offered, mostly in the SCM section. Furthermore, the qualitative data obtained from both sets of participants (SCM end-users and SCM administrative staff) also emphasised that training of staff is crucial. According to the Public Supply Chain Management Review, Department of Health (2015) SCM practitioners normally do not have the skills, knowledge and experience that is needed for effective SCM functioning and competency assessments show significant gaps in SCM skills and knowledge.

The collected data from the SCM administrative staff themselves indicate that they see themselves as in need of training and the quantitative results confirmed that the necessary training is not provided to equip them with the skills needed to work efficiently. Watson (2014) describes lack of skills and lack of knowledge of technology, leading to low technology usage, as key obstacles in achieving supply chain efficiencies. A Communication Recruitment report (2014) a research project conducted in 2013 to benchmark supply chain skills in South Africa against BRICS nations showed that South Africa is under-skilled.

Therefore, it is recommended that the Provincial Department of Health management take this into consideration and include skills training in the Departmental Operational Plan, and also liaise with Human Resource Development (HRD) to ensure that training of SCM administrators is included, and budgeted for, every financial year, to equip them, and also to ensure that it is done on a quarterly basis.

It is also recommended that the Provincial Department of Health management should consider the following:

- Instituting a performance agreement of every SCM staff with their supervisors as a measure of acceptable performance
- Human Resource Development should take responsibility for skills development of SCM staff and should conduct skills audits to establish any skills gaps especially on the internal transfers.
- SCM management should liaise with the Human Resource Development section to specifically include the following training on the annual skills plan to be offered to SCM administrative staff:
 - On-going SCM administrative workshops
 - Customer care training
 - Purchasing and financial controls training
 - Orientation of SCM staff in the relevant policies, acts and procedures required for the implementation of their duties
 - Orientation of SCM end-users regarding the SCM policies and procedures

The Department needs urgently to improve staff capabilities and skills with developmental training if they are to achieve the required sound knowledge and efficiency for better management and operation of the SCM Department.

6.2.2 Online tracking system of all requisitions sent to SCM

The Department has correctly determined that SCM turnaround times must be monitored from a central place within SCM that ensures that the level of efficiency of both systems and personnel is increased. This will help to avoid a situation where the entire Department is compromised in the event of a deficiency in one or more of the factors discussed above. With regards to systems, the experience of the researcher, along with the primary data collected, confirms that there is no system designed to monitor the progress and the status of requisitions forwarded to the SCM section for procurement processes. The SCM end-users rely on manual correspondence books that are used to record all documents that are sent to other sections, including requisitions forwarded to SCM to initiate the procurement process. The findings also revealed that there is no online tracking system used to trace the progress of requisitions within the Department.

The Provincial Health facilities (hospitals and clinics) rely on the SCM section as a supporting system in the provision of goods, services and acquisitions. All requisitions for goods and services are submitted to SCM to initiate the procurement process. However, 89% of respondents from the SCM end-users' questionnaire indicated that there is no effective communication system and that this severely affects their work within the Department. Furthermore, 59% of SCM administrative staff respondents indicated that there is no online system available in the Department. According to Autry, Goldsby, Bell, and Hill (2013) the International Organisation for Standardisation (ISO) enables organisations to formulate a policy and objectives, taking into account the legislative requirements of each organisation. It also provides the following three standards of quality within a system: firstly, the standard requires the organization to audit its own quality system to verify that it is managing its processes effectively, (b) the organisation may invite its clients to audit the quality of its system, and (c) the organisation may engage the services of an independent quality system certification body.

The researcher has discovered that the South African Department of Treasury (2015) introduced a "Logis" system that is used by all other Health Departments in other Provinces in their SCM sections. The system assists in monitoring and evaluation and also in updating SCM end-users up to the point when payment is made. It also offers added value as even the stock levels can be viewed by all, and at all facilities, therefore providing an opportunity for savings where goods may be sourced from, or within, the Department. Demand management will also benefit from this system.

The benefits of Logis implementation are listed below:

- It ensures an improved control environment, as it can generate a report from one to three months
- There is no cost of acquisition and it is owned by Government, involving cost savings
- It provides performance monitoring of employees and of transactions

- It also provides reports per district, and per institution, and shows all 30 days' payments made, which can be viewed by the Department without submission by institutions, therefore improving monitoring.
- It provides details of multi-year commitments on contracts and these can be loaded and monitored against budget, and used for budgeting purposes.
- The Logis Business Reports, monitoring of progress, and management information month by month provide tangible benefits.
- Visible spending per Cost Centre, providing details of spending, can be drawn from the Accounting Basic System (BAS). The BAS system is used to process payment in the government sector.
- There is an opportunity for staff to grow and be capacitated with new skills.
- The skilling of employees on the use of the system is easy
- Monitoring can be centralized at Provincial Head Office
- The Logis system can also ensure that compliance is achieved.

The overall Logis system benefits are listed in the following table:

Reforms: Asset & Inventory	Systems Implementation
Improved accountability	Improved record keeping
Better management and control	Better data integrity and control
Meaningful reporting	Complete, accurate and timeous reports
More efficiency	Frees up capacity now involved in manual processes
Increased savings	Standard coding can be enforced
PFMA compliance enabler	Improvement in control and audit trail

Table 6.1. Logis System overall benefits – South Africa, Department of Treasury (2015)

It is therefore recommended that the Provincial Health Department should liaise with other Health Departments in other Provinces for benchmarking.

The researcher also discovered a good system which is known as the SAGE Evolution System, which is used by the Department of Cooperative Government and Traditional Affairs (COGTA)'s SCM section, where all requisitions are processed online, providing status progress of each requisition and allowing for the progress of a requisition to be viewed at any time. This system also helps in the monitoring of the budget and in payment processes. Tracing requisitions is also easy when using this system. It is therefore recommended that the Provincial Health SCM benchmark the two systems mentioned to see which one is preferable to be used by their Department.

6.2.3 Bid Committee Meetings

The fact that Bid Committee meetings are often not held timeously was also a concern, and it is recommended that the Bid Committee function should be included as a Key Result Area (KRA) in the job description of those chosen to sit on these committees. Their attendance would then be assessed when their performance is reviewed. When these meetings do not occur, it causes the late appointment of suppliers, and deadlines/set time frames may not be met, as will be discussed below.

6.2.4 Time frames

SCM supports departmental programmes in providing what the Department requires. This is done through the compilation of the Procurement Plan (PP), where the programs are required to indicate their needs and also the times when each item will be needed. This does not always happen. The impact is that departmental programs are compromised in the delivery of scheduled and required services. To correct this, the PP must be an online tool that will be monitored as to scheduled delivery time frames and, preferably, monitored quarterly.

According to standard SCM practice, the process of purchasing from the beginning to the end should not exceed three months. Often the process in the Department of Health takes anything up to a year. Service delivery is obviously compromised.

After closing, and before the bid is tabled, the Departmental Bid Evaluation Committee (DBEC), sit together with SCM in order to assist the Committee by

indicating any discrepancies noted on received bids, and any required documents which may be outstanding. Per bid this often takes months, when the actual work flow measures show most should and could be done in one day. Checking a bid document's discrepancies, for instance, should not take more than seven minutes. As SCM receives an average of 50 offers per bid, this could obviously be done in a day. In this regard it could be recommended that the attitude of SCM staff needs to change and a sense of urgency must be developed. This could be achieved if accountability were enforced, from the Chief Financial Officer (CFO) down to the administrative staff.

The findings of the research indicate that SCM staff do believe in sharing workloads in their sections in order to be able to achieve customer satisfaction. Therefore, management needs to allocate work according to how it best satisfies SCM end-users' needs, and SCM should be accountable for their activities.

6.3 OBJECTIVE 2: TO EXAMINE TO WHAT EXTENT THESE FACTORS AFFECT THE COMPETENCE OF SCM ADMINISTRATIVE STAFF

6.3.1 Policies

According to the research findings, the issue of official policies is a concern and SCM management needs to ensure that the administrative staff are knowledgeable concerning all the acts, policies and procedures that can be applied in the implementation of their work. Hard copies should also always be available for reference. A joint workshop for SCM end-users is recommended to clarify all prescripts, acts and internal policies that are provided by the SCM section. While these policies are available on the Departmental internal intranet they are often not explained or clarified for the SCM administrative staff. It is recommended that workshops and orientation in this regard should be provided twice a year.

Where staff are not knowledgeable about these critical prescripts, this can compromise productivity and quality of work. Sound knowledge and correct application of knowledge would also help to address problems of irregular expenditure as staff would be able to carry out their duties correctly within the framework of the prescripts. With properly trained staff, work is quicker and more

efficient as it reduces over-reliance of staff on the guidance of senior officials, and staff can generally do more work with less supervision.

6.3.2 Leadership

Management has a responsibility to provide direction, and to give instructions, support and guidance to SCM administration to achieve certain goals. However, the findings from the qualitative data indicated that the SCM administrative staff require better management to equip them with the knowledge and skills to be able to fully understand SCM policies, and they need clearer direction and guidance. Also seen to be important was better communication between management and staff to be conducted in a respectful and professional manner. It is therefore recommended that the Department provide the leadership with annual workshops, possibly taking *The 7 Habits of Highly Successful People* or other books by Steven Covey as a guide. According to Covey (2012) the following are important habits for leaders/managers to apply to themselves and their subordinates.

Below are the 7 habits provided by Steven Covey for the management of successful organisations: -

- Value the important over the urgent
- Focus on what matters the most
- Seek to understand those you lead, seek to understand difference in others.
- Sharpen the saw, develop daily confidence, skills, and relationships with those you lead in order to support them.
- Begin with the end in mind, share goals and expectations with the team, and provide resources to complete the job.
- Remember 'someday' is not a date on the calendar, set deadlines for the task delegated.
- Be pro-active, think ahead when it comes to customers' needs, and look ahead to what you will need to lead far into the future.

6.4 OBJECTIVE 3: TO DETERMINE WHETHER A RELATIONSHIP EXISTS BETWEEN THE KNOWLEDGE AND SKILLS OF SCM ADMINISTRATIVE STAFF AND THEIR ATTITUDES AND PRACTICE OF THEIR DUTIES

Findings obtained from both SCM end-users and SCM administrative staff participants revealed that there are different factors that cause an existing relationship between knowledge and skills of SCM administrative staff and their attitudes when doing their activities. It was found that several of the SCM administrative staff respondents on the open-ended question believed that the Provincial Department should provide them with customer care training to equip them with knowledge and skills on how to deal with SCM end-users and suppliers in a professional way. The other interesting factor was that 42% of SCM respondents did not perceive their customers as the most important aspect of business success. Furthermore, 39% of respondents do not believe that sharing workloads with their colleagues is crucial for them to meet customers' satisfaction. There were also 35% of SCM administrative respondents who did not believe that everybody involved in SCM section could fast track customers' services, while responses from a many as 62% of respondents were either neutral or clearly suggested that they do not respond to emails when asked to follow up on requisitions sent for procurement.

These factors confirm that there is an impact on the SCM administrative staff's attitudes which appear to require management intervention, for instance by organising team-building workshops to encourage togetherness, giving credit and praise to deserving individuals, and encouraging a more proactive attitude where all staff members are willing to make things happen, allowing for rotation of employees amongst the different SCM sub-sections.

It is therefore recommended that the theory of Herzberg is adopted to change attitudes of SCM administrative staff and to motivate them. According to Herzberg's motivational theory, to help employees in the workplace to always maintain a positive attitude towards their work, an employer or manager should ensure that the factors listed below are implemented:

- Encourage responsibility and empowerment amongst employees
- Ensure a sense of achievement for their good performance

- Provide opportunities for learning and growth to equip them with relevant skills to do their job
- Ensure promotions and recognition of ability to allow them to see themselves as valued employees within the organisation.
- Encourage a feeling of being a part of something, for them to be accountable and take control of their actions
- Provide stimulating work by giving them incentives

The diagram below points out the factors that either motivate or demotivate employees in performing activities at work:

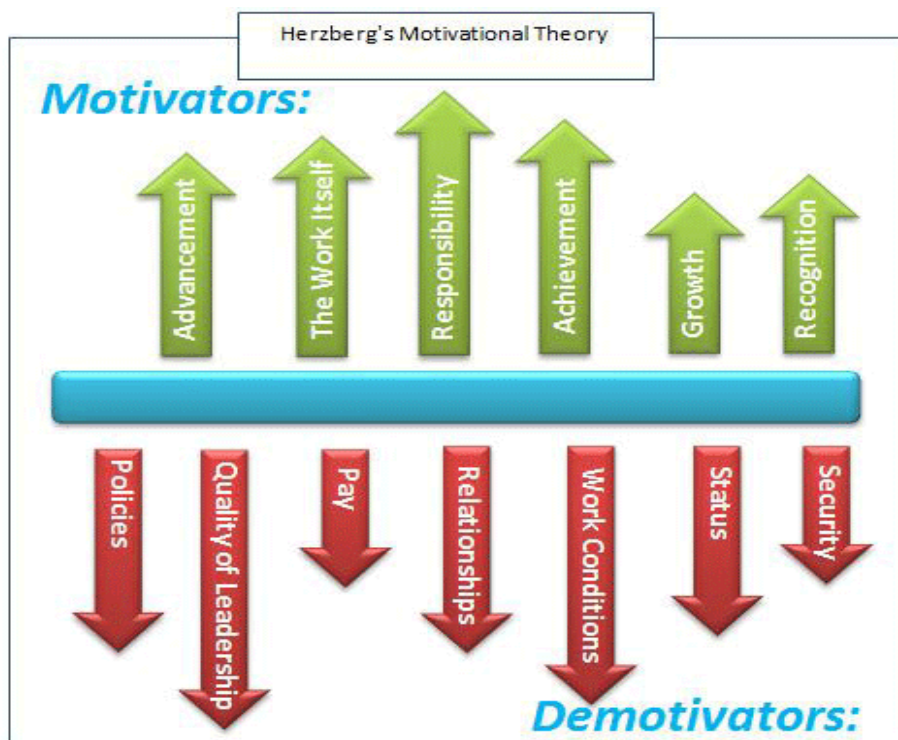


Figure 6.1: Herzberg's Motivational Theory

Isom (2014) lists three pieces of advice that can help co-workers to have a good attitude and promote a positive work culture: appreciation of co-workers for their good work; encouraging enthusiasm among co-workers, which will help them to get through the day more quickly and "having fun". This can be encouraged by promoting interactions between employees and developing interpersonal relationships as a team. The findings from SCM end-users indicated that 80% did not believe that there were good relations between SCM administrative staff and end-users, and this might

be caused by the attitudes they experience when interacting with staff in the SCM section. The open-ended responses within the qualitative data collected also indicated that the treatment end-users received when making follow-up enquiries is often not acceptable.

6.4.1 Staff knowledge and skills

The findings have therefore clearly indicated that the SCM administrative staff require the Department to provide them with training, including customer care training. It appears that the Department needs urgently to improve staff capabilities and skills in order to ensure that staff can manage and operate the SCM Department with better knowledge and efficiency. Joint workshops with SCM end-users to promote better understanding between the groups is also highly recommended.

Below the researcher will discuss gaps identified and overall recommendations of gaps identified in the targeted SCM sub-section.

6.5 GAP: MONITORING AND EVALUATION OF SUPPLY CHAIN MANAGEMENT PERFORMANCE IN HEALTH DEPARTMENT

The Supply Chain Management section is a critical section in most companies as it deals with procurement of all the required items or services for any company or department to run efficiently. Therefore, the monitoring and evaluation of staff and of the SCM Unit's performance is crucial. According to Khan, Hussain and Ajmal (2016:46) Sustainable Supply Chain Management (SSCM) allows monitoring of performance across all stages but also ensures that critical areas of the supply chain, which require immediate attention, are attended to. Defining the departmental or company's supply chain is essential to get the true scope of its sustainability. Furthermore, supply chain mapping will help companies to trace back the activities involved in development and management across the supply chain, and this provides an opportunity to identify any issues plaguing any specific section in a supply chain. Mapping of a supply chain requires identification of the individual services offered by the company, tracking the flow of materials, and monitoring possible corruption issues and environmental impacts at every stage of the supply chain.

It is recommended that the Provincial Department of Health create a post to employ a Deputy Director that will specialise in the monitoring and evaluation of SCM performance. This person would have a responsibility to look at the following:

- Why the Intenda system was introduced to SCM end-users and administrative staff, but never utilised in the Provincial Department of Health.
- Monitoring and evaluation of training and skills development provided to the SCM administrative employees and SCM end-users.
- Monitoring and evaluation of internal staff transfers to SCM to verify that people applying for transfers have the relevant qualifications and experience.
- Monitoring that orientation of SCM administrative staff is offered on a quarterly basis and also that ongoing workshops within the Department are offered.
- Ensuring that the District Health Indicators System (DHIS) develops an SCM indicator that will measure or evaluate the performance of Provincial SCM District facilities
- Ensuring that SCM and finance staff have quarterly meetings to review the budget, and the status of procurement progress for all sections within the Department. Furthermore, to check why other items were not procured, although included on a procurement plan, and why contracts are not renewed on time.
- Monitoring the updating of the contract register and renewal of the SCM contracts.
- Monitoring and evaluation of the Departmental Procurement Plan (PP)

The following section will present findings and recommendations that have been identified as regards the research objectives and enable the researcher to provide additional recommendations stemming from the study:

6.6 RECOMMENDATIONS TO CORRECT THE IDENTIFIED GAPS IN THE THREE TARGETED SCM SUB-SECTIONS

Findings reveal that in Demand Management an online PP should be developed for the monitoring of the status quarterly. A report should be prepared for the Chief Financial Officer (CFO) to report to executive management monthly meetings. This

could assist the Department to see the progress of each program and allow all Deputy Director-Generals to provide support to their directorate if there are challenges, in order to avoid the unnecessary budget overspending that is always reported by auditors. Demand Management should also monitor that purchases are done on time as per the timeline provided in the PP.

Furthermore, findings also revealed that sometimes contracts are not renewed on time which leads to the Department applying for the extension of contracts with the ex-service provider, or else they apply for month-to-month contracts while the Department is still in the process of sourcing a new supplier. This can be a cause of overspending. Therefore, it is recommended that contract performance in the Department needs to be monitored by Contract Management and SCM end-users as they are in a better position to understand what is required. Staff need to be capacitated as to how to monitor contract performance. A contract register should be checked every month to monitor the expiry date of contracts, while performance should be monitored and reports should be compiled for the Head of Health (HoH) and these should be reviewed by the HoH. Financial control in this respect would include things such as controlling price increases in line with legislation, capping expenditure per contract to the contract amount, and monitoring the expiry of contracts so that replacements are done before they expire. All these would really help but few are currently observed.

Most of the issues concerning the Acquisition/Quotation section have been covered in the first points mentioned under this objective; however, the issue of specification was not addressed. It is recommended that SCM have a database of all specifications of items to be purchased on an annual basis and that they have a meeting with SCM end-users in order to revise and confirm the accuracy of the database at the beginning of each financial year. Amendments should be done at that meeting to avoid delays in the appointment of suppliers.

6. 7 LIMITATIONS OF THE STUDY

According to Hussain (2011:61) limitations are possible shortcomings or influences that either cannot be controlled, or are the result of restrictions imposed by the

investigator. The study was limited to all SCM end-users and SCM administrative staff from three sections within the Provincial Department of Health. The researcher struggled to get a gate-keeper's letter to get permission to conduct the study thus causing delays in the progress of the study. The researcher also found that participants were not returning their questionnaires timeously during the data collection process and as a result the researcher had to visit their individual work stations for collection, to make several phone calls and write numerous emails to appeal to them to participate and return questionnaires.

6.8 SUGGESTIONS FOR FUTURE RESEARCH

Future research could focus on how other, more successful, government departments have done monitoring and evaluation of SCM performance, as it is common knowledge in several departments that SCM staff face challenges in performing their duties. This research could focus on the various elements of the SCM for adherence to

- the relevant legislative requirements, internal policies and procedures. The compliance of SCM policies and prescripts in respect of quotations /acquisitions and contract management;
- budgeting and planning of all procurement and service delivery needs;
- monitoring and evaluation of SCM policy and delegations, training responsibilities and bid committees.

6.9 CONCLUDING REMARKS

This dissertation found evidence overall that the Supply Chain Management section of the selected South African Provincial Department of Health is failing to provide the support required for its staff to operate optimally. There is an overall lack of leadership and accountability within the SCM section leading to crucial functions being delayed or performed inadequately, and opening up possibilities for fraudulent practices to go undetected. Staff who were respondents appeared to be aware of these shortcomings and to be keen that they be rectified.

Recommendations stemming from the research included, firstly, the need to create a new senior management post for a Deputy Director in the Department with responsibility for ongoing oversight of SCM – the person in this post being held responsible for all the activities of the section by focusing on monitoring and evaluation of SCM performance. Better recruitment practices, better staff orientation and ongoing support of staff once employed were advocated by the staff themselves in order to allow them to provide better service to their end-users. Ongoing liaison between end-users and SCM staff was also found to be lacking and ways for ensuring that this be instituted were suggested.

The recommendations made were based on the data provided by the participants, and are supported by the literature review. It is hoped that the findings of this research study will assist the Provincial Department of Health to support staff using the recommendations for ensuring that the SCM section can function more effectively.

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APPENDICES

APPENDIX A

1 Datchet Place
New Germany
3610
23 October 2014

Dr Elizabeth Lutge
Manager: Epidemiology and HRKM
KZN Department of Health
Pietermaritzburg
3201

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN THE KZN DEPARTMENT OF HEALTH – SUPPLY CHAIN MANAGEMENT, PROVINCIAL OFFICE

Dear Dr. Lutge

My name is Nontobeko Ngobese, and I am a Masters student at the Durban University of Technology. The research I wish to conduct for my Master's dissertation is in the KZN Department of Health. The title for my study is "Perceived knowledge and attitude of administrative staff working in Supply Chain Management of the KwaZulu Natal, Department of Health – Provincial Head Office. This project will be conducted under the supervision of Dr Paul Green, Head of Department for Finance and Information Management at the Durban University of Technology, and the Co- supervisor is Dr Jane Skinner also employed in the same University as a Senior Researcher.

I am also employed by the Department of Health as an Office Manager. I am hereby seeking the letter of permission to conduct the study in the Department as it is requested by the University - Faculty Research Ethical Committee by the 24th of October 2014 for them to approve the proposal that will be submitted to your office before collection of data.


The approved proposal will be submitted to your office as soon as possible so the requested letter is one of the requirements for the University to approve the proposal. Approval letter from the committee will also be submitted to your office.

Upon completion of the study, I undertake to provide the Department with recommendations of improvements of which may impact on the effectiveness of administrative staff working within Supply Chain Management in the KZN Department of Health and also contributing in the achievement of the goals for the Department. The copy of full research report will be provided to the department.

If you require any further information, please do not hesitate to contact me on **0834262897/0833558397** and ngobesenontobeko2@gmail.com.

Thank you for your time and consideration in this matter.

Yours sincerely,


Ms Nontobeko M. Ngobese
Durban University of Technology

APPENDIX B

1 Datchet Place
New Germany
3610
18 August 2015

Mr Mondli Mlangeni
General Manager: Supply Chain Management
KwaZulu - Natal Provincial Department of Health
Pietermaritzburg
3201

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN THE KWAZULU – NATAL(KZN)
DEPARTMENT OF HEALTH – SUPPLY CHAIN MANAGEMENT, PROVINCIAL OFFICE**

Dear Mr Mlangeni

My name is Nontobeko Ngobese, employed by the Department of Health as an Office Manager in Nutrition Section. I am currently studying towards a Masters degree at the Durban University of Technology. I wish to conduct the research study in the KZN Department of Health. The title for my study is **“Perceived knowledge and attitude of administrative staff working in Supply Chain Management of the KwaZulu - Natal, Department of Health – Provincial Head Office”**. This project will be conducted under the supervision of Dr Paul Green, Head of Department for Finance and Information Management at the Durban University of Technology, and the Co- supervisor is Dr Jane Skinner also employed in the same University as a Senior Researcher.

At present I have obtained the following documents:

- I. A letter of support for the study from the Department of Health which was obtained from **Epidemiology and Health Research and Knowledge Management** on the 23rd of October 2014 - (letter is attached).
- II. I was further advised to obtain an Ethical Clearance approval from the University, which I have obtained on the 13th of August 2015- (letter is attached).
- III. I was also advised to liaise with the SCM Manager and request a letter of support for the study.

Request

I would like to request permission and letter of support to conduct research with SCM administrative staff members to collect data for the research that will be conducted.

Upon completion of the study, I undertake to provide the Department with recommendations of improvements of which may impact on the effectiveness of administrative staff working within Supply Chain Management in the KZN Department of Health and also contributing in the achievement of the goals for the Department. The copy of full research report will be provided to the department.

I am available at your convenience to meet should there be further queries.

Thank you for your time and consideration in this matter.

Yours sincerely,

A black rectangular box used to redact the signature of the sender.

Ms Nontobeko M. Ngobese
Durban University of Technology
Cell No.: 0834262897 / 0833558397
ngobesenontobeko2@gmail.com.



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

OFFICE OF THE CHIEF FINANCIAL OFFICER
Natalia, 330 Langalibalele Street, Pietermaritzburg, 3201
Private Bag X 9051, Pietermaritzburg, 3200
Tel: 033 395 2075, Fax: 033 342 4694
Email: sihle.mkhize2@kznhealth.gov.za
www.kznhealth.co.za

APPENDIX C

Date: 06 October 2015
Enquiries: Mr. S. Mkhize
Ref:

Mrs. NM Ngobese
1 Datchet Place
New Germany
3610

**RE: PERMISSION TO CONDUCT RESEARCH AT HEAD OFFICE – KWAZULU-NATAL
DEPARTMENT OF HEALTH**

I have pleasure in informing you that permission has been granted to you by the Head Office to conduct research on Perceived knowledge and attitude of administrative staff working in Supply Chain Management of the KwaZulu-Natal Department of Health.

Please note the following:

1. Please ensure that you adhere to all the policies, procedures, protocols and guidelines of the Department of Health with regards to this research.
2. This research will only commence once this office has received confirmation from the Provincial Health Research Committee in the KZN Department of Health.
3. Please ensure this office is informed before you commence your research.
4. The Head Office – KwaZulu-Natal Department of Health will not provide any resources for this research.
5. You will be expected to provide feedback on your findings to the Head Office – KwaZulu-Natal Department of Health.

Thanking you.

Sincerely,


MR. S. MKHIZE
ACTING CHIEF FINANCIAL OFFICER: KZN HEALTH

uMnyango Wezempilo . Departement van Gesondheid

Fighting Disease, Fighting Poverty, Giving Hope



Reference: 355/15
KZ_2015RP28_420

Date: 4 December 2015

Dear Ms NM Ngobese
Email: nompumelelo.ngobese@kznhealth.gov.za

Approval of research

1. The research proposal titled '**Perceived knowledge and attitude of administrative staff working in Supply Chain Management (SCM) of the Department of Health Provincial Head Office**' was reviewed by the KwaZulu-Natal Department of Health.

The proposal is hereby **approved** for research to be undertaken at the Provincial (Head) Office of the Department of Health.

2. You are requested to take note of the following:
 - a. Make the necessary arrangement with the identified facility before commencing with your research project.
 - b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.
3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

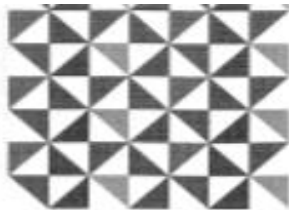
For any additional information please contact Mr X. Xaba on 033-395 2805.

Yours Sincerely


Dr E Lutge

Chairperson, Health Research Committee

Date: 08/12/15



13 August 2015

IREC Reference Number: **REC 92/14**

Ms N M Ngobese
1 Datchet Place
New Germany
3610

Dear Ms Ngobese

Perceived knowledge and attitude of administrative staff working in Supply Chain Management of the KwaZulu Natal, Department of Health- Provincial Head Office

I am pleased to inform you that Provisional Approval has been granted to your proposal REC 92/14 subject to:

- Piloting of the data collection tools and
- Obtaining and submitting the necessary gatekeeper permission/s to the IREC.

Full approval is subject to meeting the above conditions.

The Proposal has been allocated the following Ethical Clearance number **IREC 079/15**. Please use this number in all communication with this office.

Approval has been granted for a period of two years, before the expiry of which you are required to apply for safety monitoring and annual recertification. Please use the Safety Monitoring and Annual Recertification Report form which can be found in the Standard Operating Procedures [SOP's] of the IREC. This form must be submitted to the IREC at least 3 months before the ethics approval for the study expires.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC SOP's.

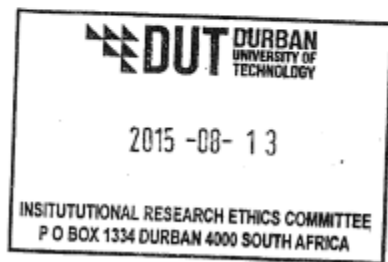
Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Please note that you may continue with validity testing and piloting of the data collection tools. Research on the proposed project may not proceed until IREC reviews and approves the final documents. If there are no changes to the data collection tools, kindly notify the IREC in writing.

Yours Sincerely



Professor J K Adam
Chairperson: IREC





LETTER OF INFORMATION

Title of the Research Study: Perceived Knowledge and Attitudes of Administrative Staff Working in Supply Chain Management of a Department of Health, Provincial Head Office.

Principal Investigator/s/researcher: NM. Ngobese (Masters of Management Sciences in Administration and Information Management)

Co-Investigator/s/supervisor/s: Dr Jane Skinner (PhD), Mr Musawenkosi Ngibe (MTech: Com Admin)

Brief Introduction and Purpose of the Study:

To examine the perceived knowledge and attitudes of administrative staff towards their work within SCM with the aim of contributing in the achievement of the goals for the Department..

The research objectives of the study are to:

- (1) Identify and discuss the critical factors that affect the attitudes of administrative staff working in the Supply Chain Management towards their work.
- (2) To examine to what extent these factors affect the competence of SCM administrative staff in their work.
- (3) To determine whether a relationship exists between the knowledge and skills of SCM administrative staff and their attitudes, practices of duties at KwaZulu-Natal Department of Health Provincial Office
- (4) To recommend any improvements of which may impact on the effectiveness of administrative staff working within Supply Chain Management in the KZN Department of Health.

Outline of the Procedures:

The research design will assist the researcher to achieve the research objectives as fully and accurately as possible. For the purpose of this research mixed methods will be used which is both a Qualitative and Quantitative Method to collect data. The researcher will send a letter of consent to all respondents which will request them to partake in the study. Questionnaires will be distributed by emails and the researcher will follow up by phoning all respondents to ensure that all emails are received. Questionnaires to be designed in such a way that closed questions and open - ended questions will be used for comments to get the perceptions of administration staff towards their work. Space will be provided for comments and any additional relevant information. Questionnaires will be divided into two. Questionnaires for end-users (Assistant Office Managers & Office Administrators/PA) will have open ended questions and also individual interviews will be conducted with them to get recommendations about SCM administrative staff attitudes and their perceptions towards the SCM admin service. A second questionnaire will be designed for SCM administrative staff. This will also have both closed and open ended questions to verify their skills/knowledge and attitude towards their work. Interviews will also be held with managers at SCM sub components. Respondents will be given 5 days to complete and return questionnaires, after which time a reminder will be sent by email and telephonically. If there is a poor response after a week then the researcher will personally visit SCM components and end-users to encourage them to return the questionnaires. Desktop research will also be applied where an internal report will be requested from the Health Department. The researcher will emphasize to the respondents that all comments will be treated as confidentially, all respondents will remain anonymous

Risks or Discomforts to the Participant: Not applicable.

Benefits: The benefits of this study, it will be made available through publication in accredited peer-reviewed journal; presentations at local and international conferences and also seminars and workshops given in the workplace to assist all administrative staff.

Reason/s why the Participant May Be Withdrawn from the Study: There exist no adverse consequences for the participant if they chose to withdraw before or during the experiment as it is purely voluntary.

Remuneration: No remuneration will be paid to the participants.

Costs of the Study: The participants are not expected to cover any cost incurred.

Confidentiality: The data will remain under the ownership of DUT and Department of Health. It will be kept for 5 years thereafter it will be disposed. Electronic data will be protected by password.

Research-related Injury: Not applicable

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher (0834262897), my supervisors (0836585951) or the Institutional Research Ethics administrator on 031 373 5599. Complaints can be reported to the Dr Skinner at janes@dut.ac.za or Tel. 031 373 5654 or Mr Ngibe at musawenkosinl@dut.ac.za or Tel. 031-3735858

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g. isiZulu.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Nontobeko M. Ngobese (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **REC 92/14**
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant Thumbprint	Date	Time	Signature / Right
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I, Nontobeko M Ngobese herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Nontobeko Ngobese

Full Name of Researcher	Date	Signature
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Full Name of Witness (If applicable)	Date	Signature
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Full Name of Legal Guardian (If applicable)	Date	Signature
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QUESTIONNAIRE: SUPPLY CHAIN MANAGEMENT: - KZN HEALTH PROVINCIAL HEAD

INTRODUCTION

- Thank you for taking time to respond to the research questionnaire.
- The questionnaire is for a Masters study titled: **Perceived knowledge and attitude of administrative staff working in Supply Chain Management of the Kwa-Zulu Natal, Department of Health - Provincial Head Office.** It will not take you longer than 15 minutes to complete.
- Please mark the relevant box with a cross (X), and give brief responses where applicable.
- Please be assured that your responses will be confidential and anonymous.

INTERVIEW QUESTIONS - END-USERS

SECTION A: Personal information

1. Please indicate your gender

Female	1
Male	2

2. Please indicate your age category

20-29 years	1
30-39 years	2
40-49 years	3
50-59 years	4
60-65 years	5

3. Please indicate the qualification you have obtained.

Standard 9/ Grade 11 or Lower	1
Senior Certificate (Grade 12/ std 10)	2
Certificate or Diploma	3
Degree	4
Post-Graduate Degree	5
Other (specify) ----- -----;	

4. Please indicate level of your employment position

Level 3 -6	1
Level 7-8	2
Level 9-12	3

5. Please indicate your current occupation

Assistant office manager	1
Office administrator	2
Office assistant	3
Other, please specify:	4

6. Please indicate the number of years of service with the Department of Health.

0-5 years	1
6-10 years	2
11-15 years	3
16-20 years	4
21 and above	5

Please note that the questions that follow are not intended to imply criticism of any individual or group of individuals but only to probe the nature and extent of challenges apparently experienced by SCM staff themselves and their end-users within the KZN DoH. These may be due to a number of factors including the nature of the DoH training practices; workload issues; appointment criteria, etc. etc. It is hoped that the findings will be supportive of SCM staff in ways which they themselves, and their colleagues who are their end users, will find mutually beneficial.

7. Please indicate your understanding of the role of supply chain management functions in the department of Health in KZN from the following statements

Statement	Strongly agree 1	Agree 2	Neutral 3	Disagree 4	Strongly Disagree 5
I fully understand the function of Supply Chain Management in the KZN Department of Health Provincial office					
SCM communicate their policies to the Department of Health staff adequately					
There is a good relationship between SCM administrative staff and end-users					
Sometimes a lack of SCM knowledge and skills among staff members can affect customers services given by department					
The attitude of the staff has an impact on end-users					
A lack of effective communication systems within the SCM department affects the end-users.					
Most of us are satisfied with the service provided by our SCM section					

8. Please indicate the areas you perceive as the most important with regard to the Supply Chain Management within the KZN department of Health Provincial office

Statement	Very Important 1	Important 2	Not sure 3	Not very important 4	Of no importance 5
State of communication of policy guidelines to the end-users by SCM section is					
Turnaround time of customer request of stock for their respective office/ section is					
Availability and accessibility of policy guidelines to the end-users of the SCM					

section is					
Day -to-day job descriptions with regard to our SCM section are					
For the SCM staff to have relevant skills in our department is					

APPENDIX H



QUESTIONNAIRE: SUPPLY CHAIN MANAGEMENT: - KZN HEALTH PROVINCIAL HEAD OFFICE

INTRODUCTION

- Thank you for taking time to respond to this questionnaire.
- The questionnaire is for a Masters study titled: **Perceived knowledge and attitudes of administrative staff working in Supply Chain Management in the Kwa-Zulu Natal Department of Health - Provincial Head Office.** It will not take you longer than 15 -20 minutes to complete.
- Please mark the relevant box with a cross (X), and give brief responses where applicable.
- Please be assured that your responses will be confidential and anonymous.

QUESTIONNAIRE FOR SCM ADMINISTRATIVE STAFF

SECTION A: Personal information

1. Please indicate your gender

Female	1	
Male	2	

2. Please indicate your age group

20-29 years	1	
30-39 years	2	
40-49 years	3	
50-59 years	4	
60-65 years	5	

3. Please indicate the qualification you have obtained.

Standard 9/ Grade 11 or Lower	1	
Senior Certificate (Grade 12/ Std 10)	2	
Certificate or Diploma	3	
Degree	4	
Post-Graduate Degree	5	
Other (specify) ----- -----;		

4. Please indicate the level of your employment position

Level 3 -6	1	
Level 7-8	2	
Level 9-12	3	

5. Please indicate in which section are you employed

Acquisition/Quotation	1	
Demand management	2	
Contract Management	3	

6. Indicate number of years of service with the department of Health.

1-5 years	1	
6-10 years	2	
11-15 years	3	
16-20 years	4	
21 and above	5	

7. Please indicate your occupation

Assistant Manager	1	
Senior Supply Chain Management Clerk	2	
Supply Chain Management Clerk	3	
Supply Clerk	4	
Other, Please specify:	5	

Section B: Knowledge and Skills

Please note that the questions that follow are not intended to imply criticism of any individual or group of individuals but only to probe the nature and extent of challenges apparently experienced by SCM staff themselves and their end-users within the KZN DoH. These may be due to a number of factors including the nature of the DoH training practices; workload issues; appointment criteria, etc. etc. It is hoped that the findings will be supportive of SCM staff in ways which they themselves, and their colleagues who are their end users, will find mutually beneficial.

Please **TICK** the statement which best suits your choice (opinion) about knowledge/skills for the job you are doing. **Please note this is your opinion. There are no right or wrong answers.**

Statement	Strongly agree 1	Agree 2	Neutral 3	Disagree 4	Strongly disagree 5
SCM staff advertise for potential suppliers to bid for contracts					
Handling of appeal processes always follows proper procedures					
All names of award companies are published					
The KZN Department of Health provides training including ongoing workshops for all SCM staff					
Our department provides us with customer care training in the SCM section					

We are provided with extra training with regard to purchasing and financial controls in the SCM section					
The SCM management orients the staff concerning all the acts, policies and procedures that can be applied in the implementation of their work, and provides hard copies for reference					
The SCM administrative staff fully understand all acts, policies and procedures that need to be applied in the implementation of their work.					
The updated database for specifications is available to all SCM staff and end-users in the Department					
The DoH has a tracking system for all received orders by SCM					
SCM ensures that contracts are renewed on time					
The SCM staff always respond to emails to provide feedback to end-users					
The bid committees meet from time to time to deal with SCM issues					
The appointment of suppliers is always conducted on time by the SCM section					
SCM staff perceive their customers as the most important aspect of business success					
SCM staff see team work as the only way to succeed in meeting demand for the customers					
SCM staff believe in sharing of workload in their section in order to be able to meet customer satisfaction					
SCM staff believe that everybody involved in the SCM section is important and can fast track customer services					

If you have anything additional you would like to add here, please explain what can be done to improve the efficiency of Supply Chain Management in your Department in your opinion

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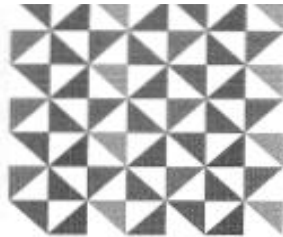
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Thank you very much for your time



Institutional Research Ethics Committee
Faculty of Health Sciences
Room MS 45, Mansfield School Site
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Durban University of Technology

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www.dut.ac.za

APPENDIX I

18 April 2016

IREC Reference Number: **REC 92/14**

Ms N M Ngobese
1 Datchet Place
New Germany
3610

Dear Ms Ngobese

Perceived knowledge and attitude of administrative staff working in Supply Chain Management of the KwaZulu Natal, Department of Health- Provincial Head Office

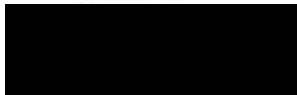
The Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the questionnaire has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the IREC acknowledges receipt of your gatekeeper permission letter.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Yours Sincerely,



Professor J K Adam
Chairperson: IREC

