# EXPLORING RELATIONSHIP POWER IN SUPPLY CHAIN SUSTAINABILITY PRACTICES: A CASE STUDY OF A SOUTH AFRICAN HOSPITAL GROUP

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#### **ABSTRACT**

Buyers and suppliers of healthcare products and services are more dependent on each other than ever before for the provision of scarce and unique resources, which highlights the need to implement supply chain sustainability practices. Firms controlling these resources hold excessive power over others. This study adopted resource dependence theory as a theoretical lens to explore the role of relationship power in supply chain sustainability practices between a South African private healthcare provider and its suppliers. The study employed a generic qualitative singlecase study design. Semi-structured interviews were used to collect data from 12 participants at various levels of the case organisation's hierarchy. The main findings revealed several types of environmental and social practice used in the supply chain of the private healthcare provider. Some of the environmental practices were effective waste management and recycling, while the social practices included supplier selection and periodic reviews. The healthcare provider exercised extensive power over its suppliers to implement these practices. By exploring the advantages and disadvantages of sustainability practices, the findings showed that relationship power acted as a driver of supply chain sustainability. Mutual commitment, continuous communication, and training support these practices. Healthcare managers must be aware of the importance of sustainability power for supply chain implementation, and are advised to invest time and effort in building buyer-supplier relationships to aid sustainability. This study expands the literature on relationship power in supply chain sustainability practices in an underexplored developing country healthcare context.

# **OPSOMMING**

Kopers en verskaffers van gesondheidsorgprodukte en -dienste is meer afhanklik van mekaar as tevore vir die voorsiening van skaars en unieke hulpbronne wat die implementering van voorsieningskettingvolhoubaarheidspraktyke aanspoor. Maatskappye wat hierdie hulpbronne beheer het buitensporige mag oor ander. Hierdie studie het hulpbronafhanklikheidsteorie as 'n teoretiese lens gebruik om die rol van verhoudingsmag in voorsieningsketting volhoubaarheidspraktyke tussen 'n Suid-Afrikaanse private gesondheidsorgverskaffer en sy leweransiers te ondersoek. Semi-gestruktureerde onderhoude was uitgevoer om data in te samel van 12 individue op verskeie vlakke van die gevallestudie onderneming se hierargie. Die studie het verskeie soorte omgewings- en geïdentifiseer. Van sosiale praktyke die geïdentifiseerde omgewingspraktyke is sluit effektiewe afvalbestuur en herwinning in, terwyl sosiale praktyke leweransier selektering en gereëlde hersienning ingesluit het. Die studie toon dat die groep mag uitoefen oor sy leweransiers om voorsieningskettingbestuur-volhoubaarheidspraktyke te implementeer. Die resultate van die studie dui aan dat verhoudingsmag 'n drywer van hierdie praktyke is. Gemeenskaplike getrouheid, voordurende kommunikasie, en opleiding ondersteun die praktyke. Gesondheidsorg bestuurders moet bewus wees van hoe belangrik verhoudingsmag vir hierdie praktyke se implementering is. Daar moet tyd belê word in die bou van koper-en-leweransier verhoudings om by te dra tot volhoubaarheid.

Hierdie studie brei die literatuur rakende verhoudingskrag in voorsieningskettingvolhoubaarheidspraktyke uit in 'n onderontginde ontwikkelende land gesondheidsorgkonteks

#### 1 INTRODUCTION

Supply chain research has recently become more focused on relationship power and joint dependence. Research shows that relationship power is important for the implementation of a sustainable supply chain [1]. Supply chain sustainability and relationship power are significant, because firms hold control over a finite number of unique resources [2]. Firms must therefore incorporate and nurture relationships up- and downstream in the supply chain to gain access to these resources and to safeguard the bottom line (the environment, the society, and the economy) [3-5]. Relationships act as channels for spreading and implementing supply chain sustainability practices across supply networks [6].

Supply chain sustainability is defined as "... the creation of coordinated supply chains through the voluntary integration of economic, environmental and social considerations with key inter-firm business systems designed to effectively and efficiently manage the material, information and capital flows associated with procurement, production and distribution of products or services to meet stakeholder requirements and improve the profitability, competitiveness and resilience of the firm over the short and long-term" [7].

Firms must act responsibly and respect the community and environment they operate in, since firms are interconnected with other network players [5,8]. Interconnectedness stems from firms' dependence on available unique and scarce resources [9-11]. Firms' competitive edge is created by unique and scarce resources, which create relationship power for the firm possessing and controlling these resources [12-14]. Relationship power also presents the ability to influence other members in the supply chain, affecting their willingness to engage in supply chain sustainability practices [15-18]. The formation of buyer—supplier relationships provides access to resources to which firms would otherwise not have access [9-11].

The implementation of and suppliers' adherence to supply chain sustainability practices are enabled by collaborating with and monitoring external stakeholders within the firm's supply chain [3,19]. The literature distinguishes between environmental and social sustainability practices. Environmental sustainability practices focus on the use of resources and their effect on the environment. Social sustainability practices are concerned with the well-being and health of human participants in the supply chain, including their skills, abilities, and relationships [5,19]. These sustainability practices comprise the re-design of processes in the supply chain, recycling of products, reducing or eliminating toxicity, and implementing total quality management systems [19]. The advantages of supply chain sustainability practices include reduced costs, increased flexibility and efficiency, improved corporate image, finding new technologies, and supplier knowledge about reducing waste [3,20]. Supply chain sustainability practices drive competitiveness in various ways. These include, for example, opportunities to gain new customers, collaborating with new suppliers for supplier knowledge-sharing, and obtaining new technologies and resources [3,19,21].

Three private healthcare groups in South Africa compete aggressively to attract patients. Private hospitals are faced with sustainability challenges, such as the effective use of available resources through sustainable procurement [22-23] — that is, the practice of conducting buying activities in environmentally, socially, and economically responsible ways to reduce waste and promote recycling, while adhering to material requirements [24-25]. Private hospitals procure according to certain procurement categories — namely, pharmacy, medical, indirect, technical, and operational [26]. The daily supply chain operations of private hospitals are conducted to minimise the environmental footprint and to sustain environmental resources [27-28].

Previous studies have explored buyer—supplier relationships for sustainability on the basis of social exchange and transaction cost theories. However, little research on buyer—supplier relationships for sustainability has been done from the resource dependence theory perspective [29-30]. The role of power in supply chain relationships needs further exploration, especially in emerging economies [9,11,15]. Most previous studies on this topic were conducted in developed countries, and further research on relationship power and supply chain sustainability is needed in emerging economies [5,6,18,24,31-32]. Different findings could be expected in emerging economies, because supply chain sustainability performance tends to be subject to different legislation and public interest aspects in emerging economies from those in developed economies [33].

The resource dependence theory is an appropriate theoretical underpinning for this research, since it has been identified as an effective but underused theory, and it offers an explanation of how relationship power will be executed. It provides a holistic view of a firm's relationship power, and explains how buyers and suppliers are dependent on each other for the supply of products and services [5,14,30,33]. Unique and scarce resources may not be available within a firm; and so this theory explains how the source of power resides in the firm [13,30,34].

The main goal of this single-case study is to explore the role of relationship power in supply chain sustainability practices between buyers and suppliers in the supply chain of a South African group with its main operations and head office in Gauteng.

This study is guided by the following research questions:

- 1. Which supply chain sustainability practices are used in the supply chain of the private hospital group?
- 2. What role does relationship power between buyers and suppliers play in the supply chain sustainability practices of the private hospital group?
- 3. Do relationship power imbalances act as a driver of or as a barrier to supply chain sustainability for the private hospital group?
- 4. How does power imbalance influence the management of supply chain sustainability between the private hospital group and its suppliers?

This study makes two contributions. First, it provides readers with a view of the formation of relationship power within a supply chain that enhances the understanding of supply chain sustainability practices and provides support to overcome sustainability challenges, especially in emerging economies [5,9,14,33,35]. Second, it addresses calls to apply the resource dependence theory in buyer—supplier relationships and sustainable supply chain management in order to help managers to approach these relationships more realistically [36-37].

The remainder of this article is structured as follows. A literature review introduces the South African private hospital industry and its supply chain. This is followed by a discussion of supply chain sustainability and its practices, relationship power, and the relevance of the resource dependence theory to this study. The literature review concludes with an explanation of the nexus between relationship power and supply chain sustainability. The research method is discussed after the literature review. Finally, the article's findings, its contributions, implications, and limitations, and its suggestions for future research are discussed.

### 2 LITERATURE REVIEW

### 2.1 The South African private hospital industry

The South African private hospital industry delivers quality healthcare in cost-effective and cost-efficient ways to medical aid scheme patients [22,38], and provides services to about 38% of the South African population [28,38]. Further, private hospitals relieve the pressure on the public hospital sector and reduce travel times for patients to nearby healthcare facilities across the country [39]. This industry has around 178 private hospitals in South Africa. Three major Johannesburg Stock Exchange-listed group —, Mediclinic, Netcare, and Life Healthcare — compete aggressively to attract patients, and collectively own 80% of hospital beds in the South African private hospital industry [22,39]. In addition, these three major groups contributed 1.3% of the gross domestic product (GDP) of South Africa in 2016. The rand value of this GDP contribution was about R55bn [40].

### 2.2 The supply chain of private hospitals

It is important to conduct research within private hospitals' overall supply chain, since stakeholders evaluate the performance of a firm by examining its total performance, which implies an evaluation of the total supply chain rather than of discrete business activities [3]. Private hospitals are dependent on upstream and downstream industries and suppliers. Upstream industries and suppliers are responsible for the provision of products and services to private hospitals, while downstream industries and suppliers distribute these resources [27]. In addition, the supply chain of a private hospital consists of both an internal and an external chain. The internal supply chain is all the physical aspects that can be seen in a hospital, such as the patients, patient care units, pharmacies, and storage, while the external supply chain consists of all the suppliers, manufacturers, and distributors who ensure that the internal supply chain has adequate resources to conduct business and deliver healthcare services [21].

To ensure the availability of resources, private hospitals claim to select only the best suppliers. Suppliers are selected on the basis of attributes such as product quality, service delivery, physical product delivery, and product price [21]. The supply chain of a private hospital is extremely complex, since various stakeholders, such as suppliers, patients, hospital staff members, authorities (i.e., government and medical aid schemes), and consultants are embedded within one network. This embeddedness requires private hospitals to adopt a relationship view of the whole supply chain. All stakeholders share resources, and their actions and interactions with one another have direct implications for everybody else [25,41].

The supply chain of a private hospital ensures that several types of products and services are procured to safeguard the delivery of quality healthcare services to patients. Figure 1 illustrates some of the products and services that are procured by private hospitals.

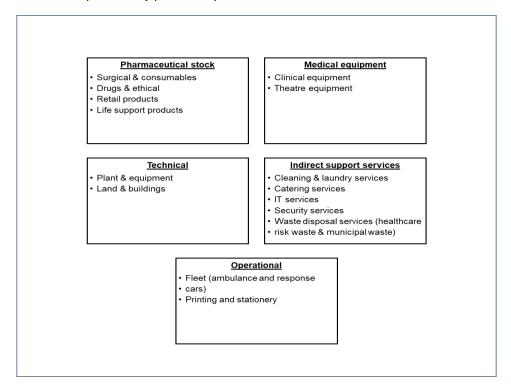


Figure 1: Products and services in a private hospital's supply chain [26]

# 2.3 Supply chain sustainability

'Sustainability' refers to the ability to meet the requirements of the present generation without compromising future generations' ability to meet their own needs [42]. The overall objective of supply chain sustainability, therefore, is to sustain the environment by balancing resource production, decreasing the use of non-renewable resources, and reducing waste [42-43]. Firms need to adopt supply chain sustainability, since stakeholders are increasingly concerned about developing and safeguarding the triple bottom line [3,24].

Firms' performance in respect of supply chain sustainability is influenced by their ability to find ways to reduce their use of water, energy, and materials [24]. The ability to manage this effectively generates a competitive advantage for firms over their rivals [3]. There are several advantages for firms when implementing supply chain sustainability, including reduced costs, improved efficiency, enhanced brand value and customer satisfaction, and attracting potential customers and suppliers [3].

### 2.3.1 Supply chain sustainability in private hospitals and supply chain sustainability practices

Strict legislation, government regulations, and pressures from the community and customers force private hospitals to adopt supply chain sustainability practices, especially in emerging economies such as South Africa [3,19,43]. One of the major regulations to which private hospitals are required to adhere is the strict process of medical waste disposal. While regulations and legislation drive the implementation of supply chain sustainability, it is important to emphasise that the ethical behaviour of firms is interlinked with sustainability. This means that firms will automatically act in a sustainable way when they act ethically in their business operations [44].

Firms must make sound sustainability decisions by adopting supply chain sustainability practices [20,42]. These sustainability practices are all the processes and activities that firms implement to ensure that their sustainable environmental, social, and economic goals are met [42,20]. It is important to implement these practices throughout the supply chain, since sustainability is not linked only to the discrete business activities within a firm [42].

Embedding supply chain sustainability practices and green procurement in private hospitals' supply chains is a daunting task. Purchasing managers, for example, are confronted with the challenge to procure products at the lowest possible cost while making sound decisions about quality and supply chain sustainability [44]. Purchasing managers thus need to consider which products are most prone to sustainability issues and might thus be the main drivers of supply chain sustainability practices [45]. Further, private hospitals cannot only focus on the highest-priced products, as it can be financially unwise; while focusing on low-cost products may have major quality and environmental implications [45]. An example of complexity in implementing supply chain sustainability practices in a hospital environment is found in infection control equipment, such as gloves and surgical masks, which is made for single use and contradicts recycling and re-using policies [45].

Buyers and suppliers are compelled to collaborate, since the development of buyer—supplier relationships ensures that the focal firm's supply chain sustainability standards are met. These standards encourage the use of sustainable raw materials and manufacturing processes [19]. Collaboration is defined as the ability of buyers and suppliers to work together to develop supply chain sustainability practices that generate competitive advantages for all of the firms involved [46]. The collaboration between buyers and suppliers in the supply chain develops a mutual understanding of responsibilities and desired sustainability performances [47]. Collaboration might also assist buyers in changing their product requirements, which could enable suppliers to develop reverse logistics channels, recyclable packaging, and environmentally sustainable transportation channels [47].

Supply chain sustainability practices should be implemented by conjoining two principles. First, these practices should improve economic vitality and enhance ecological health. Second, these practices should prioritise the triple bottom line (the environment, the society, and the economy, in that order) [42]. Environmentally sustainable practices focus on the use of resources and the implications for the physical environment, while socially sustainable practices focus on the health and well-being of the stakeholders in the supply chain and on the social effect of businesses [19].

# 2.3.1.1 Environmentally sustainable practices

Environmentally sustainable practices are characterised by green procurement and supplier certification. 'Green procurement' refers to buying activities with an awareness of the environment, the society, and the economy, thus reducing the sources of waste and promoting recycling and the reuse of materials without affecting resource requirements [24-25]. Supplier certification — the process of ensuring that a supplier adheres to certain quality requirements stipulated by the focal firm [48-49] — reduces the information gap between buyers and suppliers.

The implementation of supplier certification ensures that suppliers use the best practices for production and service delivery according to the desired quality requirements of buyers [48]. While green procurement and supplier certification involve assessing and evaluating the environmental performance of suppliers, they also ensure that the supply chain sustainability practices of buyers and suppliers are up to date [19]. Two environmental sustainability practices, total quality management and reverse logistics, are discussed below.

By focusing on continuous improvement processes, total quality management ensures that customer requirements are met and that customers receive superior value [50]. Firms can increase their competitive

advantage when they provide innovative, high-quality products and services [50-51]. The implementation of total quality management is a challenging task, since product components are often sourced from various suppliers rather than from one independent supplier, and the quality standards of different suppliers are not always aligned [48].

'Reverse logistics' refers to the processes and activities in place for the purpose of reusing and recycling the original product or its components. Recycling includes the facilitation of material reprocessing, disassembly of waste products, or the separation of components from the original product [19,49]. Apart from total quality management and reverse logistics, several other environmental sustainability practices relate to energy reduction, such as the reduction of waste, emissions, pollution, and consumption of hazardous materials [52]. The implementation of environmental sustainability practices have long-term advantages for a firm, such as building its corporate image and brand, cost reduction, and profit generation through firm innovation and the use of new technologies for environmental improvements [20].

Private hospitals in South Africa are part of a competitive environment, and must implement innovations to address the environmental concerns of stakeholders and decrease their impact on the environment to differentiate them from their competitors [43]. Such innovations might include creating new products through waste recycling, less dependence on electricity from coal resources by using solar-energy alternatives, the use of biodegradable chemicals in operations, and the reduced use of water resources [19,35].

# 2.3.1.2 Social sustainability practices

Practices for social sustainability include the monitoring of all suppliers' social sustainability initiatives by ensuring their compliance with health and safety systems that apply throughout the supply chain [19]. These practices include the allocation of fair work hours and wages for the labour force [19,53].

Although lower purchasing costs might lead to enhanced economic sustainability, purchasing managers need to consider that lower product costs do not always translate into enhanced environmental and social sustainability standards. Therefore, unacceptable sustainability practices can be reduced by establishing procedures for sustainable supplier selection [35,54].

Sustainable supplier selection is essential for building a sustainable supply base in the long run. The selection process takes sustainable environmental and social criteria into account when recruiting and selecting new suppliers [44]. Sustainable supplier selection related to sustaining the environment is, for example, to evaluate suppliers on the basis of their green competence. Furthermore, supplier selection for social sustainability would exclude suppliers who, for example, employ child labour or discriminate against any workforce [44].

# 2.4 Relationship power in buyer-supplier relationships

The roles of buyers and suppliers in relationships are defined by the resources they can offer, since these relationships are established between buyers and suppliers who have the capability to provide each other with unique resources [11]. Power in buyer—supplier relationships is defined as the ability of one member in the relationship to influence the behaviour of another member to gain control over unique resources [9,55]. Relationship power thus resides in the firm that is able to control unique resources, which means that relationship power is socially embedded in relationships [11,14]. However, it is important to note that neither the source nor the possession of power solely defines the power distribution in a relationship. It mainly resides in the willingness of members to exploit their power position in the buyer—supplier relationship [11]. It is important to understand the dependence between buyers and suppliers in a relationship, since dependence is the obverse of power, and members have to depend on one another to achieve the desired goals [15,56].

The level of dependence in a relationship is determined by two factors: the need for a resource, and the availability of alternative resources. The dependence of members in the buyer—supplier relationship increases either when the need for the unique resource increases or when limited alternative resources are available [56]. Consequently, when a firm can supply unique resources, it has the upper hand, and relationship power starts to surface [56]. Therefore, buyer—supplier relationships are seldom balanced and equal because of the inherently imbalanced distribution of power and dependence between buyers and suppliers [56-58].

# 2.4.1 Types of relationship power

Relationship power is the source of many of the dynamics and complexities in buyer—supplier relationships, and it must be understood in order to ensure the longevity of the relationship [56].

Coercive power is derived from economic activities such as imposing penalties on members in the buyer—supplier relationship, threatening to withdraw initial promises, and withholding support from one another [9]. This power is found in buyer—supplier relationships where one member is heavily dependent on another, which can reduce collaboration opportunities in the long-run [6].

Non-coercive power is derived from non-economic activities [9]. Non-coercive power offers several advantages, such as the promotion of innovation and change to ensure that the organisation can adapt and respond faster to environmental opportunities and threats [9]. This type of power provides buyers and suppliers with the ability to reach consensus on decisions and so generate a more stable supply chain network [14]. Coercive power might amplify the conflict between buyers and supplier, while non-coercive power might reduce the likelihood of conflict [6].

Types of non-coercive power include expert, reference, legitimate, and reward power [59]. Expert power happens when one firm has expertise and knowledge in a specific area of interest or a specific industry that the other firm desires [6,16]. Reference power is the power held by the focal firm when another firm admires its way of conducting business, and so aspires to be identified with it [6,16]. Expert power tends to lead to reference power, as expertise in the industry leads to an improved reputation, which in turn increases the focal firm's power base [6,16]. Legitimate power exists when the focal firm uses a binding contract to exercise power over another firm [6,16]. Legitimate power can, for example, be derived from service-level agreements that force suppliers to adhere to and guarantee the specific standards and requirements of the focal firm [60]. If suppliers are unable to meet the service-level agreement as stipulated, they are subject to penalties [60]. Reward power exists when the focal firm offers rewards and incentives to influence the other firm to reach the desired goals [6,16].

# 2.4.2 Imbalanced relationship power

Imbalanced relationship power is caused by the difference in dependence between members, which allows the dominant member to exercise power over the other member in a buyer—supplier relationship [61,34]. The most powerful firm is the leader in the buyer-seller relationship, and thus is the one to manage and distribute all risks or benefits [9].

Buyer power surfaces when many suppliers and many resource alternatives are available in the marketplace. Thus, when firms can choose between various suppliers, buyer relationship power exists. Buyer power allows buyers to force suppliers to comply with the buying firm's supply chain sustainability standards before the suppliers can provide products or deliver services [3]. Supplier power exists when only a few suppliers are available to supply unique resources [61]. Successful relationships are established once firms can accept the relationship power in the buyer—supplier relationship, even though the power might be imbalanced rather than equally distributed [61].

The behaviour of members in buyer—supplier relationships can be predicted by understanding the underlying trust and power embedded in the relationship [62]. Trust and commitment are two important attributes of buyer—supplier relationships, and imbalanced power in buyer—supplier relationships can be reduced by increased relationship commitment and trust [63-65].

# 2.4.2.1 Relationship commitment

'Relationship commitment' is the readiness of members not only to sustain relationships in order to acquire resources, but also to make sacrifices to ensure the longevity of the relationships [63,66]. The willingness of buyers and suppliers to commit to and participate in joint activities is influenced by the power imbalances embedded in relationships [16]. A lack of mutual commitment between members in a relationship might increase supplier switching costs and dependencies, which can create arm's-length relationships [61].

### 2.4.2.2 Trust

'Trust' is defined as the readiness of members in a buyer—supplier relationship to adhere to the requirements and behaviours of others [34,67]. Embedded trust in relationships implies that members have

a positive attitude to and confidence in one another in the buyer—supplier relationship, and that everyone will perform according to the focal firm's requirements [62].

Trust also increases members' commitment to spend more time and resources on the desired outcomes of the relationship [62]. Greater collaboration between members of a relationship can be achieved once trust is embedded, although the more powerful member might still influence the weaker party to adhere to specific standards and requirements [16].

#### 2.5 The relevance of the resource dependence theory

This study is underpinned by the resource dependence theory. It is a sustainability theory that is based upon the premise that firms gain a competitive advantage once they possess or have access to a bundle of unique resources that are not easily imitated, substituted, or purchased [33,68]. This theory also explains how firms manage their dependence and maintain their relationships with external stakeholders in order to acquire unique resources [5,9,30].

Firms' dependence on resources is a key source of relationship power, since the unique resources that firms need are often held by other firms [69]. Therefore, resource dependence theory provides an overview of the formation of power in relationships, and assists in the development of ways to access and exploit unique resources [14,69]. According to Gelderman and Van Weele [10], three factors affect how dependence between firms increases: first, the dependence of one firm on another increases once the importance of a resource increases; second, the dependence of one firm on another firm increases once the discretion over resource acquisition increases; and third, when the concentration of resource control increases, the dependence of one firm upon another for that resource increases accordingly. Relationship power exists between buyers and suppliers when they depend on one another for resources, and those resources aid supply chain sustainability practices.

The next section discusses the relevance of relationship power in supply chain sustainability practices.

# 2.6 Relationship power in supply chain sustainability practices

Firms realise that they are members of a wider community and that it is their responsibility to act in ways that show respect for and sustain the environment and the society in which they conduct business [5,8]. It is necessary to conduct research on power in buyer—supplier relationships, since it potentially provides channels for spreading positive supply chain sustainability practices across the supply chain [3,6]. The full potential of a sustainable supply chain can only be achieved when firms work in close collaboration with all the buyers and suppliers that form part of the supply chain [3,6].

It is worthwhile to integrate buyers and suppliers throughout the supply chain, because integrated firms can manage one another's compliance with supply chain sustainability practices [3]. Such practices generate competitive advantages when they are grounded in and facilitated by buyer—supplier relationships [70]. Members of buyer—supplier relationships can usually provide unique resources, which act as a way to achieve competitive advantage and create sustainability opportunities [5]. Firms also seek to improve supply chain sustainability by ensuring that suppliers can deliver products in the long term. Compliance with sustainability practices thus guides firms' survival [71].

The cooperation between buyers and suppliers increases the focal firm's ability to implement supply chain sustainability practices [43]. Firms are held responsible not only for their own actions, but also for the actions of those with whom they are connected in their buyer—supplier relationships [69]. Therefore, firms exercise power over the members in their buyer—supplier relationship to ensure that they behave ethically and adhere to sustainability standards [69].

Relationship power in the supply chain surfaces when firms confront suppliers about reducing the risks and implications of their actions [5]. Powerful buyer—supplier relationships play an important role in implementing supply chain sustainability practices [54], as buyers ensure supply chain sustainability through their purchasing decisions. For example, buyers can force their suppliers to use recyclable materials for the packaging of products [43].

The next section discusses the methodology that was followed in this study.

#### 3 METHODOLOGY

#### 3.1 Research design

This This study employed a single-case study design. A single-case study promotes the understanding of the dynamics and the multiple variables that are present in a single setting [72]. It was appropriate, therefore, to conduct single-case study research, given that the healthcare industry is embedded in a dynamic and rapidly changing environment that results in the daily formation of multiple variables. Furthermore, studying the case of a leading firm provides opportunities for in-depth data collection for an underexplored phenomenon that could lead to useful insights [73-74]. The adoption of a single-case study was considered to be useful in answering 'how' questions, since this research was concerned with how relationship power and supply chain sustainability practices are interlinked.

# 3.2 Sampling

The study was conducted in a South African hospital group with its head office in Gauteng and a large national footprint. This group is one of the three largest hospital groups in South Africa, and was chosen based on accessibility. The private healthcare industry is theoretically relevant in exploring relationship power, since it is embedded in a network of linkages in which buyer—supplier relationships are crucial because they act as conduits through which supply chain sustainability practices can be implemented.

The units of analysis for this study were the supply chain of the group, while the units of observation were the participants from whom data was collected. Purposive sampling, more specifically maximum variation sampling, was used to identify potential participants in the study. It is one of the most commonly used purposive sampling methods, and it helps the researcher to select individuals on different managerial levels with different characteristics, perspectives, and backgrounds [75-76]. The participants were deliberately chosen from the different organisational levels in the selected organisation to ensure that various perspectives on relationship power and supply chain sustainability practices were included [76]. The participants conformed to the eligibility criteria, and included hospital managers, procurement managers, pharmaceutical managers, technical managers, buyers, medical representatives, and stock controllers. The final sample size was based on the data saturation principle, whereby data is continuously collected until no new codes or themes relevant to the study's topic are discovered in new participants [95]. Data saturation occurred after nine interviews, as no significant new data was found in the three interviews conducted thereafter. The specific eligibility criteria were, first, that the organisation had to be based in South Africa for most of its activities and that its headquarters were situated in the Gauteng province; second, the organisation had to be proactively involved in supply chain sustainability practices; and third, the organisation had to be involved in buyer-supplier relationships. The inclusion criteria were derived from this proposed study's research purpose.

In addition, snowball sampling was used in conjunction with maximum variation sampling. The snowball sampling method began after the data collection process started, and used referrals, relying on participants to identify other potential participants [76-77]. Snowball sampling was appropriate to use, as it is time-and cost-efficient. Table 1 provides a profile of the study's participants.

	Participant's code	Job title	Gender	Years in industry	Years in firm	Duration (minutes)
	B1	Procurement manager	Female	13	5	29.07
the / on	B2	Hospital manager	Male	29	17	30.42
	В3	Pharmaceutical manager	Female	30	9.5	23.34
	B4	Pharmaceutical manager	Female	12	5	38.05
in udy ati	B5	Stock controller	Female	15	9	27.25
Buyers in the case study organisation	B6	Technical manager	Male	10	1	33.43
or G	B7	Hospital manager	Male	30	20	40.55

Table 1: Summary of participants

	Participant's code	Job title	Gender	Years in industry	Years in firm	Duration (minutes)
	S1	Medical representative and area manager (medical)	Female	25	3	32.51
брп	S2	Catering manager (food services)	Female	30	1	20.08
Suppliers for the case study organisation	<b>S</b> 3	Medical representative (pharmaceutical)	Female	5	1	19.05
	S4	Medical representative (equipment)	Female	3	1	11.47
Suppliers organisat	S5	Marketing director (maintenance and repairs)	Male	30	4	20.92
Number of interviews:						12
Average duration of interviews in minutes:						27.17
Average years in industry:						19.3
Average years in firm:					3.3	

#### 3.3 Data collection

Semi-structured interviews were used to collect data because they are considered the most appropriate data collection method to provide a researcher with in-depth insights and a better understanding of the topic under exploration [77-78]. This data collection method allowed the researcher to ask open-ended questions, aided by a discussion guide, which allowed the participants to reflect their own beliefs and perspectives [79-80]. The discussion guide was developed from an extensive literature review. A pre-test interview was conducted with a procurement manager who fitted the eligibility criteria. Only minor adjustments were made to the discussion guide, and the participant was then included in the sample for the main study. Interviews began with background questions and progressively moved towards more specific and topic-related questions. Twelve participants were interviewed in person on a one-on-one basis in their respective offices during working hours. The average duration of the interviews was 27.17 minutes. The audio-recorded interviews were transcribed by professional transcription services typically three working days after the interview had been conducted. The researcher listened to the interview recordings while reading the transcripts to ensure that all of them were verbatim.

# 3.4 Data analysis

Thematic analysis was used to analyse the data, which allowed the researcher to interpret the data by identifying, organising, and grouping codes into themes and sub-themes [81]. The researcher created an *a priori* code list that was derived from the literature. The researcher listened to the audio recordings directly after every interview, which allowed the researcher to become more familiar with recurring and new answers to the derived codes. The researcher used the qualitative analysis program Atlas.ti to analyse the data. The code list was updated every time a new code appeared. Table 6 summarises the linkages between the raw data extracts, codes, sub-themes, and main themes of this study.

#### 3.5 Trustworthiness

To ensure the trustworthiness of the study, a four-criterion framework was implemented that consisted of credibility, dependability, confirmability, and transferability [76]. First, 'credibility' refers to the accuracy of a research study's findings compared with the intention of the study, and how well the actual perspectives of participants are reflected by the findings [76,82-83]. Credibility was obtained by gaining as much background information as possible about the case organisation prior to the interviews [83]. Data triangulation was then used, in which several participants from the case organisation were interviewed to gain different opinions and experiences about relationship power and supply chain sustainability practices [76,83]. Second, 'dependability' is concerned with the stability and reliability of data over time and under certain conditions. It refers to the probability of finding similar results if the proposed research study were

to be replicated with similar participants, methods, and conditions [76]. The dependability of the study is demonstrated through the provision of a detailed and comprehensive description of the methodology [82]. Third, the researcher must ensure that participants' true experiences and ideas are reflected by the study's findings, and not those of the researcher [76,83]. A link was made between the study's literature and the collected data to reflect the true experiences and ideas of the participants and not those of the researcher [76,82-83]. Confirmability was therefore achieved. Last, 'transferability' refers to the extent to which the proposed research study's finding can be applied in different contexts, groups, or settings [76]. Transferability was achieved by providing a detailed description of the participants, the data collection methods, and the number and length of the interviews that were conducted [84].

### 3.6 Ethical considerations

The relevant Research Ethics Committee at the University of Pretoria approved this study. A letter of permission from the case organisation was obtained before any data collection was conducted. Before each interview, the participant was asked to read and sign the informed consent form to show that they took part in this study voluntarily. The researcher also informed the participants that they were allowed to leave the interview at any point, and emphasised that their confidentiality and anonymity took priority. Last, pseudonyms were used to remove any information that could be linked back to the participants or the case organisation.

#### 4 FINDINGS

This study identified four main themes that linked with the research questions. These themes relate to the following: (1) the supply chain sustainability practices that are implemented by the group; (2) the role that relationship power plays in supply chain sustainability practices; (3) how power imbalances can be a driver of or a barrier to supply chain sustainability practices; and (4) how power imbalances influence supply chain sustainability practices' implementation and management. A discussion of these themes follows in the sections that follow. The participants' direct quotations were linked back to the literature as far as possible. Table 2 provides a summary of the main themes and sub-themes of this study.

Table 2: Summary of the main themes and sub-themes of the study

Theme 1: Supply chain sustainability practices used in the supply chain of the group	Theme 2: The role that relationship power plays between buyers and supplier in supply chain sustainability practices	Theme 3: Relationship power as a driver of supply chain sustainability practices	Theme 4: Influences of imbalanced relationship power in the management of supply chain sustainability practices
<ul> <li>Environmental sustainability practices</li> <li>Social sustainability practices</li> <li>Innovativeness through supply chain sustainability practices</li> </ul>	<ul> <li>Imbalanced relationship power exercised by the buyer</li> <li>Factors contributing to imbalanced relationship power</li> </ul>	<ul> <li>Advantages of implementing supply chain sustainability practices</li> <li>Disadvantages of implementing supply chain sustainability practices</li> </ul>	<ul> <li>The importance of buyer—supplier relationships in supply chain sustainability implementation</li> <li>Procedures in implementing supply chain sustainability practices</li> <li>Mutual commitment, trust, and continuous communication</li> </ul>

# 4.1 Theme 1: Supply chain sustainability practices used in the supply chain of the group

This study's first research question was aimed at answering what types of supply chain sustainability practice are used in the private hospital's supply chain. This section addresses the types of environmental and social practice implemented by the group and its suppliers.

Supply chain sustainability is concerned with safekeeping the triple bottom line, as well as meeting the present generation's requirements without compromising future generations' ability to meet their own needs [42]. Firms adopt supply chain sustainability practices to drive their own competitiveness, while ensuring that sustainable environmental, social, and economic goals are met [3,20,42,68].

This study explores the types of supply chain sustainability practice that are implemented in the group, along with the innovative projects that are run in partnership with suppliers. The group exercises a great influence over suppliers to participate actively in both environmental and social sustainability practices.

# 4.1.1 Environmental sustainability practices

Environmental sustainability practices focus on the use of resources and the implications of that resource use on the physical environment [68]. Environmental sustainability practices are normally characterised by processes such as recycling, reducing waste, and implementing total quality management systems [19,49-51]. The interview data revealed that various environmental sustainability practices are implemented by the group with assistance from its suppliers.

Suppliers' increased awareness of their impact on the environment contributes to their willingness to work towards and implement the environmental sustainability practices that are set out by the group. These sustainability practices include effective waste management, reduced water consumption, and recycling of products. Extracts from participants' interviews illustrate these practices:

"We want this product, and people must conform to the standards. [They] must provide us with a waste generation certificate and sustainability report." (B7, hospital manager, male)

"We have resource programmes with suppliers to ensure that we mitigate the use of water, so that we don't overuse water." (B7, hospital manager)

"Glass recycling is a big thing ... The way you have to responsibly do away with your waste, is that you have to pay per kilogram, and it is at a premium. So we welcome companies that come and say, 'Listen, we will assist you'." (B4, pharmaceutical manager, female)

"So environmentally we do have systems like waste management, we have trunk tracks, which is how we reduce the wastage of food products ... That is the policy that we have from the [buyer]." (S2, Catering manager, female)

These findings confirm the presence of environmental sustainability practices such as reduced water consumption, waste management, and recycling, as set out in the literature by Bon and Mustafa [51], Eltayeb *et al.* [49], Marshall *et al.* [19], and Wang *et al.* [50].

# 4.1.2 Social sustainability practices

Social sustainability practices are concerned with the health and well-being of the stakeholders in the supply chain and with the impact that doing business has on the society [19]. These practices normally comprise supplier selection and certification and the allocation of fair work hours and wages [19,44,53]. The various social sustainability practices generally implemented by the hospital group are summarised in Table 3.

Table 3: Summary of the social sustainability practices implemented in the group

Social sustainability practice	Practice description	Number of participants who mentioned this practice	Illustrative quotation(s)
Compliance with legislation and regulations (including ISO standards, CE marks, and BBBEE requirements)	Government regulations and legislation pressure private hospitals to implement supply chain sustainability practices (Kumar <i>et al.</i> , 2012:1293; Marshall <i>et al.</i> , 2015:673; Rajabian Tabesh <i>et al.</i> , 2016:9).	9	"So our suppliers need to comply with legislation and government recommendations and our own recommendations in terms of BBBEE scoring." (B1, procurement manager, female)  "Your product needs to have ISO standards, CE mark each product has to have a CE stamp." (B2, hospital manager, male)
Patient and personnel well-being	Social sustainability practices are implemented to care for patients' and personnel's well-being in the private hospitals' supply chain (Mani et al., 2018:261; Marshall et al., 2015:674).	2	"The products we use for hygiene and things like that also need to conform to certain environmental standards. Not to be dangerous to patients' health." (B7, hospital manager, male)
Suppliers' periodic reviews and performance assessments	Suppliers are monitored for their compliance with supply chain sustainability and social sustainability practices (Marshall <i>et al.</i> , 2015:676).	2	"Especially with (group) we need to do our performance score card, we're not allowed to go into theatre without that." (S1, medical representative, female)
Green procurement, maintenance, and after-sales services	Green procurement involves the buying activities that are concerned with safeguarding the environment, the society, and the economy (De Sousa Jabbour et al., 2015:368; Oruezabala & Rico, 2012:574). Supplier selection also addresses the selection of suppliers based upon pre-requisites such as maintenance and after-sales services (Goebel et al., 2012:8).	3	"We call it now green procurement to make sure we are not overstocked so we try to reduce the carbon footprint of companies we are involved in." (B4, pharmaceutical manager, female)  "I do an analysis for every new product. And this includes the purchase, the maintenance and servicing of the product." (B1, procurement manager, female)

According to Awaysheh and Klassen [53], Goebel *et al.* [44], and Marshall *et al.* [19], social sustainability practices must protect the well-being of all stakeholders, and must comply with regulations and legislation. Therefore, the findings of this study confirm the work of the above-mentioned authors.

# 4.1.3 Innovativeness through supply chain sustainability practices

The South African private hospital industry is highly competitive, and groups can increase their competitiveness by developing and providing innovative products [50-51]. The group in this case study exercises non-coercive power over its suppliers. It is achieved because non-coercive power aids the promotion of innovation and change to ensure that the firm can adapt and respond faster to environmental opportunities and threats [9]. The group endeavoured to implement a number of innovative projects and products with its suppliers, including recycling specific plastics, especially IV drip bags, and using it to make school shoes for the local community. Another initiative that has been created with the suppliers is the development of a vegetable garden at one of the group's hospitals by separating hospital food and creating compost. These two innovative projects are illustrated by the following quotes:

"There is also one of the companies ... whereby plastic containers are recycled into school shoes." (B3, stock controller, female)

"We started with the composting six months ago, and now we are ready to do our whole vegetable garden (at hospital X)." (S2, catering manager, female)

These findings are in line with Cowan *et al.* [9]: relationship power is exercised by the buyer (i.e., the group) to promote innovative projects and products with the assistance of its suppliers. However, the types of innovative project and product are specifically linked to the group, and might expand the existing literature.

# 4.2 Theme 2: The role that relationship power plays between buyers and supplier in supply chain sustainability practices

The second research question of this study was aimed at understanding the role that relationship power plays between buyers and suppliers in supply chain sustainability practices. The discussion below explores this role.

Relationship power is defined by the unique resources that buyers and suppliers can offer to one another, and by the ability of one member to influence another member to gain access to and control over unique resources [9,11,55].

# 4.2.1 Imbalanced relationship power exercised by the buyer

This study found that the group (i.e., the buyer) has excessive power over its suppliers to work towards supply chain sustainability and implementing supply chain sustainability practices. Imbalanced relationship power occurs when the dominant member can exercise power over the other members in a buyer—supplier relationship to achieve certain outcomes [34,61]. The imbalanced relationship power is illustrated in the extracts below:

"We have cancelled contracts halfway through the year — 'Sorry, you can't deliver to the regulations of what we have asked for, so we cancel the contract'." (B2, hospital manager, male)

"We won't buy products if a supplier is not on a sustainability programme ... and we will easily cancel an agreement with a company that does not follow things." (B7, hospital manager, male)

Furthermore, buyer power surfaces when there are multiple alternative suppliers to choose from; and it allows the buyer to force suppliers to comply with the sustainability standards set by the buying firm [3]. The group has various alternative suppliers from which they can buy, and it is also not influenced by the availability of unique and scarce resources. This is evident from the quote below:

"We are spoiled for choices in healthcare in term of suppliers." (B1, procurement manager, female)

These findings confirm the studies of Khoja *et al.* [61] and Wang *et al.* [31]. Imbalanced relationship power helps the group to reach its sustainability goals. In addition, it is evident that the buyer has the upper hand, since there are many alternatives to choose from. The findings of Kumar *et al.* [3] are therefore confirmed.

# 4.2.2 Factors contributing to imbalanced relationship power

This study found that several factors contribute towards the imbalanced relationship power exercised by the group. This group has excessive buyer power over its suppliers. It is illustrated by the factors listed in Table 4, accompanied by relevant raw data extracts. The factors include product pricing and product quality, specialised products, contractual agreements and the need to meet strategic objectives, a product warranty accompanied by after-sales service, and local South African companies' preferences.

The factors expand the existing literature, since they are unique to this group. This is represented specifically by the fact that the group exercises excessive power over the specialised products in the private hospitals' supply chain. Two examples of specialised products that were mentioned in the interviews are hygiene and cleaning materials. A detailed list of product ingredients contained in hygiene and cleaning materials has to accompany a tender application.

Furthermore, the group emphasises the need to rely on suppliers that provide them with product warrantees and good after-sales service. Suppliers need to act immediately when the group requests its services, even after hours. This can be seen from this quotation:

"So if we require something from a supplier that we would be able to pick up a phone ... provide us with that piece of equipment or stock item within a certain time frame." (B7, hospital manager, male)

Last, it is much easier for the case organisation to have quicker access to resources when using local South African suppliers. Power is exercised over the suppliers of this group owing to its preference to appoint localised South African firms.

"The aim is to localise all your suppliers." (B4, pharmaceutical manager, female)

Table 4: Summary of factors contributing to imbalanced relationship power

Factors contributing to imbalanced relationship power	Factor description	Number of participants who mentioned this practice	Illustrative quotation		
Product pricing and product quality	Purchasing managers need to procure products at the lowest possible price while making sound supply chain sustainability decisions (Goebel et al., 2012:9). The provision of high-quality products and services increases firms' competitive advantage (Bon & Mustafa, 2013:517; Wang et al., 2012:119). However, since products and services are sourced from various suppliers, ensuring their quality might be a daunting task (Chen & Deng, 2013:175).	12	"So I think they (group) are very honest and upfront with it: 'No, we lost the exam glove of our tender, and it's because of one rand'." (S1, medical representative, female)  "The encouragement from my side, you need to come in with a good price, good product, and you have to deliver." (B2, hospital manager, male)		
Contractual agreements and the need to meet strategic objectives	Service-level agreements are implemented into contractual bindings between buyers and supplier to force suppliers to adhere to and guarantee the specific standards and requirements of the focal firm (Gardas & Narkhede, 2013:442).	10	"We exercise power anywhere we need services because we need to be compliant. If they're [suppliers] not compliant, I will not be compliant we just enforce them to be compliant." (B6, technical manager, male)		
Factors that are not supported by the literature because of the unique setting of this case-study					
organisation					
Factors contributing to imbalanced relationship power	Factor description	Number of participants who mentioned this practice	Illustrative quotation		
Specialised products		4	"We require a material safety data sheet with all that information on what type of ingredients there are, what type of chemical, what hazardous materials, how it must kept and stored — all those factors before we decide, yes, we will go ahead		

		with that product." (B7, hospital manager)
Product warranty accompanied by after-sales service	6	"If we require something from a supplier that we would be able to pick up a phone provide us with that piece of equipment or stock item within a certain time frame." (B7, hospital manager, male)
Local South African companies' preference	5	"The aim is to localise all your suppliers." (B4, pharmaceutical manager, female)

# 4.3 Theme 3: Relationship power as a driver of supply chain sustainability practices

The third research question of this study was concerned with whether relationship power acts as a driver of or a barrier to supply chain sustainability practices in a group. The discussion below explains how relationship power drives sustainability practices in this context by mentioning the advantages and disadvantages of these practices.

# 4.3.1 Advantages of relationship power in supply chain sustainability practices

The dynamics and complexities that are embedded in buyer—supplier relationships are usually derived from the relationship power between members. It is important to understand the relationship power between members, because it enhances the longevity of the buyer—supplier relationship [56]. This study found that relationship power offers several advantages in implementing supply chain sustainability practices. The advantages are discussed in Table 5.

Table 5: Summary of the advantages of implementing supply chain sustainability practices

Advantages of implementing supply chain sustainability practices	Description of advantages	Number of participants who mentioned each advantage	Illustrative quotation	
Improved corporate image	Building and enhancing a corporate image and brand (Wang & Sarkis, 2013:873).	4	"We want to be marketable with government and be seen as a responsible company." (B4, pharmaceutical manager, female)	
Financial advantages	Reduction of costs (Kumar <i>et al.</i> , 2012:1278-1280).	3	"They [suppliers] are assisting us with sustainability there is a saving we're getting." (B6, technical manager, male)	
Advantages that are not supported by the literature because of the unique setting of this case- study organisation				
Increased community contribution	study (	5	"There is one supplier that is now with [case organisation] that has a project where they take the plastic and make shoes with it for underprivileged children." (B5, pharmaceutical manager, female)	

According to Kumar *et al.* [3] and Wang and Sarkis [20], supply chain sustainability practices yield several advantages, including reduced costs and an improved brand image. The findings of this study, therefore, confirm those of these authors.

Apart from the advantages set out in Table 5, this study also found that the implementation of supply chain sustainability practices increases the community contribution of the group, which potentially expands the existing literature. It can be seen from the quotation below:

"There is one supplier that is now with [case organisation] that has a project where they take the plastic and make shoes with it for underprivileged children." (B5, pharmaceutical manager, female)

# 4.3.2 Disadvantages of relationship power in supply chain sustainability practices

The findings also suggest that there are disadvantages to implementing supply chain sustainability practices by exercising relationship power over suppliers. In this specific context (i.e., the group), the disadvantages are unique, and expand the existing literature framework, especially in relation to private hospitals in South Africa. The implementation of supply chain sustainability practices can easily be a drawback because it is time-consuming and costly.

"When a new sustainability project gets given to you ... you add more to their [employees'] plate." (B4, pharmaceutical manager, female)

This step is in alignment with the frameworks described in the literature [16, 33-36].

Furthermore, if the group aims to implement too many supply chain sustainability practices, the suppliers can easily become hesitant about working towards the implementation of these practices, as seen below:

"I think a lot of suppliers would be aggressive in the beginning, and they would have conflict and differing ideas and minds." (B2, hospital manager, male)

Last, the stakeholders responsible for the implementation of supply chain sustainability practices might lack the training that would ensure successful implementation.

"The nursing staff is not always trained on waste management." (\$4, medical representative, female)

# 4.4 Theme 4: Influences of imbalanced relationship power in the management of supply chain sustainability practices

The final research question for this study focused on how imbalanced relationship power between buyers and suppliers influences the management of supply chain sustainability practices in the group. The effect of imbalanced relationship power on the management and implementation of sustainability practices is discussed below.

Relationship power between buyers and suppliers is particularly important for the implementation of a sustainable supply chain [1]. It potentially provides channels for spreading positive supply chain sustainability practices across the supply chain [3,6]. This main theme is linked with two sub-themes that are discussed below. First, the importance of buyer—supplier relationships in the implementation of supply chain sustainability practices is discussed. Then, second, the procedures that are followed to implement these sustainability practices are discussed.

# 4.4.1 The importance of buyer—supplier relationships in supply chain sustainability implementation

Relationship power can be a channel for the implementation of supply chain sustainability practices. Therefore, firms must implement buyer—supplier relationships to ensure the spreading of supply chain sustainability practices [1,3,6]. This study found that buyer—supplier relationships and consensus between these members are paramount in the successful implementation of supply chain sustainability practices. This is evident from the quotations below:

"Supply sustainability to me means that it depends on the relationship building." (B2, hospital manager, male)

"Having a relationship with them [suppliers] assists us in being able to dispose [of] our waste correctly." (B6, technical manager, male)

From these findings, the studies of Kumar *et al.* [3] and Meqdadi *et al.* [6] are confirmed. Buyer—supplier relationships are key to the successful implementation of supply chain sustainability practices.

# 4.4.2 Procedures in implementing supply chain sustainability practices

This research study found that the group has procedures in place to which suppliers must adhere when implementing supply chain sustainability practices. Stakeholders play a significant role, and training must be given throughout the implementation process to enable all stakeholders to be informed about the practices that are implemented. This point is illustrated in an extract from one participant:

"... "They [suppliers] have been awarded already on the formulary within bulk training campaigns throughout the hospitals about how what environmental practices we [group] want to instil." (B1, procurement manager, female)

It is evident that training plays a significant role in buyer—supplier relationships. This finding expands the current literature on the procedures that can be followed in implementing sustainability practices.

# 4.4.3 Mutual commitment, trust, and continuous communication

The behaviour of buyers and suppliers in a buyer—supplier relationship is influenced by the mutual commitment and trust they exercise towards each other. These are two important attributes of buyer—supplier relationships; and an imbalanced relationship power can be reduced with the presence of these attributes [63-65].

Buyer—supplier relationships are paramount for supply chain sustainability. Mutual commitment is the readiness of members to make sacrifices for the longevity of the buyer—supplier relationship [63,66]. Trust also increases the commitment of members to allocate more time and resources to achieving the desired goals of a buyer—supplier relationship. The quotation below illustrates the mutual commitment that is present between the buyer and the supplier in the group setting, with the aim of aiding supply chain sustainability practices:

"It's in the benefit of our company and our suppliers to work together to maintain a sustainable practice... we work together finding solutions for our problems." (B7, hospital manager, male)

It is also found that the presence of continuous communication in a buyer—supplier relationship plays a significant role in aiding and sustaining supply chain sustainability practices in the group setting. This is an expansion of the work done by Barnes *et al.* [66] and Huo *et al.* [63], because continuous communication undergirds supply chain sustainability practices by buyers and suppliers:

"The supplier we use monitor[s] electricity consumption, and if sometimes equipment has the tendency [of] consuming more electricity, they send us reports to show." (B6, technical manager, male)

Even though trust between buyers and suppliers can influence members to have a positive attitude towards meeting the focal firm's requirements [62], little mention has been made by the participants of the trust between buyers and suppliers when implementing supply chain sustainability practices. This potentially contradicts the study of Nunkoo and Ramkissoon [62].

#### 5 CONCLUSION

# 5.1 Summary of findings and theoretical implications

The purpose of this single-case study was to explore the role that relationship power plays in supply chain sustainability practices between buyers and suppliers in one of the three largest hospital groups in South Africa. This study reported findings in four areas in an attempt to answer the four corresponding research questions. These areas were the following: (1) the supply chain sustainability practices that are implemented by the group; (2) the role that relationship power plays in supply chain sustainability

practices; (3) how imbalanced relationship power can be a driver of or a barrier to supply chain sustainability practices; and (4) how imbalanced power influences the implementation and management of supply chain sustainability practices. This study found that the group exercises a significant amount of buyer power over its suppliers, which can be explained by the large national footprint this group has.

This study explored the types of environmental and social sustainability practice that are implemented by the group with the assistance of its suppliers. It also found that innovative projects and products are created by adopting sustainability practices. The literature on environmental sustainability practices was confirmed by this study [19,49-50,52]. Environmental sustainability practices are implemented to reduce the carbon footprint of the group and its suppliers. Effective waste management programmes, reduced water consumption, and recycling of products confirm the perspectives of Bon and Mustafa, [51], Eltayeb *et al.* [49], Marshall *et al.* [19], and Wang *et al.* [50]. In terms of social sustainability practices, this study found that patients' and personnel's well-being, as well as compliance with legislation and regulations such as ISO standards, BBBEE certification, and CE marks, are key. The study's findings confirm those of Awaysheh and Klassen [53], Goebel *et al.* [44], and Marshall *et al.* [19], who all claimed that firms should protect stakeholders' well-being and comply with regulations. However, additional practices such as suppliers' periodic reviews and performance assessments, maintenance, and after-sales services expand the existing literature. The group and its suppliers invested in various innovative projects and products, such as vegetable gardens and recycling plastic bags for school shoes, all of which confirm the perspectives of Cowan *et al.* [9].

Furthermore, this study explored the role that relationship power plays in supply chain sustainability practices between buyers and suppliers. It found that the group has excessive buyer power over its suppliers when requiring them to adopt supply chain sustainability practices. As the group is the dominant member in the buyer—supplier relationship, it can achieve sustainability outcomes by exercising its power, which confirms the arguments of Khoja et al. [61] and Wang et al. [34]. In addition, the private healthcare industry has the advantage of accessing a vast number of alternative suppliers, which also helps to create buyer power, again confirming the study of Kumar et al. [3]. This study also found several factors that contribute to the buyer power embedded in the group. This extends the literature, since it is unique to the specific South African group. These factors include specialised products, product warranties accompanied by aftersales service, and a preference for local South African companies. Other factors confirm the perspectives of Goebel et al. [44] and of Gardas and Narkhede [60]. These perspectives include product pricing and quality, along with contractual agreements and the need to meet strategic objectives.

Relationship power and supply chain sustainability practices offer both advantages and disadvantages for the group and its suppliers. According to Kumar *et al.* [3] and Wang and Sarkis [20], supply chain sustainability practices offer advantages such as reduced costs and improved brand image, which this study confirms. However, given its unique setting, the disadvantages are unique to the group. They include the excessive time and capital required to invest in supply chain sustainability practices; the possibility that suppliers will resist implementing these practices; and the possibility that stakeholders might not be always trained to implement and manage supply chain sustainability practices.

This study also explored how imbalanced relationship power influences the management of supply chain sustainability practices. It is paramount to invest in buyer—supplier relationships, since they are particularly important for the implementation of supply chain sustainability practices [1]. This study found that buyer supplier relationships and buyer—supplier consensus aid the implementation of supply chain sustainability practices. The findings of Meqdadi et al. [6] and Ulstrup Hoejmose et al. [1] are thus confirmed. Procedures such as training opportunities are in place to implement supply chain sustainability practices successfully throughout the whole supply chain — an item that expands the current literature. Mutual commitment and continuous communication play a significant role in the allocation of resources and the implementation of supply chain sustainability practices. This study confirms the finding of Barnes et al. [66] that mutual commitment indicates buyers' and suppliers' readiness to make sacrifices for the longevity of the buyer supplier relationship. This study found that suppliers work for the benefit of themselves and the buyer. Continuous communication plays a crucial role in aiding and sustaining supply chain sustainability practices in the group, and this point expands the studies of Barnes et al. [66] and Huo et al. [63]. Although the literature mentions the trust between members that Is necessary if goals are to be met, no participant mentioned the importance of trust. This might contradict the existing literature; but further research needs to be done before such a statement could be made.

Finally, the findings of this study support the implementation of the resource dependence theory as a theoretical underpinning. The findings explain how interdependence drives the dominant member (i.e.,

the private hospital group) to use and enforce its relationship power over the weaker parties (i.e., the suppliers) to implement environmental and social supply chain sustainability practices.

# 5.2 Managerial recommendations

First, this research study shows that managers need to be more aware of the role that relationship power plays in implementing supply chain sustainability practices because it is such a significant aspect of a supply chain. This implies that, once a buying firm has power over its supplier, supply chain sustainability advantages can occur. However, managers should not underestimate the disadvantages that accompany relationship power in supply chain sustainability practices: they can be detrimental to the implementation of such practices. Managers should go to extra lengths to mitigate the disadvantages and to ensure the successful implementation of these practices by providing adequate training to all stakeholders. Second, this study emphasises that buyer—supplier relationships are paramount if firms want to meet their sustainability goals and be competitive among their rivals. Managers should make a concerted effort to invest time and money in effective and continuous communication and mutual commitment, because these contribute to the longevity and success of buyer—supplier relationships.

# 5.3 Limitations, and directions for future research

This study specifically focused on the private hospital industry in South Africa; therefore, research should be conducted into the supply chain of other industries to determine the transferability of this study's findings. It was found that a large firm, such as the focal group, exercises significant power over its suppliers. It would be valuable to investigate relationship power and supply chain sustainability practices in smaller firms. Furthermore, this study's sole focus was to explore the environmental and social aspects of the triple bottom line, even though participants mentioned that the economic aspect plays a significant role in the case organisation. Future research could focus more on the economic aspect of the triple bottom line and on the effect that relationship power has on this aspect.

This study's transferability could be determined by replicating it in a developed country where there are different laws, regulations, and community pressures. The case organisation is one of the top three hospital groups in South Africa, and participants might have been biased and have withheld information to protect themselves and the firm during the interviews. Future research could consider using other data collection methods such as observation or collecting questionnaires to avoid receiving biased information. Last, the sample size of this study was limited to 12 participants. Only five suppliers were interviewed; and so future research could be conducted with a larger sample involving more suppliers.

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