

Sustainable purchasing in the Dutch healthcare sector: cultural aspects analysis

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ABSTRACT,

In recent years, due to climate change, there has been a shift from healthcare organizations focusing solely on patient care to healthcare organizations additionally looking at their impacts on outside stakeholders, such as the environment, employees and society. Sustainability, as a result, is a concept which has become one of the most important topics in the operations of healthcare organizations. The purpose of this study is to look at the current extent of sustainability adoption in the healthcare sector, in combination with the role a purchaser can play regarding sustainability adoption. Additionally, the influence of two cultural aspects on sustainability adoption in the healthcare sector is investigated, i.e. national culture and organizational culture. In order to research this, a case study at seven healthcare organizations has been conducted, through interviews with purchasers of these organizations. The results support previous literature on the increasing importance of sustainability and how organizational culture can foster the interest of an organization for a topic such as sustainability. The results also address measures that organizations have already taken regarding sustainability and initiatives that are yet to be pursued. It also addresses the role of a purchaser in ensuring that sustainability gains traction throughout the organization, even though this is very much linked to organizational culture. Lastly, the results address the importance of national culture, however in practice mainly national rules and regulations play a role regarding sustainability adoption in the healthcare sector. The focus of future research should be on trying to find out if differences in sustainability adoption and influences of organizational culture exist in different regions of the Netherlands as well as comparisons with other countries.

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Keywords

Procurement, sustainability initiatives, Dutch healthcare organizations, stakeholder theory, organizational / national culture, supplier assessment

1. INTRODUCTION

The Dutch healthcare system currently faces several challenges. Increasing prices of products and high political pressure to increase sustainability in its operations largely influence management decisions in the Dutch healthcare system. Healthcare costs in the Netherlands are a large cost factor¹. During both 2018 and 2019, the Netherlands pledged approximately 10 percent of its gross domestic product (GDP) to health care. In 2019, the total amount spent on healthcare was 80.9 billion euros. Substantially are the procurement costs for hospitals of the total hospital expenses; In 2018, total procurement costs for hospitals in the Netherlands were 11 billion euros². All in all, value-based procurement can help hospitals cut costs, which can make healthcare more affordable for everyone. Procurement makes up around 30% of operating costs of hospitals, and the British Medical Journal estimated that up to 2,5% of total procurement costs can be saved through better procurement³. However, as in the Netherlands healthcare is provided to all citizens, with support of health insurance companies⁴, costs-minimization is not the main driver behind public procurement in the healthcare sector from the perspective of patients.

A more topical challenge the Dutch healthcare system faces is based on the fact that healthcare is one of the most polluting industries⁵. Healthcare leads to large amounts of air pollution, both directly through e.g., medical waste, and indirectly through e.g., procurement of unsustainable materials and anaesthetics. Greenhouse gas emissions due to this pollution can represent 3-10% of total national emissions, with hospital and pharmaceutical companies being the main drivers⁵. Sustainability, thus, is another very topical problem the Dutch healthcare system has to deal with. The Dutch government has obliged itself to sustainable development goals (SDGs), which are 17 goals, established in accordance with the UN, which are used to change the world for the better by 2030⁶. These SDGs are also in line with the Paris Agreement, a UN treaty regarding restricting climate change, which the Netherlands have also pledged to act in accordance with⁷. The healthcare sector is no exception to these rules, for which in the SDGs in the Netherlands mainly 'Good health and well-being', 'Responsible consumption and production' and 'Climate action' are applicable. To improve on these specific SDGs, the healthcare sector must contribute, and procurement can make a large impact by making sure sustainability becomes a core concept in purchasing⁸. The trend of sustainability in procurement shows an increasing importance⁹, however sustainable procurement in the health sector in the Netherlands is an underexposed subject. The increasing importance of sustainable procurement, however, has been mentioned in other countries¹⁰. Pakistan, for example, experiences difficulties in implementing sustainable procurement in its healthcare sector, which eventually will lead to difficulties for Pakistan to adhere to the Paris Agreement.

Overall, health costs in the Netherlands are relatively low for patients, due to the existence of health insurance agencies in combination with compensations for lower incomes¹¹. This, in combination with the increasing importance of sustainability in healthcare procurement due to Sustainable Development Goals

and the Paris Agreement can be ranked based on topical importance. In the healthcare sector in the Netherlands, costs are tried to be minimized, because healthcare is viewed as a right for all people in the Netherlands¹². However, costs are still based on purchasing expenses, material costs, salaries, etc., which together form the operating expenses¹³. This means that ultimately the price is negotiable, and a low price is desirable for both the healthcare sector and its clients, such as patients and health insurance companies. On the other hand, the Dutch government has committed itself to sustainability goals, which also apply to the healthcare sector. As a consequence, the Dutch healthcare sector must comply with the sustainability goals. As the whole of the Dutch healthcare has no choice but to comply, a logical consequence would be for organizations throughout the Dutch healthcare system to look for improved sustainability practices in procurement. Linking the importance of procurement on steering organizations as well as the increasing importance of improved sustainability over the upcoming decade(s), the following research question has been established:

~ How can the purchasing department improve sustainability adoption in Dutch healthcare organizations? ~

Various research has been conducted on value-based procurement and strategic sourcing in the healthcare sector in the Netherlands^{14,15}, however sustainable procurement in the healthcare sector in the Netherlands is a subject on which improvements can be made. Research about procurement in the healthcare sector in the Netherlands thus far has mainly addressed the relation of the Dutch healthcare sector and insurance companies¹⁶, which sustainability not really being incorporated in comparable research. This research will provide a framework for purchasing professionals in the health industry in the Netherlands, especially regarding purchasing more sustainably. The theoretical application is based in the fact that healthcare organizations will have multiple benefits through becoming more sustainable and it will address the role that procurement has to play in this process. Besides the theoretical application, the research also has a very practical application. This application mainly emerges when the healthcare purchasing professional increases his awareness about the topic of sustainable procurement. As this topic is so underexposed, a small amount of exposure will make sure that procurement in this sector can evolve from the practicality of the procurer himself.

In addition, as this research is specifically about sustainable procurement in the healthcare sector in the Netherlands, national cultural aspects are considered as well, which this research will take into consideration. To elaborate, this means that this research will specifically apply to the Dutch healthcare sector. It is important to investigate sustainability in the Dutch healthcare context, because as mentioned the subject of sustainability is very topical and no research has linked the importance of sustainability to procurement in the Dutch healthcare sector yet, only the link between the Dutch healthcare sector and insurance companies has been investigated¹⁷. This research not only links sustainability and the Dutch healthcare sector, but also

¹ (CBS, 2020)

² (Lippolis & Lankhorst, 2019)

³ (Torjesen, 2013)

⁴ (WHO, 2021)

⁵ (Mercer, 2019)

⁶ (RVO, 2021)

⁷ (United Nations, 2023)

⁸ (Soete et al., 2017)

⁹ (Walker et al., 2012)

¹⁰ (Ahmed et al., 2021)

¹¹ (Kroneman et al., 2016)

¹² (WHO, 2021)

¹³ (Statline, CBS, 2023)

¹⁴ (Tip et al., 2022)

¹⁵ (Frederico et al., 2021)

¹⁶ (Victoor et al., 2019)

¹⁷ (Victoor et al., 2019)

incorporates national culture. National culture can vary based on multiple dimensions. That could be due to the level of uncertainty avoidance differing in different societies, e.g., Japanese people are naturally more inclined to avoid uncertainties and as an effect of this, would be less open to changes in current practices in general, while the Netherlands and other western cultures are less uncertainty avoidant¹⁸. This is a contribution relating national culture to sustainable purchasing in the healthcare sector as this is also something that is completely novel. Research about relating national culture to sustainable food consumption does already exist¹⁹, but the link between sustainable purchasing in the healthcare sector and culture does not exist yet. As this research will address this link, that will be another large theoretical contribution provided by this research.

2. THEORETICAL FRAMEWORK

2.1 Increasing awareness and recognition of environmental sustainability issues among healthcare organizations

Organizations such as the WHO and the UN are increasingly aware of the importance of environmental sustainability. The United Nations have published the aforementioned UN Sustainable Development Goals (SDGs), which include targets and guidelines related to sustainability in the healthcare sector. As mentioned in chapter 1, mainly goal 3, goal 12 and goal 13 are relevant in the healthcare context. These goals cannot be regarded individually, as e.g. goal 3 is about good health and well-being and goal 12 is about responsible consumption and production. However, the combination between these three goals, i.e. the two goals just mentioned in combination with goal 13 about climate action leads to a combined influence on the healthcare sector and expectations from a UN point of view. The WHO also has published several important reports and guidelines regarding sustainability in healthcare. The WHO regards climate change as the biggest threat to human existence and has described clearly in what ways climate change can influence health practices²⁰. The link between climate change and the increasing importance is well-established, as the UN SDGs also clarify. The SDGs are a means to try and tackle climate change. The WHO links the effects of climate change on healthcare²¹. Two very important international actors, thus value the importance of sustainability practices in the healthcare sector dearly. On a national level the importance of environmentally sustainable practices, however, is also increasingly recognized. If companies, societal organizations or even sectors run into problems when trying to become more sustainable, the Dutch government tries to help them tackle these issues by engaging into a green deal with these companies or sectors. Since 2011 more than 200 of these green deals have been established²². The green deal 'Working together on sustainable healthcare' has been in progress since 2022. This green deal has been established, as the healthcare sector in the Netherlands has been responsible for 7% of the total Dutch CO₂-emissions. Additionally, 4% of all waste and 13% of all resources used are related to the healthcare sector²³. This green deal tries to establish a Dutch healthcare sector that has minimal CO₂-emissions and a minimal impact on the environment, while trying to establish a circular economy regarding resources and materials. This green deal is in place

from 2023 until 2026. The green deal sustainable healthcare has five purposes²⁴.

I. More focus on health

II. Increasing awareness and knowledge

III. 55% less direct CO₂-emissions in 2030 and climate neutral in 2050

IV. 50% less primary resource usage in 2030 when compared to 2016 and a maximal circular healthcare in 2050

V. Decreasing environmental impact of medicine(usage)

The combination between these 5 purposes proposed in the green deal also confirm the increasing national awareness and recognition of environmental sustainability among healthcare organizations. Not only because it flows logically from the statements proposed in the green deal, but also because it is literally one of the purposes of this green deal (purpose II.).

2.2 Triple bottom line concept: impacts on procuring sustainably

In the Netherlands, more than 45 healthcare organizations are already participating in MVO (maatschappelijk verantwoord ondernemen or freely translated 'operating in coherence with CSR' (corporate social responsibility))²⁵, with some examples being large academic hospitals such as the Radboud UMC and Erasmus MC. Corporate social responsibility is closely related to the triple bottom line theory. According to Ksiezak & Fischbach, most CSR theories admit that the foundation of CSR theories is the Triple Bottom Line (TBL) concept²⁶. The Triple Bottom Line theory can be explained as a way of thinking about social responsibility not only covering a company's profit, but also the environment and its inhabitants (profit, planet, people (or 3 P's))²⁷. CSR has never before occupied such a high position among company priorities, as corporate businesses have never before been impacted as much by social inequalities and changes in global climate²⁸. Originally, corporate organizations were merely impacted by a single bottom line, i.e. profit. A company needed only to be worried about profit (or loss). More recently, companies became increasingly aware of other important factors in the company's environment. In other words, two additional bottom lines were established. The three bottom lines are thus profit, planet and people, which are sometimes also referred to as economic, environmental and social. Regarding purchasing sustainably in the healthcare sector, the tendency to merely look at cost-minimizing products has decreased over time. In recent times, according to MVO and the TBL concept, multiple healthcare organizations (should) have paid more attention to the two additional bottom lines. According to this concept, in addition to generating a profit, a purchaser in a healthcare organization should also look for the impact of the operations of the healthcare organization, its suppliers and their products on the environment and society. A healthcare organization that operates in accordance with the TBL concept will only buy products from suppliers that also operate in a socially responsible way. This means, no harm to nature and no harm to society and its inhabitants²⁹. Figure 1 schematically explains this the triple bottom line concept clearly.

¹⁸ (Hofstede, 2002)

¹⁹ (Ahn et al., 2022)

²⁰ (WHO, 2021)

²¹ (WHO, 2021)

²² (Rijksoverheid, 2023)

²³ (Green deal, 2022)

²⁴ (Green deal, 2022)

²⁵ (MVO Nederland, 2020)

²⁶ (Ksiezak & Fischbach, 2017)

²⁷ (Zak, 2015)

²⁸ (Zak, 2015)

²⁹ (Zak, 2015)



Figure 1. Triple Bottom Line ³⁰

2.3 Stakeholder theory: a foundation of the triple bottom line concept

CSR has been mentioned as early as 1953 ³¹, at which point the main concept can loosely be explained as the fact that business corporations have an obligation to not only work for profit, but also for social betterment. It is still very vague, and is still mainly guided by considerations at the individual and organizational level ³². In 1978, the concept CSR2 was first mentioned, which renamed the 1953 version of CSR to CSR1. CSR2 is different from CSR1, because it is explained as corporate social responsiveness, instead of corporate social responsibility ³³. This means that CSR2 is about a company's responsiveness to social pressures and wishes. The perspective of CSR2 led companies to move from a conciliatory approach to an approach in which they acknowledge different kinds of stakeholders, which were not affiliated with the company, and discuss corporate activities with these stakeholders ³⁴. This is the start of the link between CSR (and thus the TBL concept) and stakeholder theory. Stakeholder theory can be regarded as a foundation for the TBL concept, as definitions are very similar. As mentioned, TBL can be explained as "the idea that a firm should measure its performance in relation to stakeholders including local communities and governments, not just those stakeholders with whom it has direct, transactional relationships (such as employees, suppliers and customers) ³⁵. As stated, the TBL concept mainly looks at the different stakeholders' perspectives from the standpoints of the 3P's, profit, planet and people. In comparison, stakeholder theory can be explained as a theory that has complemented the original way of thinking about conducting business. Originally, businesses were merely seen as property of their owners/shareholders and are limited in their liability for their effects on others. Stakeholder theory has added to this old way of thinking, by also taking into consideration the effects a company has on other (outside) stakeholders, such as society as a whole, employees, customers, the environment, the next generation, etc. ³⁶. As becomes instantly transparent, the definition of both the TBL concept and stakeholder theory are apparently similar. Both take into account not only the interests of the company itself, but also all stakeholders that are or can be influenced by the operations of the business. By approaching business with this broader view, potential negative impacts can prospectively be diminished. To relate this to the healthcare sector, the old way of providing care was based on a very simple mindset. The healthcare organization has to make profit at the end of the day, so revenues should be

higher than costs. Potential lawsuits due to malpractice or improper care should be avoided, because these might lead to lower revenues, higher costs or both. Looking at the functioning of healthcare organizations in the most basic way possible, this is the basis ³⁷. With the addition of the perspective of stakeholder theory, healthcare organizations broadened this view. Proper healthcare is not only provided, because this might lead to revenue, but also because the hospitals might feel obliged to treat fellow human beings, society and the next generation in a positive way. Not only patients must be treated fairly and wisely, but the environment can also be classified as a stakeholder. A healthcare organizations that treats patients fairly, but keeps polluting, doesn't regard the environment as this healthcare organization regards other stakeholders. Employees must also be treated fairly, if the healthcare organization wants to do its due diligence regarding employee treatment. Employees cannot be underpaid, overworked, etc. Profit, obviously, is still important, but the healthcare organization is able to broaden its view to make sure any stakeholders are included in its operations. This shift in paradigm is very topical in the healthcare sector ³⁸.

2.4 Impact of national culture on sustainability in the healthcare sector

Importance of sustainability in the healthcare sector has been increasing, due to various concepts. The aforementioned TBL concept and increasing influence of stakeholder theory in the healthcare sector are factors that influence sustainability practices in the healthcare sector in a positive way. Especially, as the healthcare sector increasingly recognizes and is aware of the pollution it causes. Summarizing, the healthcare sector overall really recognizes the current position of the healthcare sector regarding sustainability and recognizes the need to change. To make the step from recognizing the need towards actually making a change, the ability to change is needed. This ability to change is largely influenced by national culture. Hofstede Insights has proposed that culture is "the collective mental programming of the human mind distinguishing one group of people from another" ³⁹. This way, the culture of the Netherlands can thus be distinguished from the culture of e.g. Japan. According to Hofstede, culture can vary based on six dimensions; Power Distance, Individualism, Masculinity, Uncertainty Avoidance, Long Term Orientation and Indulgence ⁴⁰. As increasing sustainability throughout the healthcare sector is a sector-wide major change, several of these dimensions are of importance for the ability to make this country-wide change throughout the whole of the healthcare sector. To make the change, uncertainty avoidance cannot be too big of a value for the culture of a group, because when the group is too uncertainty avoidant, this group might be inclined to not change at all. Additionally, as the change is major and might take some time to be realized throughout the sector, it helps if the culture is focused on the long term, instead of on the short term. Other dimensions are also of importance regarding the culture of an organization, as some values are important for an organization to have to make major changes. These will be elaborated upon in chapter 2.5. According to Hofstede Insights the Netherlands has an Uncertainty Avoidance score of 53 and a Long Term Orientation score of 67 ⁴¹. Firstly, the Uncertainty Avoidance score; An Uncertainty Avoidance score of 53 is a score that is generally the same as other western countries' uncertainty avoidance score.

³⁰ (Markham, 2023)

³¹ (Tien, 2014)

³² (Tien, 2014)

³³ (Tien, 2014)

³⁴ (Freeman et al., 2010)

³⁵ (Zak, 2015)

³⁶ (Freeman et al., 2010)

³⁷ (Gilmartin & Freemant, 2002)

³⁸ (Gilmartin & Freemant, 2002)

³⁹ (Hofstede Insights, 2023)

⁴⁰ (Hofstede, 2002)

⁴¹ (Hofstede Insights, 2023)

The Netherlands are moderately uncertainty avoidant, which means that the Netherlands likes to avoid uncertainty, but does not go out of its way to do so. In high Uncertainty Avoidant nations, rigid codes of belief are maintained and unorthodox ideas and beliefs are not tolerated. In other words, these Uncertainty Avoidant nations would have trouble making major sector-wide changes. The Netherlands, as a country, does not have too many problems regarding making major changes, especially not if these changes are responsible. Secondly, Long Term Orientation. As the Netherlands score quite high on this dimension, it means the Netherlands has a very pragmatic nature. According to Hofstede Insights, pragmatic societies believe that truth depends very much on the situation, context and time. This shows an ability to change from traditions to changed condition. The combination of a moderate Uncertainty Avoidant dimension and a high Long Term Orientation dimension for the Netherlands, means that the Netherlands as a country is open for change, especially if this change is founded on important truths.

2.5 Impact of organizational culture on sustainability in the healthcare sector

In chapter 2.4 the ability of the Netherlands as a country to make major changes has been analyzed. The impact of national culture on changes in the healthcare sector is proposed to be of influence. However, not only national culture is of importance regarding changes in the healthcare sector, but organizational culture is as well. Organizational culture is explained as the culture existent within an organization. For example, an organizational culture that really fosters the importance of and ability to change will more easily change its operations than an organization which does not fosters these qualities, but focuses on other qualities. Organizational culture (OC) is dependent on several factors, both internal and external ⁴². According to Cicea et al., internal factors influencing OC are employees, leadership, competence and support, activity field and resources and technology. On the other hand external factors influencing OC are political factors, economic factors, industrial factors, social factors and technological factors. Regarding the ability of an organization in the healthcare sector to become more sustainable, several of these factors are especially of influence. These are employees, competence, resources, technological factors and political factors. Employees and competence are intertwined, as both are especially related to the competence of employees. For this research, mainly the specific influence of a purchaser in the procurement department is important. A purchaser which is able to make changes regarding sustainability, because this is valued by the purchaser, will also be able to foster sustainability. Resources are needed to make changes regarding sustainability. If the purchaser is not provided with the right resources, changes regarding sustainability in the healthcare sector cannot be made. Technological factors are of importance, because sustainability will be a more reachable goal, once technological breakthroughs make sustainable solutions more affordable and marketable. Political factors, lastly, are of influence, because political factors can push an organization to make changes, because of subsidies or new rules and regulations. In other words, it is proposed that an OC that fosters sustainability initiatives through competent purchasers, which are provided with the right resources, will lead to a more sustainable organization. Additionally, technological and political (external) factors will also help this process regarding OC.

2.6 Growing importance of sustainability in the healthcare sector in the Netherlands

The tendency that is noticed in chapter 2.1, together with the theories that are mentioned in chapters 2.2 and 2.3, in combination with the influences of culture (both national and organizational) that are phrased in chapters 2.4 and 2.5, leads to the following propositions.

The first set of propositions is regarding the awareness of the importance of sustainability in healthcare organizations. These propositions will talk about the comparison a healthcare organization can make with other organizations and with its suppliers. Additionally, the healthcare organization will classify the importance they place on the concept of sustainability in both the past and (possibly) in the future.

Proposition 1a: *Healthcare organizations that have already taken sustainability initiatives and thus are aware of the concept of sustainability, are more inclined to keep improving regarding sustainability.*

Proposition 1b: *Healthcare organizations that have already taken sustainability initiatives think this positively influences the way people regard the organization.*

Proposition 1c: *Healthcare organizations that have already taken sustainability initiatives expect their suppliers to do the same.*

The second proposition is regarding national culture. As explained in 2.4, the moderate Dutch Uncertainty Avoidance and high Long Term Orientation should be reflected in the way changes are made regarding sustainability in a Dutch healthcare organization, if national culture were to be of influence.

Proposition 2: *National culture, especially the factors Uncertainty Avoidance and Long Term Orientation, is reflected in the way changes are made regarding sustainability in healthcare organizations.*

The last set of propositions are regarding organizational culture. Firstly, if OC is to be of influence, it should be reflected in the way changes are made regarding sustainability in Dutch healthcare organizations. Additionally, relating to the internal factors (OC-related) employees, competence and resources, it is proposed that in an OC which fosters sustainability initiatives, purchasers also feel free to pursue sustainable initiatives.

Proposition 3a: *Organizational culture is reflected in the way changes are made by a healthcare organization regarding sustainability.*

Proposition 3b: *Purchasers in a healthcare organization that values the importance of sustainability feel the freedom to procure in a more sustainable way.*

The propositions will test if the importance of sustainability in the healthcare sector is felt by the healthcare organization and in what way, additionally they will test the influence of both national and organizational culture and behavior of employees in the healthcare organizations. The results to these propositions will be presented in chapter 4 of this research.

⁴² (Cicea et al., 2022)

3. METHODOLOGY: CASE STUDY

3.1 Research design: case study at healthcare organizations

The research that will be conducted will be a qualitative research, performed through case study research with semi-structured interviews with selected organizations. The data will be analysed on current practices in Dutch healthcare organizations, differences between Dutch healthcare organizations and potential points of improvement in Dutch healthcare organizations after transcription of the semi-structured interviews. The research will be qualitative, which means it will focus on a small number of relevant cases, which will be thoroughly investigated and analysed. Qualitative research normally focuses on descriptions and is interpretation-based, while quantitative research ordinarily is based on numbers and focuses on measurability. Qualitative research can specifically be of use when analysing a real-life context, or with exploration or identification of concepts or views⁴³. This research will explore the concept of improving sustainability in Dutch healthcare organizations focusing on the purchasing department, which can be classified as a real-life context.

The approach of qualitative research chosen for this research will be case study research, which is research of a small number of cases. Case study research preferably is used when the main research question is a 'how' or a 'why' question and the research focuses on contemporary phenomena⁴⁴. Both of these prerequisites are applicable to this research, which is why case study research is used. These cases will be used to answer the research question. In this research a small number of cases are established, which are 7 semi-structured interviews with Dutch healthcare organizations. These will be hospitals, nursing homes, physicians, emergency rooms and physiotherapy centres. The only common trait all these healthcare organizations must have, is that all must be Dutch, as this is specified in the research question. As 7 healthcare organizations will be interviewed, this case study research is designed as a multiple-case design⁴⁵. All cases analysed are similar, however as all cases stand apart from one another, all cases can have different outcomes. However, since the cases are all situated in the healthcare sector, the cases are very comparable. To extract information from the multiple cases semi-structured interviews will be held with professionals from the purchasing departments of different sorts of healthcare organizations. With a semi-structured interview, an interview with an outline of predetermined open questions is meant⁴⁶. However, once an interviewee answers an open question with an answer that seems especially significant for this research, the interviewer will improvise additional relevant questions in pursuing this topic that is deemed significant. Semi-structured interviews, or SSIs, have some disadvantages, i.e., SSIs can be intensive for the interviewer and interviewee and SSIs can be time-consuming. However, the advantages outweigh disadvantages, because SSIs can generate enormous amounts of information, due to the possibility of following up on predetermined questions⁴⁷. The large amount of information gained outweighs the disadvantages of the relatively large consumption of time and effort. The information extracted from these SSIs will be phrased through transcriptions of the interviews, which will be recorded, to make sure that the information can be extracted objectively and clearly.

⁴³ (Hancock et al., 2007)

⁴⁴ (Yin, 2018)

⁴⁵ (Yin, 2018)

3.2 Semi-structured interviews with seven healthcare organizations

Seven interviews have been held with seven different healthcare organizations. Throughout the results section, the order in which they are explained in chapter 3.2 will be used, as this is the order in which the interviews took place. The first interview was with a specialist in sterile, medical products in a medium-size hospital (H1). This specialist is responsible for purchasing the right equipment for the operating room and making sure equipment used is sterilized correctly. The second interview was with one of the partners of a physiotherapy center (P1), who is also for a large part responsible for procuring products. The third and fourth interviews were with the purchaser of two elderly care homes (N1)(N2). This person is responsible for procuring all products for two different nursing homes, i.e. disposables, food and hardware. The fifth interview was with the manager of business operations of an organization, which is in charge of multiple nursing homes (N3). This person is also responsible for purchasing strategically. The sixth interview was with the manager of business operations of a general practitioner's center with multiple GP's (GP1), who is also in charge of strategic purchasing for this organization. The seventh, and last, interview was with three partners of a physiotherapy center (P2), where all three partners had a different role regarding purchasing. Tasks, such as strategic purchasing, purchasing of important operational products and purchasing of day-to-day products were divided among the partners of this organization.

Table 1. Interviewee's role per organization

Organization	Interviewee(s)
H1	Purchaser of sterile products for the operating room
P1	Partner, in charge of procurement
N1	Senior purchaser
N2	Senior purchaser
N3	Manager, in charge of strategic procurement
GP1	Manager of business operations, in charge of strategic procurement
P2	Three partners, divided roles regarding purchasing

3.3 Interview structure

A single questionnaire is used to conduct the semi-structured interviews for the case study. Before the interviews start, participants are asked to give their permission for the interview to be recorded, so the content of the interview can more easily be transcribed to text. Of the 7 interviews that are held, a single interview has been recorded via Microsoft Teams and the other 6 through mobile phone recordings. After starting the recording, all participants are also asked to give the permission to be recorded on the record. The participants are also informed about their right to stop the interview whenever it is pleased, as well as the opportunity to withhold from giving an answer to any question. Additionally, it is stressed that all interviews will be anonymous, to make sure that the participants do not feel limited in giving as many information as possible in every question. After this general start the participants are asked to briefly introduce the organization after which the actual questionnaire is initiated. The questionnaire consists of three segments. The first segment is about purchasing in the organization in general. These questions try to address the structure of the purchasing department, the structure of the supplier market and any

⁴⁶ (Adams et al., 2015)

⁴⁷ (Adams et al., 2015)

purchasing strategies that might be in place in the organization. This is to gain an overview of the general lay-out of the market in which the organization operates, both from an inside (procurement department) perspective, as from an outside (supplier market) perspective. The second segment is about the importance of sustainability both for the organization in general, as specifically for the procurement department. This is, to investigate if sustainable practices are already an important topic. This segment will also research the potential leading role of the procurement department in fostering sustainability initiatives, as is explained in chapter 1. Lastly, in the third segment of the questionnaire specific questions about the link between culture and sustainability are asked. This will provide clarity regarding the importance of organizational culture on sustainable purchasing, as well as potential impacts national rules and regulations might have on sustainable purchasing in the organization. It is proposed, as in chapter 1, that both organization culture and national culture greatly influence the importance of sustainability in the purchasing department of healthcare organizations. It is thus proposed, that the answers of participants reflect this. All questions in the questionnaire are open questions, to make sure the participants give the most elaborate answer possible, without the risk of them being contained by closed or steering questions. Additionally, as is the case with semi-structured interviews, the interviewer can choose to pursue a line of questioning via improvised questions relating to one or more of the questions in the questionnaire to obtain more information.

3.4 Data analysis approach

The conducted interviews were transcribed via software provided by Amberscript. Amberscript automatically transformed the audio recordings to text. To make sure the transcriptions were correct, these texts were also manually checked afterwards. After this, the transcribed texts were coded. This was mainly done via an inductive coding approach. With this approach, the data will be analyzed through an open coding process. The inductive coding approach makes sure that key aspects, which were not yet mentioned by theory, still are considered. Inductive coding uses research participants' views to generate a theory that connects the themes of the different participants⁴⁸. Next to the inductive coding approach, also a part of the deductive coding approach was used. The deductive coding approach analyzes data based on already existent and explained theories. To effectively describe deductive coding, it can be described as a top-down approach, where data are used to add, confirm or contradict theories found in literature research⁴⁹. Theories explained in chapter 2 will be linked to the data that is analyzed, to look at similarities and differences. After both the inductive and deductive coding, the analysis was compared to establish which results are in line with main, explained theories, or which results are in addition of the already existent data⁵⁰. The respondents per organization will be explained in detail in chapter 4.1.

The data analysis approach used has led to several important findings, which will be presented in chapter 4. It will start with differences between the various healthcare organizations, continue with the importance of sustainability in supplier selection, supplier management and sustainability initiatives within the organization and concludes with influences of organizational and national culture on sustainability initiatives in the healthcare sector and stakeholders' influence on the importance of sustainability in an organization.

4. ANALYSIS AND RESULTS

4.1 Different healthcare organizations have different purchasing departments

As this research was conducted by analyzing the healthcare organizations presented in chapter 3.2 and table 1, this naturally brings different scopes and roles of purchasing departments. Multiple participants addressed healthcare purchasing departments can vary based on organizational structure, but mainly on roles and responsibilities. Firstly the size and structure of the different purchasing departments will be addressed, after which the roles and responsibilities of the purchasing department per organization will be analyzed. A small purchasing department in the table is classed as 3 people or less, a medium purchasing department in the table is classed as 4-10 people and a large purchasing department is classed as 11 people or more.

Table 2. Size of the purchasing department per interviewed organization

Small	Medium	Large
P2	N1	H1
GP1	N2	
	N3	
	P1	

As can be seen, the size of the purchasing departments are arranged based on the sort of healthcare organization they are. This division by size is deliberately chosen, as roles and responsibilities in these organization are often linked to size. To elaborate, an organization which has a small purchasing department, has a purchaser which has more broad responsibilities than a large organization that splits its purchasing department into small segments. The hospital, for example, is a large organization, contained of multiple purchasing managers, who supervise multiple senior and junior purchasers, in combination with purchasing assistants. All three nursing homes are classified as medium. The first two nursing homes have two main purchasers, who work together, in combination with a facility manager. However, all nurses and first-line healthcare providers within these organizations also play a role in the purchasing process. The third nursing home mainly has a facility manager who operates centrally, which means this person operates on behalf of the six locations this nursing home leads. However, within all the six locations the nurses and first-line personnel also have a steering role in noticing the need for better or different materials. Both the physiotherapy centres are led by partnerships. The first physiotherapy centre has four partners, which are all ultimately in charge of purchasing. In addition to the partnership, a secretariat is established, which is mainly concerned with operational purchases, such as disposables. The orders of these materials do not vary on a weekly basis, so the secretariat can safely order these products. Purchases above 250 euros need involvement of one or more of the partners, especially regarding approval. The second physiotherapy centre has divided the purchasing roles within the partnership. One partner is mainly responsible for purchasing strategically (i.e. medical products), another is mainly responsible for operational purchasing (i.e. day-to-day products). The general practitioner has a facility manager involved with purchasing e.g. disposables, but regarding the strategic purchasing two GPs are also involved in the purchasing process.

⁴⁸ (Cresswell & Plano Clark, 2007)

⁴⁹ (Cresswell & Plano Clark, 2007)

⁵⁰ (Trochim, 2006)

4.2 Sustainability and strategy as deciding factors in choosing the supplier base

In chapter 4.1, the difference between the purchasing of household items and the purchasing of other operational products is mentioned. From now on, this research will focus on the purchasing of those products that are important for the functioning of the healthcare organization as such. Chapter 4.2 addresses the importance a healthcare organization places on sustainability practices in suppliers' operations, due to the fact the healthcare organization simply values this initiative, or due to the fact that the healthcare organization has an active strategy of only conducting business with sustainable suppliers. In this chapter several reasons for a healthcare organization to choose a supplier over another are mentioned and also schematically displayed. The reasons to choose a specific supplier that are mentioned in table 3 are mentioned, because the healthcare organization answered their strategy to be as such (in the case of differentiation and cost minimization). Other reasons are mentioned, because the healthcare organization stressed that this was a main reason for them to choose this specific supplier. The last reason has also been added, because this answer also came forward sometimes. This reason is based on the fact that the healthcare organization procures materials from this specific supplier, because they have always done so and have a good relationship with this supplier. All of the respondents mentioned that suppliers are selected based on both quality and cost minimization. All addressed the fact that in healthcare a certain basis of quality must be met, as qualitative healthcare is more important than cheap healthcare. All, however, also mentioned, that if they are able to cut costs, they will try to do so. As an example, H1 and GP1 are both in different alliances with respectively other hospitals and other GPs to be able to order in bulk and in that way cut costs. P2 mentioned that they also tried to establish such an alliance. H1 mentioned that they ordered products from all over the world before the COVID-19-pandemic (e.g. China, Malaysia), however since the pandemic they have tried to order more and more from Europe. This is, to minimize the risk involved with purchasing outside of Europe. On a smaller scale, P1 mentioned that they compare suppliers based on quality and location. If quality is the same, P1 prefers purchasing from local suppliers. Lastly, N1 and N2 also addressed that they prefer purchasing from local suppliers. The reasoning used by both N1 and N2 is that purchasing locally is more sustainable as supply lines logistically are shorter. Regarding sustainability and location, N1 and N2 mentioned the importance of procuring locally, due to the logistics involved. As mentioned, logistics also influence sustainability. Additionally, N1 and N2 both have tried to decrease the number of contact points. They have tried to combine shipments of materials, to make sure that for example a delivery van does not need to make a specific trip to deliver a box of bandages. By thinking ahead and ordering in time, the shipments normally can be combined. H1, P1, N3 and P2 explicitly mentioned the importance of a reliable supplier. N3 mentioned that as a nursing home, reliability is one of the most important factors. To treat elderly people in a good way, reliability must be ensured. Products that organizations actively procure due to sustainability involved are disposable gloves made of recycled plastic, tools for the operating room, which can be cleaned in a steam cleaning machine which can reach temperatures of 134 degrees Celsius (in the case of H1), reusable towels instead of disposable paper covers for treatment tables (in the case of P2). The two general practitioners in the GP's office both value sustainability, so they have altered their materials and operations in such a way, that it reflects sustainability in a better way. GP1 mentioned that sometime ago they procured multiple sorts of needles, as this was the practice under previous GP's,

however as of now they've reduced the number of needles procured to only 3, as these sorts of needles are the only ones used. By reducing products procured, waste can be minimized. Lastly, all nursing homes procure from the same food supplier. The nursing homes stressed that a food supplier is an essential supplier for them, as this is one of the primary things they provide to their residents. This supplier is the main food supplier in healthcare in the east of the Netherlands, and as this supplier has always supplied them in a good way, the nursing homes all see no reason to switch to another supplier. All found reasons to choose a specific supplier over another per healthcare organization can be found in table 3.

Table 3. Found reasons to choose a specific supplier over another supplier

Reasons to choose for a specific supplier	RESPONDENT						
	H1	P1	N1	N2	N3	GP1	P2
Quality	X	X	X	X	X	X	X
Costs	X	X	X	X	X	X	X
Location	X	X	X	X			
Operative excellence	X	X			X		X
Sustainability	X		X	X		X	X
Long-term relationship			X	X	X		

4.3 Past and future sustainability initiatives in healthcare organizations in combination with the role of the purchaser

All respondents have mentioned they value sustainability. The first thing that really stands out is that almost every respondent regards sustainability in its own way. When asked what sustainability initiatives have already been implemented within the organization or what sustainability initiatives are wished to be undertaken, all organizations took a different approach. Some common themes emerge, but also some differences are observed.

Table 4. Sustainability initiatives that already have been implemented per organization

Sustainability initiatives that are already undertaken	
Organization	Initiatives
H1	Affiliated with a green deal, establishment of green teams within the hospital, change of package material from plastic to other materials, elimination of waste in disposables.
P1	Sustainable employability of employees (e.g. visiting patients at home by bicycle instead of by car), built a new building which is built sustainably with a green mortgage and subsidies, timers on LED-lighting.
N1 + N2	LED-lighting, ability to receive energy advices from professionals, monitoring of energy usage, reducing the amount of delivery moments, sustainable employability of employees (e.g. incentivizing employees to come to work on a bicycle), established and started implementing a sustainability vision within the organization.

N3	Composed a sustainability policy throughout the organization, increased isolation, LED-lighting, established a sustainability roadmap per location with goals to be achieved.
GP1	Together with the employees read through a book called 'De Groene Huisartsenpraktijk' and wrote down all potential improvements for the GP's office, built a new sustainable building, sustainable employability of employees, operating in a more digital way instead of using paper throughout the operation, trying to reduce amounts of medication that (unnecessarily) are procured.
P2	Built a new sustainable building several years ago, using towels for patients instead of disposable paper covers, sustainable employability of employees.

Table 5. Sustainability initiatives that the organization still want to undertake

Sustainability initiatives that the organization wants to pursue		
Organization	Initiatives	How can the purchasing department help implement this?
H1	Equipment is steam-powered and as of now the steam is produced via gas, re-using wastewater from the steam in other processes in the hospital as this water is clean.	Actively engaging with innovative suppliers, which can help re-evaluating current processes
P1	Increasing sustainable mobility of employees.	-
N1 + N2	Handling food in a sustainable way, waste reduction, waste separation, continue implementing sustainability vision throughout the organization and altering the organizational culture to fit this vision.	Trying to procure in a more lean way, to reduce waste and help altering the organizational culture regarding sustainability
N3	Waste separation, decreasing energy usage through the hiring of a sustainability employee.	Trying to procure in a more lean way.
GP1	Actively engaging patients in sustainability policy and encouraging them to also act more sustainably.	-
P2	Preventively helping people to live in a more healthy way, waste	Trying to procure in a more lean way.

	separation, keep reducing disposables.	
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Common themes that emerge from already implemented sustainability initiatives are sustainable employability of employees (e.g. through encouraging employees to come to work or visit patients by bike, and encouraging employees to stay healthy), improving the practice itself by making sure the building and work environment operates in a sustainable way and making a start by incorporating sustainability within organizational policies. On the other hand, some differences and patterns within these differences also emerge. First of all, based on these respondents, the conclusions can be drawn that the larger the organization, the more involved they are with sustainability. For example, the hospital has gone as far as creating green teams and pledging to a green deal. This conclusion is quite logical, as the hospital simply has more financial possibilities to pledge part of its capital and employees on sustainability practices. Other differences are in the approach that organization take when answering these questions. For example H1 really looks at innovating its operations and procuring differently to establish this. On the other hand, the physiotherapy centres (P1 and P2) and the GP mainly look at their building and employees, to try and incorporate sustainability within their organization, instead of looking at purchasing practices. Lastly, the nursing homes (N1, N2 and N3) look at employees and their building as well, but the common theme in these nursing homes is that they also already have included sustainability as a pillar of their policy. These organizations have already tried to reshape their organization in a more futureproof, sustainable way.

4.4 Influences of organizational and national culture on sustainability initiatives in the healthcare sector

Organizational culture is a factor that is of large importance for the way an organization regards sustainability. Additionally, it also influences the way a purchaser can push sustainability adoption within the organization. National culture also influences the way purchasers and organizations regard the importance of sustainability adoption within healthcare due to the aforementioned national cultural dimensions long-term orientation and uncertainty avoidance. In addition to this national culture, national law and legislation also greatly influence sustainability practices within the healthcare sector. Respondents mentioned that they don't think national culture as such influences sustainability adoption, which means the nature of a Dutch person, with relatively low uncertainty avoidance and high long-term orientation isn't directly reflected in sustainability adoption for these organizations. A good example was the answer of H1; first and foremost, when looking from a national culture perspective, people still look at the short term, which is about the lowest costs or healthcare possible. This is more important to many people, than operating sustainably. People choose the certainty of good healthcare now over the risk of sustainable (and possibly good) healthcare later. This answer reflects clearly the fact that many people still look at cost and quality over potential sustainability in the future. This answers aligns with 'a bird in the hand is worth two in the bush'. On the other hand, however, almost all organizations mentioned they felt some pressure from society and the government, to become more sustainable. This could be due to the Paris Agreement, which also reflects on the healthcare sector, or due to subsidies which are provided to organizations for making their practice more sustainable. Following this reasoning, long-term orientation definitely is of influence, as organizations are pressured to look ahead to tackle potential future sustainability issues. Uncertainty avoidance does

not really come into play, as in many instances healthcare organization must become more sustainable. As the trend throughout society points towards a more sustainable society, many healthcare organizations don't view becoming more sustainably as a risk or uncertainty. Regarding organizational culture, many organizations feel this reflects the extent of sustainability adoption in the organization. For example, N1, N2, N3 and H1 have explicitly mentioned sustainability as a pillar of their organization. By making sure that an organization for example has not only good care, profit and helping the community as pillar, these organizations now also added sustainability as an important concept for the organization. As a result, all departments, including the purchasing department, should operate following all these principles. When looking at this from a purchasing point of view, a purchaser must procure good materials, while still making sure that the company operates at a profit, while helping the community and do all this while also making sure that sustainability is incorporated in the products that are procured. Adding sustainability as a pillar helps transforming the 'old' organizational culture to an organizational culture which includes sustainability. The other organizations, P1, GP1 and P2 have not explicitly anchored sustainability within their organization, however all mention that sustainability already plays an important role in their operations. In other words, these organizations already implicitly transformed their organizational culture to also fit sustainability adoption. Conclusively, organizational culture in all respondents already fits increasing sustainability adoption, with the main fits of this organizational culture being the internal organizational cultural factors employees, leadership and resources and the external organizational cultural factor social factors from Cicea et al.⁵¹. To summarize the findings and add an overview regarding influences of national and organizational culture per healthcare organization, table 6 has been added.

Table 6. Influences of organizational and national culture on sustainability initiatives per organization

Organization	Influence of organizational culture	Influence of national culture
H1	Sustainability as a core concept in the organization. Looking via green teams actively for more sustainable solutions to current practices.	Creating a long-term view regarding sustainability. Subsidies for becoming more sustainable. Trying to become climate neutral by 2050.
P1	Sustainability is important, but not a pillar in the organization yet.	Trying to become more sustainable in the future (long-term) via rules and regulations posed by the government.
N1 + N2	Sustainability as a potential future core concept in the organization. Trying to fit the organization to an environment which fosters sustainability.	Already trying to actively become more sustainable, as climate neutrality must be reached by 2050. Creating a long-

		term view for the organization to become more sustainable.
N3	Sustainability is already an active concept in the organization. When making new plans for the organization, sustainability must be included in the thinking process.	Trying to reach climate neutrality by 2050, actively engaging sustainability to make sure the organization is ready for this long-term transition.
GP1	Sustainability is an important topic, but not yet a core concept in the organization. It will, however, be accounted for.	Not really looking at the long-term, as mainly current sustainability-related problems are tackled.
P2	Sustainability is not a core concept yet, even though it is deemed as important.	Trying to become more sustainable by improving the facility, which is subsidiarized by the government.

4.5 Stakeholders' influence on importance of sustainability in a healthcare organization

Purchasers are not the only stakeholder within an organization that is able to push sustainability adoption, as is explained in chapter 4.4. Other stakeholders can push from a more sustainable approach from a healthcare organization by asking for sustainable practices and products, or by leading by example (i.e. doing certain things more sustainably than the healthcare organization, from which the healthcare organization can learn). Additionally, all respondents are asked about a tendency towards sustainability in society, so also a sense of obligation towards stakeholders regarding sustainability can be felt. In addition to company-specific stakeholders, such as purchasers, management and (other) employees, potential stakeholder interest from outside of the company has also been analyzed. The stakeholders that have the largest stakes in the company have been asked, and several were mentioned by the respondents, such as patients, suppliers, local communities and society. For example, society might be a stakeholder for all respondents, however table 7 is from the point-of-view of an organization, it thus only reflects if an organization regards this stakeholder as a stakeholder for their organization. Obviously, for all organizations, management has wishes regarding sustainability. Several organizations mentioned that purchasers in their organizations, also wished to make their organization more sustainable. Regarding involvement of other employees, GP1 mentioned they discussed sustainability with their employees, and H1 formed green teams within their organization to deal with sustainability practices. All organizations didn't experience any wishes from the stakeholder patients, as every single one of the respondents explained that patients' primary goal is to receive care in a good manner. All respondents didn't feel any pressure from suppliers to become more sustainable. Regarding local communities' pressure to become more sustainable, this was only felt by the hospital, which serves a very large community. All organizations mentioned that they observe the tendency in society to be placing

⁵¹ (Cicea et al., 2022)

more importance on sustainability. This can be translated into society as an important stakeholder for all organizations.

Table 7. Specific stakeholder’s wishes regarding sustainability practices within respondents from a respondent’s point-of-view

Stakeholders that want the organization to become more sustainable	RESPONDENT						
	H1	P1	N1	N2	N3	GP1	P2
Purchasers	X		X	X		X	X
Management of the organization	X	X	X	X	X	X	X
(Other) employees	X					X	
Patients							
Suppliers							
Local communities	X						
Society	X	X	X	X	X	X	X

What is reflected in table 7, is the larger an organization, the more pressure from stakeholders is felt regarding sustainability adoption. H1 thinks this is due to the fact that its target group is also relatively large. To serve all segments of this target group, all kinds of interests must be accounted for, which means all segments must be viewed as stakeholders in the organization.

5. DISCUSSION

5.1 Reflection of the propositions

In the respondents’ answers, some of the propositions were quite clearly reflected, while others didn’t logically flow from the analysis. This subsection addresses to what extent propositions were observed and implications are addressed. Regarding the first set of propositions, relating to the importance of sustainability in healthcare organisations, this is quite clearly observed throughout all respondents. As mentioned in chapter 4.3, all organizations that already have taken multiple sustainability initiatives are also more inclined to keep improving. H1 is a good example, as it has already undertaken multiple sustainability initiatives, but also plans on improving in even more innovative ways. GP1 mentioned that it wants to market itself in a way, where attention is paid on already undertaken sustainability initiatives, which fits the proposition ‘Healthcare organizations that have already taken sustainability initiatives think this positively influences the way people regard the organization’. ‘Healthcare organizations that have already taken sustainability initiatives expect their suppliers to do the same’ is not directly reflected throughout the healthcare organizations’ responses, as suppliers are mainly assessed on quality, cost, location and operative excellence, as mentioned in chapter 4.2. ‘National culture, especially the factors uncertainty avoidance and long term orientation, is reflected in the way changes are made regarding sustainability in healthcare organizations’ is regarding national culture, which does not play as large a role as organizational culture. Some factors of uncertainty avoidance and long term orientation are reflected, but these cannot be compared with healthcare organizations from

other countries, as these are not interviewed in this research. Conclusively, the response regarding national culture cannot be ranked. Regarding the propositions of organizational culture, many organizations mention that throughout the years, the organization has fostered sustainability more and more. In other words, throughout the years, the organizational culture has increasingly fitted sustainability principles. This organizational culture is also reflected in the freedom a purchaser feels when purchasing. If a purchaser wants to procure a product, because it’s more sustainably produced (with the same quality), a single purchaser might prefer buying this more sustainable product. Mainly N1, N2 and P1 mentioned this in the interview.

5.2 Reflection of differences, similarities and main patterns in this research

Most organizations have quite similar answers, which leads to the conclusion that most healthcare organizations think alike, regarding sustainability. This could also be due to national regulations, which influences every single one of these organizations. Main differences are observed to be due to differences in size of the organizations. This research poses that the larger the organization, the more committed to becoming sustainable they are, which is also in line with literature⁵². Other large differences are due to individual influences of purchasers. In other words, the more importance an individual purchaser places on sustainability, the more involved with sustainability an organization is. This is especially reflected in GP1, N1 and N2, where the respective purchasers mentioned to be very in favour of sustainable practices. These differences between organizations are quite remarkable, however several similarities were also observed. As mentioned in 4.2, most organizations assess their suppliers on quality, costs, location and operative excellence. Sustainability as a basis on which to assess suppliers, is not yet existent among most healthcare organizations. Most organizations, however, have already implemented sustainable initiatives and all have already put into plan an action to implement future sustainable initiatives. The last similarity is that most organizations value the same stakeholders the most regarding sustainability initiatives, as is explained in 4.5. These similarities also merge with the main patterns, as the main pattern of an interviewed organization is that of an organization which values sustainability, has already and will in the future take action regarding sustainability. On the other hand, it does not yet think of sustainability as a means of assessing suppliers or fulfilling the wishes of multiple stakeholders. The purchaser in many instances plays an important role, as is also facilitated by the organizational culture, however is sometimes limited to the products with the best quality or the lowest cost. In short, the main pattern confirms sustainability to be an important topic, but steps are still to be made in the respondents’ organizations.

5.3 Discussion of the results

As mentioned, two important international actors, the UN and the WHO, think that sustainability practices should increasingly be pursued in the healthcare sector, to tackle climate change^{53,54}. This is well-reflected in the results, as all respondents are well-aware of the effects of climate change and sustainability initiatives they can pursue to help tackle climate change. Most of the respondents mention to be aware of the green deal, as multiple mentioned they undertake sustainability initiatives to help reduce direct CO₂-emissions by 55% in 2030 and become climate neutral in 2050. Several organizations also try to decrease environmental impacts of medicine(usage), with H1 and GP1 being the most prominent examples. This fits very well with

⁵² (Gallo and Christensen, 2011)

⁵³(United Nations, 2023)

⁵⁴ (WHO, 2021)

point V of the green deal sustainable healthcare mentioned in chapter 2.1⁵⁵. As table 5 clearly addresses, most respondents are increasingly aware of their stakeholders, which fits stakeholder theory⁵⁶. One thing that stakeholder theory poses, however, and is not reflected in the results is about the importance of all stakeholders. Freeman et al. mentioned that stakeholder theory takes into consideration the effects of a company on other stakeholders, such as society, employees, customers, the environment, the next generation, etc. Most respondents take into account the stakes of some stakeholders, such as purchasers, management, society and sometimes other employees. However, patients are not viewed as a stakeholder regarding sustainability practices, as most respondents view patients purely as persons who regard care to be the only thing of relevance to them. Suppliers are often also not viewed as a stakeholder of sustainability, because mostly the transactional relationship with the supplier is only explained. In other words, if the supplier supplies me with the right products at the right times and we pay them for these products in time, there is no reason to doubt this relationship. Following stakeholder theory, both the supplier and the healthcare organization itself should also assess their partners on sustainability practices, if they value these practices themselves.

Furthermore, as briefly mentioned, national culture is not really reflected in the respondents' answers, even though they seem to understand the tendency in society. Hofstede's six dimensions⁵⁷ are not reflected in the way changes are made in the organization. Most organizations seem to try to become more sustainable due to national rules and pressures, as well as the tendency in society that they should. Organizations, as a result, do not reflect the Uncertainty Avoidance coefficient of Hofstede's dimensions, as they must become more sustainable. A change towards sustainability, thus, might not feel as an uncertainty. Organizations, however, do reflect the Long Term Orientation coefficient of Hofstede's dimensions, as multiple organizations have mentioned to be planning to become more sustainable in the future. N3, as an example, has created a sustainability roadmap for each of their six locations. N1 and N2, as another example, has mentioned that they want to be a frontrunner. They don't want to become sustainable, because they should, they want to become sustainable, because N1 and N2 genuinely feel that this is the correct way forward. Other organizations, such as P1, P2 and GP1 have mentioned that their new buildings were built to be prepared for the future. Multiple organizations, thus, demonstrate a long term orientation with fits the dimension of Hofstede.

Organizational culture, on the other hand, is clearly reflected in sustainability adoption of all companies. This research affirms the theory posed in Cicea et al.⁵⁸, as multiple respondents mention that organizational culture has a large influence on sustainability adoption and the freedom of purchasers to also pursue sustainability initiatives. Main factors that Cicea et al. mentioned which are observed in the respondents' organizations are (competent) employees which steer towards sustainability, an example would be GP1, where the employees together looked at ways to become more sustainable. Leadership which fosters sustainability, to give an example, N3, where the general manager believed in becoming more sustainable and thus created a roadmap for every location. Resources is another factor of organizational culture, which is needed to become more sustainable as an organization. H1 addressed this clearly, by mentioning that they continuously look for more sustainable solutions to current practices, to make sure the organization

becomes more sustainable. The last factor of organizational culture, which influences sustainability adoption is a so-called external factor, which is the social factor. By working in an environment that wants to become more sustainable, this creates sort of a social pressure on employees to also act in accordance with this culture. A good example is GP1, where sometimes small measures were almost deemed unnecessary, but these measure were still implemented, because some of the employees cared. Because some employees cared about this measure being implemented, this also led to the involvement of other employees and management, which is a great example of the social factor influencing organizational culture. This fits literature greatly, as literature mentions that colleagues with a shared goal a more willing to share knowledge⁵⁹. This creates sort of a vicious circle, because once colleagues want to implement measures, due to social pressure this makes other colleagues want to do the same, which then creates a shared goal for all colleagues. This leads to them wanting to implement new measure, which leads to another shared goal. This vicious circle is a good example observed in this research.

5.4 Contributions, limitations, and future research

This research contributes on previous research by confirming the role of a purchaser within a healthcare organization and the steering role it can play regarding sustainability adoption within the organization. The research also contributes regarding the incorporation of organizational and national culture, as mainly the importance of organizational culture has been observed to play a large role in adoption of sustainability practices in healthcare organizations. It also provides clear overviews of which stakeholders most actively ask for sustainability and which still have a transition to make regarding their stance on sustainability. The research, however, also entails some limitations, which can be due to lack of time or due to lack of resources. First of all, even though this is meant with a qualitative research in combination with SSIs, the sample size still is relatively small, with only seven interviews. A bigger sample size might have reflected the 'real' situation in the healthcare sector more realistically. Future research should try and involve more organizations in their sample. Additionally, this research was conducted with merely healthcare organizations from the east of the Netherlands. It's not to say if this provided a better or a worse sample regarding already existing sustainability initiatives, when compared to other regions of the Netherlands, however it does provide a skewed overview. To really tackle research about healthcare organizations in the Netherlands a sample should contain organizations from all regions of the Netherlands. A future research could take this in account, to make sure a research is not skewed on regional preferences. A logical future research that also flows from this statement, is a research comparing the involvement of the purchasing department in sustainability adoption in the healthcare sector across multiple countries, which provides healthcare organizations in different countries with handles to become more sustainable. Two of the interviews of this research were also taken before the literature review was finished, because these interviewees were only available for a limited amount of time. The last and biggest limitation came from the fact that the term 'sustainability' is actually very vague. As mentioned previously in this research, the respondents all had their own definition of sustainability, as there is not a single, clear and concise definition available. This generates creative insights from respondents, as

⁵⁵ (Green deal, 2022)

⁵⁶ (Freeman et al., 2010)

⁵⁷ (Hofstede, 2002)

⁵⁸ (Cicea et al., 2022)

⁵⁹ (Chow & Chan, 2008)

these respondents are in a sense asked to think outside of the box, however a single definition of sustainability would help in comparison of respondents' answers, as a question containing the same definitions of words can lead to similarity in answer routes. To elaborate, when a question about sustainability was answered in this research, respondent A chose the answer route of sustainable employability of employees, respondent B chose the answer route of a sustainable building, etc. Future research should limit this freedom in answering by providing a clear and concise definition of sustainability and sustainable practices. Ultimately, as mentioned, this research give a good overview of sustainability adoption in the healthcare sector, but could also be conducted with multiple regions or countries. Following this reasoning, a comparison can also be made with other sectors in the Netherlands, regarding sustainability adoption. In that way, the research is not limited to a single sector.

6. CONCLUSION

The findings support previous research in the way that sustainability is a topic of increasing importance in healthcare organizations. The purchasing department can play a steering role in this, as is normal in a purchaser's role in a healthcare organizations. However, through interviews at seven healthcare organizations, new implications regarding the influence of organizational culture and national law and legislation have also been identified. Even though healthcare organizations do not always look at suppliers from a sustainability point-of-view, as quality and costs are still the main drivers for supplier selection in the healthcare sector, both suppliers and healthcare organizations have increasingly become more sustainable. From a healthcare organization's viewpoint, not only a purchaser can play a leading role in sustainability adoption, but this can also be helped by management, other employees in combination with society and the government. To make sure that sustainability gets adopted throughout the organization, mainly organizational culture is of influence, according to most respondents. Even though mainly large organizations might feel extra pressure to become more sustainable due to stakeholder pressure, all organizations are already trying to incorporate sustainability within their organizational culture, both explicitly as implicitly. Establishing a clear organizational culture which includes sustainability, helps sustainability adoption in the purchasing department, among other employees and among outside stakeholders. Thus, organizational culture which includes sustainability in combination with national laws and legislation is the basis on which all parts of the organization can build, to make sure a healthcare organizations becomes more sustainable.

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