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An evaluation of the needs of the targeted public for the growth of Intravenous Vitamin Therapy Business in East London, Eastern Cape, South Africa

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An evaluation of the needs of the targeted public for the growth of Intravenous Vitamin Therapy Business in East London, Eastern Cape, South Africa

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Student number: 1904891

A business venture proposal submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2022

Protocol number: WBS/BA1904891/463

DECLARATION

I, Akhona Aphane, declare that this business venture proposal is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Akhona Aphane

Signed at Johannesburg

On the 22nd day of September 2022

ACKNOWLEDGEMENTS

To my husband and two daughters, thank you for the love, support and the sacrifice over the years.

To my supervisor, thank you for your guidance and efficiency, it is highly appreciated.

SUPPLEMENTARY INFORMATION

Supervisor:	Dr. Nomusa Mazonde
Word count †:	18000
Supplementary files:	Financial Projections- Microsoft Excel

† Including Executive Summary, References.

EXECUTIVE SUMMARY

The Intravenous Vitamin (IV) Emporium is a medical spa that offers a range of IV and mineral infusion therapy. Each IV drip, packed with a combination of vitamins, minerals anti-oxidants and electrolytes, and is specifically formulated to maximise overall health, performance and general well-being. In East London, there seems to be a lack of adequate resources and management for the proper administration of IV therapy and it is observed that there is no development plan in place for the integration of IV therapy in the healthcare. All these factors provokes the need for IV therapy to be implemented for the promotion of efficient intake of vitamins for the public and patients who are unable to take the nutrients orally or for their health and lifestyle needs. It is therefore against this background that this business venture proposal aims to develop and expand on the concept of the IV therapy business in East London to ensure accessibility to an alternative of oral ingestion of vitamins. Using an inductive approach, qualitative data was collected from the recent and relevant primary research articles. The business venture proposal utilised the medium of the secondary qualitative research design, to extract substantial amounts of data from various prevailing sources. The study forwarded that benefits of Vitamin therapies are huge if compared to their costs and effort of preparation. Vast literature have also proved the importance of the vitamin therapy business in East London and the Eastern Cape. However, the amount and dose of administration of Vitamin therapy should be carefully evaluated depending on the age, medical history and medical condition of the patient. The study recommended that health practitioners should work along with researchers and nutritionists to design the vitamin therapy regimes for the local population to elevate the general public health standards and reduce the deficiency of vitamins in the local population of East London and Eastern Cape.

Keywords: Intravenous Vitamin, mineral infusion, vitamin, therapy.

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CHAPTER ONE: INTRODUCTION

The IV Emporium is a medical spa that operates in the health and beauty spa industry. The business is based in East London and offers Intravenous Vitamin (IV) Therapy service in this area, and surrounding towns in the Eastern Cape Province. The founders of the business have years' worth of experience in the pharmaceutical industry and newcomers to the entrepreneurial space. With favourable market conditions and IV therapy's unique competitive advantage, the opportunity for the business to grow year-on-year is a realistic possibility. The major targeted customer population for the intravenous mineral and vitamin business involves the health care providers, athletes, personalised clinical set-ups, home care, and the general health conscious consumer.

Intravenous vitamin (IV) therapy is related to the insertion of high doses of vitamins into the bloodstream of the patient, according to their nutritional needs. Various healthcare institutions of countries are introducing these therapies to treat their patients despite claims found in a study by Kreft et al. (2019), stating that intravenous drips of vitamins are disapproved by the Federal Drug Association (FDA) because they do not have any health benefits to patients and do not serve as a source of hydration.

1.1 Background of Intravenous Vitamin Therapy

IV therapy has been a part of the medical and healthcare industry for almost a century. In 1883, Dr. Thomas Latta published the first article on intravenous technology to treat patients with cholera and IV therapy was proposed in the 1930s but was not fully developed until the 1950s (Ramamurthy & Ghosh, 2021). IV therapy is the form of intervention that is beneficial for patients that are unable to take vitamins and nutrients orally due to different pharmacological issues. Dr. John Myer was the first scientist to administer and propose further the development of IV vitamin drips in the 1970s. In 2002, the treatment of patients with IV therapy was integrated into healthcare to provide comfort and relief for patients with several

medical conditions such as migraines, fatigue, and allergic reactions, to name a few (Jolles et al, 2015). IV therapy strives to accelerate the process and speed at which nutrients that include vitamins are absorbed by the body, making it more efficient than oral intake of the same (Joyce, 2015). Essentially, IV therapy is meant for patients who are unable or unwilling to ingest vitamins. This is achieved by inserting a small tube filled with vitamins and nutrients in the arms.

1.2 Market Need

The problem is that there are no proper services for the provision of intravenous vitamin therapy in East London, Eastern Cape (van Niekerk, 2019). The population of the country considers it a luxury that is why there is no particular management and development plan for intravenous vitamin and mineral infusion therapy (Wells, Butcher, and McCormack, 2020). However, it is necessary to implement the therapy to promote the easy and efficient way of delivering vitamins to the patients and general public that are unable to take the nutrients orally or their health and lifestyle needs (Wells, Butcher & McCormack, 2020). Additionally, there is no development plan in place for the integration of IV therapy in healthcare. All these factors point to the need for IV therapy to be implemented for the promotion of efficient intake of vitamins for the public and patients who are unable to take the nutrients orally or for their health and lifestyle needs (Sahai, Tavares, & Sweeney, 2017).

Spending on health spa products and services has been growing parallel with the growing middle class, booming wellness tourism industry and interest in healthy living and stress reduction (Blaauw, Osland & Sriram, 2019). New industry players diversifying and leveraging their strengths by putting together offerings that target holistic wellness through medical spas. The demand is driven by the end-user, having to manage elevated health risks because of poor lifestyle habits and urban stresses, and the ever-increasing healthcare costs (Freige & Butcher, 2020). Personal fulfilment that is all encompassing in the form of optimal physical, mental and emotional function, nutrition and general wellness also drives the need for IV therapy (Rehou, Shahrokhi, Natanson, Stanojcic, & Jeschke, 2018).

Companies have come to recognise the importance of the health and wellness of the ecosystem for productivity and performance, as well as the link to organisational success (Hafner, van Stolk, Saunders, Krapels, & Baruch, 2015; Harshitha & Senthil, 2021). An investment in employee wellness and the outcomes thereof bode well for business, with employees having increased morale, reduced absenteeism and increased loyalty (Hafner, van Stolk, Saunders, Krapels, & Baruch, 2015).

Wellness spas have responded to a rising need for mental wellness, stress reduction and improved health with additional services such as nutritional assessments, counselling, holistic personal wellness plans and coaching. Wellness tourism grew faster than other tourism, and there has been an increasing interest in alternative treatments with industry growth trends showing the increase of the inclusion of mobile IV therapy, which targets homes and hotels, all administered by certified nurses, (Global Wellness Economy, 2021).

1.3 Purpose of Research

The purpose of the business venture proposal is to explore whether a market exists to support a business venture. The main idea for the implementation and development of IV therapy in East London is to ensure the provision of maximum benefits to not only the patients with different issues but to the general health conscious public. The practice of infusing the vitamins in the treatment plan of patients was to deliver the nutrients and vitamins directly into the bloodstream. According to research by Carr et al. (2019), IV therapy is rapidly establishing in the field of medicine due to the positive effects of this therapy on patients. IV therapy offers maximum benefits to patients suffering from different ailments that inhibit oral ingestion of their nutrients. In addition, another study related to the implication of IV therapy was compared to the use of a peripheral venous catheter, causing different complications to the patients. The results of this study showed that those patients with PVC or those who undergo catheter insertions with proper care and management have experienced very fewer signs (7.9%) as compared to those patients who are monitored by staff of that hospital who experienced several signs of inflammation (21.7%) of the prevalence of sepsis occurred due to insertion of the

catheter. The results concluded from these studies showed positive effects of the implementation of IV therapy that reduced both local and peripheral issues developing during the application of IV therapy. This was related to the proposed management plan of introducing the business plan of IV therapy in East London to reduce the complications occurring to the deliverance of drugs and other medical fluids orally.

Several studies showed that intravenous intake of vitamins has more benefits than oral intake thereof (Kokotis, 2014; Hadaway, 2019). The main purpose of this business venture proposal is to develop and expand on the concept of the IV therapy business in East London to ensure accessibility to an alternative of oral ingestion of vitamins. Millennials are taking an interest in therapies that promote health and wellbeing, making it more attractive and increases the economic growth of the venture. In the past, IV therapy was reserved for the treatment of ailments, which is why it is important for IV Emporium to also educate the public on the importance of hydration and vitamins for overall wellness. The absorption rate of vitamins when administered by IV therapy is about 90%, which make it easy to achieve the maximum benefits from infusing nutrients and vitamins into the body (Kokotis, 2014; Hadaway, 2019).

1.4 Scope of Research

The subject of this business venture proposal has a vast scope because it targets the East London as well as surrounding areas. This business venture proposal helped the individual intended to initiate IV vitamin therapy and to attract millennials for investing in this venture. This business venture proposal also helped the millennial to understand the significance and potential impact of IV vitamin therapy, as they are more concerned related to their wellness. Moreover, this business venture proposal also guides the consumer and South African citizens about the idea and other health-related concerns, and the available alternative therapies and treatments that could help. This would also contribute to the growth and development of our business as it already allows them to take their infusion plan into their own hands. Lastly, this business venture proposal would also bring the

attention of higher authorities and government bodies about the significance of this therapy, considering the high levels of vitamin deficiency among the residents of East London, Eastern Cape.

1.5 Research Objectives

The goal of the business venture proposal is to determine the effectiveness of our proposed business model of Intravenous vitamin therapy in East London, as there is no sign of IV therapy there yet.

- To evaluate the needs of the targeted public for the growth of IV therapy in East London.

1.6 Research Question

What are the important considerations that need to be taken to successfully introduce an IV therapy business in East London, Eastern Cape?

CHAPTER TWO: LITERATURE REVIEW

2.1 Key terms of literature

Intravenous therapy: Intravenous therapy also known as IV therapy is the management of the transportation of hydrations and nutrients towards the blood vessels for sudden absorption and energising the body (Perry, Potter, & Ostendorf, 2014; Waitt, Waitt, & Pirmohamed, 2004).

Contingency theory: According to the contingency theory, there is no single way that can be stated as ideal for organising a company, manage the company and in the decision-making within a company (Battilana & Casciaro, 2012; Shala, Prebreza & Ramosaj, 2021). Instead, the operational and functional methods of a company is dependent upon several external and internal factors thus requiring the organisation to adopt and implement the style that is best suitable according to the situation (Tarter & Hoy, 1997).

Trans-disciplinary approach: This approach refers to the program integration that reduces the confines and boundaries that exist among the traditional disciplines and incorporate the modern methods of teaching as per the present world challenges (McGregor & Volckmann, 2013).

System management: The integrated management of the Information Technology (IT) within the company is known as system management (Karapetrovic & Casadesús, 2009). This system constitutes of various subsystems, which are required for the management and control of the major system of IT.

IV vitamin therapy: It is a vitamin injection therapy which inserts vitamins into the human body by veins with the aim of the high absorption of vitamins, amino acids, minerals and nutrients to the blood vessels (Meehan, Tavares, & Sweeney, 2013).

Oral vitamin therapy is traditionally used by healthcare professionals and is well recognised, though the intravenous therapy directly transports the vitamins, minerals

and nutrients through the blood to the cells and tissues of the body (Bolton, 2010). Drugs, nutrients, and minerals that are given orally pass through the intestines, and liver and most of it is metabolised already before the drug entering the system through circulation (low bioavailability) (McCulloch et al., 2011). Slow absorption and filtering of the nutrients are the drawbacks of orally ingested nutrients and minerals, which shifts the focus to IV therapy that has 100% of the bioavailability, simply meaning that the product is absorbed quickly and efficiently and is readily accessible for the cells and tissues of the body (McCulloch et al., 2011). IV therapy promotes physical and mental well-being, as the daily body requirement of vitamins and minerals is difficult to manage in the busy schedules of life (Goudarzi et al., 2020). IV therapy provides immediate availability of vitamins and minerals for the body. It also promotes immunity by supplying vitamins C, B12, and zinc, which strengthens the body and builds immunity against diseases (Fujii et al., 2020).

Different positive impacts of introducing IV therapy in East London are determined and evident from literature. All the basic facts should be kept in mind while generating the idea of proposing this venture of introducing IV therapy to the people of East London, Eastern Cape (Marsh, Webster & Rickard, 2017). As it is evident from the several types of research that East London is a socially and economically deprived region. People of that region may consider our business plan as a luxury but through proper management of financial resources, project management and outcomes measure, IV therapy can be successfully introduced as well as integrated to the people of East London, (HADaway, Dalton & Mercanti-Erieg, 2013; Crowell, O'Neil, & Drager, 2017). The main idea to propose the intravenous therapy business in East London is to generate the idea that IV is not for those who are suffering from diseases but it also addresses many other issues related to the general public (Bolton, 2010).

Spoelstra-de Man et al. (2018) concluded in their study that the patients with oxidative stress displayed progress to vitamin C given intravenously, after a repeated oral dose of Vitamin C showing no progress. Meehan et al. (2013) also highlighted that the patients with chronic kidney receiving Vitamin K intravenously showed more rapid improvement as compared to the patients who received Vitamin K therapy orally. This further proves the benefits of IV therapy as well as its efficiency compared to oral

therapy is relatively high. Currently, there is no offering of IV therapy in the city of East London and the Eastern Cape. Hence, all the more realisation for an unmet need for a business venture proposal for a facility offering IV therapy in the city of East London and the Eastern Cape, as has been proven that the overall physical and mental health of a person is improved by providing immunity, hydration, and nutrition.

Obaromi et al. (2019) explained that Eastern Cape has a high rate of TB, HIV, and multi-drug-resistant tuberculosis, and due to poverty, most of the people are unable to get satisfactory treatment. It is an excellent opportunity to introduce the business of IV therapy as it can provide enough electrolytes and vitamins to boost immunity and the high efficacy rate can provide immediate treatment to the people in need by involving health care professionals and community health care workers. The global market value and the growth rate of the IV vitamin and mineral therapy was $40.7 billion to $54.5 billion in just (three) 3 years 2018-2021 (Simoens, 2021). The IV market globally is increasing rapidly and it is a big opportunity to introduce this business in a place where it is not present as it can help in the financial growth of the region as well by involving biotechnological and pharmacological departments, the health care professionals and community health workers, away from the traditional hospital setting.

The management theories are a group of different concepts that help to manage a business or association. The Contingency theory, which stated that there is no one best way to establish a company, to make choices in a company, rather the management of any task focuses on the inner and exterior situations (Otley, 2016). This theory is appropriate for the IV vitamin and mineral therapy because it is reactive, its principles can be moulded according to the need of the situation (Islam et al., 2012). Battilana et al. (2012) concluded in their study that contingency theory helps the supervisors and leaders to continuously improve their skills as they are faced with new problems and they have to formulate a plan and strategy for the management.

On the contrary, Lizarralde et al. (2011) argued that the Contingency theory is a complex set of methods and is often very challenging for the supervisors and leaders to deal with the situation. They have to understand the situation very thoroughly and critically to make a decision plan, which often drains the leaders and they find it difficult

to manage. Malina et al. (2011) also supported this theory and further explained the disadvantages by concluding in their studies that the supervisors wasted their time, resources and money to find a solution for the problem thus making it ineffective.

Whalen et al. (2016) contradicted these ideas and stated that the contingency theory is adjustable by nature and it is a widely used theory by business management as it can bend and mould the policies and rules according to the changing settings (Battilana et al., 2012). Tenhiala (2011) also supported this theory and said that this theory enables the supervisor to use knowledge, management skills and ideas as well as not just rely on the company policy. Therefore, after reviewing the evidence, one could note that the contingency theory was applicable successfully to the business of IV therapy for vitamins and minerals.

In order to estimate intravenous vitamin C sales in the US, Padayatty, Sun, Chen, Espey, and Drisko (2010) surveyed attendees at annual CAM Conferences in 2006 and 2008. Annual sales of the manufacturers were 750 000 and 855 000 vials. Infection, cancer, and weariness were common causes for treatment, 101 people out of 9,328 with data suffered side effects, most of which were minor and included weariness and lethargy. The study found that practitioners unexpectedly frequently use high dose IV vitamin C. High dosage intravenous vitamin C looks to be astonishingly safe, excluding the known risks of IV vitamin C in patients with renal impairment or glucose 6-phosphate dehydrogenase insufficiency.

Dayal and Kolasa (2021) highlighted that the intravenous delivery of nutrients is referred to as drug or parenteral nutrition in the United States. The study stated that while there was a chance of harm, there was no enough evidence to draw the conclusion that these costly services, which are frequently offered without the patient's primary care physician's awareness, are beneficial.

The effectiveness of intravenous multivitamin therapy in a hospital or outpatient situation, as well as the evidence-based recommendations for employing intravenous multivitamin therapy in a hospital or outpatient setting, were both reviewed in Canada by Wells, Butcher, and McCormack (2020). The report made clear that no evidence-based recommendations had been made. The use of intravenous multivitamin or

micronutrient supplementation for patients with malabsorption problems, those who have recently undergone surgery, and those who have burns, trauma, intoxication, or other serious infectious diseases in a hospital or outpatient setting, therefore, cannot be concluded.

Marik (2019) stated that there was growing interest in the use of intravenous vitamin C as an additional treatment in the management of patients with sepsis and septic shock based on a sample of the emerging economies. Currently, this strategy is being tested in patients with sepsis in at least 20 randomised controlled trials across the globe. The absence of glucose-6-phosphate dehydrogenase (G6PD) was listed as an exclusion criterion in nearly all of these trials. This was predicated on a small number of instances of hemolysis in G6PD-deficient patients who received high pharmacologic doses of IV vitamin C. However, the truth is that low-moderate dose intravenous vitamin C may be the best option for patients with G6PD deficiency who have drug-induced hemolysis.

2.2 The Industry

Total revenue in the South African health and beauty spa industry was roughly R1.54bn in 2016 (Shand, 2017). The industry employed approximately 5,500 people and there are more than 700 spa facilities in the country (Walker, 2017). South African Spa Association (SASA) statistics revealed that many spas are linked to hotels and resorts and that more than 80% of Spas are locally owned (Shand, 2017).

Vitamin intravenous (IV) drips are on the rise in South Africa because they promise to ease hangovers, increase energy, and boost immune systems (Hill, Wendt, Benstoem, Neubauer, Meybohm, Langlois, Adhikari, Heyland, & Stoppe, 2018). There is a difference between a normal IV drip and a vitamin IV drip as it provides customers with vitamins for wellness, instead of essential nutrients in a hospital environment (Goudarzi, Memar Montazerin, Najafi, Shojaei, & Chi, 2020).

The benefits of the IV drips include, cleansing organs, detoxing the system, giving energy and boost immunity as well as offering slimming products (Goudarzi, Memar

Montazerin, Najafi, Shojaei, & Chi, 2020). Typical customers include corporate executive, celebrities, and stay-at-home moms as these drips cost anything between R999 and R2999.

The customer will go for a medical screening, a drip will be prepared for them which takes between 30 to 45 minutes to administer and must be taken every three to four weeks which is not a tedious exercise as the experience that the customers are given keeps them coming back. The drip is received on massage chairs, with access to Wi-Fi and a section of drinks on offer.

A dietitian at the Nutrition Information Centre Stellenbosch University (NICUS), Irene Labuschagne, noted that there has been an increase of caution over the use of vitamin IV drips in South Africa because of the lack of documented information on safety of some if not all products (Fujii, Luethi, Young, Frei, Eastwood, French & Vitamins Trial Investigators, 2020). The market has seen particular growth among triathletes and weightlifters who want to improve their performance, as well as people who struggle with flu, and customers who come for fertility reasons (Chang, & Lee, 2019).

2.3 Market segmentation

The market for intravenous solutions, especially vitamins and minerals is relatively broad. This is because the complete segmentation of the market is primarily based on the aspects of the type of product, the nutrient content and values, amino acids in the solutions, the total parenteral solution and the efficacy of the vitamins and minerals in the in solution. The market values for the intravenous solutions various regarding the regional hierarchy, as per the health condition of the population and the requirements of maintaining the nutritional need (Rimmer, 2019).

2.4 SWOT Analysis

Strengths	**Weakness**
1. IV therapy will help to increase the nutrient uptake more rapidly in the body, 2. IV therapy can contribute to healing many medical conditions such; fibromyalgia allergies and asthma, 3. It would also be enhancing health outputs, 4. Boosting the energy levels and hydration, 5. This is most needed for the obese population living in East London, 6. This business will promote the reduction in metabolic diseases 7. It would contribute to maintaining nutritional requirements (El Morr et al., 2010).	1. IV vitamin therapy might increase the rate of infections, 2. IV vitamin therapy may cause oedema, 3. Over dosage of the vitamin and mineral can disturb the metabolism, 4. Increases bruising and risk of haematoma (Dobrzykowski, 2012).
Opportunities	**Threats**
1. Concerning the business, developing and promoting IV therapy is effective as it enhances the economic outputs, 2. As per the evaluation, the global market of IV solutions is expected to rise to $54.5 billion, in 2 years,	1. The major obstacle in promoting the business is the effective collaboration with the health care providers and the health care system, 2. Risk of increasing legal accusations (Joyce, 2015).

3. The compound annual growth rate is expected to accelerate at an average of 6.0%, 4. With consistent technology advancement and modification, the demand for IV solutions is expected to rise (Hadaway, 2019).	

Demographics and Segmentation

The Eastern Cape Province's Buffalo City Metropolitan Municipality includes the city of East London. With 893,000 residents, or 12.2% of the Eastern Cape Province's total population, The Metro is the second-largest city in the region. A calm city, East London is renowned for its beaches, friendly locals, and good weather all year round. Buffalo City Metro's share of the Eastern Cape Province's R 390 billion GDP in 2019 constituted 20.02%.

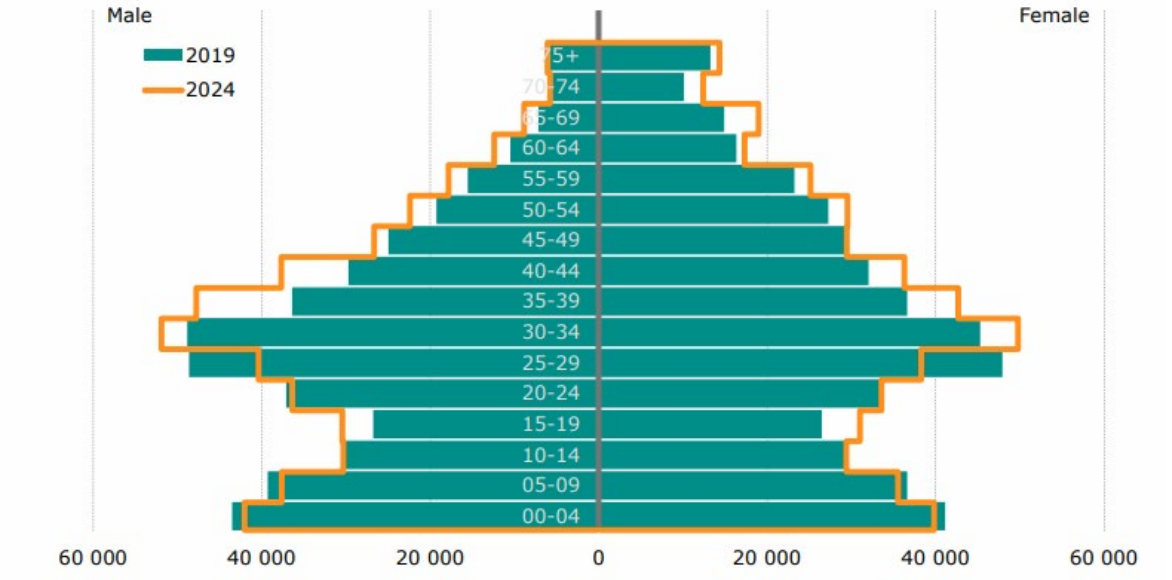


Figure 1: Population Structure, East London 2019 vs. 2024 ("Buffalo City Metropolitan Municipality CEMDF Tourism Session," 2021, p.3)

In Buffalo City, the estimated life expectancy is rising. There are 113 healthcare facilities in total, including 82 clinics, 7 community health facilities, 6 hospitals, and 18 mobile clinics, in the Buffalo City Metro. There are 30 fixed community health clinics, 2 community health centers, 9 mobile clinics (8 clinical services and 1 dental), and 2 specialized hospitals are located in the East London region (Fort Grey TB Hospitals and New Haven Chronic Hospital). This sub-district also houses Frere Hospital, a tertiary hospital. In the ten years from 2007 to 2017, the Buffalo City Metropolitan Municipality's Gini coefficient decreased, reaching a low of 0.64 in 2017.

2.5 Contingency Theory

According to the contingency theory, there is no single way that can be stated as ideal for organising a company, manage the company and in the decision-making within a company (Battilana & Casciaro, 2012; Shala, Prebreza & Ramosaj, 2021). Instead, the operational and functional methods of a company is dependent upon several external and internal factors thus requiring the organisation to adopt and implement the style that is best suitable according to the situation (Tarter & Hoy, 1997).

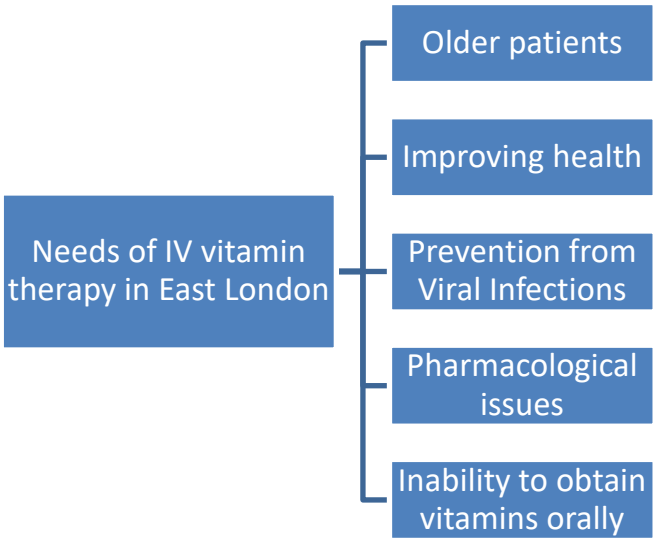
The management theories are a group of different concepts that help to manage a business or association. The Contingency theory, which stated that there is no one best way to establish a company, to make choices in a company, rather the management of any task focuses on the inner and exterior situations (Otley, 2016). This theory is appropriate for the IV vitamin and mineral therapy because it is reactive, its principles can be moulded according to the need of the situation (Islam et al., 2012). Battilana et al. (2012) concluded in their study that contingency theory helps the supervisors and leaders to continuously improve their skills as they are faced with new problems and they have to formulate a plan and strategy for the management.

On the contrary, Lizarralde et al. (2011) argued that the Contingency theory is a complex set of methods and is often very challenging for the supervisors and leaders to deal with the situation. They have to understand the situation very thoroughly and critically to make a decision plan, which often drains the leaders and they find it difficult to manage. Malina et al. (2011) also supported this theory and further explained the disadvantages by concluding in their studies that the supervisors wasted their time,

resources and money to find a solution for the problem thus making it ineffective. In the context of this research, it is important to note that introducing Intravenous Vitamin therapy business in East London, Eastern Cape, South Africa is based on the contingency theory because it states that there is no one particular way of introducing a business into the market. Based on the market situation, a leader must be contingent to mould his action and introduce the business accordingly.

Whalen et al. (2016) contradicted these ideas and stated that the contingency theory is adjustable by nature and it is a widely used theory by business management as it can bend and mould the policies and rules according to the changing settings (Battilana et al., 2012). Tenhiala (2011) also supported this theory and said that this theory enables the supervisor to use knowledge, management skills and ideas as well as not just rely on the company policy. Therefore, after reviewing the evidence, one could note that the contingency theory was applicable successfully to the business of IV therapy for vitamins and minerals.

2.6 Theoretical Framework



The need of the targeted public for the growth of IV therapy in East London is illustrated in the theoretical framework. It is shown that older patients are in need of the IV therapy because they are frail and vulnerable to health issues. Patients that are unable to take vitamins orally are also in need of the IV vitamin therapy. IV vitamin therapy is the form

of intervention that is beneficial for patients that are not able to take vitamins and nutrients orally due to different pharmacological issues. Moreover, IV therapy plays a vital role in the cure of those patients that are not able to receive the vitamins orally; a small tube is inserted into the venous system through the arms to deliver the needed dose of vitamins into the body of patients.

Furthermore, vitamins are considered the authoritative lifeguard during the spread of viruses. Therefore, it is a need of the target population to take IV vitamin therapy to improve their health and prevent any viral infections during an outbreak by keeping their ability of immunity strong.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section of the business venture proposal was designed to primarily elaborate the plan and methodological approach adopted by the researcher to systematically scheme and execute the proposal. The research methodology is a technique or an approach promoted by the researcher, for the purpose of recognising and selecting the systematic procedures of performing a research study (Snyder, 2019). The methodology is regarded as the most essential and preliminary segment of performing the study. This is because the trustworthiness of the results and outcomes were solely dependent on the methodological aspects and potential procedures adopted and implied by the researchers for the collection of data and performance of the study (Kumar, 2018). Thus, this section of the study provided the elaboration to the peer-reviewers, observers associated to the field as well as the researchers working in the similar domain. The section covered the detailed descriptions related to the research philosophy, research approach, research design, search strategy, the data collection method, data analysis techniques, limitation of the study design and the ethical consideration that were focused on by the researcher while designing the study.

3.2 Research Philosophy

The research paradigm or research philosophy is a term that is used to describe the consistency and similarity in the relative beliefs and concepts of the researchers, related to the specific type of phenomenon and the field of interest (Flick, 2015). The evaluation of the research studies has provided the considerate amount of evidence that the research philosophy or paradigms are primarily classified in three distinct types including the positivism, interpretivism, and pragmatism (Kumar, 2018). The literature obtained from the research studies have provided the understanding that the positivism is a type of research philosophy with the elementary focus on the objective approach of evaluating and adhering to the factual knowledge. The fundamental principles for the paradigm are potentially dependent on the terms of observations and

the measurements of the prevailing theories or evidence provided by other researchers working in the similar domain (Nayak & Singh, 2021).

Interpretivism, on the other hand, is also termed as the constructivism, which is a type of research philosophy that is considerably focused on the subjective ideologies and approaches of the researchers to analyse the social environment and associated phenomenon, in accordance with the relative interests of the researchers (Shirish, 2012). The interpretivism philosophy is used to evaluate the dynamic transitions in the perspectives associated to the social environment and the interests of the individuals. Pragmatism is referred to as the practical approach of evaluating the prospects associated with the positivism and interpretivism (Kumar, 2018). This approach serves as the fundamental basis for the evaluation of the phenomenon, with the term of comparing the subjective and objective approaches (Snyder, 2019). For this business venture proposal, the selection of the interpretivism approach promoted the idea of the business venture proposal that focused on the evaluation of business efficacy and the market requirement related to the promotion and delivery of intravenous vitamin and mineral therapy, as a public service. The core reason for the adoption of the interpretivism approach is that it was useful for uncovering the underlying causes of intricate, interconnected, or diverse social research processes especially in this study where the IV therapy is at the centre of the study. Moreover, it also allowed the researcher to incorporate cross-cultural data, ethical issues and any intervening factors.

3.3 Research Approach

The research approach is the primary element that provides the fundamental foundations for the researcher to select the type of research design and its relative implication with respect to the topic, objectives and the rationale of the research study (Engwa & Ozofor, 2015). The studies have identified that there exist two major types of research approaches including the deductive approach and inductive approach. The inductive approach is the relative pattern of performing the research that includes the observation of the social phenomenon, the evaluation of existing data and the methods of its collection, proceeding towards the development of theories (Shirish, 2012).

While the deductive research approach follows the pattern of observing the social phenomenon, developing a hypothesis or detection of the existing evidences and theories that were aimed towards the evaluation of theories using the medium of data and information obtained from various studies verifies the reliability of the collected data (Kumar, 2018). Observing the objectives of this study, the inductive approach was followed in this business venture proposal. This is because the formulation of this study was primarily based on the terms of collecting and analysing the data, following the principles of secondary qualitative research studies. The data was primarily collected from the recent and relevant primary research articles. According to Fugard & Pots (2014), for small researches, a sample size of secondary sources of about eight to ten can be suitable and used. Purposive sampling that falls under non-probabilistic sampling method was used in this business venture proposal and this justifies the criteria upon which the articles based on the studies outside the UK were also excluded. This type of sampling justifies and gives the liberty to the author of this study to articles as so desired. This extraction of the findings, from various studies, was helpful in critically assessing the need for and efficacy of intravenous vitamin and mineral therapy. The prime reason for the selection of a certain approach in this business venture proposal was that it enabled the researcher to be more flexible in the formation of theories. Moreover, as the business venture proposal considered qualitative data, the inductive approach made it easy for the researcher to evaluate the pattern and then present the findings accordingly. Other than this, it was also helpful to the researcher to comprehend the trends of data, dynamics, strength, resilience, intensive focus on the subject and formation of unconventional futures. In addition, the findings presented using this approach was more subjective and practical.

3.4 Research Design

The research design is a term that reflects the coherent and organised manner adopted by the researcher to evaluate and imply the comprehensive strategies for the collection of data and maintaining adequate analysis. The efficiency of the researcher in selecting an appropriate research design serves a crucial role in determining the trustworthiness of the results of the study (Flick, 2015). The critical evaluation of

studies has led the researcher in concluding that there are three types of research designs including qualitative, quantitative and mixed-method research designs. The qualitative research design comes in two distinct types including the primary qualitative studies and secondary qualitative research designs (Taherdoost, 2016). The primary qualitative research designs involve the collection of the data, using the medium of interviews conducted from study participants or focused population. The secondary qualitative research studies are potentially dependent on the aspects of collecting and extracting the reliable information through the prevailing research studies and primary literature sources (Mohajan, 2018).

On the other hand, the quantitative research design comparatively deals with the collection of the adequate data using the survey questionnaire as a productive tool. The principles of the quantitative research design are essentially focused on the aspects of collecting numerical data and measuring its authenticity using appropriate statistical techniques (Snyder, 2019). While the quantitative measures are applied to assess the reliability of the qualitative data (Opoku, Ahmed & Akotia, 2016). The mixed-method research design considers the implementation of the principles of both qualitative and quantitative research studies. The mixed method approach can be used to evaluate the phenomenon using both statistical measures as well as theoretical or non-numerical data from interviews and the prevailing research studies. This business venture proposal utilised the medium of the secondary qualitative research design, to extract substantial amounts of data from various prevailing sources. The prime reason for opting for secondary research design was the ease of availability of secondary data, which is cheap and most of the time is free to access. Moreover, the researcher incorporated a larger amount of data and statistics as compared to the primary research design. Additionally, the findings or the outcomes of the business venture proposal was more objective, authentic and free from biases, unlike the primary research design. In addition, the researcher was in a position to make the findings well supported, valid and widely acceptable.

3.5 Data Search Strategy

The collection of the literature and shreds of evidences required for the assessment of the market value and competence of the business plans associated to the promotion of intravenous vitamin and mineral therapy was performed with the term of extracting relevant information from the primary research studies. The literature or evidence was collected using the electronic databases such as ProQuest, Science direct, Google Scholar and Mendeley. The keywords including IV therapy or intravenous therapy, Mineral and vitamin requirement, East London, Disease in East London, IV mineral therapy, IV vitamin therapy, IV vitamin therapy for the public, efficiency of IV therapy in curing diseases, market value of IV vitamin and mineral therapy, under-serviced market of IV therapy and business competence of organisations in promoting IV vitamin or mineral therapy, was used to extract the relative research articles. The primary research articles published in English language within the year range of 2010 to 2021 was considered for the inclusion in the business venture proposal. The grey and manual literature sources was excluded, to avoid the risk of biases.

3.6 Data Collection Method

Data collection is termed as the process of gathering an adequate amount of information from various sources. This aspect is of keen consideration and requires the high focus of the researcher because the development of the analysis and interpretation thereof was of great significance in the application of appropriate research techniques in the collection of data (Opoku, Ahmed & Akotia, 2016). The data collection for this second study was done using the preferred reporting item for the systematic reviews and meta-analysis (PRISMA) guidelines. These guidelines were helpful for insuring further authenticity and reliability of data and evidence-based literature as presented in prevailing studies (Moher et al., 2015). Because of their methodological rigour, systematic reviews standards are the gold and basic standard for synthesising the evidence in the field of health care. They can be utilized in the creation of clinical practise guidelines and provide information for clinical decision-making (Bastian, Glasziou & Chalmers, 2010). The guidelines equips readers with the

knowledge they need to form their own opinions about how properly a review was conducted and how relevant the findings are to their particular situation. Additionally, it makes the research reproducible, which is one of the characteristics of a systematic review (Kirkham, Altman & Williamson, 2010). Everywhere, systematic review authors apply the PRISMA statement to ensure that their work is as beneficial to patients, healthcare providers, and other researchers as possible (Moher, Liberati, Tetzlaff, Altman & PRISMA Group, 2009). For the reliable formulation of conclusions based on key considerations as found earlier in the paper, the researcher considered primary articles and archival researches. The reason for choosing the mentioned sources for data collection is to make the findings more authentic and credible because such data was well supported by industry experts. Moreover, the data can be comparable which would make the study relatively easily accessible and easy to understand for the reader. The review of the findings and evidence presented in these articles were promoted for the purpose of critical analysis of intravenous vitamin and mineral therapy in East London. In addition, the outcomes of each selected study was compared with the focused research objectives to ensure the collection of relevant and viable evidence. The studies that were extracted after the keen observation of their objectives and the research outcomes was then summarised in the results section, in the form of a table. This table helped peer-reviewers in assessing the objectives, the methodological approaches and the relative findings that were presented in each selected research.

3.7 Data Analysis Technique

The data analysis method or process is essentially for ensuring the accuracy of the data thus maintaining the efficacy and sustainability of the findings and the evidence presented in the research study (Igwenagu, 2016). The reliable selection of the data analysis technique significantly helps in suggesting the future implication of the study evidence and findings. The observation of the studies has suggested that qualitative research studies use two types of analysis techniques to evaluate and elaborate the data or information, which includes the aspects of content analysis and thematic analysis (Mishra, 2017). The prospects of the thematic analysis involve the collection

of a significant amount of data from prevailing research findings, including the responses of the study participants. This collected data is productively evaluated and the codes were generated through observing the findings of the study (Habib, Pathik & Maryam, 2014).

These codes were grouped based on their similarity. The codes were required to be submerged because they need to generate the appropriate themes for the analysis in such a manner that they represent the objectives and context of the study (Choy, 2014). On the other hand, content analysis was regarded as a simpler method of quantifying the primary qualitative information to evaluate its validity and reliability. The content analysis is effective in providing comparisons in the qualitative evidence (Mishra, 2017). This business venture proposal used the principles of the thematic analysis to ensure the in-depth analysis of the shred of evidence and the findings of various research studies associated with the domain. The process of this secondary thematic analysis involved the collection of evidence from prevailing primary research studies, summarising it in the form of a table, observing the results of each study keenly, and then extracting the codes based on the considerate evaluation. These codes were grouped, according to their relativity and similarity to the context of the study. After which, the themes were extracted from each group of code, in a manner of expressing the rationale of this study and the potential focus of the objectives of the business venture proposal.

The prime reason for considering the thematic analysis was the flexible nature of this approach that allows the modification for numerous studies and giving the intensive details of complex data sets. Moreover, as an early-stage researcher, it allows one to adopt the more available type of data analysis as it does not require one have extensive theoretical information and background. Furthermore, this method also helped the researcher to breakdown large data into small meaningful features thus making the results clearer and easily understandable for the reader.

3.8 Reduction in the risk of biases and assessment of trustworthiness of the collected data

The assessment of the trustworthiness and reduction in the risk of biases of the data collected from the research studies was performed using the medium of Critical appraisal skilled programme tool (CASP). The CASP tool is known as the most effective resource that helps the researchers in analysing the authenticity of the research objectives, the reliability of the chosen research methods, and the efficacy of the analysis in presenting the expected outcomes of the research, based on the methodological designs implied for the systematic execution of the study (Long, French & Brooks, 2020). With support from the Cochrane Qualitative and Implementation Methods Group, the Critical Appraisal Skills Programme (CASP) tool is the most often used instrument for quality appraisal in health-related qualitative evidence syntheses (Long, French & Brooks, 2020). The CASP tool can be used to assess the advantages and disadvantages of any qualitative research approach. Ten questions are included in the tool, each of which focuses on a distinct methodological facet of a qualitative investigation (Noyes, Booth & Cargo, 2018). The tool's questions prompt the researcher to evaluate the suitability of the research techniques and the significance and clarity of the findings (Garside, 2014). By using critical analysis, one can on articles that are pertinent to the research issue, provide reliable evidence to support or reject its assertions, or highlight high-level research that is pertinent to your practice (Franceschini & Maisano, 2017). As the following research is a qualitative study, it would contribute to strengthening the research objectives, and enable the researcher to focus on the relevant research articles, according to the research questions, the support or reject the claims that are backed by evidence.

3.9 Trustworthiness

The trustworthiness or rigor of research is defined as the level of assurance in the data, interpretation, and methodologies used to ensure its quality (Polit & Beck, 2014).

Dependability is the capacity of a third party to monitor, review, and assess the study process. In addition, it refers to the degree to which research processes are recorded as well as the consistency and dependability of the research findings (Streubert, 2007). By carefully examining the methodology and methodologies, the reader can determine whether or not appropriate study procedures have been followed (Shenton, 2004). This research included reflexivity, or the self-evaluation of subjectivity. Reflexivity has the potential to reduce prejudice and strengthen dependability by making the research process more transparent.

How well a phenomenon or set of results from one study can be applied to theory, practice, or future research is referred to as transferability, which is a type of external validity (Lincoln & Guba, 1985). Transferability is the capacity to apply study findings to various contexts, to put it another way. Transferability can be essential to the application of research findings because policy and management frequently rely on data from a single or small number of research projects, which frequently rely on evidence from a variety of contexts that may differ from the context in which applications will be made. The researcher made it clear to what degree findings might or might not be applicable to various situations to guarantee transferability. Transferability problems, seen from a positivist angle, have to do with how firmly the results of a specific research program can be applied to a broader population.

In qualitative studies, the aspect of trustworthiness is also included as the findings are not developed using statistical tests and are solely based on the expertise of analyst. In order to ensure trustworthiness in this qualitative study, it is reported that the data is taken from credible sources which is assessed by applying CASP tool as mentioned in the previous section. Moreover, the data is dependable and transferrable as the findings of this study can be applied in other similar contexts of introducing the IV vitamin therapy in another region or identifying the needs of population of East London through the findings of this study.

3.10 Ethical Considerations

The term ethical issues and consideration refers to the aspects of research standards focused by the researcher for the productive conduction of the specific type of research study (Flick, 2015). This business venture proposal was designed and organised in a manner that promoted the ethical standards of qualitative research studies. The researcher was careful to keep in mind copyright and intellectual property laws to prevent possible copyright and plagiarism infringements. Due credit and respect was given to various sources and authors. The researcher maintained certain level of objectivity to avoid unnecessary bias, as influenced by the political landscape and various socio-economic factors.

3.11 Limitations

Limitations of the research are the obstacles faced by the researchers that refrain them to explore the subject more thoroughly. In certain research, the time and cost constraints were the major factors that limits the researcher to explore the root efficacy of the business plans associated with the IV vitamin and mineral therapy in East London more thoroughly. Moreover, as the researcher considered the secondary data, the lack of data and past literature on intravenous business therapy, specifically to East London, made it difficult for the researcher to incorporate data that are more specific. Additionally, the unavailability of social care workers, health experts, and COVID-19 pandemic crises, also restricted the researcher from incorporating primary data directly.

3.12 Time frame

The potential period, required for the planning and conduction of the research is presented in the Gantt chart presented below:

TASKS	**2021-2022**
	Months

	Aug	Sept	Oct	Nov	Dec	Jan
Planning a focus of research						
Evaluation and extraction of the primary studies using PRISMA guidelines						
Selection and application of the appropriate methodology						
Redefining and refining of the research objectives						
Collection of adequate data and assembling it						
Maintaining the analysis and appraising the evidences						

CHAPTER FOUR: FINDINGS AND ANALYSIS

4.1 Introduction

The fourth chapter of the current business venture proposal includes the findings of the study. The research question of this proposal was to find the important considerations that need to be taken to increase the effectiveness of introducing an IV vitamin therapy business in East London, Eastern Cape. This was done by applying thematic analysis. Three themes emerged from the literature that is Service for vitamin therapy in East London, Vitamin therapy for the improvement of diseases, and evaluation of the need for IV vitamin therapy in East London. According to Fugard & Pots (2014), for small researches, a sample size of secondary sources of about 8-10 is good and justified. Therefore, eight articles selected to discuss the themes structured according to the study topic in order to support the depth of the proposal.

Moreover, the CASP appraisal tool was also used to find if the results obtained from the study are valid or not, and in addition to this, it was also used to find if the research articles that were chosen for this study meet the quality standard or not. The CASP of this research helped in the validation of the results of this study and confirmed that the study could be used in making medical decisions for the local population of East London. Furthermore, PRISMA was also developed to properly report the findings of the study, which evaluates the effect of IV vitamin therapy and whether the study is based on just one article or includes other related research articles. In the last stage, the summary of the chapter was provided.

4.2 Critical Appraisal CASP

In an organized literature review, the quality check of the evidence studies included was a necessary part. The most commonly used tool for the evaluation of the quality of literature in systematic literature review is the Critical Appraisal Skills Programme (CASP). It is mostly used in the studies that are related to health care, which is validated by Cochrane Qualitative and Implementation Methods group (Long, French, & Brooks, 2020). The CASP tool is greatly advised for beginner qualitative researchers. The CASP appraisal of this systematic literature review was also carried out to establish if the results of this study were valid, and the research articles included in this study were evaluated for their quality.

The CASP of this research helped in the validation of the outcomes of this research and confirmed that this study could be used in making medical decisions for the local population of East London. Ten questions were answered for the evaluation of the research papers and studies included in this study. This literature review primarily focused on answering the question of whether there is a market that exists to support business ventures related to intravenous vitamin therapies in East London. The author of this research emphasized choosing only those articles that were in between the range of 2010 to 2022. The articles based on the studies outside the UK were excluded. Articles based on systematic literature reviews or review articles were also not included in the analysis of this research.

A thorough search for the research articles was done, and it was made sure that all the relevant articles suitable according to the exclusion and inclusion criteria were included. Google Scholar, PubMed, and Sci-Hub were used for articles search to cover as many studies as possible. The authors of this systematic review emphasized the quality of the studies selected for the analysis in this study. To ensure the quality of included studies, a critical appraisal of the articles was done. The results of those studies that had similar outcomes were combined to avoid redundancy. Certain studies had similar methods, and the results were also following the same pattern, so the results of these studies were combined (Chang et al., 2020; Emedo et al., 2010; Jessiman et al., 2013). The overall outcomes of this review study suggested that there is a space for the market of Intravenous Vitamin Therapy in East London for patients and the public that is unable to take vitamin supplements orally. These findings were highly justified on the fact that the articles that were selected and used in this study also acknowledged the importance of the Intravenous Vitamin Therapy to the public across the globe. There are numerous benefits of intravenous vitamin therapy and a great need for such therapies to improve health care practices in studies that include (de Grooth et al., 2018; Schencking et al., 2012; Hiedra et al., 2010) also justifies this research's findings. Based on the findings it was suggested that there was a space for the market of Intravenous Vitamin Therapy in East London for patients and the general masses that is unable to take vitamin supplements orally.

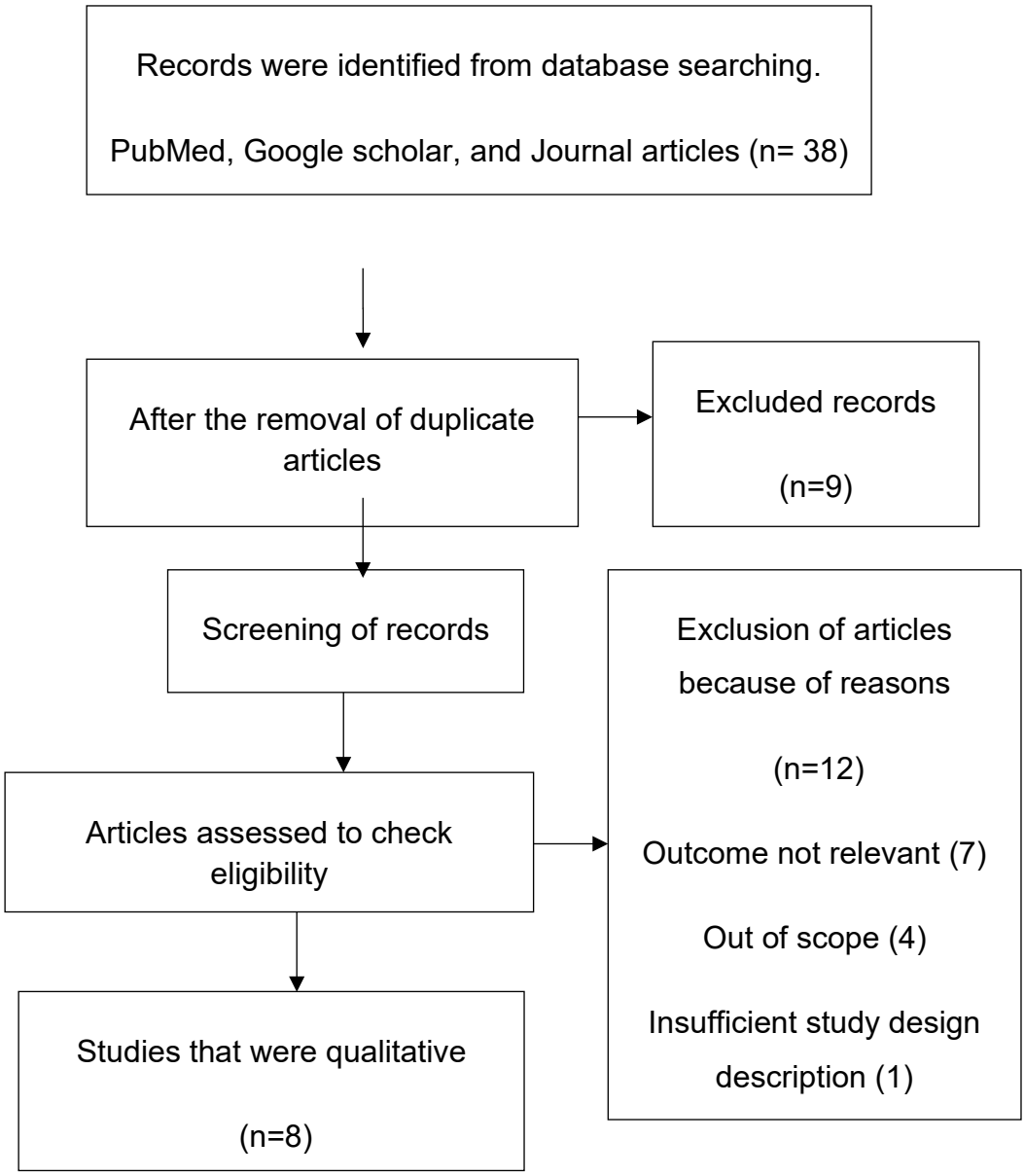
The results of this review are highly precise as they are directly focused on the need and benefits of intravenous vitamin therapies in East London particularly. These results precisely focus on the importance and need for intravenous vitamin therapy services in East London. The results of this study were obtained by the critical analysis of relevant studies for intravenous vitamin therapies. The determined benefits of Intravenous Vitamin therapies apply to both patients and the general population (Hiedra et al., 2020, Tan et al., 2010). All the important outcomes related to the research topic were considered while the analysis was done. The benefits of intravenous vitamin therapies, different vitamin therapy services, and the need for these therapies were evaluated and supported the need for IV vitamin therapies business in East London. Since there are numerous benefits to the health of the general population related to IV vitamin therapies, the costs and harms caused were

justified (Chang et al., 2020; Emedo et al., 2010; Jessiman et al., 2013; de Grooth et al., 2018; Schencking et al., 2012; Hiedra et al., 2010, Tan et al., 2010).

4.3 PRISMA

PRISMA have been developed based on understanding and selection criteria of the study. It helped to critically appraise the published articles as shown below in figure 1.

Figure 1: Study PRISMA



Source: Sarkis-Onofre, Catala-Lopez, Aromataris, Lockwood (2021)

The above figure presents the guidelines that were used in this study in respect to data collection methods and approach that were relevant to this particular situation where articles were used. It therefore demonstrated that after record screening the number of observations and came to a total of eight.

4.4 Table of findings

The details of the studies extracted to develop the findings in this study are given below in Table 1. The table one below provides the aims, methodology and key findings of the studies that was used to conduct thematic analysis.

Table 1: Table of Findings

Author	Year	Aim	Methodology	Findings
Jessiman, T., Cameron, A., Wiggins, M., and Lucas, P.J	2013	To describe the deficiency of vitamins found in the families that are eligible due to poor availability of vitamins as well as the lack of awareness and how to improve it.	Qualitative study, in-depth interviews	The use of vitamins can be increased by promoting HS vitamins and their awareness among people, especially health care professionals.
Chang, K., Harbin, M., Shuster, C., Griesdale, D.E., Foster, D., Sweet, D.,	2020	To find out whether corticosteroids alone show the improved results or the combination of vitamin C therapy with the corticosteroids will provide better results	The septic shock patients who received hydrocortisone alone were compared with those who were administered	The addition of vitamin C therapy to corticosteroid therapy shows a significant effect on ICU patients with

Author	Year	Aim	Methodology	Findings
Wood, MD, and Dhingra, V.K		in treating sepsis, which has a high mortality rate.	hydrocortisone along with the Vitamin C therapy within 72 hrs.	septic shock and other diseases related to organ dysfunction.
Emedo, M.J., Godfrey, E.I. and Hill, SM	2010	To know about the perspectives of youth who were born with the serious condition of failure of the intestine and were administered IV nourishment throughout their development.	Qualitative study- diagnostic methods: enteropathy, extreme short gut analysis, complex analysis of mucosal inflammation and dysmotility, and intestinal pseudo-obstruction analysis.	The therapy was found significant because the children coped well with the intravenous therapy.

Author	Year	Aim	Methodology	Findings
de Grooth, H.J., Manubulu-Choo, W.P., Zandvliet, A.S., Spoelstra-de Man, A.M., Girbes, A.R., Swart, E.L. and Oudemans-van Straaten, H.M.	2018	To determine the impact of Vitamin C intravenous therapy on patients with dysfunctional organs.	A randomised pharmacokinetic trial	2g per day of Vitamin C administered intravenously resulted in normal plasma concentrations in patients with multiple dysfunctional organs.
Schencking, M., Vollbracht, C., Weiss, G., Lebert, J., Biller, A., Goyvaerts, B. and Kraft, K.	2012	To evaluate the uses, safety, and benefits of giving Vitamin C to patients with shingles.	A multicentre prospective cohort study	The use of Vitamin C i/v therapy proves to be beneficial in reducing the pain and symptoms linked with the Herpes virus.
Bhatia, M., Talawadekar, G., Parihar, S. and Smith, A.	2010	To provide a comparison of pre-operative methods, including vitamin K therapy for hip	A prospective audit.	A single 1 mg of Vitamin K dose given intravenously reduces the time for

Author	Year	Aim	Methodology	Findings
		fracture surgery patients.		reducing INR time and pre-operative delay.
Tan, C.W., Ho, L.P., Kalimuddin, S., Cherng, B.P.Z., Teh, Y.E., Thien, S.Y., Wong, H.M., Tern, P.J.W., Chandran, M., Chay, J.W.M. and Nagarajan, C.	2020	To determine the clinical outcomes of older COVID-19 patients who received DMB compared to those who did not. We hypothesised that fewer patients administered DMB would require oxygen therapy and/or intensive care support than those who did not.	Cohort observational study	The primary approach used is when the DBM is given to older patients. Vitamin B12 is vital for assisting a strong intuitive microbiome which plays an essential role in the functioning and the growth of the immune system. This would be essential in the extreme reaction of the immune specifically in

Author	Year	Aim	Methodology	Findings
				the patients with COVID-19.
Hiedra, R., Lo, K.B., Elbashabsheh, M., Gul, F., Wright, R.M., Albano, J., Azmaiparashvili, Z. and Patarroyo Aponte, G	2020	To determine the impact of vitamin C on the patients' health suffering from COVID-19.	A case series of 17 patients	IV vitamin C usage in the patients with COVID-19 from severe to moderate might be feasible clinically.

Source: Researchers Computations

The above table demonstrates the eight tables that were used in the process of data collection. The aim, the methodology and the key findings of the studies were presented in the above table.

4.5 Thematic Analysis

By using the findings of the studies provided in the table 1, themes were formed. The themes were based on the patterns and similarities of findings identified in the selected studies. The three main themes identified in the extracted articles are Service for vitamin therapy in East London, Vitamin therapy for the improvement of diseases and Needs Evaluation for IV vitamin therapy in East London.

4.5.1 Theme 1: Service for vitamin therapy in East London

A study by de Grooth et al. (2018) was conducted using a randomized pharmacokinetic trial on critically ill patients with the dysfunction of multiple organs. The patients were randomly given 2 or 10 grams per day of vitamin C infusion, twice daily or continuously for 48 hours. The concentrations of vitamin C in plasma within 96 hours of administration and 24-hour elimination of Vitamin C in urine was assessed. The findings of this study suggested that 2g per day of Vitamin C administered intravenously resulted in normal plasma concentrations in patients with multiple dysfunctional organs (de Grooth et al. 2018). The 10g per day IV administration of Vitamin C resulted in high concentrations of the vitamin in the body. Findings of this study also provided evidence that the introduction of Vitamin C therapy is important to prevent the increasing cases of Vitamin C deficiency, commonly in patients with dysfunctional organs.

Another study by Schencking et al. (2012) had an objective of evaluating the uses, safety and benefits of giving Vitamin C to patients with shingles. The study was carried out between April 2009 and December 2010. In this research, 16 health care workers recorded the data and information from 67 participants having Herpes Zoster virus infection along with symptoms. These patients were then administered Vitamin C intravenously for almost two weeks. The symptoms of shingles, like hemorrhagic lesions, where noted, and the pain assessment of these patients was carried out during the phase of observation for up to 12 weeks (Schencking et al. 2012). Findings of this research suggested that the associated use of Vitamin C proves to be beneficial in reducing the pain linked with the Herpes virus and the corresponding symptoms. This therapy can prove to be beneficial for health practitioners to cure the symptoms of patients with Herpes. However, to confirm the findings of this study, a randomised or placebo-controlled trial is necessary.

The study conducted by Bhatia et al. (2010) was a prospective audit which included the comparison of pre-operative methods for hip fracture surgery patients, one of the groups was given Vitamin K intravenously. The first part of the audit analysed already existing pre-operative practices. The researchers gathered the data

from the day of admission until the day of surgery and noted the reasons for the delay in surgery. The time required for International Normalized Ratio (INR) to drop to 1.5 or below was also noted. In the later part of the audit, 45 patients with INR above 1.5 were given a single dose of Vitamin K intravenously (Bhatia et al. 2010). Findings in this study suggested that a single 1 mg of Vitamin K dose given intravenously reduces the time for reducing INR time and pre-operative delay. This dose was considered safe and effective for the treatment to avoid delay in surgery.

According to Mathur, Johnston & Clark (2020), intravenous (IV) hydration treatment was a crucial component of managing critically ill-hospitalized patients. Inappropriate prescription is a common fluid prescribing error that raises the risk of patient morbidity and mortality. Sterns (2021) also stated that intravenous fluid therapy provided a source of vitamins for patients. The study concluded that before using intravenous fluid therapy, patients must speak with a health care professional for full information about their health, medical concerns, and treatment options, including any risks or advantages associated with the use of drugs. As a result, it did not recommend any therapies or drugs as being secure, efficient, or appropriate for treating a particular patient.

Kaminski, Krgielska-Narozna & Soczewka (2020) examined 317 websites that represented active facilities using a sample of five European nations. Only 6 (1.9%) facilities cited scientific research on parenteral supplements, and these references were heavily prejudiced. In addition, 17.4% of the facilities left out information about their staff, while 11.9% pointed out various contraindications. Fatigue (62.5%), improved immunity (58.0%), anti-aging, and physical activity (51.5%) were the most frequent indications. About 11.6% of institutions claimed that some parenteral supplements (intravenous hydration treatment) could assist manage specific cancers, and 2.2% said they could help with fertility issues. Vitamins C (57.4%), B12 (47.7%), and B6 (42.3%) were the supplements most frequently offered as intravenous infusions. Numerous chemicals are available on the parenteral supplements market as treatments for both minor and severe health issues.

Considering the years 2009 to 2016, Jayawardena, Thejani and Ranasinghe (2017) did a research study to evaluate the efficacy of alcohol hangover prevention and treatment options. A 4-stage systematic search technique was used to retrieve the data, and findings were synthesized systematically. It was noted that intravenous vitamin therapy showed the greatest recovery after symptoms of exhaustion, nausea, and stomachache. In individuals with sepsis who were undergoing vasopressor therapy in the intensive care unit. Lamontagne, Masse, Menard, and Sprague (2021) demonstrated that the use of intravenous vitamin C had produced conflicting effects in terms of the risk of death and organ failure. The results for organ-dysfunction scores, biomarkers, 6-month survival, health-related quality of life, stage 3 acute renal damage, and hypoglycemia episodes were comparable across the two groups. One patient in the vitamin C group experienced a major episode of hypoglycemia, while another experienced a serious anaphylactic reaction. According to the study's findings, persons with sepsis who were receiving vasopressor therapy in the ICU and were given intravenous vitamin C had a greater chance of dying or having persistent organ failure after 28 days than those who got a placebo.

4.5.2 Theme 2: Vitamin therapy for the improvement of diseases

Jessiman et al. (2013) carried out a qualitative study that describes the deficiency of vitamins found in the families that were eligible due to poor availability of vitamins and the lack of awareness. They were less motivated people, so there was a strong need for vitamins for those families. This situation of lack of availability of the vitamins could be improved by providing healthier training to the health care professionals regarding the vitamin uptake as well as the alternative therapies that could be used to fulfil the requirements of the individuals like IV therapies.

Moreover, Jessiman et al. (2013) also stated that there was increased awareness about the therapies and their importance which led to greater accessibility to vitamins in the hospitals as well as in the local markets. In this particular research, a qualitative study was conducted using in-depth interviews. This was a fieldwork that took place between May 2011 and February 2012 and about 13 primary care settings were used as this study is based on in-depth interviews, so a sampling technique that

was used in the research was purposive sampling. The purposive sample includes about 50 frontline professionals related to health and children, 15 Healthy start coordinators, and 107 parents. In the study, the authors used specific criteria for reporting the qualitative research that helped to easily explain the methods of the study, i.e. consolidated criteria of reporting (COREQ). Jessiman et al. (2013) selected about 13 participants through purposive sampling from the PCT unit across England who were eligible for the research. Before taking the interviews with the participants, all the necessary information was provided to them about the research. The interviews were mainly based on one-to-one conversation, but the option for the telephonic interview was also provided to the participants. A written consent was also taken during the interview in person. According to the findings obtained the use of vitamins increased by promoting HS vitamins and the awareness among the people, especially health care professionals.

Chang et al. (2020) conducted qualitative research in Canada. This study aimed to find out whether corticosteroids alone show the improved results or whether the combination of vitamin C therapy with the corticosteroids provide better results in treating sepsis, that have a high mortality rate. This study was conducted in December 2016 and was continued until February 2018, which was carried out in the ICU of the hospital for a quaternary referral. The study selected 144 patients. According to Chang et al. (2020), the addition of vitamin C therapy to corticosteroid therapy showed a significant effect on ICU patients with septic shock and other diseases related to organ dysfunction.

Emedo et al. (2010) conducted a study in the UK to know about the perspectives of children who were born with serious intestinal failure and were administered intravenous nourishment throughout their development. This was qualitative research. Seven children whose age was in between 7-17 years and were able to meet the criteria of the study were selected and interviewed. The diagnostic methods that were used by Emedo et al. (2010) were enteropathy, extreme short gut analysis, complex analysis of mucosal inflammation and dysmotility, and intestinal pseudo-obstruction analysis. It was found that the children survived with the application of intravenous therapy for nutrition. Hence, the therapy was found significant.

A comprehensive evaluation conducted by Borges-Vieira and Cardoso (2022) sought to determine whether vitamin C therapy and B vitamins were more effective than conventional treatments for depression and anxiety disorders. The primary inclusion criteria for the study, which took place between March 2020 and September 2021, were randomized controlled trials (RCTs), patients who were both sexes, at least 18 years old, and who met the target diagnoses of major depressive disorder (MDD), generalized anxiety disorder (GAD), or mild to severe depressive and anxiety symptoms. Trials that included any of the following diseases in conjunction with another were disqualified: schizophrenia, prenatal depression, bipolar depression, sleep disorders, eating disorders, cancer, and multiple sclerosis. According to the results of this investigation, Borges-Vieira and Cardoso (2022) suggested that, depending on the clinical status of the patient and nutritional biomarkers, vitamins B and C may be an efficient and well-tolerated adjuvant strategy for treating the symptoms of depression and anxiety.

Heleen, Berger, Straaten, and Karin (2018) forwarded that thiamine, vitamin C, and vitamin D all showed promise as adjuvant therapies for severe acute illnesses. Vitamin C's ideal dosage and plasma levels, however, are still unclear. A repletion dose (0.5–3 g/day) was used in several trials that showed better organ failure recovery. In severe sepsis, a brief course of pharmacological dosages (50–200 mg/kg/day or 6 g/day with or without hydrocortisone and thiamine) may reduce the need for vasopressors and aid in recovery. The research also implies that intravenous vitamin C dosages should probably be kept to the early stages because (intra)cellular signaling depends on low levels of radials.

Bilg (2017) explored on the utilization of intravenous mega-dose vitamins for the specific disorders of interest, such as fibromyalgia, chronic fatigue, cancer and asthma. However, no patient had an objective tumor response; no complete or persistent relief from pain or fatigue, and for asthma, conventional therapy was needed in addition to vitamin therapy. The analysis also showed that adverse effects were minor across all studies evaluated. The effects of the interventions were best in participants with lower baseline levels of the vitamins or when used in conjunction with conventional treatments. In some patients, the symptoms worsened before they

improved. Despite the fact that intravenous mega-doses of magnesium, vitamin C, and multivitamins are well tolerated and have few side effects, the present study does not offer enough proof to warrant the continued use of this supplemental therapy. There may be some advantages to combining intravenous therapy with traditional treatments, but more clinical research is necessary.

While intravenous vitamin therapy is used to treat a range of ailments, including cancer, tiredness, asthma, and Crohn's disease, as well as to treat nausea, enhancing quality of life and emotional state, the possibility of using it to prevent or treat cancer is of more interest (Mikirova, Casciari, Riordan & Hunninghake, 2013). The subsequent conversion of this vitamin C to dehydroascorbate yields H2O2, which kills cancer cells (Agus et al., 1999; Ohno et al., 2009). It is believed that cancer cell killing occurs once plasma vitamin C concentrations reach 33.7mM (Yeom, Jung & Song, 2007). Last but not least, Yeom et al. (2007) reported that vitamin C affects the amounts of amino acids in human bodies and can reduce the bioavailability of two amino acids needed for quickly expanding tumors. High dose of 10 grams of vitamin C administered intravenously every day for 10 days, followed by oral administration, enhanced the average life of patients with advanced cancer (Ohno et al, 2009).

4.5.3 Theme 3: Needs Evaluation for IV vitamin therapy in East London's

Tan et al. (2020) researched the 43 participants involved in this research paper. The paper found that the primary approach used is when the DBM is given to older patients. Vitamin B12 is vital for assisting a strong intuitive microbiome which plays a vital role in the functioning and in the growth of the immune system. This would be essential in the extreme reaction of the immune specifically in the patients with COVID-19. The limitations of this research paper are that the participants are limited and belonged to the category of older age. Further, this study is not able to carry out measures that are systematic biological to provide support for the findings. In late 2019, the pandemic of Covid-19 spread all around the world, with the records of 700,000 deaths and 20 million people infected because of this disease. The key determinant is the hyper-inflammation of the immune in the patients. The strategy of treatment that is potentially attractive is immunomodulation (Tan et al., 2020). A

number of agents that is immune-modulatory might perform the final role. For example, vitamin D safeguards the efforts against infection in the tract respiratory, whereas enhancement is brought by magnesium. The functions of vitamin D, in addition, involve the anti-thrombotic, anti-hypertensive and bronchodilator. Further, vitamin B12 also works as an essential modulator of intuitive macrobiotics. To overcome the effects of COVID-19, vitamin short courses would be completed. These courses involved magnesium/Vitamin D and Vitamin B12.

Hiedra et al. (2020) conducted research on the 17 participants involved in that research paper primary approach was used. The aim of this study was to identify the impact vitamin C has on the health of the patients that are suffering from the COVID-19. Findings of this study revealed that the IV vitamin C usage in the patients with COVID-19 from severe to moderate might be feasible clinically. The limitation of this research is that the participants selected for this research paper were limited further. Only three types of medication were used in this research paper that is corticosteroids, hydroxychloroquine, and tocilizumab. It is indicated that the use of vitamin C dose is low, and the duration of that treatment is short most of this time. This is measured as inexpensive and safe. Further, in this study, only three medications are used. Other medications also play a significant role. The other medications that can be used in this are (ACE) angiotensin-converting enzyme and inhibitor agents. The spread of the deadly disease COVID-19 all around the world creates a panic all around the world (Hiedra et al., 2020). The only way to get rid of this disease, suggested by the doctors, is to boost the immune system so that it helps us to fight this deadly disease. So much evidence is available that highlighted the benefits of vitamins that vitamin supplements play an important role in curing the infections that are caused by viral, most specifically in the population that faces the deficiency in the vitamins. Vitamin C plays a vital part in the improvement of the function of immunity. It was presented in the previous studies that vitamin C helps in improving the various viruses involving influenza, poliovirus and simplex virus.

Vollbracht, Raithel, Krick, Kraft, and Hagel (2018) conducted a study to examine the change in disease-specific and nonspecific symptoms (fatigue, sleep disorders, depression, and lack of mental concentration) during adjuvant treatment with

intravenous vitamin C. According to the results, the mean sum score of four nonspecific symptoms fell considerably by 4.84 points and that of three disease-specific symptoms decreased significantly by 4.71 points between the beginning and conclusion of treatment. More over half of the patients only took vitamin C for their allergies. According to the study, intravenous high-dose vitamin C therapy lessens allergy-related symptoms.

According to Carr, Vissers, and Cook (2014), radiation therapy side effects and adjuvant chemotherapy side effects were frequently experienced by cancer patients and have a negative impact on their quality of life. More so than pain, fatigue is one of the most prevalent and incapacitating symptoms described by cancer patients. Recent research suggested that intravenous (IV) vitamin C can help with a variety of cancer and chemotherapy-related symptoms, including exhaustion, sleeplessness, nausea, and discomfort. Along with improvements in general health, improvements in physical, role, cognitive, emotional, and social functioning were also seen. These limited studies have not yet demonstrated that IV vitamin C has direct anti-cancer benefits, but there is consistent evidence that it can enhance cancer patients' quality of life (Yeom, Jung & Song, 2007; Vollbracht, Schneider, Leendert, Weiss, Auerbach & Beuth, 2011; Stephenson, Levin, Spector & Lis, 2013; Takahashi, Mizuno & Yanagisawa, 2012) can reduce certain aspects of tiredness (Carr, Vissers & Cook, 2014a, b).

4.6 Chapter summary

This chapter has provided the findings based on the extensive analysis of relevant research articles. The table of findings was prepared by using relevant articles searched from different search engines like PubMed, Sci-hub and Google Scholar from the period 2010 to 2022. The findings from these articles were extracted that were relevant to the objectives of this study. The thematic analysis of the first theme showed that there are several therapies of vitamins that were employed to improve the health of patients and the local population of East London. These therapies may include using Vitamin K intravenously to reduce INR values before surgery to reduce the delay in surgery and the use of Vitamin C intravenous therapy to reduce symptoms and pain in patients with Herpes-Zoster Virus Infection. The thematic analysis of the second theme

showed that vitamin therapy could be utilised to improve the condition of diseases like organ dysfunction and also for health improvement in children. The third theme emphasises the need for intravenous vitamin therapy mainly to increase the immunity and health conditions of the population in East London. The critical appraisal done by using CASP evaluated the used research articles and provided validation for these articles to be used to improve health care practices for the local population in East London and Eastern Cape.

CHAPTER FIVE: CONCLUSION

5.1 Introduction

The main purpose of this qualitative study was to find out the importance and need for IV Vitamin therapy in East London and Eastern Cape. This chapter of the business venture proposal included the major findings related to the IV vitamin therapy that is its effectiveness, need, benefits, and service provision in East London and Eastern Cape. The discussion included a summary of the themes discussed in chapter four. This chapter also contained the possibilities for future research, which helped in answering the research question. Lastly, the conclusion of the overall business venture proposal was also included in this chapter.

5.2 Discussion

In present times, so many viruses spread all around us that they are not only harmful to us but also result in the death of the infected person. Vitamins are considered essential nutrients for a healthy life. It was revealed by the studies that vitamins play an essential role in both inherited and latent immunity. The previous studies demonstrated that, the vitamins were considered the authoritative lifeguard during the spread of viruses (Şengul et al., 2021). It was represented in the previous studies that vitamins A, C and D are the important vitamins that work as the life saviour. The deadly disease ARDS has serious effects on the lungs and would be prevented somehow by the use of vitamins. Additionally, alternative therapies of immunomodulatory would also be useful in the treatments. The IV vitamin C is measured as an effective and safe instrument for ARDS. The usage of the antibiotic agent, for instance, high doses of IV vitamin C, A, and D, seems favourable in dealing with deadly diseases (Du, Cullen & Buettner, 2012).

Vitamin A is ingested and serves as a source of retinoid, which is required for a variety of physiological processes ranging from embryonic development to various functions such as visuals and from the diversity and development of muscle cells of epithelia to the functioning of the brain. It is derived from plants as carotenoids such as beta-

carotenoids and animals as retinol. Vitamin C (ascorbic acid or ascorbate) is a vitamin that is water soluble with powerful antioxidant properties (Bouillon et al., 2019). Because humans lack L-Gulono-gamma-lactones oxidises, a crucial enzyme in the biosynthesis process, vitamin C must be consumed as a dietary supplement. IV vitamin C usage in the patients with COVID-19 from severe to moderate might be feasible clinically. Vitamin B12 is vital for assisting a strong intuitive microbiome which shows an important role in the functioning and the growth of the immune system (Chang & Lee, 2019). This would be essential in the extreme reaction of the immune specifically in the patients with COVID-19. The strategy of treatment that is potentially attractive is immunomodulation. Several agents that are immune-modulatory might perform the final role. For example, vitamin D safeguards the efforts against infection in the tract respiratory, whereas enhancement is brought by magnesium. Vitamin C plays a significant role in the enhancement of the function of immunity.

The previous studies presented that vitamin C helps in improving the various viruses involving influenza, poliovirus and simplex virus (Al Tanoury et al., 2013). The objective of this research is to understand whether there exists a business opportunity for intravenous vitamin therapy and to provide the maximum benefits of intravenous vitamin therapy to patients with impaired health and for the general public, which is health-conscious. As given by de Grooth et al. (2018) in their study, 2g per day of Vitamin C given intravenously proves helpful in decreasing the cases of Vitamin C deficiency, mostly in the patients suffering from organ dysfunction. Another study by Hill et al. (2018) supports these findings and identifies that Vitamin C protects the organs of the body from inflammatory and oxidative stress. They also found that the application of Vitamin C can help in preventing damage to the organ systems. Vitamin C plays the role of an antioxidant and prevents the Reactive Oxygen species from damaging the lungs and causing lung inflammation. The study by May, Bellomo, and Lankadeva (2021) also supported that intravenously administered Vitamin C improves the clinical state of heart, lungs, liver and kidney functions as well as decreases body temperature in cases of sepsis by gram-negative bacterial infection. This study also inferred that current treatments are not effective in reducing the pathological and physical effects of sepsis or organ function, and the anti-oxidative and anti coagulative

abilities of Vitamin C can prove to be helpful for the treatment of organ damage by sepsis.

The intravenous therapy of certain vitamins also helps in reducing the symptoms of certain infections. The findings in the study by Schencking et al. (2012) also proved that combined use of Vitamin C intravenous therapy with the normal treatment of Herpes Zoster virus infection could prove to help reduce the dermatological symptoms and also reduces the pain. Vitamin C administration proved to produce analgesic properties in patients with conditions like pain and stress caused by surgeries, communicable diseases, and cancer. The study by Carr and McCall (2017) shows that I/V vitamin C administration to patients with chronic pain in a body region causes a decrease in their symptoms. This study also found that acute herpes infection can be eliminated by a high dose therapy of Intravenous Vitamin C therapy and enhance the quality of a patient's life. Diets rich in Vitamin C prove to be a beneficial measure for the prevention of skin diseases in patients. The study by Wang et al. (2018) also supports the findings in this research and states that Vitamin C therapy is effective in reducing the symptoms of Herpes Zoster virus infection. As stated in this study, the vitamin has much less toxicity, is easily available, and, when applied clinically, shows remarkable results.

Findings in the study by Bhatia et al. (2010) show that a single 1 mg dose of Vitamin K therapy given intravenously reduces the delay in hip fracture surgeries caused by increased INR values in such patients. This intravenous therapy was found to be effective by the health practitioners and was considered to be applied as a pre-operative practice. Vitamin K acts as an anti-coagulant and thus facilitates the reduction of warfarin on the day before surgery. According to Fisher (2017), the intravenous administration of Vitamin K before the hip fracture surgery helps the surgeons in reducing the delay in surgery and thus reduces the risks for patients. This study also states that an optimum dose of vitamin K I/V administration can be decided according to the patient's medical history and age. Another study by Cozzolino et al. (2020) identifies the role of I/v Vitamin K therapy in the treatment of chronic kidney disease patients. The study states that deficiency of vitamin K can lead to CKD, and the therapeutic role of Vitamin K is identified in the absorption of numerous proteins

that are responsible for bone and vascular health and proper functions. It is also found in this study that low Vitamin K intake can lead to impaired mineralisation of bones and calcification of blood vessels. The study by Akbari, and Rasouli-Ghahroudi, 2018, also identify the role of Vitamin K in the formation of bones and stimulating bone cells. They found that Vitamin K has certain anabolic characteristics that stimulate the bone cell's progenitor to produce native bones.

Previously, much research was conducted on the benefits of HS vitamins. These studies lack information about the barriers that affect the accessibility of HS vitamins. The findings of the study specify the two important barriers that affect the free availability of the HS vitamins, which include awareness and their accessibility. Parents were interviewed about the use of vitamins that were recommended by health professionals. Most health care professionals advise parents to take vitamin supplementation, especially for women who are pregnant, as their earliest opportunity. According to the findings obtained from the study, it is observed that there is poor awareness about vitamin supplementation and its need, especially during pregnancy and for children. Most parents know about the free vitamins, but they do not use them and do not approach the health care professionals (Jessiman et al., 2013).

The awareness of HS vitamins should be given to health professionals in the UK so that they will convey this information through general practice and in children's centres. According to the reports, less than of the midwives in the UK and health advisors are currently aware of the guidelines related to vitamin D and recommend vitamin supplementation to parents. Therefore, training is required, which should be given to the health professionals to close the gap in the knowledge and to find new strategies to reach out to people, especially women (Rafraf et al., 2012).

Moreover, intravenous vitamin therapy is also used to lessen organ dysfunction. About144 patients were selected for the study. Half of the participants were tested by the administration of hydrocortisone alone, and the other group was administered hydrocortisone along with the vitamin C therapy in the ICU patients having sepsis. Our findings show the benefit of vitamin C therapy used in combination with hydrocortisone which shows a significant reduction in the mortality rate in the hospital (especially in

the patients with sepsis). Nevertheless, according to the study conducted by Marik et al. (2017), intravenous vitamin therapy is the most significant method to decrease the mortality rate and vasopressor duration. However, the findings of this study concluded that there was no significant decrease observed in the ICU.

The paucity of a mortality benefit in this study could be due to the lack of randomisation, as vitamin C may have been administered to worse patients. Despite this, the two groups appeared to have similar general characteristics, with no considerable differences in variables such as age, gender, or origin of sepsis, a determinant of hospital mortality based on pathophysiologic character traits leading up to ICU admission, was taken into account by including it as a modelling control variable. The findings of Marik et al. (2017) influenced the use of corticosteroids which was not received by the control group on a regular basis. It has been found that the mortality rate also decreases with corticosteroid therapy which further enhances the results.

Furthermore, Emedo et al. (2010) conducted a study to know about the perspectives of children who were born with serious intestinal failure and were administered intravenous nourishment throughout their development. Different types of diagnostic methods were used, including enteropathy among others. The findings of the study indicated that when the intravenous nourishment therapy was applied to the children, they survived impressively. Hence, the study concluded a point that intravenous nourishment therapy was found to be significant and effective for children.

As the nature of the study was qualitative, in-depth interviews were taken with the children. We were able to determine a variety of facets of life that this group of youths that was affected considerably by their need for IV nutrition therapy. It was found that children were very comfortable while talking to the interviewer. It was also found to be impressive that children saw the health professional as their friend rather than a trained professional (Yanase, 2020). The findings of the study proved that intravenous therapy for the nourishment of children is safe as well as effective because the vitamins that are necessary for the development of children that are directly delivered to the bloodstream and bypass the digestive system, and are used by the body in immediate conditions. The theme discussed above related to the effectiveness of IV vitamin

therapy in the nourishment of children somehow exhibits the nature of the research question posited in the study (Emedo et al., 2010).

5.3 Conclusion

Intravenous vitamin (IV) therapy is related to the insertion of high doses of vitamins according to the desired needs of the patients in his/her body to treat the specific ailments through veins into the body of patients. According to a study by Kreft et al. (2019), drips of vitamins are not beneficial for the patients as they are not approved by FDA and are also unable to provide hydration or any other benefits, but many other medical and healthcare institutions in countries are introducing these therapies to treat their patients. IV therapy has been a part of the medical and healthcare area for about a century. In 1883 Dr Thomas Latta published the first article on intravenous technology to treat patients with cholera. At that time, IV therapy was proposed in the 1930s but was not fully developed until the 1950s (Ramamurthy & Ghosh, 2021). IV vitamin therapy is the form of intervention that is beneficial for patients that are not able to take vitamins and nutrients orally due to different pharmacological issues. In 2002, treatment of patients with IV was established to provide comfort and relief to the patients with several different medical conditions such as migraine, fatigue, allergic reactions, and many others (Jolles et al., 2015).

According to research by Carr (2019), IV therapy is rapidly established in the field of medicine due to its positive effects of this therapy on patients. The main idea of proposing this therapy is to ensure the possible and maximum benefits to the patients suffering from different ailments, not allowing them to take the prescribed nutrients orally. Furthermore, another study related to the implication of IV therapy compared the use of a peripheral venous catheter, causing different complications to the patients. Three themes were selected in this paper that is service for vitamin therapy in East London, vitamin therapy for the improvement of diseases, and evaluation of the need for IV vitamin therapy in East London. Eight articles were selected to discuss the themes structured according to the study. Moreover, the CASP appraisal tool was used in this research paper. Critical Appraisal Skills Programme (CASP) is mostly utilised in qualitative studies of literature related to health, or it is validated by the Qualitative

Cochrane and Methods of Implementation group (Long, French & Brooks, 2020). The CASP tool is greatly advised for beginner qualitative researchers. The CASP appraisal of this systematic literature review was also carried out to establish if the results of this study were valid, and the research articles included in this study were evaluated for their quality.

In short, IV therapy plays a vital role in the cure of those patients that are not able to receive the vitamins orally; a small tube is inserted into the venous system through the arms to deliver the needed dose of vitamins into the body of patients. Over a century, the development in medical and healthcare departments has proven the application of IV vitamin therapy as an effective and quick measure to treat and administer different medical issues by nurses, doctors, and other health care professionals (Baillie, Carr, & Peng, 2018). Over the period, IV vitamin therapy has faced different controversies, but proven benefits showed the results of improvements in those patients with the treatment plan, including this IV vitamin therapy. It was revealed by the studies that vitamins play an essential role in both inherited and latent immunity. It is shown by the previous studies, vitamins are considered the authoritative lifeguard during the spread of viruses. It was represented by the previous studies that vitamins A, C and D are the important vitamins that work as the life saviour.

5.4 Recommendations

This study has covered various aspects of the use of intravenous Vitamin therapy in clinical and medical areas. The benefits of Vitamin therapies are enormous if compared to their costs and effort of preparation. The descriptive and extensive analysis of the previously available literature and the thematic analysis of these articles have proved the importance of the vitamin therapy business in East London and the Eastern Cape. It is therefore against this background that the research as well as the business venture proposal recommends the implementation of the project as there is high possibility of it succeeding. This forms the rationale behind the integration of the research paper and the business venture proposal. This is highly justified by the overall findings and verdict of the emerged themes. Additionally, the forecasted financials also demonstrate the possibility of obtaining gainful annual returns from the operations and

this again arguments the possibility of it being a successful project. Despite the benefits and recommendation of the project being implemented there are certain limitations to the use of Vitamin therapy for the local population. The amount and dose of administration of Vitamin therapy should be carefully evaluated depending on the age, medical history and medical condition of the patient. Similarly, therapies like Vitamin K anticoagulation therapy may not be effective for patients with warfarin-induced coagulopathy. For such patients, any alternate therapy should be applied which does not harm their health. The health practitioners should work along with researchers and nutritionists to design the vitamin therapy regimes for the local population to elevate the general public health standards and reduce the deficiency of vitamins in the local population of East London and Eastern Cape. The departments related to infectious diseases should also focus on the application of vitamin therapies to improve the recovery of patients and minimise the negative impact on their health.

SITUATIONAL ANALYSIS

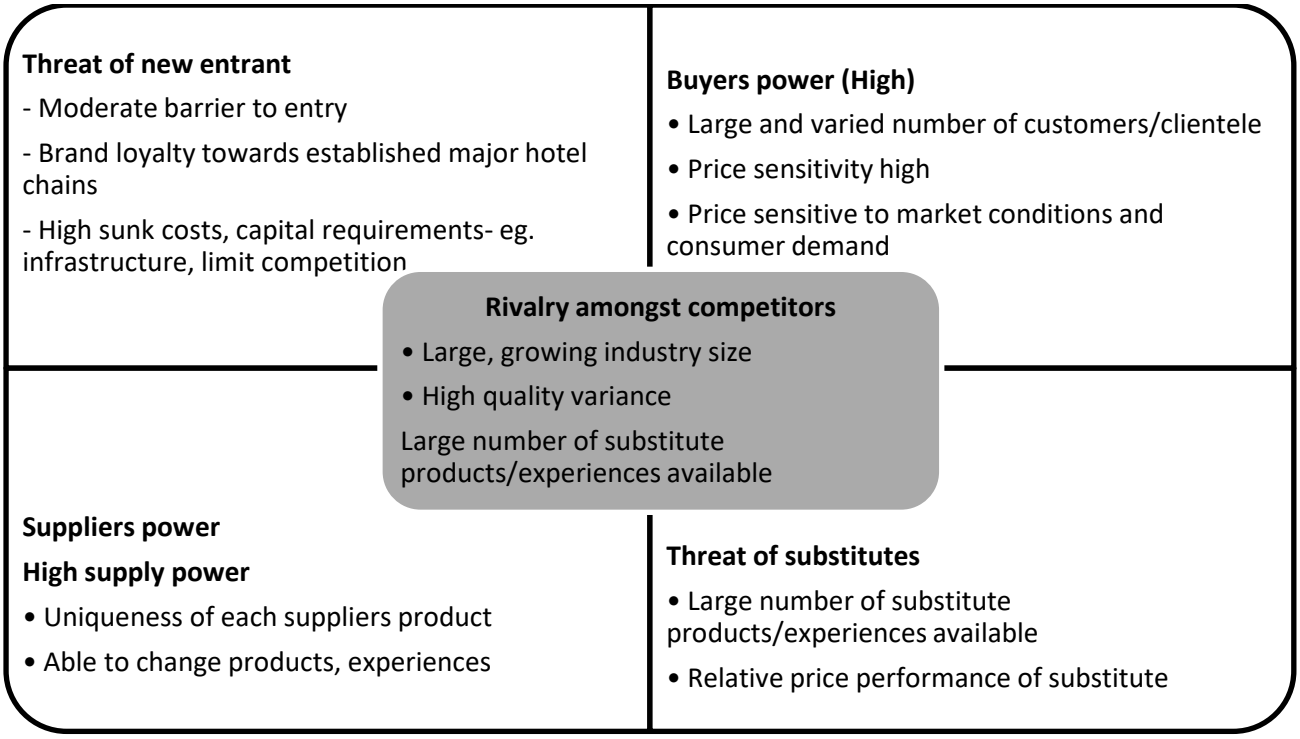
Introduction

The success and long term survival of The IV Emporium lies it the business's ability to remain competitive, consistently providing a good service, both in product quality and to customers, as well as effective marketing and system processes. Customer satisfaction, delivering and capturing value is at the core of this new venture.

An internal analysis of the entity which assesses its strength and weakness as well as the opportunities and potential threats is essential in identification of the core competences, which in turn, the company would use to respond to threats and opportunities.

Industry Analysis

Porter's Five Forces analyses the level of competition within an industry. Under the industrial analysis, this model was extracted from the theoretical literature of the articles that were used in this study. The relevance of this Porter's model just like in most of the business models also finds relevance in this business venture proposal. From what was extracted an analysis conducted in order to resonate with this business venture proposal, the results are highlighted below.



• Rivalry – South Africa has a few players in the medi-spa space, but none have infiltrated the chosen location. The increasing demand allows for access to market share reducing the direct threat from rivals as the potential market is increasing (Hubbard & Beamish, 2011).

• New entrants – Newly founded businesses are curtailed by the high capital outlay, further exacerbated by the limited grant funding programmes funding for the health and beauty sector, making new entrants unlikely.

• Substitutes – There are no true substitutes, as IV administration of nutrients is the most efficient mode of take-up and maximum bioavailability for nutrients and minerals to be absorbed in the body.

• Buyers – Buyers are limited to the middle to upper income earners (Cunningham & Hamey, 2012). The pricing for the IV therapy is set and is therefore agreed on prior to administering – meaning that the customer cannot influence the set selling price (Indiatsy et al., 2015).

• Suppliers – Suppliers for the business's core products such as infusion pumps, intravenous sets, needleless connectors and IV cannulas are B Braun Melsungen AG,

Fresenius Kabi and Baxter International which are all prominent organisations that have a network of local subsidiaries operating in the market. If there are numerous suppliers, it means that the industry is more attractive as suppliers cannot dictate prices (Johnson et al., 2008).

The above analysis shows that there is a high level of competition in staying and being relevant in the industry, with the barrier of entry being moderate, with the main stumbling block high start-up capital requirements for the establishment. There is also a high threat of substitution due to the strong presence of well-established IV therapy franchises in existence in South Africa, although they have not yet infiltrated the chosen city location, thus it is important for a new entrant to study the trends and devise solutions to overcome threats and stay relevant. There is sufficient room in the South African health and wellness industry, and more so in the province of the Eastern Cape, for new medi-spas offering unique experiences due to meet the growing demand seen in the market.

Rivals in the industry will not threaten profits through competition as demand is increasing.

Competitor Analysis

One of the key assumptions for this business is that there is a demonstrated market need for an IV therapy service. To illustrate this, a detailed competition analysis will demonstrate other players in the market who are profitably rendering the same service to its customer.

Competitor 1: Big pharmaceutical chains such as Dis-Chem (possibly, should they develop this service offering in the area).

Competitor 2: Local health and beauty spas should they expand to offer this service.

Competitor 3: Competitors outside of East London looking to expand in the Eastern Cape Province- IV Bar, Reviv among others.

Other competitors may include Ozone Clinic, Drip IV Lounge and Aesthetic Laser Centre CC should they expand their footprint to the chosen business location of East London.

Detailed SWOT Analysis

Strengths	Weaknesses
Service Delivery Standards The business provides exceptional service with a professional attitude. The team is fully trained, with moral values and work together as a team. **Low Expenses** Operating expenses are still low because the business is still relatively new. This results in a low-risk opportunity for investment and partnership. **Profit** Business is making most of its profits through IV therapy. **Management Experience** Management specialises in different areas of pharmaceutical industry. This gives the business a broad perspective on a full IV therapy service delivery. **IV Competitive Advantage** Advantage 1: Offer a luxurious, feel-good experience. - Will ensure that they do not on provide quality products but quality services to customers by providing personalised communications, regularly collecting	**Inexperience** It is a new business, and this could result in the market not providing opportunities or contracts to IV, but rather to a well-known business in the industry. **Business Growth** The business will work hard to improve the current growth. The company is still new in the market with the potential to grow in the near future. **Operational Systems** Operation systems are not fully in place, but the systems will improve as the business grows.

customer feedback, tracking key metrics, and incorporating executive attention. Advantage 2: Prime location. The business location will help attract new and more customers and will ensure they turn them into repeat customers. Advantage 3: Only medi-spa in the area. The business does not have any competition in its area which means that its target market will not have any other options but them.	
Opportunities	**Threats**
Consumer Preferences: - Quality Products - Affordable Prices - Quick Turnaround Times - For the IV drip to be administrated by a professional. - Right documented information on the safety of all of its products. - To receive quality services that is worth the price that they are paying.	**Competition** The health and beauty spa industry is an extremely competitive industry in South Africa. Corporate companies with large marketing and operational budgets are making it difficult for start-up companies to enter the industry. **Industry Standards** Safety and quality standards in the health and beauty spa industry is consistently improving. IV will stay updated and evolve with the market.

In respect to the situational analysis conducted in this business venture proposal critical uncertainties, reflections and the expected business strategy was availed. The overall strategy of the business was availed using the Porter's five forces model as illustrated before where critical aspects that affect the business were analysed. The competitor's analysis was resonated by the Rivalry amongst competitors of the Porter's five forces model. This enabled this business venture proposal to assess critical uncertainties that might surround this business.

MARKETING ANALYSIS

The city of East London, Eastern Cape is in need of a medical spa that offers a

The medical spa market size is anticipated to rise significantly between 2022 and 2028 as a result of consumers' growing awareness of wellness and self-care. Medical spas, commonly referred to as medspas or medi-spas, are establishments that mix medical and aesthetic procedures in serene settings, all under the direction of medical directors like dermatologists, physicians, or plastic surgeons. Medical spas provide a variety of cosmetic procedures including laser therapy, hair removal, face peels, fillers, injections, and among others.

VRIO Analysis

An internal analysis using the VRIO (value, rarity, imitability, organisation) framework was used to identify the advantages that can be a source of sustained competitive edge for the business.

Capabilities identified- Customer service orientation, Niche service expertise, Ability to utilize relevant technologies, Competitive pricing. Resources identified- Financial Capacity

Resource or Capability	**Is it Valuable?** **(Value)**	**Is it Rare?** **(Rare)**	**Is it difficult to imitate (Inimitability)?**	**Does it have organizational support** **(Organisational support)**	**Competitive Implications**
Customer Service Orientation	Yes	Yes	No		Temporary Competitive Advantage

Niche industry expertise and knowledge	Yes	Yes	Yes	Yes	**Sustainable Competitive Advantage**
Ability to utilize relevant technologies	Yes	Yes	Yes	Yes	**Sustainable Competitive Advantage**
Competitive Pricing	Yes	Yes	No		Temporary Competitive Advantage

OVERALL IMPLICATIONS:

The above demonstrates the competitive level of the IV Therapy business's resources and capabilities.

It is evident that a stronger drive is required to keep the business ahead of the curve in establishing and maintaining a service need. A strong customer focus and quality service orientation is required, centering comforts and all round experience, specially tailored infusions to suit client needs. Coupled with this, technological advances and marketing abilities will be beneficial in remaining competitive and relevant, and strong online presence providing a sustained competitive advantage.

BUSINESS VENTURE PROPOSAL

Business Overview

The IV Emporium is a medical spa that offers a range of intravenous vitamin and mineral infusion therapy. Each IV drip, packed with a combination of vitamins, minerals anti- oxidants and electrolytes, is specifically formulated to maximise overall health, performance and general wellbeing.

The business runs various marketing campaigns to generate leads and build the brand as a way to formulate appropriate strategic alternatives that benefits the venture. A well-balanced sales approach was followed to convert the generated leads into closed business. The spa grows its employee base carefully, based on the need within the business, business growth, and time capacity. The business created a critical juncture upon which a management system was formed to make sure that operations in the business function smoothly. The business implemented a system driven organisation to make the business scalable within five years.

The IV Emporium has a vision to provide a luxurious and comforting atmosphere where customers relaxed and get rejuvenated with our wide range of tailored vitamin infusions. The business aims to influence the economy of South Africa, through job opportunities and people empowerment. The founders of the business have great professionalism levels that makes sure that this principle is the cornerstone of the organisation.

Customer Preferences- Consumer behaviour and choice is the primary step in deriving market demand, having analysed preferences and choice, the below preferences emerged as the most important factors in influencing decision making, satisfaction of the customer.

- For the IV drip to be administrated by a professional, and ensured safety and quality of all of its products.

- For privacy and comfort at the establishment, and the admiration of the drip in optimal time.

- The budget line- To receive a consistent, quality service that is worth the price that they are paying.

Customer excellence sets The IV Emporium apart from its competition. The business prides itself in excellent customer relations and fast service delivery. The medi-spa will enter the market in its start-up phase with a very competitive price, offering 10% discount on first time treatments, and 10% discount on birthdays and this will be an appropriate strategic avenue.

After the first investment and launch, a lean five years is projected with the implementation of systems, market conditions and IV's unique business model. The business will be poised to expand and scale through its own financing after five years.

Strategic Purpose

Vision

The IV Emporium's vision is to provide a luxurious and comforting atmosphere where customers will relax and get rejuvenated with their wide range of tailored vitamin infusions.

Mission

The IV Emporium's mission is to encourage their customers to be proactive and engage in practises that will nourish their bodies to prevent illness, brain function, and declination in physical fitness, or hormonal imbalances.

Key to Success

The IV Emporium's key to success includes:

- An upmarket, easily accessible location;

- Establish trust and repeat business with an exclusive clientele catering to their personalised needs with every IV therapy session.
- Professional nurses and qualified staff with relevant experience in medical administration.

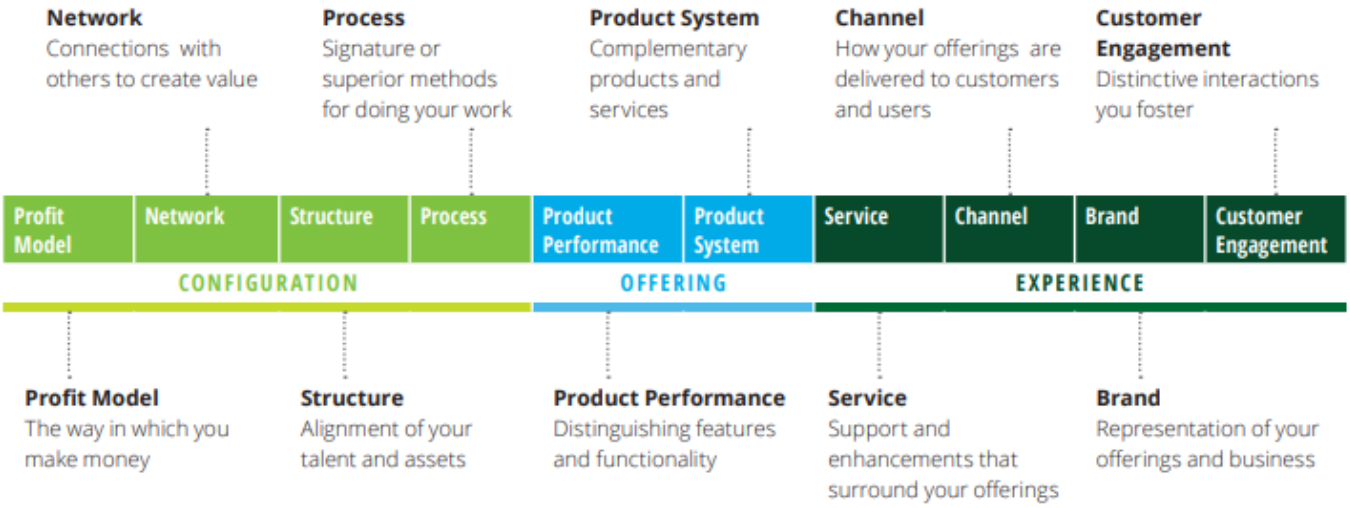
Business Model

Operational Model

The city of East London, Eastern Cape is in need of a medical spa that offers a luxurious service for intravenous vitamin and mineral infusion therapy. There is no evidence of this service offering currently which creates an opportunity in the market that will enable IV to penetrate the market and get the business off the ground.

IV aims to create a memorable and unique experience for each customer. The selling process begins with online and personal marketing to generate leads. A well-balanced sales approach will be followed to convert the generated leads into closed business. IV will have a reputation of exceeding client's expectations through being reliable, professional, and offering its services in the most efficient and effective way.

Competitive Advantage



Advantage 1: Offer a luxurious, feel good experience.

The business ensures that it does not only provide quality products but quality service to customers by providing personalised communications, regularly collecting customer feedback, tracking key metrics, and incorporating executive attention.

Advantage 2: Prime location.

The IV Emporium's location helps it attract new and more customers and ensures it turns them into repeat customers.

Advantage 3: Only medical spa in the area.

The medi-spa does not have any competition in this area, which means that its target market does not have any other options but them.

PRODUCTS AND SERVICES

The Immunity Drip

An Immunity drip is meant to maximise the immune response of the body and protect it as it contains a high dose of vitamin C and zinc. The best for preventing against illness, whilst providing an energy boost, detoxing and hydrating the body.

The Energiser Drip

This energy-boosting vitamin drip is made from a blend of vitamins, minerals & amino acids that help in leaving recipients feeling optimally energised. The added benefits of the energiser drip is better recovery times and leaves the skin glowing.

The Fitness drip

The fitness drip is packed with high concentrations of energy-boosting B vitamins and powerful amino acids. This drip provides performance enhancement benefits, allowing the body to accelerate muscle recovery and keep the recipients performing at their optimum.

The Flawless Drip

This drip includes a specially formulated mixture of IV fluids and complex B, which are eight B vitamins that play a vital role in keeping body running like a well-oiled machine.

An anti-ageing solution that softens fine lines, clear up problematic skin, strong nails and give the recipient a healthy glow.

The Inflammation Drip

A high dose IV infusion of a combination of vitamins and minerals. The drip helps manage chronic inflammation and invigorate the body.

Marketing Strategy

Viral Marketing

The business focuses on excellent service delivery standards to build a strong wave of viral marketing. Viral marketing is the best and most cost-effective form of marketing. Word of mouth produces immediate trust and does not cost money.

Social Media Marketing

SMM refers to social media and social networks to sell a company's products and services. Social media marketing provides a way for businesses to connect with existing customers and reach new ones but still promote their desired culture, mission, or atmosphere.

I. Platform used are Twitter, Facebook and Instagram.

II. Strategy:

- Social Media Ads: The business uses ‘Facebook Manager’ to run advertisements on Facebook and Instagram, which will generate traffic to the website and create an online presence.

- Special Offers: promotions, competitions, and giveaway specials are the advertised on IV’s Facebook page and Instagram account.

- Client Engagement: The medi-spa have to engage with its client base on Social Media.

- Brand Building: IV constantly create brand awareness through Social Media to build the brand in East London and surrounding areas.

Google AdWords

Google AdWords is a platform that allows users to promote their products and services when users are searching for relevant keywords. If done correctly, it can increase leads and sales.

I. Platform that shall be used includes Google AdWords.

II. Strategy:

- Website: The business will set up a professional website with a strong search engine optimisation (SEO) for Google AdWords marketing.

- Having a strong SEO for Google AdWords is the most efficient and affordable marketing strategy. Moreover, it will only bring in clients who are actively seeking to find The IV Emporium's services.

Email Marketing

Email marketing is the use of email to promote a product or service while building relationships with potential customers or clients. This is basically direct mail sent electronically, not by mail.

I. Email through the creation of a leads list shall be used.

II. Strategy:

- Email List: The business builds an email list over time and send monthly newsletters to promote specials, product offering, birthday discounts, and to retain new customers for repeat business.

Traditional Marketing

Traditional marketing is a broad category that includes various forms of advertising and marketing. This is the most well-known type of marketing and contains the ads people see and hear every day.

I. Platforms include banners, brochures and flyers.

II. Strategy:

- Brand Awareness: The medi-spa create brand awareness by setting up banners and distributing flyers at local shopping malls, centres, corporate companies, sporting facilities, business expo's tourism indabas, private estates, and residential areas.

- Networking: The founders and management team shall join business networking events and distribute business cards for personal marketing.

Sales Strategy

Strategy 1: Personal Sales Process

The personal sales process is the sales system that the business uses to convert the leads generated through word of mouth and the various traditional marketing strategies mentioned in the previous chapter. The process consists of four steps, which leads to closed business.

Step 1: Introduction Meeting.

- An introduction meeting is scheduled with good prospects to discuss their requirements and needs.

Step 2: Establish Customers Budget.

- The salesman establishes the customers' budget after the introduction meeting and draws up a few scenarios to fit the customers' requirements and needs.

Step 3: Sales Meeting.

- This is where the customer is given a few options to choose from, then the ideal outcome will be negotiated.

Step 4: Finalise Quote.

- The final quote is generated and sent to the customer.

Strategy 2: Online Sales Process

The online sales process is a sales system that IV uses to convert the leads generated through the social media, Google, and email marketing channels. The process consists of 4 steps, which leads to closed business.

Step 1: Introduction Phone Call.

- An introduction phone call is done so that prospects' requirements and needs can be discussed.

Step 2: Establish Customers Budget.

- On that first phone call, the sales rep sets up the customers' budget and explain a few options that fit the customers' requirements and needs.

Step 3: Follow Up Email.

- An email is sent to the client, explaining the options and process, which was discussed over the phone.

Step 4: Follow Up.

- Five working days after the first call, the client pushes for a possible conversion.

Operations Strategy

Direct interaction with customers. By administering IV drips to deliver nutrients directly to the bloodstream, and selling in-store products with customers.

IV follows the process below to deliver its services.

I. Marketing:

- IV launches its marketing campaigns, and these include traditional, online and email marketing.

- Depending on the marketing channel the client was exposed to, the client expresses their interest in the business.

II. Sales:

- The client provides IV with information on the services required and the ideal outcome that suits the client's needs discussed.

- Either clients has an option to pay a deposit or the full amount due before the service is implemented. This depends on the payment arrangement that the client makes with the Business.

- IV implements its services.

III. Operations:

IV directly interact with customers. By administering IV drips to deliver nutrients directly to the bloodstream and selling in-store products with customers.

FINANCIAL PLAN

Source of Start-up Funding

The start-up financing available to this business venture is limited to two funding options, as expounded below.

Bootstrapping

The initial capital injection is sourced from self-funding. This is from long term savings over a two-year period. This accounts to 30% of the required capital funding.

FFF- Friends, Family and Fools

Another commitment will come from my sibling, who has vested interest in the success of the business, with the upscaling prospects of franchising in the medium term future. The benefit of receiving funding from a family member is the lowered cost of borrowing, whilst the risk is losing their investment alongside the relationship suffering.

Development agencies and Grant Programmes

Institutions such as the National Youth Development Agency (NYDA) and the Small Enterprise Development Agency (Seda) offer financial, non-financial support through various programmes aimed at youth, and women owned business ventures.

Funding Required

FUNDING/START UP CAPITAL	
Equity	R600,000.00
Loan Amount	R950,000.00
Loan Term (months)	60
Annual Interest Rate	12.00%
Monthly Interest Rate	0.95%
Monthly Repayment	R20,838.91
Total Amount Payable	R1,250,334.66

START UP COST USAGE	
Description	**Amount**
Furniture, décor, and appliances	R320,000.00
Stock and suppliers	R165,000.00
Stationery	R35,000.00
Branding	R45,000.00
Store launch	R23,500.00
Refreshments	R6,500.00

Total Start Up Cost	**R595,000.00**

Important Assumptions

The financials are projections and carefully considered estimated, based on the following assumptions:

- The business continues to grow and receive continuous success and more;
- The wellness and spa industry maintains its growing trend and popularity, in metropolitan cities in particular;
- With the use of innovative marketing techniques and high service quality, the business achieves higher sales.

Financial Projections

The Variables

The financial variables taken into consideration were the following:

Annual Company Tax Rate – 28%

Annual Inflation Rate increase in expenses - 4.5%

Assume business growth - 7.5%

Profit and Loss Projections

Five Year Profit and Loss Projection

FORECASTED FINANCIAL YEAR 2022 / '23							
Product Description	**Cost Price Per Unit**	**Markup on**	**Selling Price Per Unit**	**Units Sold**	**Annual Cost Per Service**	**Annual Revenue Per Service**	**Annual Profit Per Service**

		Cost Price		Annually			
Immunity Drip	R630.00	43%	R900.00	680	R428,400.00	R612,000.00	R183,600.00
Energizer Drip	R780.00	54%	R1,200.00	780	R608,400.00	R936,000.00	R327,600.00
Fitness Drip	R715.00	54%	R1,100.00	1072	R766,480.00	R1,179,200.00	R412,720.00
Flawless Drip	R910.00	54%	R1,400.00	1488	R1,354,080.00	R2,083,200.00	R729,120.00
Inflammation Drip	R780.00	54%	R1,200.00	508	R396,240.00	R609,600.00	R213,360.00
Hydration Drip	R638.00	33%	R850.00	472	R301,136.00	R401,200.00	R100,064.00
Detox Drip	R560.00	43%	R800.00	588	R329,280.00	R470,400.00	R141,120.00
Rolls Royce Drip	R1,040.00	54%	R1,600.00	860	R894,400.00	R1,376,000.00	R481,600.00
TOTALS					**R5,078,416.00**	**R7,667,600.00**	**R2,589,184.00**

PROFIT AND LOSS ASSUMPTION					
	2022 / '23	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Annual cumulative price (revenue) increase	0.00%	7.50%	15.56%	24.23%	33.55%
Annual cumulative inflation (expense) increase	0.00%	4.50%	9.20%	14.12%	19.25%

INCOME					
Revenue	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Immunity Drip	R612,000.00	R657,900.00	R707,242.50	R760,285.69	R817,307.11
Energizer Drip	R936,000.00	R1,006,200.00	R1,081,665.00	R1,162,789.88	R1,249,999.12
Fitness Drip	R1,179,200.00	R1,267,640.00	R1,362,713.00	R1,464,916.48	R1,574,785.21
Flawless Drip	R2,083,200.00	R2,239,440.00	R2,407,398.00	R2,587,952.85	R2,782,049.31
Inflammation Drip	R609,600.00	R655,320.00	R704,469.00	R757,304.18	R814,101.99
Hydration Drip	R401,200.00	R431,290.00	R463,636.75	R498,409.51	R535,790.22
Detox Drip	R470,400.00	R505,680.00	R543,606.00	R584,376.45	R628,204.68
Rolls Royce Drip	R1,376,000.00	R1,479,200.00	R1,590,140.00	R1,709,400.50	R1,837,605.54
Total revenue	**R7,667,600.00**	**R8,242,670.00**	**R8,860,870.25**	**R9,525,435.52**	**R10,239,843.18**

Cost of Sales	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Immunity Drip	R428,400.00	R447,678.00	R467,823.51	R488,875.57	R510,874.97
Energizer Drip	R608,400.00	R635,778.00	R664,388.01	R694,285.47	R725,528.32
Fitness Drip	R766,480.00	R800,971.60	R837,015.32	R874,681.01	R914,041.66
Flawless Drip	R1,354,080.00	R1,415,013.60	R1,478,689.21	R1,545,230.23	R1,614,765.59
Inflammation Drip	R396,240.00	R414,070.80	R432,703.99	R452,175.67	R472,523.57
Hydration Drip	R301,136.00	R314,687.12	R328,848.04	R343,646.20	R359,110.28
Detox Drip	R329,280.00	R344,097.60	R359,581.99	R375,763.18	R392,672.52
Rolls Royce Drip	R894,400.00	R934,648.00	R976,707.16	R1,020,658.98	R1,066,588.64

Cost of goods sold	**R5,078,416.00**	**R5,306,944.72**	**R5,545,757.23**	**R5,795,316.31**	**R6,056,105.54**

Gross Profit	**R2,589,184.00**	**R2,935,725.28**	**R3,315,113.02**	**R3,730,119.21**	**R4,183,737.64**

Non-Operation Income	**2022 / '23**	**2023 / '24**	**2023 / '24**	**2025 / '26**	**2026 / '27**
Total Non-Operation Income	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**

TOTAL INCOME	**R2,589,184.00**	**R2,935,725.28**	**R3,315,113.02**	**R3,730,119.21**	**R4,183,737.64**

EXPENSES					
Operating expenses	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Personnel Plan	R1,932,000.00	R2,018,940.00	R2,109,792.30	R2,204,732.95	R2,303,945.94
Administration expenses	R1,500.00	R1,567.50	R1,638.04	R1,711.75	R1,788.78
Accounting and audit fees	R4,300.00	R4,493.50	R4,695.71	R4,907.01	R5,127.83
Advertising and promotions	R8,000.00	R8,360.00	R8,736.20	R9,129.33	R9,540.15
Alarms	R650.00	R679.25	R709.82	R741.76	R775.14
Bank charges	R299.00	R312.46	R326.52	R341.21	R356.56
Cleaning	R3,000.00	R3,135.00	R3,276.08	R3,423.50	R3,577.56
Computers	R2,000.00	R2,090.00	R2,184.05	R2,282.33	R2,385.04
Discount allowed	R3,200.00	R3,344.00	R3,494.48	R3,651.73	R3,816.06
Electricity and water	R3,500.00	R3,657.50	R3,822.09	R3,994.08	R4,173.82
Equipment rental	R2,000.00	R2,090.00	R2,184.05	R2,282.33	R2,385.04
Insurance	R2,800.00	R2,926.00	R3,057.67	R3,195.27	R3,339.05
Legal fees	R800.00	R836.00	R873.62	R912.93	R954.01
Motor vehicle expenses	R2,000.00	R2,090.00	R2,184.05	R2,282.33	R2,385.04
Motor vehicle lease	R3,500.00	R3,657.50	R3,822.09	R3,994.08	R4,173.82
Printing and stationery	R1,800.00	R1,881.00	R1,965.65	R2,054.10	R2,146.53
Rent	R21,500.00	R22,467.50	R23,478.54	R24,535.07	R25,639.15
Repairs and maintenance	R6,000.00	R6,270.00	R6,552.15	R6,847.00	R7,155.11
Security	R8,000.00	R8,360.00	R8,736.20	R9,129.33	R9,540.15
Staff training	R34,500.00	R36,052.50	R37,674.86	R39,370.23	R41,141.89
Telephone, postage, and internet	R3,000.00	R3,135.00	R3,276.08	R3,423.50	R3,577.56
Travel and accommodation	R8,000.00	R8,360.00	R8,736.20	R9,129.33	R9,540.15
Web hosting	R120.00	R125.40	R131.04	R136.94	R143.10
Total operating expenses	**R2,052,469.00**	**R2,144,830.11**	**R2,241,347.46**	**R2,342,208.10**	**R2,447,607.46**

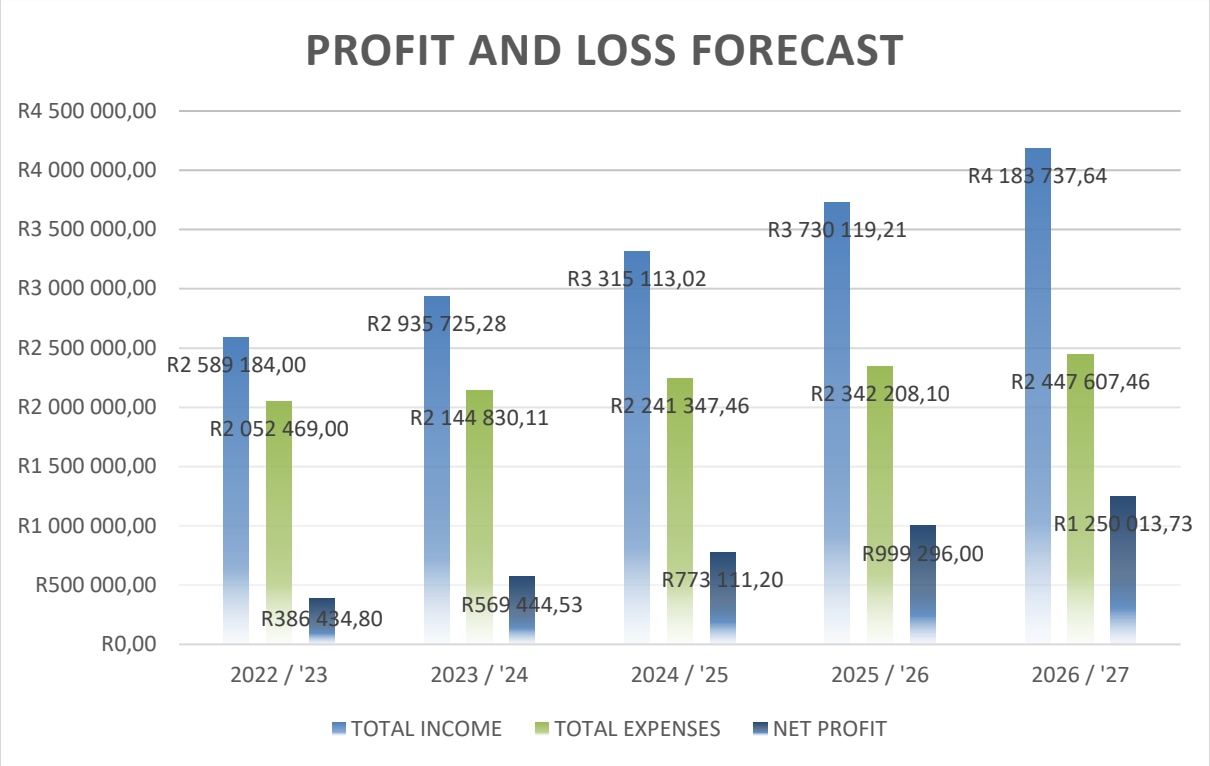
Other Expenses	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Total Other Expenses	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**

TOTAL EXPENSES	**R2,052,469.00**	**R2,144,830.11**	**R2,241,347.46**	**R2,342,208.10**	**R2,447,607.46**

NET PROFIT BEFORE TAX	**R536,715.00**	**R790,895.18**	**R1,073,765.56**	**R1,387,911.12**	**R1,736,130.18**

TAXES					
Income Tax	R150,280.20	R221,450.65	R300,654.36	R388,615.11	R486,116.45
TOTAL TAXES	**R150,280.20**	**R221,450.65**	**R300,654.36**	**R388,615.11**	**R486,116.45**

NET PROFIT	**R386,434.80**	**R569,444.53**	**R773,111.20**	**R999,296.00**	**R1,250,013.73**



Five Year Cash flow Projection

CASHFLOW						
Operating activities	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**	**Total**
Net income	R386,434.80	R569,444.53	R773,111.20	R999,296.00	R1,250,013.73	R3,978,300.26
Less: Accounts receivable movement	-R638,966.67	-R47,922.50	-R51,516.69	-R55,380.44	-R59,533.97	-R853,320.27
Total operating activities	**-R252,531.87**	**R521,522.03**	**R721,594.51**	**R943,915.56**	**R1,190,479.76**	**R3,124,980.00**

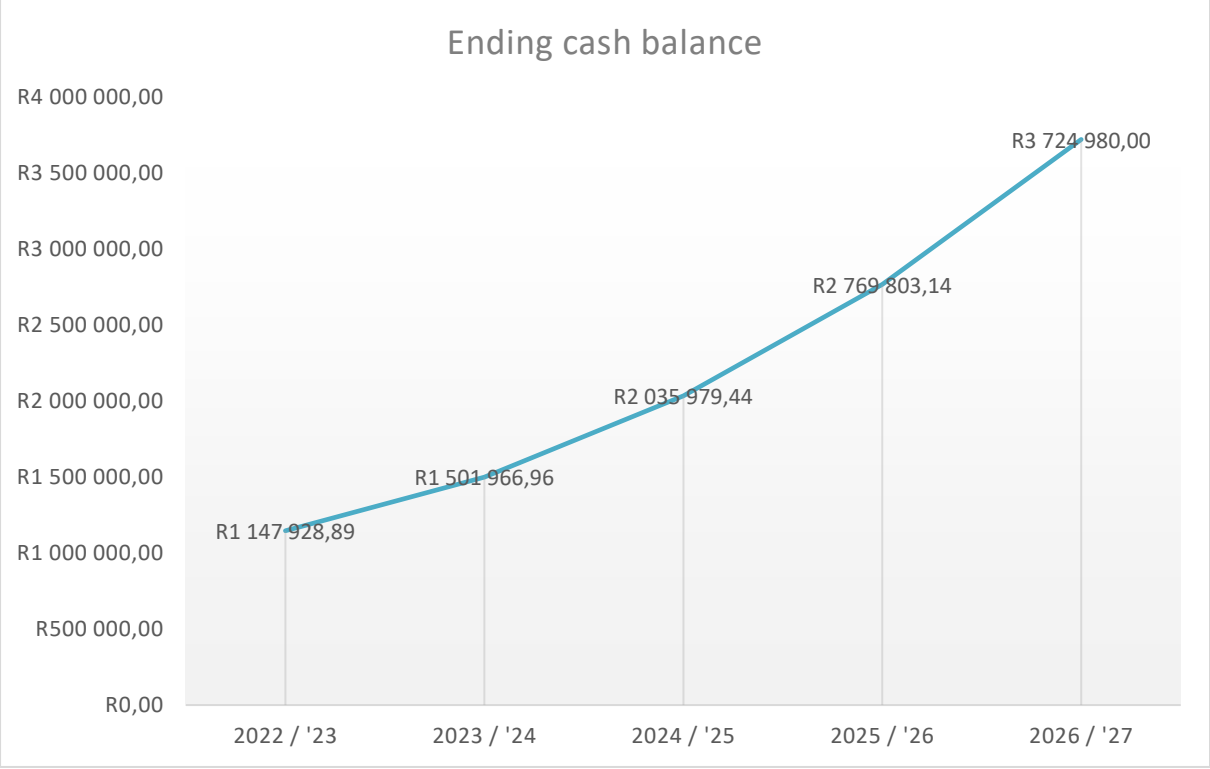
Investing activities	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**	**Total**
Total investing activities	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**

Financing activities	2022 / '23	2023 / '24	2024 / '25	2025 / '26	2026 / '27	Total
Long-term debt/financing	R950,000.00	R0.00	R0.00	R0.00	R0.00	R950,000.00
Long-term debt/financing repayments	-R149,539.25	-R167,483.95	-R187,582.03	-R210,091.87	-R235,302.90	-R950,000.00
Owners' Equity	R600,000.00	R0.00	R0.00	R0.00	R0.00	R600,000.00
Total financing activities	**R1,400,460.75**	**-R167,483.95**	**-R187,582.03**	**-R210,091.87**	**-R235,302.90**	**R600,000.00**

Cumulative cash flow	**R1,147,928.89**	**R354,038.07**	**R534,012.48**	**R733,823.69**	**R955,176.86**	**R3,724,980.00**

Beginning cash balance	**R0.00**	**R1,147,928.89**	**R1,501,966.96**	**R2,035,979.44**	**R2,769,803.14**	

Ending cash balance	**R1,147,928.89**	**R1,501,966.96**	**R2,035,979.44**	**R2,769,803.14**	**R3,724,980.00**	



Five Year Balance Sheet Projection

ASSETS						
Current Assets	**Initial balance**	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Cash and short-term investments	R0.00	R1,147,928.89	R1,501,966.96	R2,035,979.44	R2,769,803.14	R3,724,980.00

Accounts receivable	R0.00	R638,966.67	R686,889.17	R738,405.85	R793,786.29	R853,320.27
Total current assets	**R0.00**	**R1,786,895.55**	**R2,188,856.13**	**R2,774,385.30**	**R3,563,589.43**	**R4,578,300.26**

Property, Plant and Equipment	**Initial balance**	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Total Property, Plant and Equipment	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**

Other Long-Term Assets	**Initial balance**	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Total Other Assets	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**

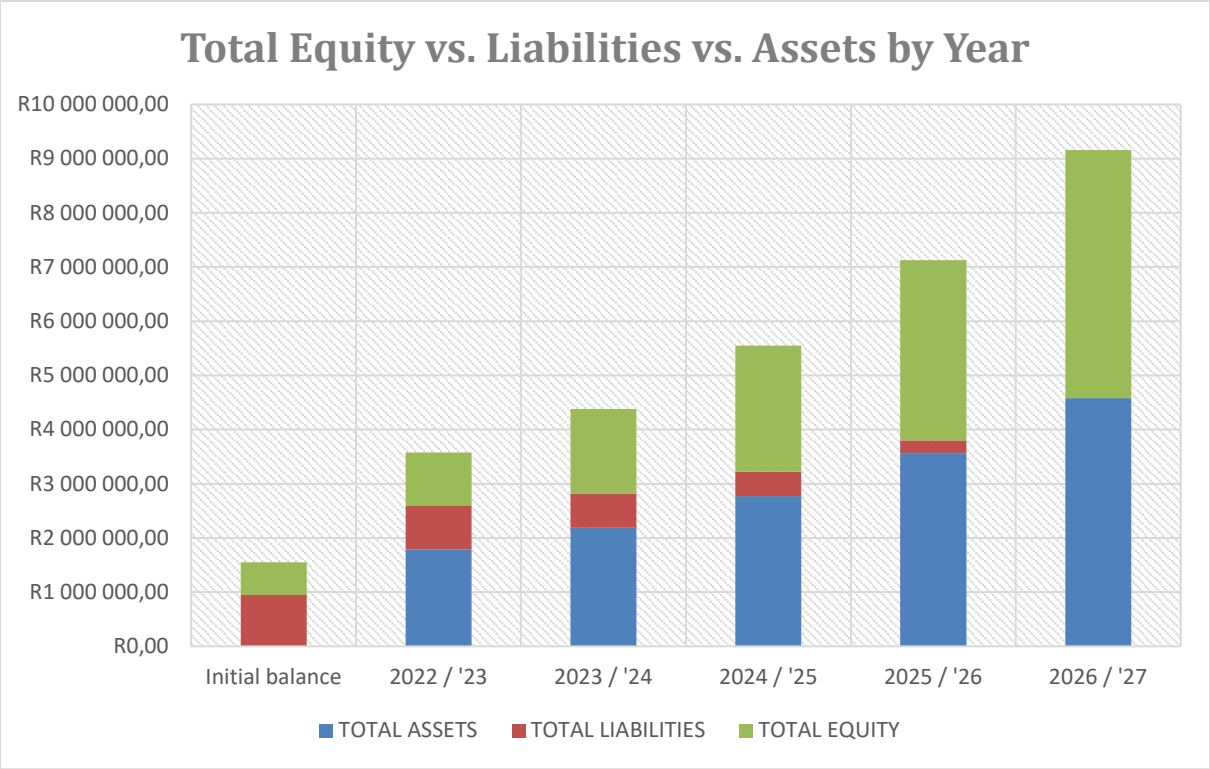
TOTAL ASSETS	**R0.00**	**R1,786,895.55**	**R2,188,856.13**	**R2,774,385.30**	**R3,563,589.43**	**R4,578,300.26**

LIABILITIES						
Current Liabilities	**Initial balance**	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Total Current Liabilities	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**	**R0.00**

Debt	**Initial balance**	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Long-term debt/loan	R950,000.00	R800,460.75	R632,976.80	R445,394.77	R235,302.90	
Total Debt	**R950,000.00**	**R800,460.75**	**R632,976.80**	**R445,394.77**	**R235,302.90**	**R0.00**

TOTAL LIABILITIES	**R950,000.00**	**R800,460.75**	**R632,976.80**	**R445,394.77**	**R235,302.90**	**R0.00**

EQUITY						
EQUITY	**Initial balance**	**2022 / '23**	**2023 / '24**	**2024 / '25**	**2025 / '26**	**2026 / '27**
Owner's equity (contribution)	R600,000.00	R600,000.00	R600,000.00	R600,000.00	R600,000.00	R600,000.00
Retained earnings	R0.00	R386,434.80	R955,879.33	R1,728,990.53	R2,728,286.53	R3,978,300.26
TOTAL EQUITY	**R600,000.00**	**R986,434.80**	**R1,555,879.33**	**R2,328,990.53**	**R3,328,286.53**	**R4,578,300.26**
TOTAL LIABILITIES AND EQUITY	**R1,550,000.00**	**R1,786,895.55**	**R2,188,856.13**	**R2,774,385.30**	**R3,563,589.43**	**R4,578,300.26**



Five Year Personnel Plan Projection

SALARIES				
Description	**Employee Number**	**Number of people**	**Amount per month**	**Yearly Amount**
Directors	1	2	R22,500.00	R540,000.00
Managers	2	2	R24,500.00	R588,000.00
Administrator	3	1	R9,500.00	R114,000.00
Receptionist	4	1	R8,000.00	R96,000.00
Sales	5	1	R14,500.00	R174,000.00
Registered Staff Nurse	6	2	R17,500.00	R420,000.00
			Total:	**R1,932,000.00**

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APPENDICES

Systematic Review Checklist

Section A: Are the results of the review valid?

1. Did the review address a clearly focused question?	Yes	Yes
	Can't Tell	
	No	

Comments:
This literature review primarily focused on answering the question that whether there is a market that exists to support business ventures related to intravenous vitamin therapies in East London.

2. Did the authors look for the right type of papers?	Yes	Yes
	Can't Tell	
	No	

Comments: The author emphasised on choosing only those articles that were in between the range of 2010-2022. Articles based on systematic literature reviews or review articles were also not included for the analysis in this research.

Is it worth continuing?

3. Do you think all the important, relevant studies were included?	Yes	Yes
	Can't Tell	
	No	

Comments:

A thorough search for the research articles was done and it was made sure that all the relevant articles suitable according to the exclusion and inclusion criteria were included. Google Scholar, PubMed and Sci-Hub were used for articles search to cover as much studies possible.

4. Did the review's authors do enough to assess quality of the included studies?	Yes	Yes
	Can't Tell	
	No	

Comments:
The systematic review emphasised on the quality of the studies selected for the analysis in this study. To ensure the quality of included studies, critical appraisal of the articles was done.

5. If the results of the review have been combined, was it reasonable to do so?	Yes	Yes
	Can't Tell	
	No	

Comments:
The results of those studies that had similar outcomes were combined to avoid redundancy. There were also certain studies that had similar methods and the results were also following same pattern so the results of these studies were combined.

Section B: What are the results?

6. What are the overall results of the review?

Comments:
The overall results of this review study suggest that there is a space for market of Intravenous Vitamin Therapy in East London for patients and general public that is unable to take vitamin supplements orally. There are numerous benefits of intravenous vitamin therapy and also a great need of such therapies for improving health care practices.

7. How precise are the results?

Comments:
The results of this review are highly precise as they are directly focused on the need and benefits of intravenous vitamin therapies in East London particularly. These results precisely focus on the importance and need of intravenous vitamin therapy services in East London.

Section C: Will the results help locally?

8. Can the results be applied to the local population?		
	Yes	Yes
	Can't Tell	
	No	

Comments:
The results of this study are obtained by the critical analysis of relevant studies for intravenous vitamin therapies. The determined benefits of Intravenous Vitamin therapies are applicable for both patients and general population.

9. Were all important outcomes considered?		
	Yes	Yes
	Can't Tell	
	No	

Comments:
All the important outcomes related to the research topic were considered while the analysis was done. The benefits of intravenous vitamin therapies, different vitamin therapy services and the need of these therapies were evaluated which supported the need of IV vitamin therapies business in East London.

10. Are the benefits worth the harms and costs?	Yes	Yes
	Can't Tell	
	No	

Comments:
Since there are numerous benefits to the health of general population related to IV vitamin therapies, the costs and harms caused were justified.