An ethnomedical study of the role and impact of cannabidiol (CBD) treatment of women living with endometriosis and Polycystic Ovarian Syndrome (PCOS)

by

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Declaration

I, **Paige Norman**, declare that this dissertation is my own original work and all citations, references and ideas used in this thesis have been duly acknowledged.

I understand what plagiarism is and I acknowledge the University policy on Plagiarism.

Signature: Norman

Date: 6 February 2022

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Acronyms

CAM	Complementary Alternative Medicine
CBD	Cannabidiol
ECS	Endocannabinoid System
FDA	Food and Drug Administration
IPA	Interpretative Phenomenological Analysis
PCOS	Polycystic Ovarian Syndrome
THC	Tetrahydrocannabinol

Abstract

Over the last few years, there has been a notable increase in popularity in the use of cannabidiol (CBD) as a form of alternative medicinal treatment for various illnesses. CBD, a by-product of the cannabis plant, is an isolate and does not contain the psychoactive agent, tetrahydrocannabinol (THC). Endometriosis and Polycystic Ovarian Syndrome (PCOS) are chronic reproductive health sicknesses that are increasingly experienced by women. In the absence of cures, biomedical treatment for these diseases aim to manage symptoms, for example; heavy bleeding, heightened levels of pain, and insomnia. CBD offers an alternative to women who feel that biomedical interventions are no longer able to maintain their health and well-being. CBD positions itself as a natural remedy claiming to be safe and effective. This research study, mainly through qualitative data collection, focused on experiences of Zimbabwean and South African women living with endometriosis and/ or PCOS, who have turned to CBD to manage their symptoms. The importance of this study was to position itself within patients' lived experiences. The research study found that CBD indeed has numerous benefits, including pain management, alleviating stress, and anxiety.

Through the emergent themes from the data, it became clear that women are marginalised and treated unequally in the biomedical healthcare sphere. Feminist Anthropology and Structural Violence was applied to analyse the data collected to explore the patriarchal nature of the biomedical healthcare system and the experiences that women have, which has led them to turn to alternative treatments.

Keywords: *Polycystic Ovarian Syndrome, Endometriosis, cannabidiol, cannabis, healthcare, pain management*

Contents

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Contextualisation of the study

The aim of this study has been to investigate alternative methods, specifically the use of cannabidiol (CBD), in treating symptoms for women who are living with endometriosis and/ or PCOS. This study is an important and much needed exploration that holds a specific function in modern day medicine by acknowledging that the biomedical system is not one that works for everyone, particularly women, and noting that there is more than just one way of treating disease and illness. Women have often been side-lined when it comes to their own health and wellbeing through doctor dismissal of symptoms and, in general, not being taken seriously in their healthcare and well-being (UNHRC, 2016; Jackson, 2019; Global Citizen, 2020; IFHHRO, 2022). When surgeries and medical interventions offer very little choice and freedom when it comes to reproductive health, CBD has allowed women to take back control over their lives and over their bodies.

Complementary Alternative Medicine (CAM) has been described as "diagnosis, treatment, and/or prevention which complements biomedicine by contributing to a common whole, satisfying a demand not met by orthodoxy, or diversifying the conceptual frameworks of biomedicine" (Ernst, 2000: 252). The use of CBD products fall into this category of healing. CBD is a natural medicine which has existed much longer than the biomedical scientific method. Naturopathic medicine re-emerged in the 1970's as a holistic method, whereby "illness reflects an imbalance between the individual and the wider world" promoting harmony and homeostasis (McKee, 1988: 777). The human body contains an endocannabinoid system which interacts with CBD to facilitate healing and this will be elaborated on later in the chapter (Pacher et al, 2006; Urtis et al, 2020).

This study takes on an ethnomedical approach as it looks at CBD use as an alternative form of therapy to biomedical treatment. CBD has been used by my participants as a way to manage the symptoms of their disease/s. Whilst the use of CBD is not necessarily tied to a particular set of cultural beliefs and values, there is a global movement towards using CBD as a result of shifting perceptions in relation to the success and efficacy of biomedical treatments. This study, therefore, explores the alternative medical system of CBD use in relation to the biomedical system, examining how women using CBD products do so in the management of disease symptoms.

Brown et al (2005) explain that societies have their own ideas and beliefs around disease and treatment. Medical systems that fall outside of the biomedical are considered alternative and ethnomedical. The ethnomedical perspective relates to the health maintenance of a group of people, in this instance women living with PCOS and/ or endometriosis (Brown et al, 2005). Women who have been diagnosed with PCOS and/ or endometriosis form communities of support of their own, and with the technology available today, these take the form of online communities, whether as online forums or Facebook groups. These communities are formed as a result of the need to share experiences and get assistance with diseases that are understudied which have no cure, and treatment options are not successful long-term. The lack of research available means that patients of these diseases have little biomedical support, and so women come together to assist with symptom clarification for diagnosis and share treatment options, that have given them relief, with each other. CBD has often come up in theses spaces and personally, as a women diagnosed with these reproductive health diseases, I have been part of this online community listening and sharing my experiences with others. Ethnomedicine, according to Brown et al (2005) is the investigation of how members of a community perceive disease, and thus how they organise themselves in relation to treatment of disease. CBD is a recent feature in how women with PCOS and/ or endometriosis organise themselves in relation to treatment in the absence of a biomedical cure and adequate biomedical treatment to relieve symptoms and manage the diseases.

Brown et al (2005) state that there are five major areas of research in ethnomedical analysis, namely; ethnographic description of healing practices, comparison of ethnomedical systems, exploratory models of health and sickness, health-seeking behaviours and finally, the efficacy of ethnomedical systems. This study is concerned with the following areas of ethnomedical enquiry; health-seeking behaviours, a comparison of ethnomedical systems, and the efficacy of ethnomedical systems. This study has explored the reasons behind the choice of alternative forms of treatment, specifically CBD usage, for health and symptom management of PCOS and endometriosis. This study also explores the differences experienced between biomedical treatment that has been received and CBD treatments, as well as questions the efficacy of biomedical treatment, which is often invasive and resulting in problematic side effects, for PCOS and endometriosis in relation to CBD usage. This study, therefore seeks, through the application of an ethnomedical lens to analyse hoe effective CBD usage has been in treatment and management of women with PCOS and/ or endometriosis' health needs.

Those who suffer from chronic ailments where there is no known cure seek, after some time, alternative treatments (Ernst, 2000: 252-253). Two such chronic sicknesses are endometriosis and polycystic ovarian syndrome (PCOS) which affects women of reproductive maturity. This study has aimed to draw specific attention to these diseases because they have unknown origins and biomedical treatment is often unsuccessful and the disease and biomedical treatment is lifelong (Ernst, 2000: 253). Biomedical treatments often require recurring, invasive surgeries as treatment for endometriosis, while women are prescribed oral contraceptives for PCOS which often has major health side effects. These side effects include depression and increased risk of cervical cancer on prolonged usage. Norman et al (2007: 685) note that an average of 1 in 15 women of reproductive age are affected by PCOS. Radhakrishnan and Verghese (2018: 338) state that PCOS affects “approximately 5% to 10% of women in the Western world”.

Integrative health, which is linked to this study, refers to a combination of medical approaches, including the biomedical/ pharmaceutical, complementary and alternative therapies, as well as lifestyle changes. All together, these make for a holistic health care approach and aim to improve our overall well-being (Kania-Richmond & Metcalfe, 2017). Integrative health care is argued to be an “innovative approach to health care delivery” where an emphasis has been placed on how disease and illness is perceived and the type of health care that is provided to the patient (Kania-Richmond & Metcalfe, 2017). Integrative health practices are an approach to care that has emerged in response to a number of factors including patient demand for complementary therapies, their use of complementary and conventional treatments simultaneously, challenges associated with chronic disease management, and increasing focus on disease prevention and health promotion. This has resulted in increasing IHC-specific research activity, development and implementation of IHC practices and programs, and health professional educational programming in this area.

Integrative health practices have emerged in response to a variety of factors, including the demand for complementary therapies among patients through their simultaneous use of alternative and biomedical therapies, the challenges faced when managing chronic diseases, and the increasing emphasis on disease prevention while promoting health (Kania-Richmond & Metcalfe, 2017). The development and implementation of Integrative Health Care practices and programs, as well as the growth of health professional educational programming in this area, have all increased as a result of this.

The use of the integrative health model has allowed participants that took part in this study to use and explore each option of health care that they felt comfortable with, in an attempt to find what works for their individual health needs. Given the nature of PCOS and endometriosis, an integrative style allows for a variety of treatments in order to manage symptoms and contain these symptoms.

Foucault's text "Birth of the clinic" suggested that medicine ought to "shift from the notion of treating the disease to the mission of sustaining the patient's health" (Foucault, 1973: 96). Through a socio-political lens, the text emphasised the influence of politics on medical knowledge. (Foucault, 1973: 33).

The notion of the clinical gaze referred to the visible signs of illness. In such instances, a cut or scratch on the body is something that can be seen and therefore addressed immediately, in contrast, internal bodily health concerns are ones that need to be explained to a medical professional and herein lies the problem (Foucault, 1973: 33). Medical language and nuances are widely varied and there is, in some cases, no language that can be used to describe one's emotions, mental state and provide an accurate state of physical wellbeing (Foucault, 1973).

Eighteenth century medicine observed disease according to the signs and symptoms that which a patient presented. The symptom "is the form in which the disease is presented" that can be visibly seen and described to a biomedical practitioner (Foucault, 1973: 90). Symptoms indicate the disease, whether it be invisible or visible. The invisible suggests something deeper, something still to present itself. Foucault (1973: 91) theorises that the “clinical method was bound up with the emergence of the doctor’s gaze into the field of signs and symptoms” suggesting that signs and symptoms were becoming more and more a reliable form of diagnostic accuracy.

Polycystic Ovarian Syndrome and endometriosis do not always have physically visible symptoms, and often lie beneath the surface. While considering Foucault’s ideas around the medical gaze, it can be understood why there is a metaphorical, question mark around female reproductive health concerns. The lack of visibility around physical symptoms, coupled with the type of medical language available to describe these symptoms, creates an unmitigated disaster. Female reproductive health issues in a historically patriarchal medical system and gaze often leads to misunderstood symptoms or misdiagnosed diseases.

PCOS is as an endocrine disorder, a hormonal imbalance that has a knock-on effect for a variety of sicknesses, such as type 2 diabetes and infertility (Badawy and Elnashar, 2011: 25; Norman et al, 2007: 685). These chronic illnesses also see patients diagnosed with high levels of anxiety and depression (Radhakrishnan and Verghese, 2018: 338-340; Tomlinson et al, 2017: 3-4). Due to the lack of a cure and effective and safe treatments for endometriosis and PCOS, healthcare for these chronic illnesses has become pluralistic with both alternative and biomedical approaches being used for a more holistic approach (Westerlund, 1989: 178-179; Rasweswe, Mogale, Musie, and Rikhotso, 2021: 1 - 3). As such, this study hopes to provide insight towards an alternative to biomedical pharmaceutical treatments.

Due to its derivation from the cannabis plant, CBD is commonly misconceived as having psychoactive effects on the brain (Walderstein, 2010: 37). Cannabidiol containing tetrahydrocannabinol (THC) has psychoactive effects, however, the cannabidiol referred to in this study has CBD which is not a psychoactive compound. Female reproductive health issues have not been at the forefront of the biomedical healthcare system. Jackson (2019) explains that women are viewed simply as a reproductive body and doctors often label women as being hysterical and over-react to their symptoms. Jackson (2019) further explains that for most of documented medical history, which has traditionally been dominated by male medical doctors and scientists, has resulted in women being marginalised in biomedical health and knowledge production. Monticelli (2019) echoes this in that the focus of women's health and bodies is placed on the ability to reproduce, and any other health issues (whether related or not) are dismissed. As such, women's ill-health experiences are trivialised to the point that women distrust their own pain and reduce the severity of it when enquired about (Jackson, 2019; Monticelli, 2019). Female reproductive health issues such as, PCOS and Endometriosis, are not commonly known and are not freely discussed and many women suffer in silence. As a result of this, it becomes challenging to find effective treatment methods of these diseases. As stated, PCOS and Endometriosis do not currently have any cures, but medications are used to manage the symptoms that present in these diseases. The biomedical healthcare system is well known for treating symptoms and not always the root cause. CBD is becoming more and more popular as an alternative method of treatment and is useful for its natural properties (Hazekamp, 2018; Urtis et al, 2020).

Cannabis[1] is generally known and understood, by the public, to be a recreational drug and is often described as being a gateway drug to more serious narcotics use. Cannabis has, however, also been used in a medical capacity to treat various ailments; inclusive of cancer, diabetes, and chronic illnesses, and has been utilised for its healing properties for pain relief and more

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[1] More commonly referred to as Marijuana or "weed"

(Kalant, 2001; Zuardi, 2006: 154). THC is known as the psychoactive agent of the cannabis plant and activates a part of the brain that deals with the hyper-alert and psychoactive elements. CBD, on the other hand, focuses more on the activations in the brain that deal with pain management and other receptors to focus on immediate pain in the body, but does not contain the same psychoactive agent that THC contains (Kalant, 2001; Zuardi, 2006: 154, Urtis et al, 2020). This means that CBD does not alter the state of a person's mind when ingested and rather deals with pain directly, alleviating it without affecting the everyday activities of the person. It may even be argued that the reduction in pain boosts the over-all performance of an individual. CBD strains are methodically extracted out of the plant to ensure that there are no psychoactive agents in the plant, ensuring a pain relief aspect without affecting the overall function of the brain.

This research has aimed to understand patient perspectives on CBD use, specifically those suffering from a chronic illness, in particular endometriosis and PCOS. It is important to investigate women's health issues, specifically Endometriosis and PCOS, since there is a significant gap in qualitative knowledge, around this topic.

Through this qualitative study, it became clear that many participants felt that the biomedical health system did not consider all aspects of women's health holistically and rather focused on the symptomatic issues as opposed to getting down to and treating the root cause. It was further felt by participants, that alternative methods need not be stigmatised and de-legitimised as they aided in improved and more holistic healthcare.

I believe that this research is particularly important as it helps create a better understanding of how CBD is useful and aids in the maintenance of health across all walks of life: race, age, gender and class. CBD, whilst having its side effects, for the most part has proven useful in treating chronically ill patients who have moved away from Western biomedicine in search of alternatives as a last resort (Corroon & Phillips, 2018; Hazekamp, 2018). This study is important in demonstrating the effects of CBD as it emphasises a possible need for an integrated medical experience. There should not simply be a sole focus on the ailment in the body or on the body, but rather a much more holistic approach – i.e., an approach considering the mind, body and soul when it comes to healing and maintaining the health of patients who visit clinics and other health care centres.

1.2 Drug Wars and legislation: Cannabis vs CBD (Misunderstood)

The use of CBD products is stigmatised in society, and this is due to its links with the cannabis plant. Cannabis has been criminalised in many parts of the world and the association with CBD often leads people to think that CBD is a drug, and therefore illegal, or morally reprehensible. The continued dominance and development of Western, synthetic medication, and frustration in the wide variety of strains of the cannabis plant and its supposed unreliability, has seen a shift away from the continued use of cannabis for medical purposes. The first banning of cannabis is said to have occurred in the 1300s in Arabia (Bankole, 2010: 333). Cannabis became classified as a recreational drug and was criminalised in 1922 in South Africa (Crampton, 2015: 55). The criminalisation of cannabis meant that all recreational usage of the plant was done illegally and generally in the privacy of an individual's home. This later led to the re-discovery of the medicinal properties of cannabis in aiding people's health and use of alternative medical practices (Kalant, 2001: 81; Zuardi, 2006: 156).

In her opinion piece, Hazel Crampton (2015: 67-68) acknowledges the existence of not only the medicinal and religious practices in relation to cannabis but also, how cannabis is being used as a recreational drug. She does this through an exploration of the Drug War in the global south, assessing how it directly affected the lives of the South African community (Crampton, 2015: 62-72). There is also reference to the fact that there are a number of illnesses that cannabis, or rather, cannabinoids are able to help in maintaining health, such as HIV and AIDS, specific types of cancer, treating patients with glaucoma, and that it acts as an anti-inflammatory. Crampton (2015: 1-8 & 55) offers a summarised account of cannabis history and how, even in the times that war was waged against drugs, there has been a continued, if not increase in the sale, trade, and usage of cannabis.

Crampton's (2015) account of the drug war and the drug policies in South Africa are presented in her book in a rather comical fashion but is able to illustrate the current drug climate. Her position on the subject is much more historical and describes where we have been and ultimately, how we got here. The book is a conversational piece that speaks to the on-going debates around cannabis, taxation on these products and legalisation thereof. Van Niekerk (2014: 5) highlights the case of Mario Oriani-Ambrosini who made an "impassioned plea" to the South African government to legalise the medical use of cannabis, as he found himself painfully suffering from lung cancer (van Niekerk, 2014: 5). This is emphasised further by Crampton (2015: 60) who illustrated how the conversation was started, and notes that whilst Ambrosini's intentions were strong and positive, he did not survive long enough to push it to the legislation bill.

Additionally, Parry and Myers (2014: 399) note the two different synthetic cannabinoids, *nabilone (cesamet)* and *dronabinol (marinol)* which have been made for sale. These are normally in the form of pills, but they have not been legalised and have not been accepted by the Medicines Control Council of South Africa. Crampton (2015: 67-68), too, discusses these synthetic drugs which have been documented in assisting nausea and vomiting for cancer patients who are undergoing chemotherapy.

Internationally, The United States of America (USA) has been the main actor in the re-emergence of cannabis oil. Despite there still being legislation making use of cannabis illegal, there are forty-seven states that have legalised the use of cannabis and sell products containing CBD in them (Dr. Oz Show, 2018). It is also important to note that CBD has been given Food and Drug Administration (FDA) approval as the medicinal benefits outweigh its illegality. Unfortunately, due to cannabis being criminalised and illegal on a federal level, there have been very few studies conducted – particularly human trials - and there is virtually no state funding to do the research (Bridgeman et al, 2017).

Whilst there has been no real change in the drug war in South Africa, there have been minor improvements in the way in which drugs are being dealt with and policed. Van Niekerk (2014: 5) draws attention to the National Drug Master Plan in South Africa during the years of 2013-2017, where communities are working towards a "society free of drug abuse", which is vastly different to that of the preceding time. The previous rational plan of a "drug-free society" is particularly interesting as it shows how there has been a shift in people's way of thinking and how the South African government responds to these various issues.

Recreational use of cannabis was legalised in South Africa in 2018, and may be used and cultivated (in small amounts) by adults in private spaces for personal consumption (Recovery Direct, 2019). After the decriminalisation of cannabis in 2018, the then Minister of Health Dr Motsoaledi signed a gazette that aimed to legalise CBD use, with restrictions, in 2019

(Recvoery Direct 2019). The Medicines Act of 1965[2] (Medicines and Related Substance Act) regulate the use of substances for medical use. The Act clearly distinguishes between THC[3] and CBD[4] (Bulose, 2022). Cannabis, (and its derivatives), and THC are classified as Schedule 7 substances which means that a permit is required from the Director General of the National Department of Health to access medication containing these substances (Bulose, 2022). CBD, specifically, is categorised as a Schedule 4 substance and in some (albeit limited) situations it may be categorised as Schedule 0 or Unscheduled (Bulose, 2022). Schedule 4 CBD products may only be obtained from an authorised and licensed institution (for example a pharmacy) with a prescription from a licensed medical health practitioner (Bulose, 2022). Schedule 0, or unscheduled, CBD products may be obtained 'off the shelf' from health stores or pharmacies. The Schedule 1 CDB products are considered complimentary medicines and legally, as Bulose (2022) points out, may only contain between 0,001% and 0,0075% traces of THC.

A vast majority of the existing literature focuses on cannabis being a drug and form of narcotic. For this reason, little qualitative literature exists relating to medicinal uses of cannabis and there have been very few studies done with human participants on CBD usage as an alternative treatment. Much of the data that does exist in literature is based within an American framework and, again, does not really focus on the qualitative, lived experience of people living with chronic illnesses who use cannabis for medicinal purposes.

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[2] The Medicines Act of 1965 categorises drugs and medicinal substances into eight groups; ranging from Schedule 1 (which is easy to obtain and does not require a prescription or permit) to Schedule 8 (which is the most difficult to obtain and requires a prescription and permit).

[3] As a psychoactive substance

[4] As a non-psychoactive substance

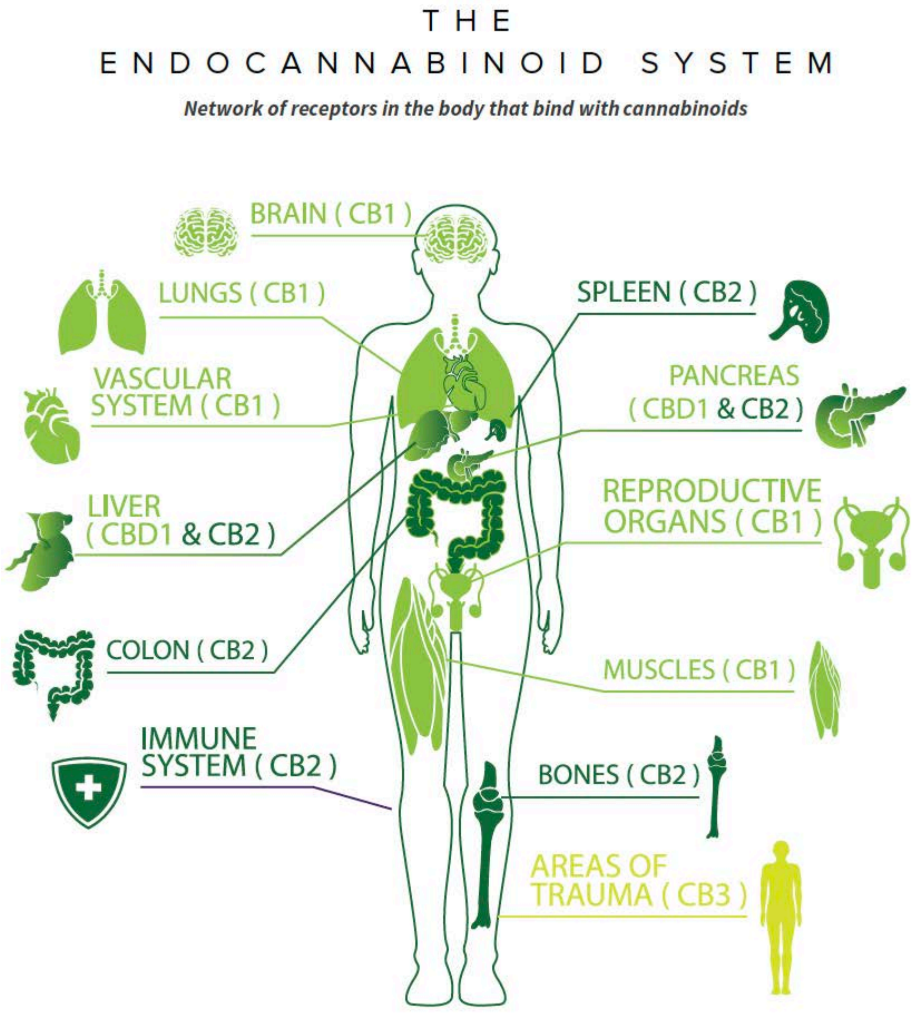
In the Zimbabwean context, there is very little literature that exists on the use of CBD as an alternative treatment and there is still a lot of secrecy around the use of these products, while in South Africa, there is more public movement on CBD use and sale.

1.3 Understanding the use of CBD

Cannabis sativa is argued to be the one of the earliest plants cultivated by man and was possibly first used in India in a medical and religious way around 1000 years B.C. (Zuardi, 2006: 154). Cannabis sativa was used, significantly, for numerous functions, such as analgesic (toothaches), anticonvulsant (rabies), hypnotic, tranquilizers and anaesthetics (Zuardi, 2006: 154). CBD is a popular compound of the cannabis plant, rediscovered in the early 1990's, and found to have incredible healing effects on the body given the endocannabinoid system existing within the human body (Alternative Medicine Handout, n.d). By isolating the CBD molecule, the receptors in the body were engaging their stimulating healing effects in the body without a psychoactive effect (Walderstein, 2010: 37-38; Alternative Medicine Handout, n.d.).

In the 1930s – 1940s there were breakthroughs made around the isolation of parts of the cannabis plant that helped to better understand the effects of the psychoactive agents in the cannabis as well as isolate the non-psychoactive agents such as CBD (Kalant, 2001: 82). Devane et al (cited in Kalant, 2001: 82) noted that cannabinoid receptors themselves do not exist in the brain meaning that there are other "endogenous materials" that are found in the brain (Kalant, 2001: 82). Endogenous materials, or endocannabinoids, refer to the tissue, cells and organisms in the brain and the body would mean better absorption for the CBD to be distributed into the body. There are two different types of receptors in the human brain that interact and work alongside the endocannabinoid system, referred to as CB1 and CB2 receptors. These receptors send messages from the brain to the parts of the body that correspond and relate to the respective CB receptors. For example, if an individual is to ingest a cannabinoid, like cannabis sativa, to help fight depression and increase focus levels, the CB receptors will interact with the endocannabinoid system in the body and target areas, such as the brain (van Rensburg et al, 2020: 192; Alternative Medicine handout, n.d.).

The Alternative Medicine Handout (n.d) describes the Endocannabinoid system (ECS) as being a network of receptors located across the entire body that control vital organs and systems, such as our immune system. Receptors are positioned in parts of the body that impact "memory, appetite, sleep pattern, mood and pain sensation" and these receptors are known as CB1 and CB2. Vital organs, the nervous system and the brain are some of the main areas where these receptors are found. The human body is known to benefit from daily doses of CBDs just as the body, specifically the immune system, benefits from taking vitamin supplements.



Picture 1[5]: An illustration of the endocannabinoid system and CB1 & CB2 receptors in the body

Kalant (2001: 84) discusses the numerous pharmacological effects for the different strains of cannabis that impact the body as a whole. He lists a number of different parts of the body that are affected, namely, the central nervous system, neuromuscular system, cardiovascular, respiratory, ocular and immune system. The idea behind this being that "pain perception is diminished and pain tolerance [is] increased" significantly (Kalant, 2001: 84). The article further describes the chronic effects and cautions that chronic or non-therapeutic (prolonged daily use) can lead to "adverse effects" in the use of cannabinoids (Kalant, 2001: 85). Kalant

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[5] https://www.cbdretailtrends.com/what-is-the-endocannabinoid-system/

(2001: 89) state that the use of cannabis for medicinal purposes have proved effective for pain relief and relaxing muscle spasms but note that there is more research required with double blind studies to definitely show the benefits of medicinal usage.

Much more recently, the sale, distribution and advertisement of CBD products has catapulted within modern society. There are a wide range of products now available and many of these products can be ordered online and delivered to one's doorstep. There are many online sites for these stores where one is able to buy products through the website and have them delivered to the address of your choosing, such as, Takealot, Dis-Chem and Clicks. These are also stores (Clicks, Dis-Chem and CBD Shop) where you are able to walk into the store and buy products off the shelf. It should be noted, however, that there are still restrictions around how much an individual can order and at what strength the CBD product contains. There is evidence that suggests that in order for the CBD component to be activated, there needs to be some THC (< 1mg). This, however, is not to say that all products require trace amounts of THC in order for the product to activate and work. There are some products that are very clearly pure CBD and have zero trace amounts of THC. South African Health Products Regulatory Authority (SAHPRA) has indicated that there are regulations that need to be adhered to regarding the sale and use of cannabidiols in South Africa. There are legal restrictions on the amount of THC that can be included in a product and official channels that need to be followed if there is commercial sale of a product (van Rensburg et al, 2020: 192).

1.4 Chronic illness

Lubkin and Larsen (2006: 4) state that in 2004 there was an estimated "133 million individuals" living with at least one chronic disease and it was projected that by 2020, 50% of the US American population, roughly 157 million, would suffer from at least one chronic disease.

Chronic illness continues indefinitely and comes to form part of the individual's identity. No matter the illness or whether or not they have been treated, have gone into remission, or they are forever trapped with the ghost of the chronic illness. Chronic illness entails prolonged, lifelong treatment, with no cure, and affects the social and physical aspects of an affected persons everyday life. A chronic disease "can appear suddenly or through an insidious process" have periodic flare ups or go into remission with "an absence of symptoms for a long period of time" (Lubkin & Larsen, 2006: 4). It is important to understand that while the diagnosis of a disease may be the same, each person is affected differently.

In order to understand chronic disease and its place in society, it is important to understand and acknowledge the trajectory of disease throughout human history. Armelagos and Barnes (1999: 187-188) refer to three epidemiological transitions throughout the history of mankind, encapsulating the evolution of disease in human populations. The transitions highlight a move from infectious or parasitic diseases to what are referred to as 'man-made' chronic degenerative diseases. The transitions highlight the changes in disease and illness, their treatments and cures, and explain at how diseases have spread and manifested themselves in host bodies up until recently.

The second transition, which is relevant to this study, occurred around the time of the first industrial revolution and is described by Armelagos and Barnes (1999:196-197) as being a shift to chronic degenerative diseases. Such diseases were prominent in developed countries and have become increasingly visible in developing nations, hence there is a strong link to economic and class brackets. The disease aetiologies that exist within this transition are a result of the adaptation that human societies have created in order to develop or continue to occupy the spaces that they are in. The first transition focused on the dietary changes in the move from a largely nomadic lifestyle to the population settling in one area and adapting the environment around them to meet their basic needs. With the rise of the industrial era, diets changed, the working life shifted, urbanisation, technology and medicine advanced.

People began working long hours and in smaller spaces with less time spent exercising or moving around. These changes, alongside the dietary changes, saw the hormonal changes within the body increased by the additives in the food. The second transition was characterised with a decline in mortality rates and an increase in the average life expectancy (McKeown, 2009).

The second epidemiological transition included changes in environment which encompasses political, cultural and socioeconomic changes. With an improved standard of living conditions, improved sanitation, better nutrition and overall increased hygiene levels, life expectancy rates increased, and child mortality subsequently decreased. Livestock and agricultural practices were modified to ensure a better quality of life and reduced the rates of infection and disease (Armelagos & Barnes, 1999; McKeown, 2009).

Medical advancements, in combination with socio-economic developments, led to improved health and reduction in communicable diseases, specifically in relation to the creation and use of vaccines (Armelagos & Barnes, 1999: 196 - 197). Although biomedicine has had immense research and development this does not mean that it is without risk and side effects which can take a toll on the body. An example of this is individuals who are diagnosed with diabetes and are given medication to manage the diabetes symptoms, but often have other side effects that may affect the functioning of organs such as the liver and kidneys. It also calls into question the effectiveness of the medication for the individual.

There are a number of chronic illnesses and diseases that affect human beings today. These range from asthma, glaucoma, various types of cancers, epilepsy, multiple sclerosis, anxiety, depression, chronic pain, rheumatism, arthritis, Endometriosis and PCOS. Many of these can be maintained through use of CBD oil and other products (Herer, 1995: 46-49; Kogan & Mechoulan, 2007: 415-423; Uritis, Gress, Charipova, Habib and Lee, 2020). Herer (1995: 47) highlights that until 1937 "all corn plasters, mustard plasters, muscle ointments, and fibrosis poultices were made from cannabis extracts". People who suffer with rheumatism or arthritis have been known to apply cannabis as a topical oil or ointment. This is important to note because the use of hemp leaves or flower tops were vital when it came to dealing with the pain from arthritis. In terms of CBD, which activates parts of the brain that deal with pain receptors, instead of simply blocking the pain for a few hours as does the average pain killer, CBD goes to the source and to the part of the brain that controls the pain receptors and helps to alleviate the pain from there. (Manzanares, et al. (2006); Dr Oz Show, 2018).

It becomes apparent that CBD has a strong effect on pain management and alleviation, which is a central part of the experience of chronic illness. This dissertation, as such, focuses on two specific chronic degenerative diseases, namely, PCOS and endometriosis, which will be further explored below.

1.4.1 Polycystic Ovarian Syndrome (PCOS)

Polycystic Ovarian Syndrome (PCOS) is a "heterogenous endocrine disorder that affects about 1 in 15 women worldwide" with an endocrine disruption which sees excessive androgen secretion (Norman et al, 2007: 685; Kitzinger and Willmot, 2002: 349; Holbrey and Coulson, 2013: 1 and Maya et al, 2018: 1). It has been argued that PCOS is perhaps a "complex prehistoric genetic trait" that dates back thousands of years (Maya et al, 2018: 2-3). This suggests that there could be some evolutionary reasoning behind the presence of PCOS, but it is unclear how this fits with more recent literature that speaks to the hormone imbalances.

PCOS negatively affects the body with the constant changes in hormone levels, resulting in mood swings, excessive hair growth and cystic acne (Maya et al, 2018: 3). The general experience of PCOS is generally influenced by the weight gain, painful periods and hormone imbalances that impact anxiety levels, energy levels and increase mood swings.

PCOS is one of the most common endocrinopathy disorders in which it is known to affect 6 – 10% of reproductive age women and yet it is evidently the least understood disorder. Diagnosis of PCOS is incredibly difficult due to symptoms varying, presenting differently and the severity in individuals (Kitzinger & Willmott, 2002: 350; Holbrey & Coulson, 2013: 2). Due to a plethora of reasons, it is "estimated that 20% of women may be affected but do not display all the symptoms, seek medical assistance or be accurately diagnosed" (Kitzinger & Willmott, 2002: 350).

Maya, et al. (2018: 1 – 10) note that PCOS can often be a symptomatic issue in pre-adolescent and menopausal women and potentially even in men. It is noted that those with PCOS are at a higher risk of developing endometrial and ovarian cancers (Maya et al, 2018: 1-2). These are inclusive of "mood disturbance and psychosexual dysfunction" (Maya et al, 2018: 1-2). It is important to note that in order to gain the most accurate understanding of the prevalence of PCOS, there need to be extensive studies done that unpack the epidemiologic underpinnings of an unselected or unbiased population (Maya et al, 2018: 2-3).

PCOS affects females at reproductive age and causes hyperandrogenism and oligo-anovulation (Norman et al, 2007: 686). These are defined as follows:

- *Hyperandogenism*: high levels of androgens in females. Symptoms of this include: acne, inflamed skin, hair loss, increased body/ facial hair and infrequent/ absent menstrual cycle.
- *Oligo-anovulation*: lack of ovulation/ absent ovulation (Kitzinger and Willmott, 2002: 349-350).

Both of these symptoms of PCOS have "substantial psychological, social and economic consequences" (Norman et al, 2007: 685). Women with PCOS are susceptible to metabolic syndrome which is a "cluster of conditions that increase the risk of heart disease, stroke and diabetes" (Norman et al, 2007: 685; Holbrey and Coulson, 2013: 1-2; Maya et al, 2018: 2). Two main definitions exist:

1. 1990 (NIH) criteria require the presence of chronic anovulation and clinical or biochemical signs of hyperandrogenism
2. 2003 (Rotterdam) criteria require the presence of two or more of: chronic anovulation, clinical or biochemical signs of hyperandrogenism and polycystic ovaries (inclusion of PCO – recognise 4 phenotypes) Norman et al, 2007: 685-686).

Other features that mimic PCOS must be eliminated or excluded before diagnosis (Norman et al, 2007: 685-686). Heterogenous condition (conditions that have several aetiologies (root causes)) and individuals may not present all of the symptoms (Kitzinger & Willmott, 2002: 349-350).

Time and technological advances have shifted focus from the ovaries to the hypothalamic – pituitary axis, to some primary defects of insulin activity as the primary pathological cause (Norman et al, 2007: 685). There is further compelling evidence which indicates that all three sources interact which suggest the same pathological outcome (Norman et al, 2007: 685-686). Kitzinger and Willmott (2002: 349-350) note that PCOS was first reported by Stein and Leventhal (1935) as a syndrome with ovaries bilaterally affected by cysts, accompanied by menstrual abnormalities, hirsutism and obesity (Kitzinger, 2002: 349-350; Holbrey & Coulson, 2013: 1-2; Maya et al, 2018: 2).

Women with PCOS will generally experience one or more of the following in vary degrees:

- Infertility
- Higher risk of miscarriage
- Hirsutism (excess hair growth)
- Amenorrhea (irregular or absent menstrual cycle)
- Menorrhagia (excessive bleeding)
- Anovulation
- Weight gain/ obesity
- Acne
- Androgenic alopecia
- Insulin resistance
- Excessive androgen production

(Norman et al, 2007: 685; Kitzinger & Willmott, 2002: 349-350; Holbrey & Coulson, 2013: 1-2; Maya et al, 2018: 2).

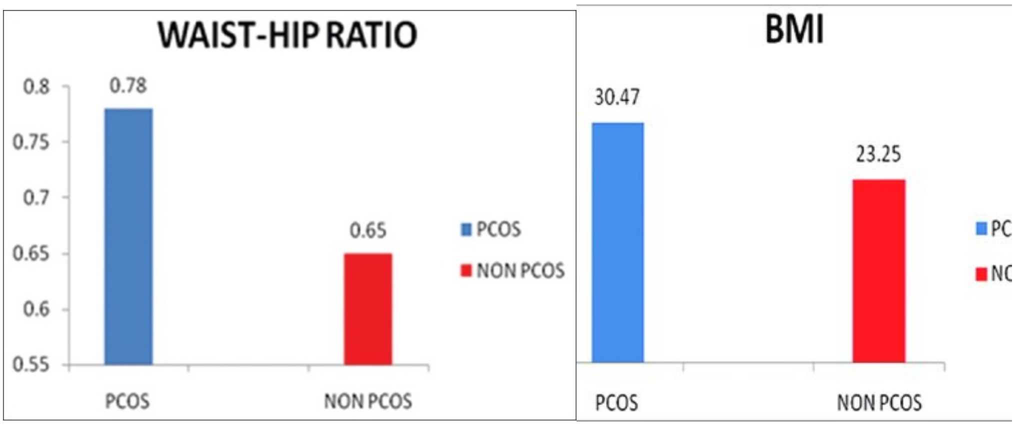

Figure 1.1[6] – Two graphs illustrating BMI levels and waist-hip ratios between women diagnosed with PCOS and those without

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[6] **Assessment of the prevalence of polycystic ovary syndrome among the college students: A case–control study from Kolkata**
Chatterjee Madhumati, Bandyopadhyay Soma Aditya 2020 | Volume: 25 | Issue Number: 1 | Page: 28-32

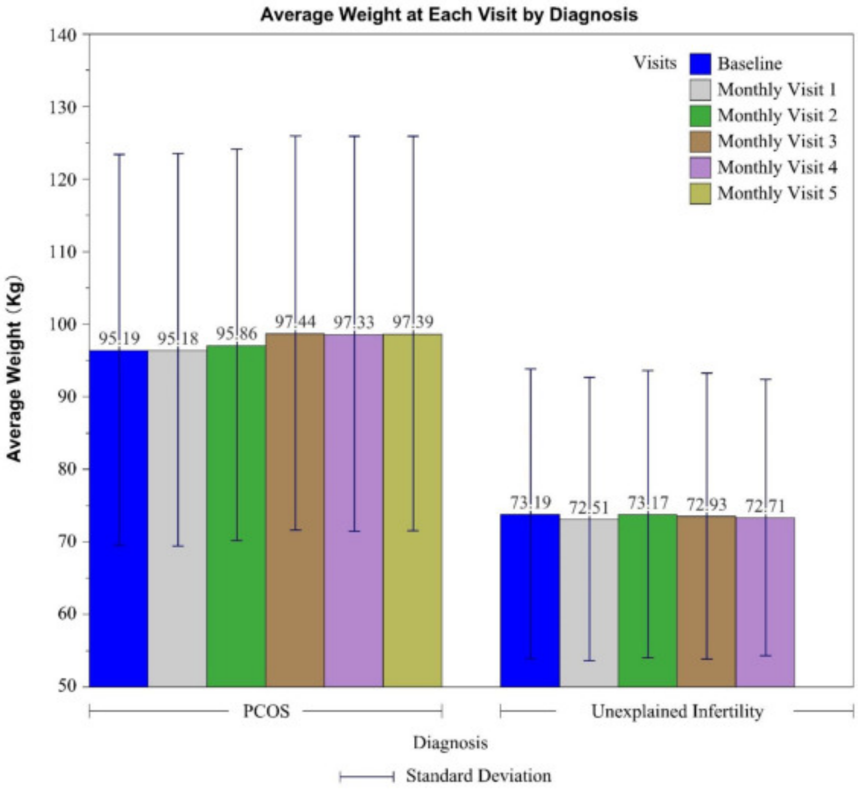

Figure 1.2[7]: Average weight at each visit for women with PCOS and those with unexplained infertility

In order for a diagnosis to be made, a doctor will have to conduct a pelvic ultrasound scan which identifies 10 or more cysts 2-8 mm in diameter (Kizinger & Willmott, 2002: 350). For there to be a PCOS diagnosis, a patient would need to have the presence of at least two of the following:

- Numerous, small ovarian cysts
- Menstrual cycle disruptions
- Clinical signs of hyperandrogenism (Kitzinger & Willmott, 2002: 350).

Interestingly, some women may present with polycystic ovaries but have no other symptoms; i.e.: “Polycystic ovaries without the syndrome” (Holbrey & Coulson, 2013: 2).

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[7] Vitek, W., Sun, F., Hoeger, K.M., Santoro, N., Diamond, M.P., Zhang, H., Legro, R.S., Coutifaris, C., Christman, G., Robinson, R. and Brzyski, R., 2020. Short-term weight change and live birth among women with unexplained infertility and polycystic ovary syndrome undergoing ovulation induction. *Fertility and sterility*, *114*(5), pp.1032-1039.

1.4.2 Endometriosis

Endometriosis is a chronic condition whose origin “remains obscure” affecting an individual both physically and emotionally (Cox et al, 2003: 62; Moradi et al, 2014: 1; Rea et al, 2020: 1). This gynaecological condition affects approximately 10% of women of reproductive age and, is known to be the leading cause of infertility in women over the age of 25 (Cox et al, 2003: 63). Endometriosis is where endometrial cells which, in normal circumstances, line the uterus, then begin growing outside the uterus wall and move beyond the pelvic cavity across all ethnic and social groups (Cox et al, 2003: 63; Moradi et al, 2014: 1). The endometrial tissue responds to the reproductive hormone cycles causing inflammation, irritation, and eventually scarring (Cox et al, 2003: 63).

Endometriosis is characterised by the pain it is associated with which is often noted as “quite debilitating” in its nature (Cox et al, 2003: 63). Endometriosis is often not diagnosed immediately, with reports that it can, on average, take up to 9.28 years to diagnose, as noted in North America, but is estimated to be between 4 – 10 years worldwide (Cox et al, 2003: 63; Moradi et al, 2014: 1 – 5; Rea et al, 2020: 2). This delay in diagnosis was partly attributed to biomedical doctor’s attitudes and not taking “complaints of symptoms such as period pain seriously” and a lack of awareness amongst women (Cox et al, 2003: 63; Moradi et al, 2014: 2). For many women, the delay in diagnosis was further attributed to how the severe pain that they were feeling was normalised by societal and personal rationalisation that pain is a part of womanhood and that it was just unfortunate that the pain they were experiencing was more severe than other women (Hadfield et al, (1996); Denny et al, (2007); Overton et al, (2010); Moradi et al, 2014: 5).

Many women in Moradi et al's (2014) study identified having experienced pain, heavy or irregular bleeding, and "progressive pain during menstrual and non-menstrual phases" in different areas of the body (Moradi et al, 2014: 5). These are often earmarked as being pain in the lower back, lower abdomen area, bowel, bladder and leg pain (Moradi et al, 2014: 4). Many women speak to the fatigue, bloating, diarrhoea and nausea that accompanies endometriosis (Moradi et al, 2014: 4). The authors touch on the lack of information around endometriosis and the lack of awareness parallels the notion that many people are not aware of what endometriosis is prior to their diagnosis (Moradi et al, 2014: 6). It was felt that at the time of diagnosis, many women felt discouraged by the lack of information that was given to them and many noted that doctor's themselves had very little information on the subject and this, in turn, contributed to delayed diagnosis (Moradi et al, 2014: 6).

Moradi et al's (2014: 6) article goes further by exploring the impact of endometriosis on women's lives and noted that many women agreed that it has had a significant impact for them. The physical and psychological impact that this disease has had on their lives speaks specifically to the symptoms, treatments side-effects and the physical body changes and appearance. Other impacts include relationships, education, employment, finances and lifestyle (Moradi et al 2014: 6). These bodily changes and changes in appearance were said to affect women, especially those who had small children, who felt that they were not adequately able to care for their children how they would like to. The bodily changes also impact how women feel with the uncontrollable weight gain, increased body hair and scars from multiple surgeries (Moradi et al, 2014: 6). The psychological aspect was explored and illustrated through women expressing feelings of anger, depression, weakness, feeling disappointed and helpless with their diagnosis, and often feeling like a burden to others (Moradi et al, 2014: 6). Many touched on how this has impacted their identity by way of affecting their sexuality and leaving many women feeling as though they are not really women given their infertility or inability to still have sex and be a mother or a good mother (Moradi, et al, 2014: 7). It becomes clear that endometriosis is a debilitating disease and negatively impacts the way women are able to live their daily lives when they are plagued with such a chronic condition (Moradi et al, 2014: 7-10).

The pain that women living with endometriosis deal with has been advocated in disability spaces where feminist action is making strides into officially classifying endometriosis as a disability (Jones, 2016: 1-2). This would allow for women, specifically in the global north, to receive the care and benefits that they require given their inability to perform daily tasks as “normal”. Jones (2016: 1) notes that disability scholars have critiqued biomedical models in their definitions and classifications of disability and note that due to the social constructions surrounding disability, chronic illness and pain are largely ignored and not written about. Jones (2016: 2) highlights that feminist disability theories focus on a variety of illnesses and disease, but endometriosis is often omitted due to being classified as a fertility issue. Feminist disability theories do not consider any other experiences such as “immunological, gastrointestinal disorders, chemical sensitivities and allergies” which are just a few of the other issues that women with endometriosis face (Jones, 2016: 2).

The loss of economic productivity during this time also has a negative impact on women’s livelihood’s with approximately “one week per month, and 12 weeks of productivity in one year” lost to the debilitating pain experienced by women with endometriosis (Gupta, 2014 cited in Jones, 2016: 2). Jones (2016: 2) describes endometriosis as “a major source of impairment, disability and discrimination” due to the social costs and loss of productivity that goes hand in hand with endometriosis.

Available treatment methods for endometriosis focus on dealing with symptoms of endometriosis, not the root cause. Biomedical treatments include being put on the contraceptive pill to regulate hormonal imbalances, and have a ‘regular’ menstrual cycle. Given that there is no known cure for endometriosis, biomedical treatments generally consist of treating symptomatic issues, rather than treating the cause. This treatment method is short-term and pain management becomes a main focus of treatment, and this can be a lengthy process. CBD and other alternative methods are last resorts to manage their symptoms and pain.

Confirmation for Endometriosis can only be conducted through a laparoscopic surgery which is invasive and not always successful if there is endometrium tissue that needs to be cauterised (Schrager et al, 2013: 107). Endometrial tissue can attach itself to neighbouring organs in close proximity to the uterus and without an exploration during the laparoscopic surgery, this tissue may not always be found and removed (Schrager et al, 2013: 107). Ultrasound scans and internal scans are not able to pick up growth of tissue, which is why a laparoscopic surgery is the biomedical intervention that gynaecologists opt for when Endometriosis is suspected (Schrager et al, 2013: 107).

A clear definition of Endometriosis remains controversial in medical disciplines as diverse as internal medicine, gynaecology and psychiatry. The cause remains unknown, but studies suggest that there is a strong genetic component affected by gestational environment, lifestyle factors, or both (Norman et al, 2007: 686).

1.5 Healthism and alternative concepts of health

According to Crawford (1980: 365) healthism, is a form of medicalisation that views the health problem in a particular way and focuses on “health consciousness and movements”. It considers health at the level of the individual as opposed to looking only at the disease or the illness. The healthism movement was particularly dominant in the middle class, whilst the working class still struggled to shorten their working weeks and do away with child labour and poor working conditions that affected their health. There were two note-worthy movements; the first being “holistic health” and the second being “self-care” (Crawford, 1980: 366). It is interesting to note that the holistic movement focused on alternative methods rather than that of the strictly, what would be defined as being ‘Western medicine’, thus including all different forms of health care. These would have included, homeopathy, reflexology, and acupuncture, to name a few.

Barry and Yuill (2002: 47) broadly define alternative medicine as being a practice that falls “outside the boundaries of conventional medicine” reinforcing the idea that there is no one true definition of what alternative medicine is and how we, as a society, define a practice or tradition as being alternative. There are, however, various factors that can be identified as an aid to health. Alternative medicine focuses not only the body, but on the mind and spirit as well. West (1993, as cited in Barry & Yuill, 2002: 47) acknowledge the categories as being “physical, psychological and paranormal” aligning itself to the notion of alternative medicine being holistic.

The notion of holistic health and well-being is a topic discussed by my research participants in this study. Holistic health was an important topic to explore as it provides an insight into participants daily lives, highlighting that maintaining their health is more than just medical (biomedical and alternative) methods and incorporates a wider scope of understanding health. Chapter two speaks to the literature that exists on PCOS, Endometriosis, medicinal uses of cannabis and CBD as a means of treatment. The literature and discussions are rooted in theoretical frameworks, in this study, Interpretative Phenomenological Analysis (IPA), Structural Violence and Feminist Anthropology.

From this overview of existing literature, is chapter three where research methods and designs are explored. Objectives for this research study are included in this chapter which creates a foundation for further exploration of the data that was collected.

Chapter four deals with the participant data that was collected and investigates a variety of themes that emerged from these conversations and observations.

Chapter five is an autoethnographic chapter detailing my own personal experiences with PCOS and Endometriosis and a self-exploration of CBD to maintain and manage my own symptoms.

Chapter six examines the perspectives of CBD practitioners and their view on CBD as an alternative to biomedicine and the experiences and encounters that they have had with patients and people coming to them for assistance and information relating to CBD usage.

The analysis of the data collected and discussed makes up chapter seven, leaving chapter eight to conclude the study conducted and provide recommendations for further studies.

Chapter Two: Literature Review and Theoretical Framework

2.1 An Overview of Literature

This chapter provides an overview on the literature surrounding Polycystic Ovarian Syndrome, endometriosis, and CBD studies. The literature review gives an idea of the existing literature on these topics in order to highlight the literature that is still much needed on these topics. The chapter further includes the theoretical frameworks and analytical lenses that were used in the duration of this research study.

As a result of European colonisation, biomedicine (Western medicine) has become the dominant and (socially) acceptable standard of healthcare around the world, with pharmaceutical companies taking charge of the manufacture and distribution of medication (Barry, 2006; Levine, 2012). All other forms of medicine, (CAM[8]) reside below it (Barry, 2006; Levine, 2012; Street and Rautenbach, 2016). To understand treatment of a sickness, one must understand causation, and diagnosis of a sickness. Foster and Anderson (1978: 50) explain two basic principles of the causes of sickness, namely personalistic (supernatural; e.g., witches, ghosts or ancestral spirits) and naturalistic (ethnomedical; i.e., concerning poor health and imbalance within the body). This study is concerned with the naturalistic principle of sickness and how CBD plays a role in this.

Anthropological studies into chronic illness have focused largely on the HIV and AIDS pandemic, tuberculosis, and cancers and these have generally been from a socio-political, economic and cultural standpoint (Ramin, 2007; Taylor, 2007; Singer, 2012; Dein, 2005; Lumlerdkij et al, 2018). Anthropological research into reproductive health has largely been related to fertility rites rather than a focus on disease (Dudgeon & Inhorn, 2004). Tomlinson et

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[8] Other forms of medicine are categorized into Complementary and Alternate Medicine (CAM): e.g. traditional healing, faith healing, herbal treatments, and dentistry.

al (2017: 17) note that qualitative studies around women living with PCOS and Endometriosis remains “underreported compared with quantitative studies” which speaks to a missing body of knowledge and experience that cannot be assessed or discussed through a quantitative study. If interventions are to be created, then qualitative information needs to be generated for a holistic and deeper understanding of the disease in question.

Heurtin-Roberts and Becker (1993: 281) note that biomedicine has created a dichotomy between chronic and acute illnesses. The distinguishing factor here is that chronic illnesses are generally without a cure. The few existing anthropological studies on chronic health look at the role of “chronicity in experiencing an illness” signifying a delay behind sociological and psychological studies which consider how society plays a role in a person’s illness and subsequent well-being (Heurtin-Roberts and Becker, 1993: 281). Furthermore, there is a need to “deepen our understanding of the relationship between illness and culture” and this study aims to bridge this gap (Heurtin-Roberts and Becker, 1993: 283).

There has recently been a surge in popularity around the use of both cannabis oil and cannabidiol. Kalant (2001: 80) cautions that it is not a new product or a new drug. It has a long history in other fields outside of medicine, for example clothing and rope. The geographical location as well as the climate of the area where the cannabis plant is growing impacts the pharmaceutical properties the plant possesses. Pre-19th century, the cannabis plant is thought to have started growing in the Asian, Middle East and Northern African regions and was used for medicinal, religious and social practices (Kalant, 2001: 80). Zuardi (2006: 153) mentions the use of cannabis as medicine “before the Christian era in Asia[9]” aiding in the

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[9] The Christian Era in Asia is said to have taken place over the period of between the 1st and 16th century

understanding that there has been a use for cannabis and its offshoots, in ways other than recreational, for a multitude of years.

The headline of a News24 article in 2018 reads "*Cannabis: Nature's remedy?*" exposing a genuine question on everyone's mind. Many people are curious to know what the benefits are and whether it is worth the time to explore alternative methods to maintain their health. Given the recent surge in popularity, there have been a number of articles speaking to the medical benefits of medical marijuana and how it can be effectively used in treating illnesses (Murnion, 2015; Bone & Seddon, 2016; Arnold, Nation & McGregor, 2020). Through an exploration of the existing data on the medicinal properties of CBD, the question remains: how have people been using these products to maintain their health and manage their illnesses? Numerous studies have been conducted to show the usefulness of medicinal cannabis and are used as an illustration to argue why CBD oil should be legalised and how it is helpful in maintaining a person's health (see Levinsohn et al, 2020; Urtis et al, 2020; Gardiner et al, 2019; Tanco et al, 2019).

Cannabidiol is only one of the many cannabinoids that are found in the cannabis plant. It is through the use of this colloquial term that many are misinformed on what CBD actually compromises of. Another contributing factor to this common miscommunication is owing to fact that the CBD property of the cannabis plant is a very recent discovery having come to light in the 1940s (Corroon & Phillips, 2018: 152).

Corroon and Phillips (2018: 152) highlight that in its pre-clinical studies, CBD proved to be beneficial in the treatment of a variety of different conditions and disorders. These range from "seizure disorders, psychotic symptoms, anxiety," chronic pain, and certain types of cancer amongst other disorders (Corroon and Phillips, 2018: 152). Despite the benefits of CBD as a non-psychoactive drug, it is noted that in the USA, the Federal courts still deem CBD to fall under the cannabis plant, making it illegal (Corroon & Phillips, 2018: 153). The differences between CBD and THC parallels with the Food and Drug Administration (FDA) laws regarding medicinal use of cannabis and reinforces the notion that the benefits of cannabinoid usage outweigh its illegality (Corroon & Phillips, 2018: 153 – 154).

It is argued that Corroon & Phillips' (2018) article is the first of its kind with a focus on people who are using CBD for medical purposes. This runs in direct contrast to many of the studies that do exist, highlighting cannabis use, but specifically focused on THC or recreational use (Corroon & Phillips, 2018: 156-157).

Studies on CBD are relatively new and there has been a strong reliance on quantitative research. Studies[10] that are qualitative in nature are few and far between. The World Health Organisation (2018: 15) in their critical review on CBD notes that studies conducted on male mice after 14 days of administering 10mg/kg of THC and 3mg/kg of CBD found that a tolerance to the effect of THC was present, whilst a presence of CBD was not found. This suggests that CBD does not have a psychoactive element to it. In human studies, it is noted that "controlled, human studies regarding the potential physical dependence effects of cannabidiol have not been reported" suggesting that there is not enough evidence to conclusively report that CBD is effective or not effective (WHO, 2018: 15).

De Souza Crippa et al's (2004: 422) study with male participants, in Brazil and used placebo tablets as well as CBD tablets and the authors highlighted differences in response to anxiety

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[10] Leo, A., et al. (2016). Cannabidiol and epilepsy: Rationale and therapeutic potential. *Pharmacological research,* **107**, pp. 85-92.

and stress levels during the experiment. There were significant differences between the two control groups, with participants that were given CBD capsules having reduced levels of anxiety and higher levels of mental sedation. De Souza Crippa et al (2004: 422) also stated that given the limitations of the study, the findings must be looked at as preliminary because it does not provide a well-rounded case for the use of CBD. This is because the sample size was too small to make a strong conclusion.

Interestingly enough, Pfizer has just entered the cannabis space after a $6 billion acquisition (Barfield, 2022). The article states that Pfizer had announced their plans to buy Arena Pharmaceuticals Incorporated which is a bioscience firm involved in cannabinoid research and development in the United States of America (Barfield, 2022). This has the potential to revolutionise the cannabinoid space and alter the current legal issues that are present all over the world.

Cannabis has been identified as a wild plant the grew throughout Africa in pre-colonial times in many places such as "Egypt, Ethiopia, Zambia, Zimbabwe, Lesotho… and South Africa" (Kunene & Blumenthal, 2015: 7). This gives us an idea of the geographic range that cannabis would have been found (Kunene & Blumenthal, 2015: 7-8) and it is said to have been used in ritual practice. With particular reference to South Africa, the psychoactive compounds in cannabis are said to have been used by the Khoi San for "psychoactive relief during their nocturnal healing dances" (Kunene & Blumenthal, 2015: 7-8).

Clarke and Merlin (2013: 248) noted that prior to the 1650s, there was little use for cannabis in Africa. Clarke and Merlin (2013: 248) go on to show that post-introduction, traditional healers in Africa began, in about 1652, to use it to assist women who were going through childbirth and women who were trying to induce an abortion. In one particular case, a Sotho herbalist noted that he would get his patient "stupefied by smoking much dagga" allowing for pain relief (Clarke et al, 2013: 248). This provides some insight into the medicinal uses in South Africa at this time (Clarke et al, 2013: 248). The use of the plant changed as it spread through Africa as its medicinal uses were discovered. Clarke et al (2013: 248) highlight the different medicinal uses that cannabis was used for, including, "malaria, black water fever, blood poisoning, anthrax and dysentery" (Clarke et al, 2013: 248).

The patriarchal norms in biomedicine have resulted in the medical needs of women being ignored. This is particularly so when it comes to female reproductive health issues which often go mis or non-diagnosed (O'Connell et al, 2018). Feminist awareness of, or activism in relation to PCOS is also very limited but growing. PCOS is mentioned mainly in the context of women seeking sex-change treatment (Kitzinger & Willmott, 2002: 350; McKellar, 2016). PCOS has been a topic of discussion since the 1980's but discussions were misguided and focused on female gendered norms, such as appearance and lacked feminist awareness. In the last 30 years, these narratives have only shifted slightly to included the important conversations around structural violence and feminist awareness in the biomedical health system.

Feminist discourse and theory addresses the patriarchal nature of biomedical practices and highlights how many female reproductive health issues, Polycystic Ovarian Syndrome included, are understudied health issue where female reproductive health issues are dismissed and ignored in biomedical discussions (O'Connell and Zampas, 2018; Jackson, 2019). Feminist theory highlights the gender inequality when it comes to the type of health care provided. Women are often not taken seriously in their medical challenges in comparison to men. There is not a lot known about PCOS and as a result, the diagnostic process can be a tedious and time-consuming process (Ellerman, 2012; Samardzic, 2021).

Research suggests that there is a connection between patients who have been diagnosed with PCOS and how this is linked to Briquet's disorder or somatisation disorder, manic depression, mental retardation, and schizophrenia (Kitzinger & Willmott, 2002: 351). Research[11] further suggests that women feel considerable amounts of distress and anxiety relating to their symptoms and failure to conform to idealised "feminine" norms of appearances and behaviour. Women are vilified if they are to speak out in different forms of activism when it comes to female reproductive health issues. This ends up creating more problems than it does solutions given the already patriarchal system and norms in place. It is said that there is currently no existing feminist work that addresses the experiences of women with PCOS which Kitzinger & Willmott (2018: 352) try to address in their work.

This level of stigmatism and "taboo" conversations about female reproductive health issues leads to more complications, shame, and secrecy around the symptoms that not very many women will feel comfortable sharing these experiences. As a result of this "secrecy" it becomes harder to find women who have experienced or are currently dealing with the same issues and experiencing the same symptoms that another woman with PCOS is facing (Kitzinger & Willmott, 2002: 352; Rowlands et al, 2016; Samardzic, 2021).

Traditionally women have suffered in silence with concerns around their reproductive health issues. These issues are considered to be private matters and have not been spoken about openly. Problems relating to reproductive health tend to be silenced and these women that are

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[11] Kitzinger & Willmott (2018: 351); Holbrey & Caulson (2013: 4 – 9); Lipton et al (2006)

suffering are made to feel inadequate and inferior to other women. This often leads to other issues, such as domestic violence in romantic partnerships (Rahebi et al, 2019).

Kitzinger and Willmott (2002: 352) qualitatively explored these experiences from a feminist perspective, with a recurring theme of "freakishness" appearing. The core question or critique dealt with the social constructions around feminism and womanhood, particularly what it really means to be "normal" (Kitzinger & Willmott, 2002: 352-353). The authors focus on the misogynistic theories that exist around PCOS and female appearances, like the normalised Western norms of a slim bodied women with thick hair on their head and smooth hairless skin elsewhere linking back to the patriarchal norms that already exist in the biomedical system.

Drawing on indigenous and alternative medical systems in India, Pathak (2020: 49) speaks of the medical semantics and political ecology of health. These systems are used "alongside and in compatibility with biomedicine, and people regularly mix therapeutic options" (Halliburton, 2004 as cited by Pathak, 2020: 49). The framework of the indigenous systems in question are rooted in the "ecological model of health" and that the body needs to be in sync and balanced within its environment (Pathak, 2020: 49). The body is seen to be responsive to the social, political, and economic spheres around it and these affect the body in a variety of ways (Pathak, 2020: 49).

The balancing of traditional and modern ways of living is a topic of concern in relation to gender norms (Pathak, 2020: 54). Specifically, some of the critiques given surrounded women having a double workload; within and outside of the home. With the economic liberalisation and the movement towards a more contemporary (modern) society, it highlights the day-to-day stresses that women are exposed (Pathak, 2020: 52-54). These were not critiques regarding the women working outside of the home, but rather sympathising that the household responsibilities often fall to the women in addition to their working life (Pathak, 2020: 54). Stress is noted as an increasingly more common attribute to the prevalence of PCOS, specifically in India (Pathak, 2020: 53-54). There are similar discussions that take place in other countries, either in the region (Pakistan, Sri Lanka, Malaysia) and other parts of the world (Pathak, 2020: 54).

It is a common trend to see the expectations of women in relationships in India, where women are expected to come home from their 8–12-hour jobs and still be able to produce a hearty meal for their families (Pathak, 2020: 55-56). While stress, diet, and exercise have been touched on multiple times as contributing factors to PCOS, diet within the household is also explored from the male perspective. Pathak (2020: 56) highlights a conversation held with a male participant explaining that there are still expectations of women, by their mothers-in-law, to provide a healthy meal for their husbands. A healthy meal is considered to be a balanced meal with lots of vegetables, starch and protein and is not just a salad. If the expectation of the mother-in-law is not met then they will insist that their son is not being taken care of appropriately and as a result, families are not eating as healthily and well as they could be (Pathak, 2020: 56). There is still an expectation that women must "fulfil the conventional roles of being good daughters-in-law, wives, and mothers" (Pathak, 2020: 56).

O'Connell and Zampas (2018: 116) note the gender stereotyping that exists within the biomedical system which is attributed to social and cultural constructions of men and women based on their "different physical, biological and sexual and social functions" (O'Connell and Zampas, 2018: 116). Gender stereotypes are often formed in an attempt to "exert control over women" that impacts human rights and access to healthcare (UNHRC, 2016; O'Connell et al, 2018: 116).

Such stereotyping can be harmful to a women's mental, physical and individual well-being (O'Connell et al, 2018: 117). Women's access and experiences within the healthcare system are often marginalised in aspects such as, informed consent due to the patriarchal nature of the medical system (O'Connell and Zampas, 2018: 118-120; Jackson, 2019).

Simonaitis (1974) discusses different States in the USA that required written consent from a woman's spouse consenting to their wives having their tubes tied or for them to get a hysterectomy. While Simantis (1974) wrote about this nearly five decades ago, not much has changed for women's bodily autonomy and rights and in the USA. This highlights the lack of agency that women have had when it comes to their own reproductive health. Interestingly enough, the same does not go for men who are able to get a vasectomy without written consent from their partner and are not even obligated to inform their spouse.

Cox et al (2003) explored women's experiences with the laparoscopy surgery for endometriosis but the findings resulted in obtaining more experiences about endometriosis in general. A common, shared experience across participants was that of women turning to alternative or complementary treatments, used adjunct to medication and treatments prescribed by biomedical doctors (Cox et al, 2003: 62; Nalliah et al, 2008).

Moradi et al (2014: 5) explained that women often refrained from talking about the issues that they were facing with their friends, family and partners for fear of being misunderstood or facing people that did not have accurate knowledge of the disease (Moradi et al, 2014: 5).

Cox et al (2003: 64) noted, through their study, the daily struggles that women living with endometriosis face. A commonality amongst women interviewed spoke at length to "doctor shopping" in an attempt to find a doctor who would be "sympathetic to their plight" (Cox et al, 2003: 64). Endometriosis affects every aspect of life, from career, relationships and plans to conceive later on in life. Many women focused on their journey, recounting the multiple surgeries they have had done and illustrate the horrors that endometriosis entails. Talks of "removing ovaries, hysterectomies, 'unsticking' of organs, partial bladder removal, bowel restrictions" and other types of operations have been common experiences, often proving successful only for a few short months (Cox et al, 2003: 64). Endometriosis, in most of these cases, returned (Cox et al, 2003: 64). Some women even reported having been told by their doctors to have a baby at an early age, regardless of whether they are in the position to do so, or may not even want children, thus reinforcing the negative impact that medical doctors can have on a women's health care and mental health (Moradi et al, 2014: 5).

Moradi et al (2014: 5) argued that while experiences with biomedical healthcare professionals were noted as either positive or negative, negative experiences were more visible. The negative experiences focused on biomedical doctors and healthcare professionals[12] not taking their concerns seriously, being dismissive and finding it difficult to identify a specialist that was well-versed in dealing with endometriosis (Moradi et al, 2014: 5). Some of the positives that some of the women reported was that some of the doctors that they had were helpful, sympathetic, and took the time to talk with their patients (Moradi et al, 2014: 5).

This chronic condition is a rollercoaster of emotional and physical pain. Relationships have been identified as having broken down due to the effects of the disease in the everyday lives of

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[12] Disclaimer: All healthcare professionals and doctors refer to biomedical doctors.

women (Cox et al, 2003: 64 - 65). A number of women in Cox et al's (2003) study noted having taken control of this disease and keeping detailed accounts of what was happening to their bodies and presenting this to their doctors, in an attempt to get the care they needed. Through this assertiveness and taking control, many women have shifted to alternative methods of treatment (Cox et al, 2003: 65). Many discussed wanting to get off all biomedical/ pharmaceutical medication and move towards natural therapies, diet, or lifestyle changes but maintain good pain management.

Cox et al (2003: 66) identified that some of the alternative treatments that women were involved in, or had tried included:

- Acupuncture
- Naturopathy
- Meditation
- Diet
- Lymphatic drainage
- Massage
- Chinese herbal medicine
- Dandelion tea
- Reiki
- Healing touch
- Aromatherapy.

It was noted that while these alternative therapies were helpful, they were often unsustainable and some became "prohibitively expensive" (Cox et al, 2003: 66; Moradi, 2014: 5; Rea et al, 2020: 4-5).

Moradi et al's (2014: 4) article explored two themes, namely, experiences living with endometriosis and the impact of endometriosis on women's lives, respectively. These two themes explore a larger narrative of symptoms, diagnosis, treatment, experience with health care professionals, lack of information, physical and psychological impacts and areas of everyday life that is impacted (Moradi et al, 2014: 4 – 10; Morotti et al, 2017). Of these women, a large percentage also have abnormal insulin activity, along with a multitude of health complications inclusive of "menstrual dysfunction, infertility, hirsutism, acne, obesity and metabolic syndrome… increased risk of type 2 diabetes and risk of cardiovascular disease." (Norman et al, 2007: 685; Kitzinger and Willmot, 2002: 349; Holbrey and Coulson, 2013: 1 and Maya et al, 2018: 1).

Despite distinct differences between these two diseases, they have very similar impacts on the lives of women that suffer from these diseases. More studies and research needs to be conducted on CBD functioning as an alternative treatment for PCOS and endometriosis.

2.1.1 The Endocannabinoid system in the human body

Cannabinoids are a "class of compounds that are plant-derived" from cannabis sativa and are made naturally in the body (O'Llenecia et al, 2019: 1). The endogenous cannabinoids or endocannabinoids are "fatty acid derivatives with wide distribution in the human body" (O'Llenecia et al, 2019: 1). Endocannabinoids are localised and can be rapidly inactivated by THC. CB1 and CB2 receptors are found on the adrenal glands, ovaries, endometrium and testes (O'Llenecia, 2019: 3 – 4) and CB1 receptors have been found "intracellularly on the mitochondrial outer membrane" while CB2 is usually associated with the immune system but have been found in ovarian follicles (O'Llenecia, 2019: 3).

The endocannabinoid system has "a strong impact on fertility, reproduction and endocrine function" and is closely associated with the female reproductive processes (O'Llenecia, 2019: 4-5).

2.2 Theoretical Framework

Overview of chapter: This research has a strong qualitative focus and has sought to explore and understand, in-depth, the experiences of women living with endometriosis and PCOS, and their journey navigating the healthcare system, alternative treatments and their lives. As such, the theoretical frameworks applied to this research must ensure that these experiences are encapsulated in the analysis and presentation of data. The three main theoretical frameworks that I believe work best with the data collected in this study, are: Interpretative Phenomenological Analysis, Structural Violence and a Feminist Anthropology approach.

2.2.1 Interpretative Phenomenological Analysis (IPA)

Smith and Osborn (2007: 53) note that IPA is used to "explore in detail how participants are making sense of their personal and social worlds" and this is explored through particular experiences and events for the participants (Smith et al, 2007: 53). The use of IPA in a research study is to attempt to experience and explore the personal account from the perspective of the participant. IPA is noted to be complicated by the researcher's own perceptions and interpretation of the data collected during interviews becomes a two-stage process, known as "a double hermeneutic" where the participants is trying to make sense of their experience and their world, while the researcher is trying to make sense of the participant going through this process (Smith & Osborn, 2007: 53; Eatough & Smith, 2017: 1).

IPA takes on an in-depth qualitative analysis and works well with a small sample group who are answering semi-structured or structured interviews (Smith & Osborn, 2007: 53 – 55). IPA allows for the researcher to ask broad questions and interpret the response given by a participant, including the questions where participants are vague and elusive (Smith & Osborn, 2007: 53 – 54).

IPA works well with my research study as it has allowed for an analysis to take place based on the broad, open-ended questions that were posed to the research participants and collect and interpret the rich data. Given the small sample size, this has allowed for in-depth interviews where participants were able to explore their experiences and provide deeper insight to the researcher into their own perspective and conceptions of their world around them. it further allowed for the examination of how people make sense of their major life experiences. This is an important part of the research study which speaks directly to the core principles of IPA and allows the researcher to effectively analyse the thick, rich data collected during the research study. Furthermore, IPA allows for the exploration of specific experiences of phenomena, in this case endometriosis and PCOS and CBD use, to be done on its own terms.

Mertens (1998, cited in Avramidis & Smith, 1999: 28) portrays the constructivist worldview whereby “realities are multiple and socially constructed” and influenced by culture and history. This is important in this research study, as it indicates how participants have been socialised which, in turn, relates to how they seek medical advice and intervention.

Following on, it was my aim to use the Interpretative Phenomenological Analysis (IPA) to elicit “rich, detailed and first-person accounts of experiences and phenomena under investigation” (Pietkiewicz and Smith, 2012: 5). This is significant in my research as it speaks to the individual experiences of people in maintaining their health. Phenomenology is best described as a research approach “concerned with the question of how individuals make sense of the world around them and how [the researcher] should bracket out preconceptions in his or her grasp of that world” (Bryman, 2012: 30). The theoretical underpinnings of IPA point to research participants that are selected purposively which, “allows one to find a defined group for whom the research problem has relevance and personal significance” (Pietkiewicz & Smith, 2012: 4).

IPA as a theoretical framework for this study is important as it explores the personal experiences of women that are living with reproductive health issues. IPA was employed throughout my data collection as it gave a deeper insight into the experiences of these women dealing with their reproductive health issues and rights and gave meaning to the daily challenges that these women face. It was important, as the researcher, not to overshadow the data collection (specifically the interviews) with my own conceptions of healthcare and experiences that I had in my own personal capacity, which is why the use of the open-ended, semi-structured interview questions were used and participants were encouraged to go into as much depth as they were comfortable with and were left to explore the experiences and feelings evoked through these experiences.

2.2.2 Structural Violence

Theories around structural violence, particularly in reference to the biomedical healthcare system helped investigate the personal critiques of biomedicine in relation to endometriosis and PCOS as outlined in my research objectives.

Structural violence originated from the works of Johan Galtung (1969) in his work on peace studies. Structural Violence is defined as being "social arrangements that put individuals and populations in harm's way" (Farmer et al, 2006: 1686). The social arrangements are structural due to their connection to the political and economic organisation and they are violent from the harm or injury that they cause people. It describes social structures that stop individuals, groups and societies from reaching their full potential. According to Ho (2007), Galtung referred to sexism as an example of structural violence, which serves to impair fundamental human needs. In this case this related to women and their access to fair and decent healthcare.

The dominant culture of biomedicine is patriarchal and the biomedical system is designed by men, for men. There is an imbalance between men and women's health, in terms of access, care and treatment (UNHRC, 2016; Jackson, 2019; Monticelli, 2019). In considering the patriarchal and misogynistic frameworks in the current biomedical system, it is clear to see that women are challenged daily with the structural violence that is the healthcare system. Structural violence definitions speak to arrangements that put populations in harm's way, and this is true of women in the biomedical healthcare system by its trivialisation of women when considering their reproductive health rights. The patriarchal culture, and thus nature, of biomedicine and its processes justify and legitimise the unequal distribution of power between women and men's healthcare, which can be seen to be echoed in general in Western society. Christie and Wessells (2008: 1956) argue that the hierarchical structures that exist in society, for the purposes of my study the biomedical system, are "mutually reinforcing, highly resistant to change, and operate at the individual level of analysis". Christie and Wessells (2008: 1956) further stress that the cultural scripts guide the behaviour of those within the culture, and these are internalised, becoming shared narratives for new members of the culture, and which then supports the status quo. This can be seen in how even female doctors treat female patients with the same dismissive manner that male doctors do.

Access to appropriate healthcare for women is a challenge on its own, but when seeing a doctor, women are not expecting to be dismissed and have their concerns trivialised. The experiences of women in these spaces highlights the deeply entrenched notion of women being classed as "hysterical" when they raise concerns about their health and more often than not, being dismissed by a doctor or specialist claiming that their pain and concerns about their health are invalid and not cause for concern.

Structural violence is fundamental in this research study as it has been a common theme throughout the interviews that I have conducted, where women have expressed issues with doctors, specialists and other healthcare practitioners that have dismissed them for one reason or another. It also speaks to the participants experience with having to meet with a variety of doctors in their quest to find a doctor that they feel comfortable with and is able to provide the appropriate healthcare that is necessary and needed for these women.

2.2.3 Feminist Anthropology

Using Feminist Anthropology to unpack women's experiences and personal critiques of biomedicine was similar in effect to that of theories around Structural Violence. They provide alternative perspectives on how to view and critique the biomedical system.

Feminist anthropology is a subfield of anthropology that emerged as "a reaction to a perceived androcentric bias within the discipline" and advocated for gender equality in ethnography and theory (Geller & Stockett, 2006; Ferguson, 2017; Dominguez et al, 2022: 1). There are three waves of feminist anthropology, yet each does not start at the end of the previous wave. They are known to have many crossovers and linkages in the theories that have emerged from the different waves.

The first wave of feminist anthropology (1850 – 1920) focused on the inclusion of women's voices in ethnography as it was noted that at the time, all ethnographic data that involved women was from the male perspective being discussed with/ by a male anthropologist (Geller & Stockett, 2006; Dominguez et al, 2022: 1). The second wave (1920 – 1980) shifted to an academic space where terminology surrounding sex and gender was adjusted (Dominguez et al, 2022: 1). Previously, the terms were used interchangeably, where gender referred to both male and female and the existing social constructions around the relationship between the two. Different societies and cultures will have different definitions of what gender means to their specific culture and so, feminist anthropology aimed to move away from broad generalisations (Geller & Stockett, 2006; Dominguez et al, 2022: 1). The second wave further attempted to break down social constructions of dichotomies that exist in perceived gender norms. Examples of this include "male/ female and work/ home" reinforcing the gender stereotypes that men are at work and women are to stay at home with the children. Dominguez et al (2022: 1) highlights that Marxist theories about social relations is what made research about "women, reproduction, and production popular" and further note that many scholars that focus on this particular school of thought are concerned with gender and the way in which it relates to class, changes in modes of production and social relations of power (Dominguez et al, 2022: 1).

Contemporary anthropology constitutes the third wave (1980 – present) and is no longer solely focused on "gender asymmetry". Rather, it has shifted the focus to other categories that include: race, class, ethnicity, religion and so on (Geller & Stockett, 2006; Dominguez et al, 2022: 1).

The first wave of Feminist anthropology reacted against the dominant narratives of women restricted to marriage, kinship and family. Women's issues were treated as insignificant when compared to men's issues. This led to a "deficient understanding of the human experience" (Geller & Stockett, 2006; Ferguson, 2017; Dominguez et al, 2022: 1). The language that is often used in ethnographic writing has a strong part to play in the ways in which we perceive gender roles and norms. The use of language has the ability to shape worldviews and how we think about gender.

The second wave reacted against "Durkheim's notion of a static system" and the inherent dichotomies (Geller & Stockett, 2006; Ferguson, 2017; Dominguez et al, 2022: 2). Feminist anthropology wants to show that the social system is dynamic. Feminist anthropology criticised cultural feminism noting that it was an essentialist view suggesting a male and female essence which in turn validated traditional roles. It is argued that cultural feminism ignores that oppressive powers under which traditional values were created (Dominguez et al, 2022: 2).

The second wave of feminist anthropology also highlighted issues of Eurocentric values being entrenched in the discipline. It was argued that there are different types of oppression and marginalisation among women (Geller & Stockett, 2006; Ferguson, 2017; Dominguez et al, 2022: 2). White, middle-class women suffer from very different issues that minorities face. McLaurin (2001: 1) notes that even despite critiques of theory and postmodernism, the curriculum that is taught to students, both undergraduate and postgraduate levels, in America "still largely rely upon canonical works" in teaching students. Black feminist anthropology seeks to "deconstruct the institutionalised racism and sexism" that dominates American and European anthropology (McLaurin, 2001: 2).

With the feminist anthropology movement, there was an increase in awareness of women within ethnography and theory. It further challenges enshrined beliefs of male/ female and work/ home. Feminist anthropology is intimately tied to gender and its construction by various societies with interest that examines both women and men (Geller & Stockett, 2006; Ferguson, 2017; Dominguez et al, 2022: 5 – 6).

White, middle-class female anthropologists have been criticised for limiting their efforts to gender issues. The subfield was ignoring social inequalities such as racism and unequal distribution of wealth. Feminist anthropology has been accused of mirroring the situation they were criticising. The field looked at the critique of androcentric bias deriving from men (men studying men) and is argued to often be the case of feminist anthropologists who are women studying women (Dominguez et al, 2022: 6).

Feminist anthropology has, however, allowed women to regain their agency, particularly in the context of their own reproductive health rights. According to Travis et al (2012: 208) feminists have historical had to advocate for their rights to medicine and healthcare. The movement has "challenged patriarchy in medicine" and advocated for female reproductive health rights (Travis et al, 2012: 208). This research and advocacy have also extended to intersecting issues such as socioeconomic, gender and race and despite important critiques, "disparities for women and people of colour persist in both access to and quality of medical care" (Williams & Rucker, 2000; Travis et al, 2012: 208, Dominguez et al, 2022).

Women's voices have been silenced in relation to their own reproductive health and well-being. Feminist theory provides a framework to ensure that women are able to voice their experiences, especially through research done by a woman, and one who has an emic perspective, who shares their experiences. It is also inclusive of the experiences of women-of-colour and highlights the experiences that they have had not just as women, but as black women who are often left out of the mainstream feminist narrative.

Chapter Three: Methods

The following chapter outlines the research methods used to conduct data collection for the research topic. Being a study conducted over two different countries, it was important to employ more than one method of data collection to ensure a well-rounded data set.

The research for this study was conducted both in South Africa and Zimbabwe. The initial expectation for this research was to be able to do the bulk of the interviews in person and partake in observation where possible. Observations took place on Facebook communities that I was already associated with, and in-person observations took place in the areas where CBD was being distributed or sold. The quantitative part of this study was always intended to be an online survey distributed to various online platforms that target women suffering from PCOS and/ or endometriosis and using CBD products to manage and maintain their symptoms. Four of my interviews were conducted in Harare, Zimbabwe. The interview with Casey and George was conducted in person in South Africa. The remaining interviews were conducted via Zoom and WhatsApp.

Through an existing network in Harare that was established due to previous research and personal connections, I had already made various connections and built relationships with people to speak to my research needs. This was an important study to conduct, given the gap in the literature. There has been a lot of research and literature produced on medicinal cannabis, but there is very little produced on cannabidiol (CBD). This is particularly so in the African context, and there were very few articles available on the use of CBD for women who struggle with PCOS and endometriosis. In conducting this research, the main objective was to ascertain if CBD products help women maintain and manage their symptoms. This chapter aims to outline the research design and subsequent data collection process.

The study was a multi-sited in that part of the research was done in Zimbabwe and South Africa. In Zimbabwe (specifically Harare), I am in contact with an existing clinic that provides CBD products to patients with various sicknesses. In South Africa, I have contacted a few retailers and users of CBD products. Both these sites offered a rich set of data and insight into the use of CBD and its application and usefulness. Zimbabwe and South Africa both still maintain certain restrictions on CBD despite having legalised the use of cannabis and CBD for medicinal purposes. Heyman and Smart (1991, cited in Thomas and Galemba, 2013: 211) note that the relationship between the state and illegal practices are "important terrain for studying the complexity of power and common sense", while others note distinctions between the social and political construction of legitimacy (Thomas and Galemba, 2013: 211). In relation to this study, this is fitting given the investigation into whether or not women are benefitting from CBD usage rather than using cannabis (with THC) for recreational purposes.

The sites of study extended to the internet through observations of public online support groups and the dissemination of an online.

My study relied heavily on social interactions, which, according to Babbie (2013: 100) are an important part of qualitative data collection. In anthropology, social interactions are a key form of primary data collection. Whilst I may not have had a high, usable survey response, I have made strong connections with my interview participants and the nature of our social interactions have been regular, deep, and meaningful which elicited rich ethnographic information to work with.

This study further employed an autoethnographic perspective to illustrate a deeper understanding of the daily effects of PCOS and Endometriosis. Autoethnography is "a research method that uses the personal experiences to describe and interpret cultural texts, experiences, beliefs and practices" and hold the notion that all personal experiences are ingrained in political and social expectations and allow researchers to engage in deep self-reflection to investigate "the intersections between self and social life" (Adams et al, 2017). The use of an autoethnographic study was important to offer a different, personal perspective to this research study.

3.1 Sampling and Data Collection Techniques

Purposive sampling was used as I am looking specifically for women who use CBD to assist in their treatment of PCOS and/ or endometriosis. Purposive sampling is a type of non-probability sampling that is useful when one aims to study a particular "cultural domain with knowledgeable experts within" (Tongco, 2007: 147). Purpose sampling is extremely useful for qualitative studies where categories of interest are specific. Babbie (2013: 129) states that the use of purposive sampling result in sample populations which provide clarity, insight, and understanding of experiences that people have. Purposive sampling does not select participants who are representative of an entire population, but rather the focus is on finding a unique population of participants who will be able to provide deeper, meaningful insight into the phenomena under study (Babbie, 2013: 129). There were two populations that were sampled for this study. The first, and main population sample, required the main criteria for selection to include women diagnosed with endometriosis and/ or PCOS and who are using, or have used, CBD oils in their healthcare regime (e.g., for pain relief). The second sample population is made up of people had specific knowledge and expertise of CBD as practitioners and/ or producers. Snowball sampling was another sampling method that was implemented in this research where conversations with participants led to additional participants getting in contact and wanting to participate in the research study. Parker et al (2019: 3) define snowball sampling as a popular method of sampling, particularly in qualitative research, that is characterised through the use of networking and referrals. The researcher starts out with a small sample group and through interviews and discussions with these participants, there is a potential for these participants to recommend other potential participants for the study (Parker et al, 2019: 3). By utilising the links within certain social circles, researchers are able to establish and create participatory links and as participants talk and get comfortable with the researcher, these other potential participants are mentioned as possible participants for the study and this process continues throughout the data collection process until the sample size, or data collected is saturated with the necessary information (Parker et al, 2019: 3).

Observations of interactions and discussions on relevant public Facebook pages were carried out and this aided in being able to offer insight into how women are finding out about the use of CBD and the support offered within these spaces through testimonies. Observation is an important tool for anthropologists. Whilst participant observation is often the go-to technique in anthropology, I opted for observation in an online setting, without interaction. I did not hide my presence, nor my reasons, which were two-fold[13], for being in these groups. I was, therefore, able to observe posts and commentary about member's lived experiences and gain a sense of the general experiences' women had in relation to healthcare for endometriosis and PCOS, and whether or not CBD was useful for those who used it.

Giglietto et al (2012: 149) note that "Facebook privacy settings deeply affects the extent and the type of data actually accessible to researchers" which protects individual privacy, but only to a certain point. During my data collection period, there were a few Facebook groups that I actively joined, both as a person with shared lived experiences, but also as a researcher. In this instance, when joining a group, if questions were required as a pre-requisite to join, I

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[13] These being as someone who is diagnosed with endometriosis and later as a researcher.

made sure to be clear that while my participation in the group was for personal reasons, it was also for an educational purpose.

In the groups where my research survey was disseminated, the group administrators or moderators (gatekeepers) were approached prior to request permission. All observed information obtained from these groups focused more on comments posted and shared, and no private information was used, but was rather anecdotal.

Semi-structured interviews were the most appropriate data collection technique for this particular study. Semi-structured interviews allow for the participant to share their experiences and offer their own understanding of how an alternative treatment may have suited their own well-being far better than that of biomedicine. Interviews are an extremely important tool for data collection and places information gleaned into broader context of experiences (Babbie, 2013: 345; Nuemann, 2014: 347). All of my participants were provided with an informed consent document which was signed by myself (as the researcher) and my participant. The use of semi-structured interviews allowed for deeper engagement with the topic and the discussion was led by my participant rather than a set of strict questions (Babbie 2013: 345' Neumann, 2014: 347). The significance of using semi-structured interviews was that the responses were open-ended, and I could then pursue information on more pertinent topics as they came up in conversation. The flexibility of the interview style also allowed for the conversation's atmosphere to be comfortable and relaxed. Semi-structured interviews further allowed for discussion around the different types of CBD oil available and used, and different methods of application. Two medical professionals who work with CBD were interviewed, seven research participants were interviews and five participants were interviewed for their insights on production and knowledge around CBD. Interviews were audio recorded and later transcribed with full permission by my participants.

These methods, used in conjunction with each other, enabled me to collect useful, meaningful, and detailed data for my study.

3.2 Collecting data

Given the change in the atmosphere and nature of everyday life due to the COVID-19 pandemic, I struggled with the initial plans that I had for my data collection. This period of data collection came with many challenges as I struggled my way through trying to find and gain access to women who had been using CBD products specifically for endometriosis and PCOS. What I did find to be interesting was the fact that in Zimbabwe, there was what seemed like an extremely long and drawn-out period where I struggled to find people who met my requirements and were willing to talk with me. This was interesting to me as it once again reinforced that there was a gap, not only in the literature, but in other areas such as education around alternative methods of healing. It was really only once I was able to speak to some of the practitioners that I was able to start moving into the interviewing process in Zimbabwe. From a South African front, I found it quite difficult again to find women that met the requirements, however, snowball sampling was useful in this regard.

Data collection was done through various different platforms due to the Coronavirus pandemic. Face-to-face interviews were able to take place in Zimbabwe with all health and safety protocols adhered to. Zoom interviews and WhatsApp video calls were another platform that was used in the data collection process.

Despite not receiving as many useable surveys as I initially set out to, I was able to interview six women and I believe that I was able to collect rich data from these interviews. These interviews were of thick description and this is something that is an integral part of the

Anthropology field. Anthropology has a much stronger focus and reliance on qualitative data and this goal was achieved through in-depth, thick descriptive interviews.

The study consisted of a mixed methods approach to data collection. The total number of participants in this study was 11 and there were 8 survey questionnaires that were completed. Of the 11 participants, 6 were women that have either been diagnosed with PCOS or endometriosis or both and are currently using or have used CBD products in an effort to manage their symptoms. The remaining 5 participants were individuals interviewed for the insight and knowledge around CBD usage, production and distribution.

3.3 Goals of research

Question: What is the role and impact of CBD use in patients living with endometriosis and PCOS?

Hypothesis: CBD is a strong contender as an alternative choice of treatment for endometriosis/ PCOS

When I started this research study, during its conception, the main objective was to explore the experiences of women living with endometriosis and/ PCOS and their use of CBD products. As the data collection part of the research process moved forward, and as conversations and observations took place around the topic, the focus shifted slightly to look more closely at the experiences that women living endometriosis and/ or PCOS had with their relative biomedical healthcare systems, which then led to their choice of alternative treatments. This was because much of the conversations were around how women were treated by their biomedical practitioners. The use and application of CBD became a secondary objective, however, my research remained the same, as I was, and am, still very much interested in ascertaining the role and impact of CBD in this group of women.

Objectives:

1. Exploring women's experiences and personal critiques of biomedicine in relation to endometriosis and PCOS;
2. To unpack the different methods of treatment that women living with endometriosis and/ or PCOS have used in maintaining their health;
3. Investigating the reason for women (with PCOS or endometriosis) choosing to use CBD in the management of their health and well-being;
4. Unpacking the role that CBD plays in pain management;
5. To understand the impact of the use of CBD in the everyday management of endometriosis and PCOS;
6. To gain an understanding of CBD from the perspective of a CBD practitioner and/ or producer of CBD.

These objectives are dealt with in detail in the subsequent ethnographic chapters and analysis chapter.

3.4 Ethical and moral considerations

Anthropology Southern Africa and Rhodes University Ethical Standards Committee were consulted at the outset of the study to ensure that data collection and interactions with participants were of a sound ethical and moral nature. The work of medical anthropologists involves complex ethical quandaries, and sometimes the measurement of 'good' and 'bad' practice is not clearly defined (Ecks and Kneuper, 2005). In many instances, ethics is negotiated in relation to the contextual reality the anthropologist finds themselves in. the need for ethical self-reflection has become an important aspect of research, especially when the researcher is part of the community being studies (Anderson, 1996; Ecks and Kneuper, 2005). Whilst, as medical anthropologists, we are engaged in research in the field of health, our studies are strongly tied to the communities in which health systems are situated and ethical concerns become more complex when dealing with people in relation to their health beliefs (Anderson, 1996; Ecks and Kneuper, 2005). Anderson (1996) notes that it is important to be respectful of the people we are working with and their choices in their healthcare. Anthropology Southern African (2005) and Ecks and Kneuper (2005) explain that, as anthropologists, we have an ethical responsibility to our informant, research site, discipline, funders (where applicable), and also importantly to ourselves as researchers. The methods that are used in research to collect data must also be ethically sound. For this study, semi-structured interviews were the main mode of data collection. Informants, prior to the start of the interview had the study explained to them, their role in the study, and their rights as per the Anthropology South Africa (2005) ethical guidelines for research. Informed consent is an important aspect of research and especially so in ethically responsible research. As such, an important part of this was the application of the informed consent document, which keeps both the participant and the research safe (Anthropology Southern Africa, 2005). Participants were allowed to give as much or as little information as they felt comfortable with and could withdraw from the study at any time. The nature of the study involved asking some questions that were personal in nature, and as such being respectful was of the utmost importance. The questions, therefore, were carefully constructed so as to ensure respect and kindness. In addition to this, my informants were made aware that they had the right to stop the interview at any point and to withdraw their information at any time during the study (Anthropology Southern Africa, 2005). It was made clear to my participants that all information would not be shared with any other individual other than the researcher and with the supervisor with no names mentioned.

The ethical considerations for this project were closely evaluated given the deeply personal nature of the interview questions and personal experiences of traumatic events that women are recounting. There were also issues around the legality of CBD products in Zimbabwe specifically that needed to be taken into account. This was a difficult area to navigate as there are clear issues relating to the government structures and what exactly is legal and what is illegal. As a result of this ethical implications, the decision was taken to keep all participants anonymous by assigned pseudonyms and changing the names of places where companies and small businesses may be compromised (Anthropology Southern Africa, 2005). Personal information has not been made public and has been kept in confidence through the application of coding and pseudonyms as per Anthropology Southern Africa (2005) guidelines. It was, however, surprising to me as a researcher, to note how many of my participants did not have any issues being named or addressed by their real names in the study. Ultimately, I have maintained the decision to keep all participants anonymous for their safety and security in having participated in this study.

This study was considered to be low risk and given that it was a multi-sited study, there were concerns around the legal restrictions in both South Africa and Zimbabwe. Ultimately these concerns did not cause any major setbacks or problems for the research. Both sites offered a rich set of data and insight into the world of CBD, its application and usefulness. Given the legal implications, it was important to make a distinction between CBD and THC as the two should not be intertwined.

In conducting ethnomedical research, a challenge is made on the status quo whereby biomedicine is perceived as the norm and 'gold standard' of health (Anderson, 1996; Lock, 2002). Our responsibility, therefore, is to enhance and expand the knowledge of alternative options for treatment of diseases. It is also important to note the cost involved in the ethnomedical system under investigation so that they people we engage with and encourage to use such an alternative source are well informed not only of the benefits of alternate treatments but also of the risks (which may be physical or economic) (Anderson, 1996; Lock, 2002). For this reason, I felt it was especially important to include practitioners and producers of CBD products in order to obtain insight into the cost of the products and the processes involved in creating them. The benefits of this study have been compiling the experiences of these research participants in their journey in using CBD products to maintain their health. The discussions and experiences that came from these participants illustrate the shortcomings of the biomedical health system in offering alternative methods of treatment, as well as a lack of focus on holistic healing for women. Through a feminist critique of this system, it has aided in understanding how current structural violence negatively impacts the access to fair and equal healthcare. By addressing the gap in knowledge and literature, in Africa specifically, there is hope in implementing better systems within the biomedical healthcare system to address these shortfalls.

Ethics is not only what anthropologists' practice in the field, during data collection, but continues well after and into the dissemination of knowledge into the public arena whether it be via publication, presentations, lectures, or thesis writing (Anderson, (1996). It is therefore important for medical anthropologists to not only respect our informants during data collection, but also when writing and speaking about them. In line with this, medical anthropologists have a responsibility to ensure accuracy and honesty in the voices that we bring forward. There is also, Anderson (1996) notes, a responsibility to ensure that a balanced account of the data is presented and that both positive and negative findings be explored and presented and to take account of the variation that exists in a people's experiences. It is also important to note that the information gleaned is limited and difficult to generalise, as it is with this study. I, therefore, acknowledge that as my sample size for my study was small it is difficult to generalise, however, based in the findings it does bare a strong emphasis that further study is needed in this field.

Finally, as a student of anthropology, I also have a responsibility to my discipline, my institution and my peers. The manner in which the study has been approached ensured that I upheld the reputation and dignity of discipline and field, thus ensuring that I conducted myself in a manner that is fitting of an anthropologist. In conducting ethical research I also ensured that my institution and peers remained in good standing with the wider community so as to maintain ties that would enable other researchers to further study the phenomenon of CBD use (Ecks and Kneuper, 2005; Anthropology Southern Africa, 2005).

3.5 Limitations of the study

After identifying this gap in the literature, this study aimed at investigating just how effectively CBD products worked for women in maintaining their health and symptoms on a day-to-day basis. It was incredibly difficult to find women that had been using or had used CBD products specifically for endometriosis and PCOS. When the initial adverts were posted on social media, there seemed to be a flurry of responses, but on further investigation, it became clear that women either did not suffer from endometriosis or PCOS or it was not CBD that they had used or were using but rather THC products, inclusive of recreational purposes. Many of these survey responses had to be discarded as a result, and as such the expected quantitative data was reduced.

The COVID-19 pandemic hit right at the beginning of my Master registration, and this was a significant limitation for the study. The uncertainty of whether the government-imposed lock-down would end, or when it would end created uncertainty around the data collection process.

This eventually did affect the data collection process by not allowing face-to-face interviews to happen in certain instances and created a sort of barrier between myself, as the researcher, and my participants when interviews took place over zoom or WhatsApp. The lack of in-person and face-to-face qualities that are present during semi-structured interviews, had to be expressed through verbal cues and prompts so that I could show my participants that I was present and listening to them in order to get quality detailed, qualitative data from.

The next set of chapters deal specifically with the ethnographic data gleaned from my research. The data has been thematically organised and presented to reflect the previously mentioned objectives of my study. The thematic presentation is organised in such a way that each theme addresses a combination of objectives, rather than a single objective at a time.

My initial aim was to obtain a minimum of 50 responses through the dissemination of a Google Form posted on relevant Facebook groups[14]. Unfortunately, this did not work in practice. I found that it was extremely difficult to find women with these specific issues that had used or were currently using CBD as a means of alternative treatment. This reinforced and reignited the passion that I have for this topic and reminded me that this was all going to contribute to something bigger later on. A few of the responses that I received through the google form (via email) made it seem as though individuals had not read through the instructions or the blurb correctly as I noted that many of the individuals who got in touch with me were using cannabis, not CBD. Some of the women who contacted me did not suffer from endometriosis or PCOS either. Part way through the data collection stage, I did consider changing the wording for the survey questionnaire but opted against it, as I felt that it may change the overall meaning and jeopardise the data already collected. Ultimately, I ended up with very few survey responses that were usable, 8 to be exact, and this was a rather difficult and harsh reality to come to terms

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[14] For example, PCOS Support South Africa

with. I feel disheartened that I was not able to get more information through this platform, which would have contributed to a quantitative analysis, but I have made my peace with knowing that CBD is not a form of treatment for many women at this moment in time.

Assessing the ethical and moral considerations was not a task that was undertaken lightly. It was of high importance to ensure that all participants were taken care of and safe during this process. My own personal experiences on this research topic helped to always keep safety, anonymity and vulnerability close in mind.

Chapter Four: The Experiences of Women Living with Endometriosis and/ or PCOS and CBD use

This research topic is deeply personal to me. Through my own struggles with PCOS and endometriosis, I have taken an interest in studying alternative methods of treatment as I have come to realise that biomedical intervention has not always been the most effective form of treatment for my own issues. This journey has opened my eyes to new and different perspectives of health and wellbeing and perception in relation to these two diseases. The research process has been emotionally taxing as I have witnessed other women falling apart in front of me as they described their own journey while battling these diseases. I would like to state outright that references to my own experiences will be used in this section of the dissertation. All participants have pseudonyms and where references are drawn to my personal experience, this will be labelled "Paige" to differentiate between the participants and myself.

My interviewing process drew on people across ethnic, socio-economic, and age groups. The research was initially intended to investigate the role and impact of cannabidiol (CBD) treatment on women living with endometriosis and Polycystic Ovarian Syndrome (PCOS) but morphed into something much bigger. The narratives that stemmed from interviews and conversations that occurred during the data collection process opened up a much broader discussion into cannabis, medicinal cannabis, and cannabidiols. This expansion also allowed for conversations on the legality of cannabidiol products, patients' journeys of treatment and accessibility to these different products.

In the last decade or so, with the re-emergence of cannabis (and all of its by-products) in treating illnesses and diseases, there has been a shift to more tolerance for it as a form of treatment. While I did not always see a tolerance for the use of medicinal cannabis and CBD products as a method of treatment, it was encouraging to see a surprising level of tolerance and willingness to listen and learn about this alternative treatment. In conjunction with interviewing participants that are affected by PCOS and endometriosis, there were a few discussions with people in my network that fell out of these bounds and initiated conversations that went beyond dealing with daily life living with chronic pain.

The following chapter explores my participants experiences of these chronic illnesses, their biomedical experiences and their journey into the use of CBD products. The survey data was used to highlight similarities between symptoms experienced, the type of CBD products used, and how many people were using a combination of pharmaceutical and CBD products to manage their illness. While this research was predominantly conducted in Zimbabwe, and South Africa, there are a select few (two) who have experienced the health care system in other parts of the world, such as the Netherlands, Scotland, and the United Kingdom.

4.1 Introduction to Participants

4.1.1 Women Living with Endometriosis and/ or PCOS and using or have used CBD

The interview process allowed women to explore and expand on their experiences in the healthcare system, but further to unpack the different methods in which they have been maintaining their health and offering descriptions of the role CBD products have played in their life and in their health management.

Table 1, below, lays out participants who have been diagnosed with either PCOS, endometriosis, or both. They have all had experiences using (currently or in the past) CBD or cannabis products to help maintain their symptoms.

Table 1

Participant	**Age**	**Location**	**Ethnicity**	**Endometriosis/PCOS/Both**	**Interview/Survey**	**CBD/ Biomedical**
Emily	**48**	**Zimbabwe**	**Caucasian**	**Endometriosis**	**Interview**	**Both**
Sophie	**23**	**South Africa**	**Caucasian**	**PCOS** **Endometriosis (suspected)**	**Both**	**Both**
Tendai	**28**	**Zimbabwe/ Netherlands**	**African**	**Endometriosis**	**Interview**	**Both**
Valerie	**30**	**Zimbabwe**	**African**	**Endometriosis**	**Interview**	**Both**
Joyce	**37**	**Zimbabwe**	**African**	**Endometriosis**	**Interview**	**Both**
Casey	**39**	**South Africa**	**Caucasian**	**Endometriosis**	**Interview**	**Both**
Paige	**25**	**Zimbabwe/ South Africa**	**Caucasian**	**Both**	**Interview**	**Both**

Emily

Emily is a white female in her late 40's living in Harare, Zimbabwe. Emily has lived with endometriosis since her early 20's and has been open about the different methods that she has used for treatment over the years. Emily mentioned moving into the alternative treatment sphere about 20 years ago after suffering from a severe case of eczema. Emily is also a fully trained and licensed holistic therapist operating in Harare. Her business is aligned with alternative treatments and production of her own products. There are about 300 products that

Emily has and the vast majority of these are homeopathic products, such as; essential oils, yoni steaming oils, a variety of creams, and bath salts. There is a small section in her shop which is dedicated to the products that have CBD and THC in them. They are separated from the rest of the products with information sheets to explain proper usage and instructions. Emily and I have spoken at length about her CBD products and how this type of treatment, in conjunction with other alternative treatments can help manage symptoms and manage pain experienced with endometriosis and PCOS.

Sophie

Sophie is a 23-year-old white South Africa female living in Cape Town. Sophie owns a business which specialises in CBD products. This business was started after Sophie, who suffers from PCOS, needed to find alternative treatments to manage her symptoms and has tried to move away from a biomedical approach. Sophie suspects that she does have endometriosis but the only way to confirm this diagnosis would be through a surgery, which Sophie has not elected to take part in. Sophie was formally diagnosed with PCOS at age 14 and has been on biomedical treatments for the PCOS to date. Sophie uses CBD oils and CBD pain cream.

Tendai

Tendai is a 28-year-old black Zimbabwean female currently living and working in the Netherlands. Tendai suffers from severe endometriosis and has had multiple medical interventions through multiple visits to different doctors and specialists in Zimbabwe, South Africa, Scotland, the United Kingdom and the Netherlands. These medical interventions were inclusive of multiple surgical procedures to remove the endometriosis, pharmaceutical interventions with various contraceptives tried while attempting to identify one that would work, prescriptions for pain medication and also had to have intravenous drugs administered in extreme cases of pain. Tendai has had an extremely long and exhaustive journey into her pain management and the management of symptoms from both biomedical and alternative treatments. Tendai has been using CBD products such as, oil, gummies, and tea.

Valerie

Valerie is a 30-year-old black Zimbabwean female living in Harare, Zimbabwe. She has spear-headed an NGO in Zimbabwe that is geared towards education and awareness engagement on endometriosis, specifically for young women, in rural areas of Zimbabwe. Valerie was officially diagnosed with endometriosis at the age of 25 but mentioned knowing that something was wrong and trying to access biomedical health care from the age of 23. By the time Valerie had received her formal diagnosis at age 25, she had already had two laparoscopic surgeries. Valerie has been on various forms of biomedical pain killers for over a decade and has been supplementing these treatments with different CBD products. These include oil, gummies, and CBD chocolate.

Joyce

Joyce is a 37-year-old black Zimbabwean female living with endometriosis. Joyce has not actively used CBD as a method of treatment for endometriosis but has reported having used alternative treatments for just over 4 years by using a variety of medicinal herbs, treatments and mix of pharmaceutical medications to manage her symptoms. I have included Joyce in this research study due to uniqueness of her case. Initially Joyce was told that her case of endometriosis was so severe and was diagnosed with pre-cancerous cells before her laparoscopic surgery and that she would never bear children. Through her journey of alternative treatment methods, her endometriosis has in fact been cured through medicinal herbs and she has been able to conceive a beautiful baby boy.

Casey

Casey is a 39-year-old white female residing in Gqeberha (formerly Port Elizabeth) in the Eastern Cape, South Africa. Casey was given a formal diagnosis for her endometriosis at age 32 and has been managing her symptoms and pain actively for the last 6 years. Casey suffers from chronic endometriosis and has, in lockdown, launched a CBD online company. Casey uses a combination of CBD products and pharmaceutical medication for her pain management. Casey noted using CBD edibles, oils and bath bombs to manage her endometriosis symptoms.

Paige

Paige is a 25-year-old white female born in Zimbabwe but currently living in South Africa. Paige has been back and forth between doctors since the age of 14 dealing with a multitude of reproductive health issues. At age 21, Paige had a laparoscopic surgery and endometriosis was found and cauterised. Roughly 18 months later, Paige was formally diagnosed as having PCOS.

4.2 Physical Symptoms and Bodily Changes Experienced by Women Living with Endometriosis and/ or PCOS

I. PCOS

Some of the common symptoms which emerged when interviewing participants about their PCOS experiences were related to very heavy bleeding during their menstrual cycles. Very often there is excessive pain experienced alongside the heavy bleeding. There were also common trends of excessive weight gain, and in turn, excessive hair growth as noted by one of the survey respondents and two interviewed participants.

In tandem with these symptoms, other conditions that were experienced include health issues such as, diabetes, glucose and insulin resistance, low blood sugar, anxiety and depression (Kitzinger & Wilmot, 2002; Maya et al, 2018). Women who have been diagnosed with either PCOS or endometriosis (or both) suffer from hormone imbalances that negatively affect the way in which their body handles day-to-day life. With all of the hormones raging in our bodies, hormonal acne is also a common occurrence.

Participants expressed insecurities around their appearance manifesting from these symptoms.

> *"It is completely life changing. You feel like a ghost of your old self. You feel tired all the time and completely deflated" – Paige*

Three survey respondents and four interviewed participants noted that the excessive weight gain has brought on comments from friends and family members making negative remarks about their appearance which were described, for example, by Tendai as "*snide*". My participants expressed feeling more self-conscious of their bodies and anxious around being in public spaces;

> "*In the space of roughly 4 months, I had gained about 20 odd kilograms without any changes in my diet or daily lifestyle. In fact, I was exercising more than beforehand but was still gaining weight at an exponential rate*" – Paige

Facial hair growth, and excessive hair growth on the abdominal area of the female body are also commonly known issues associated with PCOS. Participants also stated that hair loss on the head is a major factor that plays a role for women. It is often around the time of diagnosis that women have reported having their "*luscious hair"* thinning out over time and struggling to grow their hair, where this was previously not an issue. This also means that making the decision to cut one's hair is no longer a simple, quick, and easy decision to make because one has to think about long it will take for their hair to grown back. That often determines the choice of a trim or a haircut and the length of that haircut.

Cystic acne and adult acne have also been reported as a common symptom for women. Cystic acne presents all over one's face and can be painful and inflamed during a menstrual cycle. Sophie and two survey respondents mentioned this symptom as a part of their experience with PCOS.

Picture 2[15]: Cystic acne from the hormonal imbalances in women with PCOS

Pain, mood changes and exhaustion are also commonly experienced because of PCOS. The pain and exhaustion is accompanied by what feels like full body inflammation. Full body inflammation has been described as being painful in all joints and, to an extent, the experience of severe nerve pain. Paige, Emily, Sophie, and Casey, all of whom have both endometriosis and PCOS, noted bloating as one of the main symptoms and feeling "*heavy*" in everyday tasks

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[15] https://ndnr.com/womens-health/mt-everest-a-case-of-cystic-acne/

that seem to be more strenuous and tedious than for the average person. This is also something that was briefly discussed in the survey questionnaire, where a participant noted that with their heavy periods, they further experienced a lot of pain, mood instability and inability to perform certain tasks.

Heavy bleeding and irregular periods[16] makes life all the more unbearable at times for women with PCOS. My participants have detailed their painful experiences with me and often describe the pain as being unbearable because there seems as though there is nothing that can provide relief in those moments. The pain is debilitating, and it is often to perform even the most basic of tasks. The contraceptive pill is often prescribed as a method against the irregularity of periods, by regulating hormones and thus the menstrual cycle. Women who do not suffer from either PCOS or endometriosis are often able to account for their cycle[17] without having to put too much thought behind it. This is not the case for those with PCOS. Despite being on the pill, as many as 4 survey respondents and 6 participants noted that there are often months where a period is missed or continues for longer than usual.

> *"So, when I got my first period, I think I had it for like a month, and very heavy, heavy period and then it stopped for like two or three months. And then I had it for like a three-month period and it was really bad. So, we were like, okay, you know what, let's just go to a gynae [gynaecologist] and see what's going on. Also, I was going through like hormonal changes for acne and things like that were popping up. So, I just decided to go check. I never assumed anything I was quite young, so I didn't think about it. I'm in extreme pain, I was in a lot of pain. I physically could not function. So, I've always ever since puberty, I've struggled with weight gain. So, I've had multiple diabetes tests*

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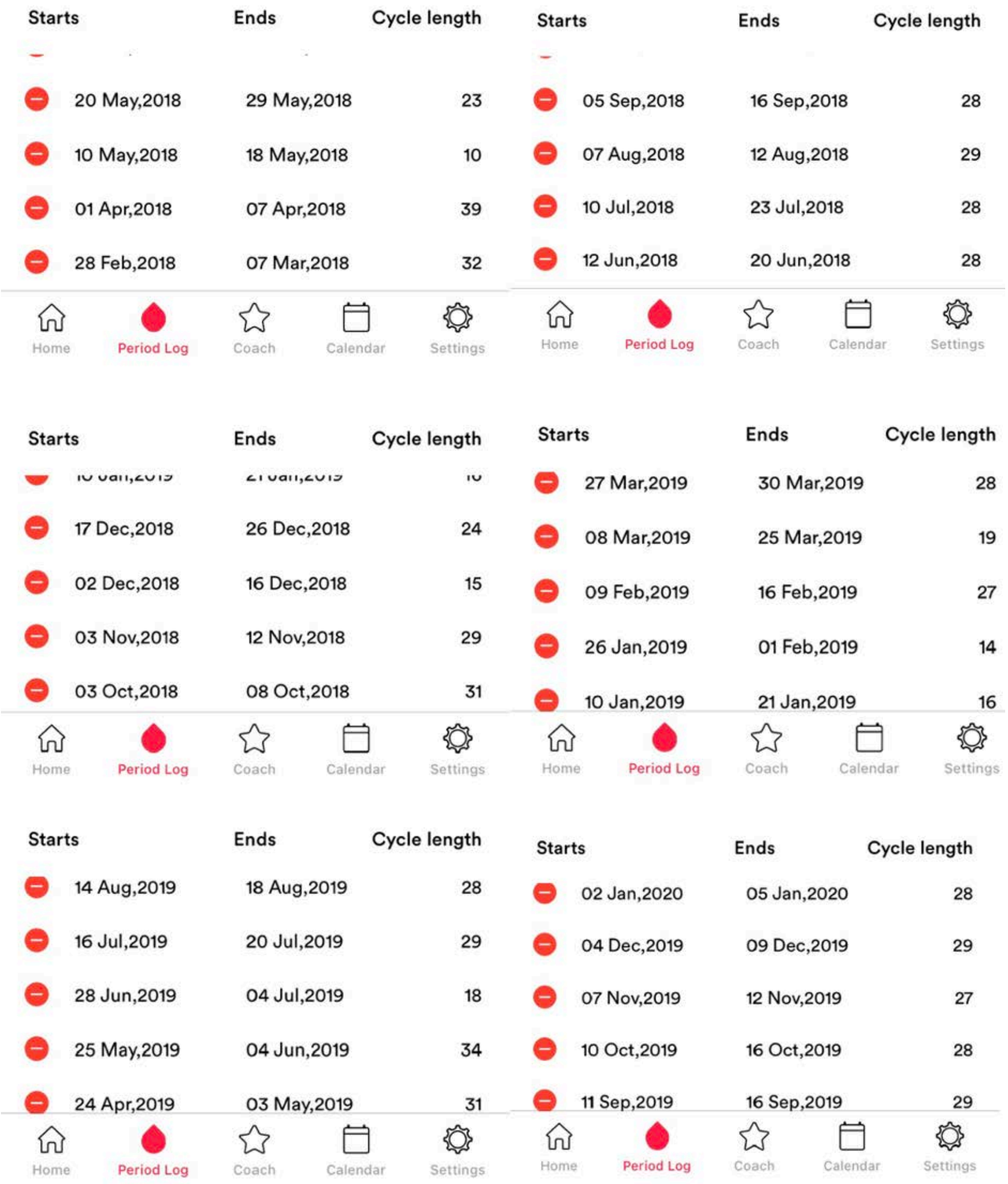
[16] Irregular periods can mean something different for different women. An irregular period can be anything from missing a cycle and not bleeding at all, to bleeding constantly throughout a month, and sometimes even longer.

[17] This refers, in contrast, to the discussion earlier regarding irregular periods. Women that do not have irregular periods are able to keep track of their cycle and are often fully aware of when they are due to start their cycle.

and multiple glucose things and whatnot. And they've come to the conclusion that it's insulin resistance, and there's nothing wrong. So, my blood sugars are fine." – Sophie



Starts	Ends	Cycle length
20 May,2018	29 May,2018	23
10 May,2018	18 May,2018	10
01 Apr,2018	07 Apr,2018	39
28 Feb,2018	07 Mar,2018	32

Starts	Ends	Cycle length
05 Sep,2018	16 Sep,2018	28
07 Aug,2018	12 Aug,2018	29
10 Jul,2018	23 Jul,2018	28
12 Jun,2018	20 Jun,2018	28

Starts	Ends	Cycle length
17 Dec,2018	26 Dec,2018	24
02 Dec,2018	16 Dec,2018	15
03 Nov,2018	12 Nov,2018	29
03 Oct,2018	08 Oct,2018	31

Starts	Ends	Cycle length
27 Mar,2019	30 Mar,2019	28
08 Mar,2019	25 Mar,2019	19
09 Feb,2019	16 Feb,2019	27
26 Jan,2019	01 Feb,2019	14
10 Jan,2019	21 Jan,2019	16

Starts	Ends	Cycle length
14 Aug,2019	18 Aug,2019	28
16 Jul,2019	20 Jul,2019	29
28 Jun,2019	04 Jul,2019	18
25 May,2019	04 Jun,2019	34
24 Apr,2019	03 May,2019	31

Starts	Ends	Cycle length
02 Jan,2020	05 Jan,2020	28
04 Dec,2019	09 Dec,2019	29
07 Nov,2019	12 Nov,2019	27
10 Oct,2019	16 Oct,2019	28
11 Sep,2019	16 Sep,2019	29

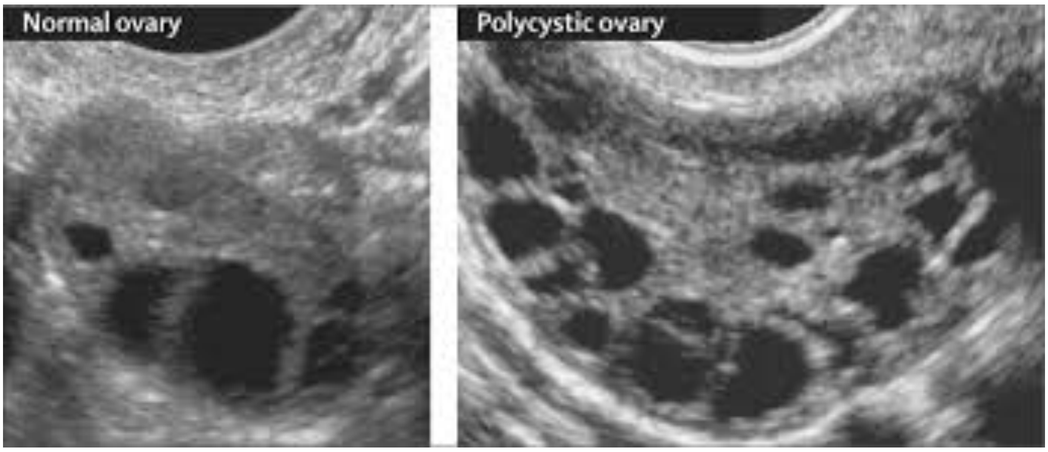
Picture 3: Cycle logs from 2018 – 2020 from Paige showing the length of some of the monthly cycles. The average length of a menstrual cycle is 28 days.

The top two images show a very irregular cycle length whilst being on the Mirena (an IUD inserted in November 2017) which was prescribed in an effort to manage the growth of the endometriosis. Information from the doctor while discussing the Mirena included that some women do not bleed during their time on this IUD while others have a light flow but not as severe or as heavy a flow as prior to inserting the IUD. Paige had the complete opposite experience. After the insertion in December 2017, the next two months consisted of light bleeding every day. The first two images show that while some of the cycle lengths look short, there are months, like May 2018 where Paige bled from 10 May to 18 May 2018 and then again from 20 May to 29 May 2018. This is not a normal response and was an incredibly draining experience. Performing everyday tasks became a chore and finding the energy to go to classes and complete coursework was a tedious task.

From images 5 and 6, Paige had the IUD removed in the June/ July break from University. During interviews, Joyce and Sophie both recall having an IUD inserted. Joyce had issues with the IUD constantly moving and falling out, resulting in her having it removed permanently. Sophie, however, mentioned it negatively impacted her weight, much like the contraceptive pill did. The contraceptive pill was prescribed after the diagnosis of PCOS was formally given and there were concerns around Paige being pre-diabetic. From these images, you can see that the cycle is regulating itself back to what is considered a “normal” cycle of 28 days, but it is important to note that the pain that accompanies the cycle was not impacted at all. Often, doctors claim that the contraceptive pill will help with acne, mood instability, help with a lighter flow and reduce pain but this has not been the experience for Paige.

Despite the medical intervention of the contraceptive pill, two survey respondents and five participants noted that with PCOS, there is often also mood instability. Through the conversations with my participants, it also became clear that the fluctuating hormonal changes that women with PCOS experience are not relegated to the time of one’s period, but is something that women have to manage at all times. These changes include hormone levels, mood and physical body changes. This has been described as a frustrating part of the disease, especially when a woman experiences a hormonal change and mood swing and it often feels as though you are not in control of a situation any longer. Three of my participants mentioned that it has impacting their relationships, both romantic and platonic and it becomes too difficult to explain and for the next person to understand the situation fully. The physical body changes affect self-image, and this often spills over into romantic relationships and can cause strain on these partnerships and relationships.

As mentioned previously, when going to the diagnostic process for PCOS, internal scans are often a common tool used to identify and diagnose PCOS. When looking at the internal scan, as well as an ultrasound, a medical professional can often identify cyst growth in the ovum (Pictures 4 & 5).



Picture 4[18]: A comparison of a normal ovary versus a polycystic ovary shown by the internal scan.

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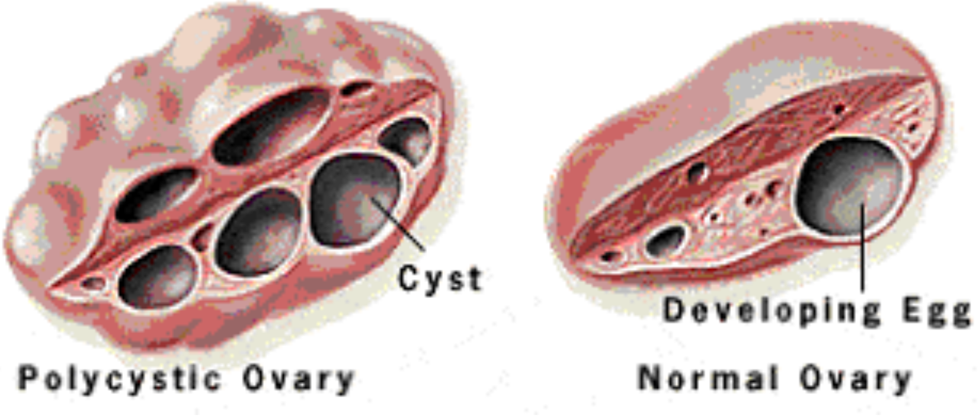
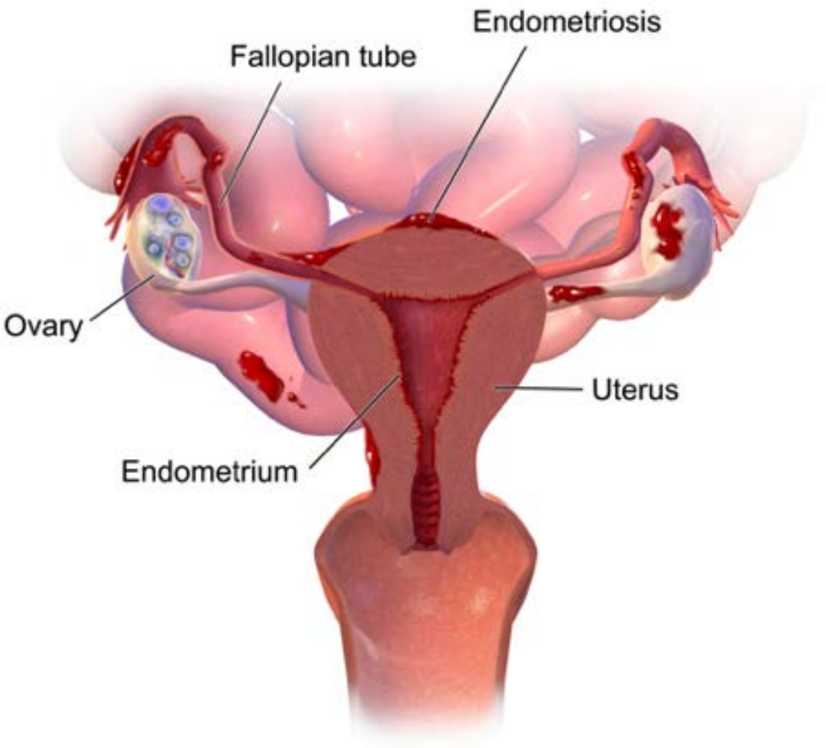
[18] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(07)61345-2/fulltext



Picture 5[19]: An illustration of a polycystic ovum versus and normal ovum.

ii. Endometriosis



Picture 6[20]: An illustration of a uterus with endometriosis

Many of the common symptoms felt by participants with PCOS were similarly experienced by those that had been diagnosed with endometriosis. Other symptoms that were experienced by

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[19] https://www.armghawaii.com/infertility/polycystic-ovary-syndrome/
[20] https://www.med.unc.edu/obgyn/migs/our-services/unc-center-for-endometriosis/

those with endometriosis were: pelvic pain, nausea, vomiting, diarrhoea, extreme pain (leg and lower back pain) and feeling faint. Other symptoms experienced by Casey included insomnia, serious fatigue and having a *"clouded mind like you can't quite concentrate"*.

Tendai also mentioned struggling with insomnia and issues with fatigue, while Paige notes having struggled with fatigue in their everyday routine. While many of these symptoms are common across both diseases, it is interesting to note the journey that women have embarked on to manage their pain and deal with their illnesses (Cox et al, 2003; Moradi et al, 2014; Rea et al, 2020). For all participants, it has been a long journey clouded with suffering, low moods and self-doubt.

It should be noted that 50% of participants expressed the use of smoking marijuana as a means of pain relief and that is the path that has then, in turn, lead them to using cannabidiol (CBD) products and an array of other methods to manage the disease.

> *"What a lot of people don't realise and think that it's just a bad period and it's not. It effects your everyday life and everything in between getting your period" - Casey*

> *"I went for a laparoscopy surgery in 2017 and they found small amounts of endometriosis on my left side. It was removed and an IUD was inserted as a means assist with the hormone imbalances. I bled for about 2 months consistently after that surgery. It was the worst feeling in the world. I was constantly drained and just too tired to perform the most basic of tasks. It makes you question everything. How are you supposed to carry on with your day-to-day life when you just don't have the energy for it?" – Paige*

It is important to note that, while it was not a focus, infertility was a common area of concern. For the most part, my participants did not indicate being at a place in their lives where having children was a top priority, but it was something that was touched on briefly. Most women noted being at "prime" ages for childbearing and knew that there are potential issues around trying to conceive given their diagnosis with either endometriosis or PCOS. An interesting case of a successful pregnancy is Joyce. I was told about Joyce in conversation with another participant, when in Zimbabwe, who had been working with a prominent Professor in Zimbabwe with qualifications in pharmaceutical science. I found this story to be a wonderful blend of the biomedical sciences and alternative methods.

Joyce suffered from premenstrual, period pains and postmenstrual pains and had irregular periods. This was an indication to her that a doctor may need to check up and make sure that everything is okay. Joyce recounts going through a diagnostic laparoscopy for her pelvis and an MRI scan for severe back pain. Joyce had the Mirena (IUD) inserted but noted that it did not stay in and she experienced challenges with it coming out. As a means of dealing with the pain that Joyce was experiencing during her cycle, she began using strong painkillers. In 2018, Joyce was diagnosed with precancerous cells, and these were removed together with the endometriosis in the laparoscopy surgery.

After the surgery, Joyce was referred to a pharmacology Professor, in Zimbabwe, to help manage her pain and symptoms through alternative medications. The advice was to stop taking the strong painkillers as it was already identified that these pain medications had left Joyce with other disorders and complications. A regimented diet and array of natural herbs and medicines were prescribed for Joyce with the aim of reducing the endometriosis symptoms. Joyce noted that the diet change was specific and reduced acidic food sources and included a lot of anti-inflammatory food sources as she suffered from arthritis too. Since working with the Professor, Joyce has welcomed a baby boy in April 2021.

4.3 Experiences of the biomedical healthcare system

The inherently patriarchal medical system plays off the stereotypes and social constructions around gender roles and norms. With these patriarchal and misogynistic stereotypes in mind, consisting of pain being a part of womanhood and women having to work through the pain and not be heard in their health care concerns, it becomes clear through my data collection that women's health concerns are often trivialised (Williams, 2000; Travis et al, 2012). Women are often secretive about the symptoms that they are experiencing due to the misogynistic nature of the medical system. This is attributed to the types of theories that exist around PCOS and the female appearance and PCOS being understood as women who are wanting to undergo a sex-change, rather than understanding that there is more to the disease and if spoken about freely, there will not be shame and secrecy attached to PCOS diagnoses (Kitzinger & Willmott, 2002: 352).

> *"I think there's a distinct lack in Zimbabwe of knowledge, full stop of PCOS and endometriosis. Absolutely. I know I think that gynaes [gynaecologists] are very quick to send patients to South Africa or elsewhere for operations for these things."* – Emily

With this knowledge in hand, and drawing on personal experience from visits to medical doctors, one of the interview questions was centred around experiences with the biomedical healthcare system. It was from here that both positive and negative responses were obtained, and parallels could be drawn between women's experiences in the biomedical healthcare system and alternative healthcare practices.

The outcome from this question revealed a dark, sullen reality of female[21] reproductive issues within the greater biomedical context. My participants experiences cover more than just the health care system and the disease, and also illustrate responses and reactions from other people (platonic and romantic relationships) and experiences post diagnosis while negotiating spaces such as romantic relationships, friendships and maintaining a professional image.

As stated previously, the interviews were conducted with women across different ethnic, socio-economic and age groups. This was important to the study as it highlights the commonalities in experiences in biomedical healthcare, but also leaves room to attend to more nuanced experiences that are race and ethnic specific.

The general patient experience of women that have been to see a biomedical doctor was a mixed response. There were three participants that mentioned that they had never had a negative experience with a biomedical doctor, they just felt that their pain was better managed through the use of alternative medications and through changes that they made in their own lives through research and trying out different things. This was not the same for all participants. The majority mentioned mixed feelings depending on the place, type of general practitioner or specialist and what it was that they were at the doctor for. This is an interesting revelation as it highlights that while there may not necessarily be an unpleasant experience under a biomedical healthcare practitioner's care, there was still a strong movement to the alternative treatments. This is mind, there was one participant whose interview is engrained in my memory forever. Interestingly enough, parallels can be drawn between the experiences of biomedical healthcare globally. The biomedical healthcare system in Southern Africa (Zimbabwe and South Africa) is structured differently to the Western countries (Scotland and United Kingdom) where there are notable differences in the public healthcare system. Private healthcare systems

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[21] Female reproductive issues referring to biological sex assigned at birth

also have differences but there are parallels in the type of healthcare that is administered. For example, Tendai notes that her healthcare experiences, from an interaction standpoint has been no different in these two settings. The type of bedside manner has been described as unfavourable.

The most notable, and possibly the most horrifying experience that came from this interview question was the experience of Tendai. Tendai is currently living in the Netherlands but has been fortunate to live in different parts of the world for both study and work. When discussing her experiences in the biomedical healthcare system, Tendai noted that one of her worst experiences was actually one in Scotland. While there, Tendai was studying towards her Master's degree and had an awfully painful flare up of endometriosis and needed urgent medical assistance. Tendai recounts going into the emergency room to get help and immediately being dismissed for having period pains. This incident came just a few months after having yet another laparoscopic surgery for her endometriosis. At the emergency centre Tendai was left alone in a room and told that she would have to wait for someone from the gynaecology department to come up and attend to her. Tendai noted that after what felt like 3 or 4 hours, she had gone to the front desk to enquire on how much longer she may have to wait. She explained that the nurses behind the desk were dismissive and informed her to calm down and not to get hysterical. In this time, Tendai was getting more and more upset and frustrated at the situation and pressed for further information. It was then that Tendai noticed one of the nurses, who was white, talking to a black male nurse and instructing him to come and talk to her and to try and calm her down as she was creating a scene. Tendai went on to say that she felt extremely upset by this and racially discriminated against. Despite the *"causing a scene*" why did the hospital staff insist on sending a black male nurse to *"calm her down"*. Here, we can see a racialised response in healthcare, where the white nurses assumed that because the nurse was black, he would be able to get through to Tendai. Ethnicity and gender were overridden by race as there was an expectation that since the nurse and Tendai were both black, that she would be more responsive to him, and they would be able to reach an understanding. There was no accounting for cultural differences between the two and the fact that cultural behaviours of interaction between males and females need to be considered. Fortunately, Tendai was able to receive medical care shortly after, but it still remains one of the worst experiences for her. Tendai noted quite strongly her own self advocacy through these experiences and having to be strongly spoken when entering new spaces. While not so explicitly labelled "hysterical" by healthcare professionals, Sophie, Emily, Valerie and Paige recall being instructed to calm down and to "*stop overthinking the pain*" and eventually the painful experience would pass.

> "*Having to have a hospital bag packed and ready to go in cases of emergency and having to keep a file of your full medical history to take with to each new doctor" - Tendai*

This sense of having to be overly prepared at any given moment with medical histories and being prepared to encounter doctors and specialist that are often very dismissive was a shared experience with Valerie, Paige, and Emily. These four participants noted having to do their own research on their medical symptoms and conditions as the biomedical explanations and treatments offered by biomedical doctors was not always presented in a supportive or helpful manner. Doctor's, in certain instances, did not know what certain symptoms were related too and it was, more often than not, dismissed as just being painful periods or hormonal issues due to puberty or something similar. Tendai recounts

> *"In the UK (United Kingdom) I had one of the worst encounters. After going in to see the doctor and explaining that I had endometriosis, the doctor was googling what endometriosis was in front of me"* - Tendai

Similarly, Paige recalls

> *"When seeing a gynaecologist in Zimbabwe, after years of suspicions around having PCOS, the internal scan was done and there were very clearly cysts on my ovaries. The doctor called me back in a week later with other test results that had come in and announced that in order to "protect my fertility" I needed to start on the contraceptive pill immediately and it would really be a simple process if I went onto the Dukien's diet and lost weight"*

While Paige recognised that this was not necessarily dismissal of symptoms, it was dismissal of the underlying cause and treating the symptoms rather than exploring the root cause of the issue. Paige recalls feeling lost and disheartened at the comments of weight loss but very little support on the pain management and "cure" side of things.

In Zimbabwe, Valerie had visited her general practitioner's room for the extreme pain that she was experiencing during her periods. She explained the debilitating nature of the period pains and requested the doctor do further investigation. She was 23 years old at the time and was told that *"it was all in [her] head and that people [her] age and race [Zimbabwean black woman] don't get endometriosis"* re-enforcing the narrative of gender and racial stereotypes in the medical system where it has been documented that healthcare providers "exhibit unconscious or unintentional bias toward members of marginalised groups" which leads to differences in treatment across the different services (Sacks, 2016: 59). These two specific incidents bring to light the dismissive nature of biomedical healthcare systems in general toward female reproductive health disorders/ diseases.

The diminishing and dismissive nature of the deeply rooted gender stereotypes in the medical system is plainly and painfully evident for women suffering from these chronic diseases. The mere fact that many women that experience PCOS and endometriosis have to fight for their own bodily rights and fight in order to be seen by a doctor is shocking and all too depressing. On average, my participants saw between 2 – 4 doctors including the referrals to the specialist. The general doctors were on average, dismissive and were not helpful when participants expressed concern about their health care. There were 8 participants in this study that noted that their symptoms continued to worsen and after what felt like countless visits to the doctor and having to fight to be seen by a specialist or gynaecologist once again highlights these dark undertones of the gender stereotypes in the medical field. Women having to seek a specialist on their own accord after self-diagnosing themselves and trying to conduct their own personal research in order to manage their disease points out our highly flawed health care system.

4.4 Diagnosis experience

Diagnosis experience is something that is very particular to an individual and it is highly unlikely that two people will have the exact same experience. The diagnosis experience is an important topic to explore, and it is arguably where a lot of the mistrust and frustration that patients experience comes from. If a biomedical practitioner does not maintain a good bedside manner while maintaining a certain level of professionalism, this can be harmful to a new or even frequent patient.

Participant experience and treatment choice is linked very closely to the experiences of the biomedical healthcare system. The treatment options in the biomedical healthcare system are not always what is best for the patient, or the best course of action with the disease that is being dealt with, but women, in particular, are not always given an array of options.

My participants were asked a broad question surrounding their experience within the healthcare system. This was left as an open-ended question, and I encouraged my participants to explore the question in a way that felt comfortable to them. While many explored their face-to-face experiences dealing with nurses, doctors and specialists as discussed in section 3.4, there were some participants like Sophie, Emily, Valerie and Tendai who noted that preceding their diagnosis was also a difficult part of learning about their disease.

Many of these women expressed feelings of disappointment and uncertainty facing diagnoses that their doctors and specialists showed little compassion towards them. In Tendai’s case, being dismissed in the emergency services ward when experiencing severe pain just highlights the traumatic undertones of these diseases.

For Sophie, a young teen at 14 years old, receiving a diagnosis of PCOS, having to navigate these spaces seemingly on her own and doing her own research emphasises the trivialised realities of women who have had to fight to have their voices heard when it comes to their reproductive health rights.

The diagnosis experiences that my participants had when finding out their formal diagnoses of either PCOS, endometriosis or both, has been described in many different ways, with the most common being relief. Relief to finally have a solid diagnosis and finally understand what is going on in their body, but more often than not, accompanied by anxiety and fear of the unknown.

From the misdiagnoses, to doctors googling information about endometriosis and PCOS in front of the patients, all of these diagnosis experiences once again highlight the inadequacy of the biomedical healthcare system when discussing female reproductive health issues.

4.5 Journey of treatment: From biomedicine products to CBD

Many of the products are broad spectrum and that means that they contain THC. CBD is a great gateway into trying something different but it won't necessarily help you to manage the pain. Anxiety starts peaking and the hormones raging in the body, so an edible would help to balance that out, but smoking is found to be more helpful for pain management.

All of my participants discussed the different ways in which their journey towards their current healthcare plan has taken place. For at least 6 of my participants, the journey has been long and filled with a trial-and-error method, whereby they have tried, tested and evaluated the different methods available to them used to find a combination that works for them. This journey has included a lifestyle change, a journey from using biomedical intervention, to cannabis into using CBD products to manage their symptoms.

All my participants noted that during their journey of treatment, in the biomedical sphere, there was trial and error that referred to the various types of medication that they needed to take in order to manage and maintain their symptoms. This was inclusive of having to use and try different contraceptive pills in order to see how their body would react and if it was the best option for them. Paige noted that during their struggles with maintaining their symptoms, they have used about four different contraceptive pills to help manage their PCOS symptoms. The previous three pills that were taken had to be stopped after a few months due to the adverse side-effects. My participants had mixed reviews about birth control as a method to manage hormone imbalances. Tendai mentioned being on many different contraceptive pills and noted that the reason for being on many different forms of contraceptives was partly owed to needing to find an option that worked effectively for Tendai. In this process, Tendai was given Depo-Provera and has been dealing with the negative side-effects, such as depression and increased anxiety for almost a year. Sophie notes being on different types of birth control as well, noting an increase of 55kgs in a four-month time period due to the pill she was prescribed and her PCOS diagnosis. The pill has different effects on different people and unfortunately it is not a one size fits all solution. The majority of my participants that have been or are currently using contraceptive pills or birth control methods for hormone balance speak of negative impacts the medication has had on their body and general health.

> *"I was experiencing quite bad bleeding, which was very abnormal, because I'm on Zoely, and that takes off takes away my period. So, my gynae [gynaecologist] at the time wanted me to do a hysteroscopy to make sure there's no cancer and things like that, which was just a completely unnecessary procedure. What actually happened, was a tablet that I had been put on for headaches was actually cancelling out my birth control. So, it was like tweaking it a bit. So, these so then you know, they panic because they heard PCOS and they're like something's wrong and then I got misdiagnosed with leukaemia, and it just went crazy. It literally just blew up. So, I didn't have any issues in terms of being diagnosed initially, but I've had issues further on. And now after seeing every single specialist on this earth, we've sorted that type of thing."* – Sophie

These ranged from depressive episodes to excessive sweating.

> "*In the different pills that I have taken, many of the least common side-effects were things that I experienced. On the very first pill that I was taking, I expressed really bad depressive episodes and heightened anxiety. I eventually was taken off the medication and just given anti-anxiety and anti-depressants. While I am sure that this was a chemical reaction, I do not feel like my body has even gotten back to what it was before the use of the contraceptive pill. It is unfortunate because I still experience some of the other side-effects, such as excessive sweating and extreme reactions to heat" – Paige*

Lifestyle changes were a big part of the treatment journey. These lifestyle changes include dietary changes, such as reducing dairy in-take, this dairy-free lifestyle change has been known to help with reducing inflammation and bloating which, in turn, will help during the menstrual cycle and Tendai and Casey have mentioned that it has helped significantly with their pain levels during their period. Reducing carbohydrates in-take and eating less grains, also helps with the inflammation in the body and by reducing this, it can help with feeling bloated and feeling a full-body inflammation. Restricting carbohydrates is also helpful for women that are insulin resistant, as it significantly reduces the sugar levels in the body which makes you feel lighter and does not give the same fluctuation in sugar levels which can leave you feeling exhausted right at the beginning of the day. There are other lifestyle changes, inclusive of meditation, mindfulness and taking on a holistic approach to your own healthcare. Many of these restrictions and changes have been implemented through a participant's own accord and research done on their disease and the best way to manage their symptoms. There was only 1 participant (Casey) who expressed that their biomedical specialist was concerned more with quality of life, rather than pushing the biomedical interventions of hormone balancing medications and invasive surgeries.

Casey notes that during her journey of treatment, a lot of the biomedical interventions were offered to her in an attempt to promote fertility and help her and her husband conceive. It was the decision between the two of them that instead of using interventions, such as the pill to regulate the hormones, Casey opted for quality of life over medicating. Tendai highlighted that her approach has been much more of a blended approach, where she combines the biomedical and some alternative treatments.

> *"If I had to scale my pain, anything above a 7 requires the [biomedical] pain medication because the CBD does not help at that point. The CBD has been helpful for the insomnia and anxiety and has promoted mindfulness. The CBD helps with muscle relaxant properties, and I have been able to substitute some of the medication with CBD products." – Tendai*

> *"I am still on some of the biomedical interventions that were offered to me, like the pill and the metformin for the pre-diabetes, but for the most part, I have been able to manage my pain and symptoms with quite high dosages of CBD" – Sophie*

It is important to make sure that you are living a proactive lifestyle rather than taking a reactive approach, as highlighted by Casey. This relates directly to how one needs to be conscious of their body and what it needs and consciously treat themselves, rather than having to rely on biomedical or pharmaceutical interventions when the pain is no longer manageable with CBD products. By being consciously aware of how your cycle works and taking action, like using the CBD products a few days before your actual period is expected to help neutralise the pain during this time. Casey and her husband, George, noted that by the time Casey is on her period cycle, the CBD interventions are not always helpful, if they are taken only when a flare up occurs.

> "*The problem there was endometriosis is that you kind of need to and I guess like with any pain management, you need to kind of see it coming. Yeah. Because when it's like in the thick of it is too late, you're already well within. So, it needs to be more of a proactive approach, rather than a reactive approach in using cannabis, just like any medication, really. But when you're in the thick of it, then for me personally, I feel like the only thing that will help is all the drugs, a strong painkiller. So, I feel like it's more of a proactive pain management process.*" – Casey

Many of the participants that were interviewed and that filled out the survey noted that they had used cannabis as an entry into the alternative sphere but had ultimately moved away from it for a variety of reasons. The main one being the psychoactive agents that are present in the THC which affected more than just the pain. For most, smoking cannabis or using products that contained THC was not a long-term alternative as they were not able to work and continue through their daily activities as they were when using CBD products. The usefulness of CBD moved beyond the pain management aspect and many participants noted that using CBD for pain management was only useful up to a certain point. Both Tendai and Casey noted, that using CBD was helpful for their anxiety and daily routine, but if the pain that they were experiencing moved past a certain point (for their own pain scale) they noted the need to use biomedical treatments, such as schedule 5 or even schedule 7 substances (as stipulated in South Africa). This was also a common occurrence if participants were experiencing migraines past the point of CBD being able to manage and control the pain levels experienced.

> "*The edibles for me and more the CBD edibles, that for me was great. If I knew I was going to have or I found like my anxiety starts peaking at certain times as well on I think it also comes into the hormone imbalances and what it was raging to my body building up to a cycle, I would find that those would help me*" – Casey

> "*I had pretty bad anxiety and pretty bad insomnia. And okay, again, [CBD] in combination with mindfulness because that's something that I do very often. It really worked wonders.*" – Tendai

Kundai, Emily, and Fred noted that while CBD was difficult to access for many, it was also not sufficient for proper pain management as there are particular dosage amounts that are needed in order for there to be a long-term effect. It was noted that there needed to be a certain amount of THC within these CBD products in order for there to be enough of an activation in the CBD products for the product to have the same impact and successfully aid in the pain management for the participant. CBD is not an easy product to give to an individual and often you may find that on its own, CBD may not always be beneficial and will need a small amount of the THC to activate it.

CBD is beneficial as an alternative treatment and women opt to take this treatment method because it is a better alternative to the biomedical treatments that women are often forced in to as a means of managing their symptoms. As a natural remedy, CBD is a healthy option as an alternative treatment. Many noted that while CBD is helpful, it can be more helpful for other symptoms experienced, such as, insomnia, anxiety and overall clarity of the mind rather than solely for pain management. It was further discussed that not many people are well enough aware of the uses of CBD and due to the stigma, that surrounds cannabis and all of its by-products, there are not a lot of people who turn to CBD as a method of healing or alternative treatment.

It becomes clear then, that the women in this study have been dissatisfied with biomedical healthcare approaches and treatments, which neither cured their disease, nor treated it effectively or efficiently. Pain management was highlighted as being of significant importance, and moving to the use of CBD products assisted women in this regard, offering relief. CBD usage reduced pain, if not removed it from the equation for a time, which then improved the quality of life experienced as would be able to go about their day in a painless and/ or pain-free way.

4.6 Financial implications

Access to decent biomedical healthcare is a universal issue, especially for women. Access to good healthcare is not always an easy process. For many different reasons, this is also a factor in the number of misdiagnosed and undiagnosed female reproductive health issues (Travis et al., 2018: 208). As expressed by Tendai, women are often viewed as being “hysterical”, and their pain and queries are very often overlooked. The financial implications of a routine visit to a gynaecologist (especially for someone without medical aid) for a consultation are extremely costly, with prices approximately R1200 – R2000 in South Africa. For those that make use of a public hospital, there is a waiting list to see the specialist. This also begs the question of the type of healthcare that you are receiving in a public hospital for very specific and specialised issues.

The financial implications that accompany the use of CBD products is also an issue. My participants noted that the financial commitment and implications that follow the use of these products are rather hefty. There are different types of CBD products that are on the market, and these different products also have very different price ranges.

- Full-spectrum CBD products: these contain small amounts of all components in the cannabis plant. These have trace amounts of THC products (must be less than 0.3% THC). For a 500mg product, starting price from R800.
- Broad-spectrum CBD products: these contain CBD but do not contain any THC. There are other components from the plant, so it is not pure CBD, but it does not contain THC at all. For a 500mg product, starting price from R700
- CBD isolate: contains pure CBD and does not contain any other components from the cannabis plant. For a 600mg product, starting price from R500.

Due to the different levels of CBD, THC, and other cannabis components in a product, prices can range anywhere from approximately R200 – R2500 (lowest to highest) depending on the size of the product, the amount of CBD and on the type of product[22].

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[22] Product referring to full or broad spectrum or CBD isolate. Also referring to the type of product, such as a cream, capsules, oils or gummies etc.…

Kundai, Emily and Fred all spoke about the cost of CBD oils and the production thereof. They also noted that not many people are able to afford this type of treatment in the long term, as it is an unsustainable amount of money. In Zimbabwe particularly, the payment for these types of treatment is required in US$, and with the current economic challenges in the country, it is more than likely that trading in US$ currency is not attainable to everyone living there. As a result, this is another contributing factor to the lack of access for an average everyday citizen of Zimbabwe. The socio-economic situation in Zimbabwe is an extremely hostile situation, and as a result, the economy is not stable, and there is often issues related to accessing US$ and local currency. Due to this economic plight, not many people are able to afford this kind of treatment for the long-term management of symptoms and pain management.

However, in South Africa, access to CBD products is much more open and readily available. There are several online stores and means of buying CBD products. There has further been an increase in the number of products that are showing up in pharmaceutical outlets, such as Clicks and Dis-Chem. The products that are sold here have daily dosage recommendations on them and are made up of a number of different ingredients.

The issue with the sale of these products is the legitimacy of them. It is very difficult (as someone who has spent time researching these products) to see the types of products that are being made available to the general public, not knowing exactly what is in the products and having no way to look into the make-up of these products. It is also interesting to note that many of these product’s state that a general practitioner (GP) or medical doctor should be consulted before using these products. Having products readily available online for personal consumption begs the question of whether or not people are actually consulting their doctors, researching appropriately and ensuring that they are using the correct products for themselves.

For those that are on chronic medications for heart diseases, diabetes and other illnesses, these CBD products may work adversely with their prescribed medications and have deadly consequences.

This links back to the lack of education out there around cannabis and CBD products and why the scientific research for these products is extremely important. There are multiple studies that exist on the benefits of CBD and cannabis for pain management, but there is also a fine line between what will work for one patient and what will work for another. Kajal, as a pharmacist, noted that it is tough to say that one product will perform a specific function, as our bodies all react and respond to medications differently. The dosages which an individual needs will differ significantly, taking into account factors like weight, level of pain, metabolism and so on. This is what makes the production of these products complex to market and sell. Testing these products has challenges of its own, with human, clinical trials being challenging to organise and pilot.

Through consultation with fellow academics, it became apparent that CBD studies are expensive, and the ethical clearance process is complex, drawn-out and requires a lot of work and information. For clinical studies/ trials working with animals, the amount of money needed is around R300 000 with at least an additional R1 Million to conduct the trial.

All my participants that had been using CBD products or had used CBD products in the past noted that the financial implication of using CBD products for pain management and management of their other symptoms was not one that everyone can sustain long-term, and for many of them, they are in a position to afford these kinds of treatments. Roberta, Kundai and Emily noted that they have dealt with patients that have been to see them but are not able to maintain the treatment regime because of the price of CBD products.

The prices for CBD products are widely varied, and this pricing difference is partly owed to the regulations surrounding the sale of these products and the taxes that are attached to them. An increase in CBD production and sales may help with a slight price reduction, but for the foreseeable future, the prices remain high and cater to a particular population group and financial bracket.

Chapter Five: Endometriosis, Me, and CBD: An Autoethnographic chapter

My diagnosis experience goes all the way back to when I was 12 years old, when I got my period for the very first time. I remember being so excited that it had finally come because it meant a new beginning and a new stage in my life. It was late in the year, as I vaguely remember practicing for the end of year Christmas play when I felt something funny happening in my body.

By the time I reached high school at age 12 (turning 13), nothing out of the ordinary had happened during the week of my period. It was, in general, a relatively heavy flow, having to change pads often, and I recall many nights where I would leak (blood) through the pad and have to change bedsheets in the morning. I remember becoming emotional, questioning why I was leaking through the pad when I put the pad on exactly the same way as I had been shown and taught to. I even attempted sleeping with a tampon in and a pad for extra security, but ended up feeling so uncomfortable with the tampon there.

Tampons became Enemy Number 1. I tried to avoid using them at all costs and made the decision to only use them during swimming season. I would only use the tampon during swimming practice or a weekend gala, but never at any other time. For some reason, they (tampons) never seemed to sit properly, and every movement felt extra painful. I hated the feeling. It made even the most simple task unbearable. At age 14, I remember crying during painful periods, which also happened to be heavy (bleeding) ones too. I used to dread having to be at school during the week that I had my period and always prayed that it would fall over a weekend so I could just roll up into a ball and ride out the pain at home. Don’t even get me started on those nights where it would appear, and I was spending the night with a friend. I would typically make up an excuse and end up going home, just to avoid either having to change my pad at their house or fear leaking in their bed. How embarrassing. I know, logically, that it is a normal, human process, but there was always that shame that accompanied a period and looking back, I can understand why we as young women avoided the topic at much as possible. It was just my sister and I in my household, and we would often discuss the general irritation that we felt when “that time of the month” was upon us. In conversations with my mother and maternal grandmother, we discovered that they too had issues with their monthly cycle. My mother recounted going to the school office when she had started her period, and they eventually stopped giving her a note; they just sent her straight to sickbay to lie down and had medication on standby if she needed it. My maternal grandmother apparently also had painful periods but has confessed that, being all those many years ago, she cannot quite remember exactly how bad they used to get. She will often remind me that she ended up getting married very early and had her first child at 20, so by the time she was in her mid-twenties, her entire menstrual cycle had changed. My sister didn’t suffer as I did. She had heavy periods but did not have the same pain issues that I experienced. As the years went on, the pain did change. It was in her mid-twenties when she started having more severe period pains.

I remember going to the doctors’ offices with my mother at age 14/ 15 to have a check-up because of the severe pain. We were finally referred to a gynaecology specialist just to see if there was anything on the actual ovary, like a cyst, or something in my uterus. We went to the doctor, and we went through the standard questions:

“How long is your period?”
“How often do you have to change your pad?”
“How bad is the pain for you?”

These were the most frustrating set of questions. The length of the period and the frequency of the period, and the frequency at which a pad needs to be replaced are really the only questions that really makes sense to me. I wouldn't have bothered to come in if my periods were not painful.

The very first ultrasound that I had done was at 15 years old. My bladder was so full, (which is a requirement for a successful ultrasound), that I feared I would pop and cause such chaos in that small room where the technician and I were looking at the ultrasound screen. I remember her not really making eye contact with me and, other than pointing out where my ovaries were on the screen, she barely spoke to me. It was a frigid and detached experience. I remember asking her if she could see anything that was abnormal, and she effectively told me to wait for my test results to come back. When they eventually did, everything was, supposedly, A-okay and there was nothing that looked abnormal from the scan. I went back to the doctor to go through the list of blood results that had come back with the scans. I had been tested for my blood sugar levels, testosterone levels, and thyroid functioning, among others, but everything came back fine.

That first scan did nothing other than confirm, to me, the fact that my doctors did not really seem to care much beyond what their eyes could see. I was told that the blood work and scans did not show anything abnormal, and it was brushed aside as being likely that I just had terrible pain. It was explained that there is a scale of pain when it comes to periods. You either have no pain during your period, or you are on the polar opposite where the pain is unbearable, but it is just something that you have to learn to live with and understand that this is part of being a woman. I felt that this was very dismissive of my pain and very reductionist in nature.

After that very first scan, it seemed as if my health was on a constant decline. I have always been classified as being overweight, and this has always been a topic of discussion between family members, and now included doctors. I was always told that I was carrying far too much extra weight, and that was the cause of all of my problems. This is something that women suffering from reproductive health issues are constantly told, yet it is often ignored that not only is the weight symptomatic, but endometriosis and PCOS, are the causes of weight gain. Subsequently, they are the reason for an inability to lose weight. It becomes a horrible cycle, and the role of the disease in weight gain is dismissed, and blame is placed on the woman for her supposed lack of disciplined eating and exercise. This has had an impact on my self-esteem, and is a sentiment that my participants have shared.

I knew I wasn't eating very healthy foods, but my diet was not fatty and imbalanced. When I was in grade 5, my mother announced that she was no longer in charge of our lunch boxes, I think she was just tired of me complaining about those dreaded peanut butter sandwiches. I did not like peanut butter, but I was now making my own lunchbox for whatever reason. My sister and I would typically pack up some leftovers from dinner the night before as our lunch, and my "tea-time" meal was generally sandwiches, fruit, and yoghurt. My diet was counterbalanced by physical activities at school.

At our high school, you were required to play at least two sports and partake in one cultural activity. If, however, your chosen sport had practice more than three days a week, you were able to stick to the one. I played hockey in the winter months and swam during our other two school terms. The swimming practice was four days a week, and I loved it! During training sessions, we would swim anywhere between 3 – 5kms in an afternoon. The training sessions were intense, but they were fun, and we all seemed to enjoy them. Swimming is considered to be an excellent form of exercise and a good workout for weight loss, muscle toning, and strengthening the heart muscle. We have a pool at home, so I would swim even when it was offseason. The type of activity, thus, in relation to what I was eating, was balanced, and it really didn't seem to be a problem. My period pain and discomfort, however, increasingly got worse. Swimming and exercise helped during the cycle, but it was gathering up the motivation and energy to get into the pool that always hindered me.

My parents always said that when I got stressed, I would go horizontal. For a lot of the time, it was just the easiest way for me to handle drama and my stress. Why do something that requires brain power, when I can sit in bed or sleep and not have to think about what's happening around me?

At the end of my senior year in high school, I was in the latter months of my 18th year, I remember having a really awful period, and the decision was made to go back to the doctor to look at alternative options, like the contraceptive pill. I had never opted for it previously because there really was no point in putting my body through such when I was still so young. On some level, I knew that if I had to deal with this kind of pain while I was on my own, at University, and in a different country, I would prefer to have all the help I could get.

We once again went back to my GP to have this discussion. She really is a lovely doctor, and our consultations were always thorough, but I wouldn't go back to her if I could avoid it. I say avoid her, purely based on the types of interactions I have had with her, from having her look up different ailments in front of me and looking up medications and possible treatments in the medical book that sits on her desk. Her manner is kind; her bedside manner, however, can be something very different. She asked the very basic and standard questions, and she wanted to know why I had chosen to go this route now, and we talked it all out. We went through the various options of contraceptive pills, implant and intrauterine device (IUD), but ultimately came back to the pill. It was decided that from a pain point of view, the pill would be able to regulate my period and help with the pain. The kind of pill that was prescribed was also said to help with the bad hormonal acne that I was struggling with at the time. Initially, I was put onto Diane 35, as when discussing other methods of contraception, Depo-Provera was an option that was offered, but my mother swiftly declined that option. I was on the Diane for about 6/7 months before I asked to move onto something else, as I felt it was doing more harm than good. No diagnosis was given at this time, and the acne was explained away as being part of the teenage/ early adult life and that it would eventually clear up, but why not help it out with the pill. I didn't really know any better, so onto the pill, I went.

Any surprise knowing that none of it helped? Nothing changed. Not even slightly. In fact, it made it worse. The pill regulated my menstrual cycle, but all that meant for me was guaranteed pain once a month and heavy bleeding too! The acne got worse, and I ended up slumping into a severe depression. Depression is one of the main side-effects that is listed on most contraceptive pills. With the first contraceptive pill that I was prescribed, I had severe anxiety and experienced excessive sweating. When I was due to go back to the doctor for my follow up appointment, I explained the excessive sweating, and upon investigation, the doctor noted that excessive sweating was one of the least common symptoms, and unfortunately it was one that my body reacted to too. I was going through all of this while I was in a different country to my family, my support system, and going through many social adjustments in my first year of university. When I would arrive back home for the semester break, I wouldn't leave the house for anything and spent my time in my room watching series or sitting in front of the TV. I didn't want to leave the house or see people either. The family was about all I could handle. So, back to the drawing board.

Between 2015 – 2016, I had tried three different contraceptive pills (Diane 35 and a standard over the counter contraceptive pill were two of the few I was prescribed), each leaving me worse off than the last. Eventually, I sat down with my parents and explained that I would rather not be on any medication if all I was getting out of it was more issues than I started with. In the latter half of 2017, I was in my third year of a four-year degree and needed some kind of intervention because of the painful and heavy periods that just seemed to never end. In the June semester break, I had travelled back to Zimbabwe and went back to the family GP to try and get a referral to a gynaecologist in Zimbabwe for more scans and tests to ascertain what was happening. The doctor outright refused to send me to a gynaecologist, explaining that the outcome of that visit would be no different to what she, the GP, was telling me. I was instructed to continue taking the prescribed pain medication, despite repeatedly telling her that they were not working. The pain medication that I had been given was apparently a strong pain blocker and was only allowed to take one a day. I tried them for about three months to see if they changed anything at all, and they did not. In all honesty, they didn't even dull the pain.

At this stage, I was growing increasingly anxious and frustrated at the state of my health and even more frustrated that no one seemed to be helping me. Fights between my mother and I broke out as we wrestled with this unknown cause. Eventually, my mother was able to organise an appointment with a gynaecologist in Port Elizabeth (PE) in the October of 2017. She flew down to South Africa, came to pick me up in Grahamstown, and off we went back to PE. I filled out all the forms and went off into the doctor's room. She asked a series of questions, such as, how long my periods lasted for, if it was light or heavy, and to scale my pain from 1 to 10, and I went with all my previous doctor's records for her to peruse.

The next part of the appointment was the scan. I had another ultrasound done, and she requested an internal scan. It was such an uncomfortable and invasive experience, but I allowed the appointment to continue through gritted teeth. After she had completed the scan, I got dressed and went through to her office. The gynaecologist told me that the scans did not show anything out of the ordinary but noted that endometriosis is not something that would show up on a scan, and the only other option that she saw fit was to conduct a laparoscopic surgery to investigate. This would mean surgery after my final year exams. In the meantime, I was given a prescription for another type of pain medication [cyklokapron], and that, too, did not help at all. I was also given a prescription for an IUD (Mirena) as it was decided that the contraceptive pill was no longer useful, and the Mirena is known to be helpful to women with endometriosis. The biggest positive about the Mirena was the fact that it could be inserted whilst I was under anaesthesia and would only need to be replaced in 5 years. This would also cut out the issues of forgetting to take the pill at the same time every day, which was something that I struggled with given my topsy turvy schedule as a student. In consultation with the doctor, it was agreed that the Mirena would be inserted while I was under anaesthesia because it would hold two functions. The Mirena is described as being helpful for reducing the growth of endometriosis and as a birth control option.

The prescriptions were filled in Port Elizabeth before my mother, and I travelled back to Grahamstown for me to finalise my end of year exams. Given that I had to have surgery, I was concerned about what to do as I needed someone to drive me around and look after me post-surgery. After much discussion, it was decided that my father would travel to Port Elizabeth to accompany me to surgery and fly back to Zimbabwe with me.

The actual surgery itself went off fine, and there were some minor issues that occurred beforehand. After I came out of the theatre, the doctor came to visit me and explained that she had inserted the Mirena, and they were able to cauterise some endometrial tissue that was forming on the left side of my abdomen. The doctor informed me that it was a minimal amount but nothing that she was concerned about. A month after surgery, I needed to go to my doctor in Zimbabwe to do a follow-up and ensure that my wounds had healed appropriately and that the Mirena was still sitting in the correct place and had not moved.

The Mirena, unfortunately, did not work for me either. I bled from December 2017 to about February 2018. It was a most frustrating time. The bleeding was not heavy, but it was such a light bleed that it was too much for a panty liner but not enough for a pad or a tampon. In May 2018, I bled for an entire month, and it was a similar issue to earlier in the year where it was so little that it didn’t make sense to waste a pad or a tampon, but too much for a panty liner. The Mirena was meant to lessen the bleeding. I was warned that I might not get a period at all, but this seemed to do the complete opposite. I stuck it out as I was also told that it might take up to 6 months for my body to adjust to the IUD. But, by December 2018, nothing had really changed other than the fact that I wasn’t bleeding as heavily as before. The pain remained the same too. There was very little difference in my monthly cycle, other than it being a lot lighter than before, but it hadn’t stopped or even slowed down.

My weight had also drastically increased, and I wasn’t feeling very good about my health at all. The painful periods started up again, and the bleeding just seemed to carry on. When I went back to the doctor in Zimbabwe, she suggested that I try some progesterone as it would help to stop the bleeding and it may help to regulate my menstrual cycle again. By the time the medication had really had any effect, I was back in Grahamstown for my graduation, and I felt bigger than ever. My weight continued to increase, and the progesterone pills that I was taking were making my feet and ankles swell up enormously. The university campus is a relatively small campus, and you can walk around campus and town quite comfortably. The different flats that I have lived in have always been no more than a 15-minute walk away from campus. It is also important to note that if you were to walk from one side of the campus to another, it would also take about 15-20 minutes, depending on how fast you are walking. I may not have been actively involved in sporting activities whilst at university, but I was walking a considerable amount. This was why it was so confusing as to why my feet and ankles were swelling. I had been in Grahamstown for 5 years by that stage, walked everywhere, and never had an issue. Now, I was struggling to walk between home and campus without my feet swelling exponentially. I called the doctor via WhatsApp and explained what was happening, and I was told to discontinue the progesterone, and we would reconvene when I got back to Zimbabwe.

I went back home in June/ July for the mid-year semester break and went to see yet another doctor who specialised in PCOS and endometriosis patients. I, again, had to answer a series of questions about my medical history and what was currently happening that I needed help with. Several blood tests required to be run, and the decision was made for me to be take out the Mirena and rather put back on the pill. This was due to the fact that the Mirena was seemingly causing more damage than good. I had another internal scan done, in the doctor's room, and it showed cysts on my ovaries, and I remember feeling my stomach knotting and the lump forming in my throat.

The doctor seemed so nonchalant with the diagnosis, and the immediate instruction was, "just lose the weight, and everything will follow". The contraceptive pill, Yasmin, that was prescribed was one that had apparently had much success with other women that were dealing with PCOS and endometriosis. A few days after my blood was drawn and I had done my glucose tolerance test, I returned to the doctor for the follow up consultation. I was informed that something needed to be done urgently in order “to preserve fertility,” and that sent me into a spiral. Being a young age of 24 and being informed so casually that my fertility was at stake, put me in shock. The remedy? Just lose the weight. I have been to see so many doctors since I was 15. Some of these doctors only performed a scan, and many of the other doctors did not offer much information and only mentioned that it was just a part of womanhood. The bulk suggested harmful interventions that a young teenage girl should not have to be dealing with, such as hormone changing contraceptives. It has been a long process of trial and error in finding a regime that works best for me and my body. My doctor suggested in one of my consultations at roughly age 17 or 18 that once I got pregnant and had children, everything would be fine. This kind of response from a doctor is problematic and can be more damaging than helpful.

I recall the nurse who assisted the doctor telling me that all I really needed to do was walk every day for at least 30 minutes. When I informed her that I actually often walk more than that due to my university lifestyle, she then went on to tell me that it should rather be a brisk walk and I shouldn’t slack off. Deeply offended, I think I shut down during that conversation. I am not a slow walker by any means. To be spoken to like I am not aware of my health issues and ways to manage my weight was incredibly insulting. Yes, weight may be the biggest issue, but the weight is a symptom, not the cause.

Weight is an issue for many women that struggle with PCOS and endometriosis. The hormonal disruptions can cause the weight increase but doctors tend not to focus on this and assume that the reason for the PCOS and endometriosis is due to the weight. I only became aware that my weight gain in the last two years was more likely to the hormone imbalances, rather than weight affecting the PCOS, when I did my own research and tried to find out as much information on the topic as I possibly could.

I say symptom and not cause of the PCOS and endometriosis, because my diet had not changed and the amount of exercise had actually increased. How was I still being affected so negatively when nothing had changed? Hence, a symptom. The underlying cause? Hormonal imbalance from something that is still being investigated.

In over a decade, I had had no relief from my symptoms, and after trying numerous treatment methods, I was no better off. This all leads to how I ended up exploring alternative treatment methods. It was something that was briefly discussed in our household when my mother mentioned that the man she works with was using CBD oils to help him sleep. He has undergone many different surgeries and medical issues and was trying his best to keep away from biomedical interventions. Alongside all of the surgeries, there was a lot of pain medication that he ended up having to take. To counter the long-term use of this medicine, he had opted for a lifestyle and treatment change.

In the December of 2017, I went to see an alternative medicine practitioner, while still using biomedical treatments for the pain management, to discuss the use of CBD myself. I ended up leaving with a small bottle of CBD oil that I was going to test out. At that time, I was not fully committed to making the necessary changes and did not use the oil as often as I should have. Despite all of that, my interest in CBD oils and products grew, and I wanted to know more.

I am currently still using the contraceptive pill (Yasmin) that was prescribed to me, using biomedical pain medication when needed and using the CBD oils as a small part of my daily routine to try and manage my PCOS and endometriosis symptoms. I have since changed the type of oil that I am using and have also started using an alternative medicine for anxiety relief. This has been helpful, but I do think that the biomedical side has impacted my mental state and health quite negatively.

My bodily awareness has definitely changed since I started conducting my research around CBD products, and to an extent, medicinal marijuana. It has been an exciting journey and I am excited to see what the future holds once I am able to explore CBD products more openly and gain better access to better quality products.

Since using CBD products and other alternative treatment methods, I have noted that my stress and anxiety levels have gone right down. Pain management has been a complex space to navigate. For the last two and a half years, I have struggled with severe migraines that happen at random times during the month, and the only method of managing the pain and effects of the migraine is to take biomedical pain killers. If I am able to pick up on the signs of an impending migraine early enough, I can manage the symptoms without biomedical intervention, but more often than not, I am not able to manage it effectively. The CBD products have helped to lessen the pain I experience during my menstrual cycle, but there are times and certain months where I can see that CBD on its own is not enough to manage the severe pain. I have enjoyed the other benefits that CBD offers, such as sleeping better at night feeling more relaxed and focused during the day.

The initial appeal of CBD products has been on my forefront for a number of years of researching alternative treatment methods. I am aware that the overuse of pain medication can have adverse effects on the human body, and I struggle with pain, not just during my cycle, meaning I am taking, what I perceive as too much pain medication at any given time. CBD, in conjunction with biomedicine, has been a winning combination for maintaining my own health, but I firmly believe that there is merit to using CBD products in maintaining your health and living a better quality, healthier and happier life.

This chapter speaks to key objective outlined in chapter three, by addressing the role CBD plays in pain management. Pain management is one of the benefits that CBD holds but aids in the maintenance of daily life and health for a woman suffering from PCOS or endometriosis.

Chapter Six: CBD from the Perspective of Practitioners and Producers

Conducting interviews with those involved in the prescribing and production of CBD products was a vital part of this research study in order to gain a better understanding of the products and their own experiences with patients over the last few years.

Table 2 consists of participants who were interviewed for this research project due to their contributions to the body of knowledge of CBD and experiences from living with a partner suffering from PCOS or endometriosis. The participants that make up table 2 were important for fulfilling objective 6 in this research study by gaining an understanding of CBD from the perspective of a CBD practitioner or producer of CBD. Their contributions, I felt, were too important to exclude from this study. Table 2 lays out participants who are involved in CBD products, such as sales or production. There are participants, such as Kajal and Kundai, who have a medical background and have spoken about their experiences with patients that have been or are currently using CBD products in an effort to manage their symptoms.

Table 2: Practitioners and Producers of CBD

Participant	Gender	Location	Job description
Kajal	F	Zimbabwe	Pharmacist
Fred	M	Zimbabwe	THC/ CBD supplier/ grower
Roberta	F	England	CBD business owner/ supplier

Chiedza	**F**	**Zimbabwe**	**Activist/ Organisation founder**
Kundai	**F**	**Zimbabwe**	**Naturopathic integrative practitioner**
George	**M**	**South Africa**	**Small scale grower**

Kajal

Kajal is an Indian pharmacist operating in Zimbabwe who spoke with me more on issues around the legal side of CBD and the accessibility of CBD products in Zimbabwe. Our conversation spanned more than just these issues, but also looked at the formulation, testing and effects that CBD and THC products have on different bodies and how this, in turn, affects the sale of these products.

Fred

Fred is a white male currently living in Zimbabwe. Fred was identified as one of the producers of CBD and THC to various companies and individuals in Zimbabwe. Fred spoke to the process of extraction of the oils and the process in which growing happens, oils are extracted and how products are put together before sale. Fred has been involved in cannabis related growing since 2014 and initially tried to merge into the market through CBD coffee grounds but found that there was more demand and need to oils and product distribution.

Roberta

Roberta is a young black female living in the United Kingdom and has a company geared towards CBD products for people who suffer with PCOS, endometriosis, chronic pain and anxiety. Roberta was interviewed after a participant recommended her to partake in the research as she was able to provide insight into her reasoning for focusing on women with reproductive health issues and wanting to offer alternative treatments to these women.

Chiedza

Chiedza is part of an NGO in Zimbabwe called "The Flow Initiative" that was formed after receiving a seed grant through a United Nations competition and the organisation is geared towards the education of female reproductive health issues for young women in Zimbabwe. Chiedza's work has allowed her to educate young women in their journey in understanding their own reproductive health and educating these young women on the different types of treatment methods, including that of CBD and biomedical options.

Kundai

Kundai is a naturopathic integrative practitioner operating in Zimbabwe. Naturopathic medicine is a system that uses natural remedies to help the body heal itself. It embraces many therapies, including; herbs, massages, acupuncture exercise, and nutritional counselling. Kundai, herself, has suffered from issues relating to her reproductive health. Kundai noted that her move to the health sphere happened a lot later in life by noting it was her second career after years in marketing. This was geared toward a holistic approach to health after multiple biomedical health care professional interactions that she dealt with. Kundai works with numerous patients who come to her for an alternative method of treatment and are specifically seeking a holistic approach. Kundai recalled at least five patients who have been to see her with issues of PCOS and endometriosis and have opted for CBD products as part of their treatment regime.

George

George is a white male living in Gqeberha and is married to Casey. George was an important inclusion in this study as he spoke both to the issues that he has seen his wife experience over the years and drew on his own experiences during this time. George is also a small-scale grower of cannabis. He is passionate about the cannabis plant and supplied a wealth of knowledge on the different strains and types of plants. Through his own research, George was able to explain his own medicating with CBD and THC products rather than relying on biomedical interventions. George is also passionate about breaking down the stigma that exists around the use of cannabis. After a serious back operation at age 21, George started using cannabis in a recreational manner to help manage the pain. When Casey and George got married, Casey would also use cannabis in a recreational manner but eventually fine-tuned her usage of cannabis and used CBD products as a means to manage her pain.

6.1 Awareness and Education of CBD

Participants of this study live in either South Africa or Zimbabwe and the data collected highlights notable differences in perceptions and attitudes towards cannabis, medicinal cannabis, and CBD. Even with the change in legislation and legality of cannabis in both South Africa and Zimbabwe, there is a recognised lack of education around the topic. It was interesting to note how the different generations had differing opinions on the matter yet there was some flexibility, wanting to learn, and being open to new experiences across generations.

> "*Definitely, if people were to come in for PCOS, and all of that, I would definitely suggest CBD. But not many do. We had someone here yesterday 'My teenage daughter, she's 16.*

> *She's got severe cramps, abdominal pain', and I said, 'Okay, so we've got CBD.' 'Oh, no, no, because she gets tested.' And that's another thing to consider as well. 'Oh, no, no, we won't go down that route.' I said 'you only steam it.' 'No, I want a pill.' But this is not what we cater for. I think there is a distinct lack in Zimbabwe of knowledge for CBD, PCOS and endometriosis."* – Emily

The inclusion of CBD practitioners as participants was pivotal for this research as it added a missing element that was not previously recognised. The knowledge that was highlighted through the interviewing process indicated how much work goes into the production and distribution of CBD products. This was an important exploration as it emphasised how important following due process is when dealing with these kinds of products, especially with the chemical compositions and extraction methods. Emily and Florian noted that in Zimbabwe at the moment, there seems to be a surge of people making their own oils and "*cooking it up on the stove*" which is incredibly dangerous and harmful for people who will consume these products.

Emily shared a story with me of an elderly woman who is currently living in a retirement village in Harare, Zimbabwe, who had indicated that she wanted to start using CBD products and had been given something that had clearly not been tested;

> "*I'm assuming [it had been] cooked up with heat applied. This was about three years ago, and one of the old ladies at Retirement Valley*[23] *was running around the fishpond naked, because of it [cannabis products], prescribed by her grandson.*" – Emily

This is a clear example of how lack of knowledge and awareness can lead to negative effects and side effects.

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[23] Name changed to maintain anonymity.

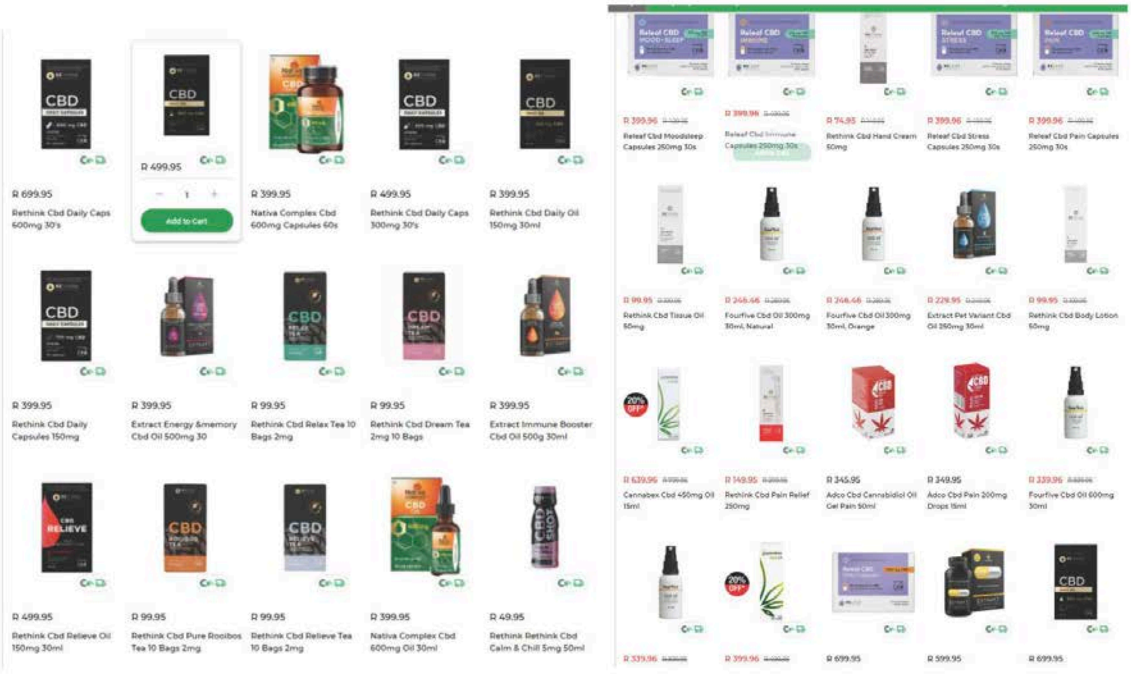
On the topic of stigma related to cannabis use, is that there is a not enough education on the alternatives that are available and how it is incorrect for CBD to be grouped into the cannabis pool. There is not enough known and spoken about in relation to this for people to clearly see and understand that cannabis and CBD contain different properties and have different effects on a body.

When considering stigma related to cannabis use, it is important to note the distinction between cannabis containing THC and cannabidiol. This is ultimately what has led to CBD being considered an illegal drug and does not have enough openly discussed information on it to show that there is a clear distinction between cannabis and CBD.

Part of this problem stems from the legalities that surround cannabis use and the Food and Drug Administration (FDA) approval delays. Cannabis, as a whole, is still classified as a class A drug (illegal) in the United States and in South Africa, possession of more than 100grams on private property and distribution is still illegal and as a result, CBD and other by-products of the cannabis plant are still categorised as illegal. The distinction between these two has not been adequately discussed and as a result, it has become increasingly hard to classify the differences. Socially, cannabidiol (CBD) has been lumped in with cannabis containing THC and is socially vilified as a result.

In 2018, South African constitutional court legalised certain acts related to cannabis for use on private property and in private residences with a maximum of 600 grams if you live alone and 1.2kilograms for a household with 2 or more adults residing at the property (Writer, 2022).
There has also been a demand in popularity for CBD products in South Africa since 2018. Pharmaceutical outlets, such as Dis-Chem and Clicks have a variety of products that are being

sold in their stores and there are a number of options available for purchase online too. Due to the processing, production and sale of CBD products, there is a limit that is stated on the labels of these products. These limits are recommended dosages and advise against exceeding the dosage for consumption, but it is not always a possibility when an individual requires a higher dosage than someone else.



Picture 7[24]**: Screenshots of CBD products from the online store of Dis-Chem, South Africa.**

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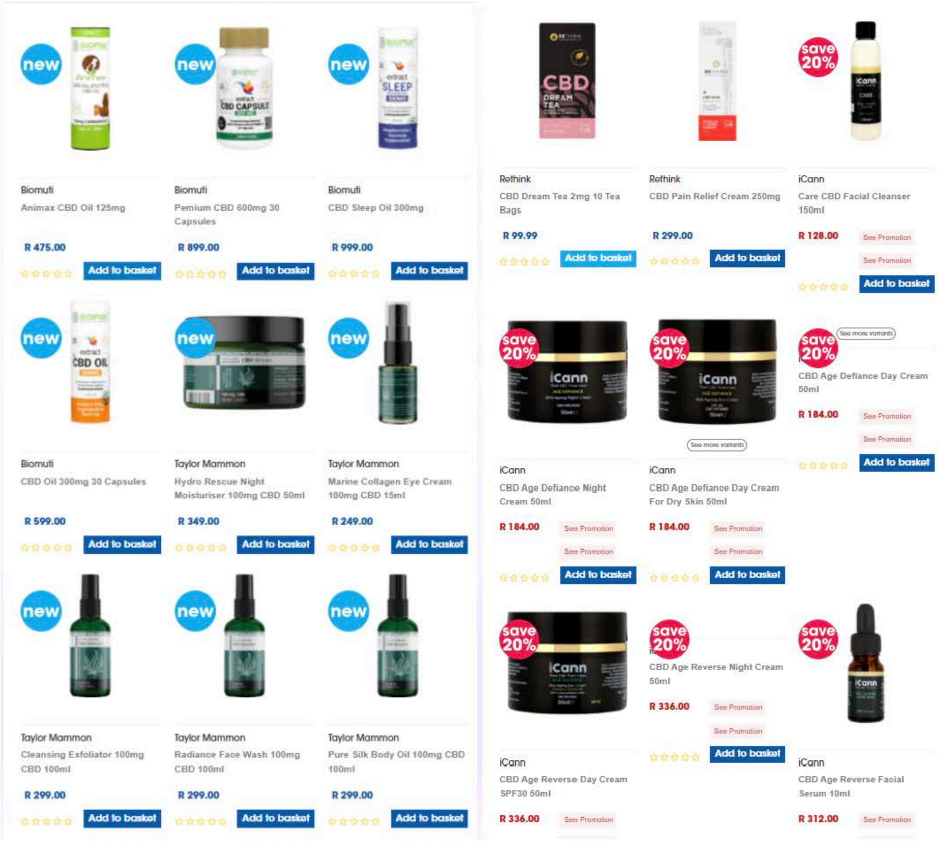
[24] https://www.Dis-Chem.co.za/catalogsearch/result/?q=cbd+products&form_key=QqddcwPHK09Gqmac



Picture 8[25]: Screenshots of CBD products from the online website from Clicks, South Africa.

Given the regulations that exist on these types of products (specifically for public consumption) it is common practice that the label will state a maximum daily dose (normally of 20mg per day) but for pain management, these restrictions are not followed. The label is more a guideline, as it is difficult to provide a prescription. If a patient requires slightly more than the recommended dosage, the option is there, but it cannot be stated legally on a label.

In Zimbabwe, however, it is quite a different story. Medicinal cannabis and hemp have been legalised for use (in 2019) but the licenses for farmers and potential producers is a very hefty fee. A license for growing production and distribution is US$50,000. This licensing fee is purely for the application, it is not inclusive of taxes and other expenses. One of the most common issues I found while researching in Zimbabwe was that everything is still being kept

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[25] https://clicks.co.za/searchProducts?query=cbd

very quiet. Despite legislation being passed and medicinal cannabis being legalised, there are still legal issues around the use of CBD products in both Zimbabwe and South Africa.

Emily, Kundai and Fred all noted that while there are supposedly laws in place that protect the use of CBD and medicinal cannabis for individuals, there is still very little understood about the distinction between the two products. This has deeply affected the use and sale of any products that have even trace amounts of THC in it. My interviews touched on the fact that there is not much known about CBD products and we, (as Zimbabweans), are not able to speak freely about it and offer educational talks and seminars on the benefits of CBD as a method of alternative treatment for sickness.

> "*So, remembering with not last year, the year before, and they said it's legal to grow cannabis, and we're calling on all farmers. So many people went for that, but it was a 50,000 US dollar application fees. They do loads of them already in 650,000. Because every time they say no, your application needs changing. You have to pay another $5,000. Okay. So, a lot of people pulled out or didn't bother. Don't blame them. Yeah, that article in the November was very contradictory. Because they were saying, yes, we're open for business and whatever. And then I was reading down because I want to know where I stand as a merchant. Yes. Yeah. So, a merchant's license which I need is 500. US dollars? Yes. Yeah. Now, they've changed their mind so many times. I'm not going to pay $500. And then they go, sorry, because they're not going to refund me. Yeah. And then six months later, Oh, do you want to reply again? So that's why we call it magic beauty at the moment. And that's unfortunately, why it's all underground. That's why we can't openly talk about it and educate people. Why don't you take CBD, or I could even make up a CBD, topical ointment and get into the ovary or even add it to the Yoni steam.*" – Emily

Due to this lack of freedom and openness around educating community members of the benefits of CBD, sales and consultations generally happen by word of mouth. People who have previously or are currently using these products are sharing their experiences with others about the benefits they have gotten from using these kinds of products. Out of the participants who suffered from endometriosis and PCOS, only four that were not of Caucasian descent. This, in turn, is deeply problematic as it creates a very exclusionary divide between what can be seen or described as a prevalence of usage in the white-middle class community and does not really extend to other population groups. This is not something that came up or was discussed in the interviews, but was something that was observed in these spaces where producers were working and the sites they referred as having clients.

From this, there births another issue of accessibility. With this so called "underground" channel of communication and sharing of information, it becomes even more clear that accessibility to CBD is not easily attainable. Apart from CBD products as a method of treatment, there are accessibility issues around receiving diagnoses and being able to access proper healthcare.

Fred described the process in which the testing and approval happens around CBD products. It is a rigorous process that involves different laboratory testing where the products vary, and they need to be declared as cleared products before they can start being sold and processed for sale. There are specific conditions that are needed for these plants to be of the highest quality before going through the testing stage. Awareness is an important part of educating people about alternative treatment methods. The NGO groups that are working in Zimbabwe with young women in the rural areas to educate around female reproductive health have mentioned that within these groups, there are conversations about the use of CBD products as a means of treatment. In discussions with Kundai and Emily, it became abundantly clear that activism for CBD products is a low and this may be owed to the legal ambiguity of CBD and cannabis products. The producers of CBD oils and products in Zimbabwe are doing some activist work in their small circles, but nothing is being publicly advertised, because of the regulations. Awareness and education around CBD is a big issue and strongly influences the uncertainty between CBD and THC plants and products.

6.2 Getting to know CBD: Growth and Extraction stage (conversations with Fred and George)

One of the first things that came up in during conversations was that the plants [cannabis sativa] need to be kept in a safe, stable environment, generally in a greenhouse or a covered structure, where the temperature, light and water is closely managed. The nutrients that are included in the growth process are also important in creating the best quality in plants. Drip irrigation[26] is generally thought of as the best option, as the water inputs are controlled and there is no chance of the plants getting mouldy by getting too much water. George echoed this thought by explaining that if there is too much water and not enough light or sunlight, the plants are not getting all of the necessary nutrients, but there is also a risk of the plants becoming damaged from too much water intake.

> "*Yeah, obviously they need their nutrition that it's all controlled basically the whole environment as you normally grow them in pots. Even though even the soil is 100% controlled. It normally has like a probe in there, which is delivering the, the nutrients directly to the root. So it's like a drip irrigation system, which is also including the*

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[26] a system of crop irrigation involving the controlled delivery of water directly to individual plants through a network of tubes or pipes.

> *nutrients straight to the root like a small pack which is going into the, into the soil.*" – *Fred.*

Considering all of these conditions needing to be in order, Fred explains that if you are looking to produce a certain strain or product, it has the potential to take (up to) a year to ensure that the right combination is found and the plants have successfully been merged or designed, if you will, to create the desired product. Through a pruning, re-planting and germination period, these aid in creating the best chance for the desired product to grow. This is in direct relation to the types of cannabinoids that you are trying to grow and produce. Fred went on further to explain that if a specific strain or cannabinoid is wanted, there needs to be some kind of testing that takes place to ensure that it is the cannabinoid that you are looking for. Cannabinoids affect every body differently, it can be extremely difficult to make a product or intend to sell a particular product for a specific symptom needing to be managed. This links back to the daily recommended dosages that are put on the packaging of CBD products. It is quite common for there to be a list of illnesses or afflictions that the product can help with, but through the approval stages and licensing of a product, it is difficult to provide a guarantee.

The extraction process for the oil products is a very interesting process and draws on different methods depending on the product.

Fred explains that there are 3 commonly known extraction methods that involve either:

1. Ethanol (this is usually used due to its scalability[27]);
2. Butane (this is a dangerous method as the gas can be difficult to work with);
3. Carbon dioxide.

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[27] Scalability in how much can be produced at the most cost-effective price.

> *"So, there are various methods available, which [have] obviously changed over the years, some have their advantages, some have the disadvantages. Now it's going into isolates just extracting a certain part of the of the cannabis plant*[28]*. So, the most common one currently is the ethanol extraction because of its scalability. And there's butane that you can use [as the gas] obviously, it's quite risky because it's quite volatile, if you if you set it on fire your house is gone. There's* CO_2 *extraction as well, which uses pressurized gas* CO_2 *which is then basically extracting the cannabinoids out of the plant. So that's the basic of all extraction. Each one has its pros and cons. We in our oil use ethanol extraction because of its scalability and to know actually, how much is going into your product so obviously, you need to lab test your extraction, your extracts, that no matter what, what method you're using, because it's a natural plant and the products vary actually depending on your climate and how much sunshine it has, and for what in the cannabis industry is very important is how stable your plant is." - Fred*

Through the use of any one of these extraction processes, the plants and seeds need to be extracted through a cold press. Cannabinoids are known to be destroyed at temperatures of, and exceeding 67 degrees Celsius. This is interesting to note as it links back to the issues of the actual types of CBD products that are being advertised and actively being sold in Zimbabwe and South Africa. It is important to understand the actual process that a CBD or even THC oil has been through before putting it in your body. If the oils have been exposed to high temperatures, they can become harmful and no longer contain the benefits of cannabinoids.

When CBD is extracted for an oil, the base oil is also important in the make-up of these products. The most commonly known oils being used in Zimbabwe is Medium-chain

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[28] Referring to the extraction of CBD strains from the cannabis plant

triglyceride (MCT) oil and coconut oil. MCT oil has been described as being a lot more useful and a lot more helpful. MCT oil is easily digestible and has other additional health benefits. MCT oil has the potential benefit of promoting weight loss, providing a good energy source and could be used as a potential to help with epilepsy, autism and Alzheimer's disease. Coconut oil is also used as a base, but, unlike MCT oil, coconut oil has the potential to go rancid if not used in a certain timeframe. MCT oil is also known not to have any taste to it or smell, whilst coconut oil, even when labelled as odourless still has an after taste to it.

> "*There's different carrier oils, we use MCT medium chain triglyceride, which is digested properly, because it goes through the digestive system and you want to make sure that most of the cannabinoids then go into the, into the body. Yeah, and depending which oil you're using, it's better digested or less digested. So, it really needs to be digested. That's the most important part. That's when you get like, the good result. And basically, when you have your drops, you eat them. They're now getting into the bloodstream. Yeah. So, they use MCT it, is basically refined Coconut oil, medium chain triglycerides. Is fat have carbon chain, right? And the longer the fat is, you get the larger chains, and you have medium change and then you have two very short chains. And in the medium one, that's something that is fast digested. And this also giving your body fast energy. Okay. It also helps for hormone imbalances and that kind of stuff. You are already getting the benefits from the oil and it doesn't solidify. Because coconut oil, for example. Yes, it's natural, but it will solidify.*" – *Fred*

An important process in the cannabis industry is actually how you are cultivating your plants. Fred illustrates that if there are 1000 seeds from one type of plant that are thrown into the field, there will be a wide variety of plants that come from the crop since they are "*sisters [seeds], not twins*" and once the seeds have germinated and flowered, the best plants, determined by size and flower formation, are harvested and the seeds are replanted to ensure the best variant continues to grow. This also helps when producing or making products, as there are Zimbabwean government regulations where the THC content may be too high, so picking the best seeds and cloning the best plants will help refine the amount of THC that is in a product or allow for the CBD strain to become the dominant strain in the plants that you are growing. Thus, cultivating plants for CBD production is a specific skill which requires specialised knowledge, investment of time, and attention to detail in order to create a quality product. This may also be a reason as to why CBD products are so expensive, as farmers are only able to grow at a small-scale as opposed to large-scale industrial production.

6.3 CBD: A Practitioners Perspective

My participants, here, expressed that there were significant barriers to CBD use. A large part of this was linked to religious and cultural barriers, assumptions around legality, misinformation, and even more problematic, ‘quack’ practitioners of inferior quality products. Kundai discussed issues around religious and cultural barriers that exist around the use of cannabis and CBD products. Aside from the lack of education around the plants, there are a number of misconceptions that exist around the use of these plants. This was true in both South Africa and Zimbabwe, but there is not uncertainty around the plant in Zimbabwe in comparison to South Africa. The biggest being a religious factor where people have been led to believe that the use of these products is a form of sinning against God and committing an unholy act, particularly in the Christian faith. This way of thinking is compounded by the cultural beliefs and practices that exist in communities. Kundai notes that this way of thinking is a lot more common in the black communities that are slightly more intolerant to different behaviours and movement away from traditional practices. There seems to be a general intolerance to trying alternative methods that have not been practiced beforehand or that are not biomedical.

The stigma that surrounds cannabis use is another relevant factor here. There is a misconception and social construction of how a person who uses cannabis products behaves and presents themselves. This social construction is part and parcel of the criminalisation of cannabis over previous years. Through media and forms of propaganda, an image of someone who is lazy, unmotivated and unclean is what has been presented to society. This is, of course, not the whole truth. There is evidence that dates back for thousands of years that highlights the medicinal benefits of cannabis use as an alternative treatment.

> "*For many people, you have to kind of educate them and say, you're not going to get high America, you might come down, you might sleep better, but you know, some people always have this illusion. Because everyone's like, oh, Cannabis, no, I don't want to smoke and it's not my religion or some, you know, all of these things. But, yeah, so these, these, these, a lot of cultural fear.*" *– Kundai*

Religious and political movements, like Rastafarians, have a particular set of ideologies attached to them and it is not uncommon to hear that people who identify with this religion or way of life are highly discriminated against. There have been a few instances where stories have emerged highlighting the type of discrimination felt by Rastas all over the world.
This all links back to a lack of education and willingness to understand the benefits and even lifestyle changes that could be attained by incorporating more cannabis or CBD usage in one's life.

This is not to say that there are absolutely no drawbacks from CBD and medicinal cannabis use. It is widely known that there is not currently enough scientific data that exists to support benefits of CBD use. However, there are numerous case studies and general stories that have emerged over the last few years that speaks to the personal benefits people have felt when using these products. There are a few studies that have been published between 2017 – 2021 that highlight events and times where the use of CBD and medicinal cannabis products have been counter-productive and have had bad reactions with pharmaceutical medication that is prescribed. One of my participants spoke about having a negative experience with the use of CBD oil that had trace amounts of THC in it. It was through this discovery that she moved towards the use of full spectrum CBD oil.

Perceptions around CBD products (as a social construct) have been changing over time too, where previously these negative connotations that are attached to the use of cannabis (and CBD as a by-product) are slowly starting to change as more and more research is being conducted and written about and more personal experiences come through. Even though there is not enough scientific data to back up these claims, it would not be prudent to discount the positive stories that are emerging form the personal use of cannabis and CBD products being used to help heal, and manage symptoms.

In conversations with Kajal, it was interesting to hear some feedback from a pharmacist's perspective on the endocannabinoid system and the effects of CBD. While Kajal noted that there is definitely a pain aspect, there were obvious concerns that came out in conversation. Zimbabwean laws around cannabis and CBD usage is really rather murky and from a legal standpoint, and Kajal noted that much of the production and use of CBD and cannabis oils is "underground" so to speak. This is classified as being underground due to the nature of the secrecy and overall avoidance around the topic and sale.

> "*It is important to remember that access to it is also limited. The fact that it's not legal makes it even worse. So, I know there's like maybe about three people that will have it.*

> *And then again, also, it's manufactured at home. So, is it really what it says it is? Which is why it's very difficult, because it's not yet reached that stage. Until it does, it's going to be that you can't really know what's going on, because it's just basically have three drops of this and hope for the best. But there is definitely a lot more in South Africa, because now it's registered and now you can buy it in the pharmacies. So, in that way, it will be more controlled. Yeah, it's really, it's not controlled at all [in Zimbabwe]. And it's basically doctor patient. Other it's not even the pharmacist it's yeah, it's another."*
>
> – Kajal

Zimbabwean health councils are slowly making progress to legalise the use of CBD products and, to an extent, the use of cannabis products for medicinal purposes. While there are still legal issues around this, Kajal highlighted the dangers with production not being out in the open and elaborated on her previous comment about not always knowing or understanding what is in the product itself and the repercussions that would follow. Kajal stated that each individual's body will process CBD products differently and the effects on one's body will present differently, so without a standardised, tested product, it is very difficult to distribute or prescribe CBD or cannabis products to patients. Kajal's reference to "*other*" speaks more to the fact that pharmacists in Zimbabwe are not being consulted in this distribution of products and due to the lack of testing, they are not able to legally sell or distribute any of these products. Kundai echoed Kajal's sentiments on the legalities by highlighting the misconceptions around CBD and cannabis use for pain management

> *"I think part of the challenge in this country is that people who are dispensing and using it, right, it's not legal, right. So, so people are resorting to it because of pain. Yeah, I'm thinking in particular, one patient. When I initially suggested CBD, for pain, she was like, I don't want to do that I'll get hot, you know. So, there's all these myths about CBD. So, you really have to help people realize that it's like any herb, it's like*

> *you taking milk thistle is like you taking lemon balm, you know, and there's power in it."* – Kundai

When furthering the discussion on patients that had been to see Kundai, she noted that access to CBD was only but a small part of the problem. There are issues around the cost of the product and concerns were mentioned around people who are producing CBD products from their homes and not being aware of the percentage of CBD and THC levels that are in the final product. This is cause for concern when people are turning to alternative treatment methods but are not acutely aware of what is being put into their bodies.

> *"I also feel there's a cost prohibitive-ness about it, right. The cost range, you know, some people are importing CBD, some people are growing it. So, the risk of that, you know, yeah, and so the prices even in the US prices, because I have CBD suppliers or people who just I get a lot of interest because there's a naturopath." – Kundai*

Kundai recounted that in the State she used to live in, in the USA, cannabis and all by-products has been made legal and there has been a surge in dispensaries around the state. This has meant an increase in the number of people actively seeking out scripts and getting CBD products. Kundai noted that in the USA, there is a lot more control around cannabis and CBD products and there are percentages that are put onto the products to identify the potency.

This, however, does not translate back to South Africa or Zimbabwe. There is very little information that is put onto the labels for these products, making it difficult to make sure that you are ingesting the right amount, or a safe amount for your body. The ingredients on the label on the bottle also has very little information. There is no way to know exactly what process has occurred when producing this product and what kind of oil has been used or type of potency. This is highly concerning due to the mass production of these kinds of products, especially in South Africa.

Chapter seven: Analysis Chapter

Women living with endometriosis and PCOS embark on a life-long journey intro treatment upon diagnosis. Whilst women share similar symptoms, and each experience is unique, there is a general consensus around the choice to move to alternative treatments, in this case the use of CBD products. Through the data gleaned it became clear that one of the main reasons for women moving from biomedical treatments to the use of CBD products, (and other alternatives), was a result of what they perceived as a lack of care inherent in the biomedical healthcare system. This chapter aims to analyse my research findings, presented in chapters three, four and five through the lens of feminist anthropology and a framework of structural violence.

All my participants expressed negative experiences with the biomedical healthcare system. This does not negate any positive responses raised, but the negative experiences were crucial to the care, treatment, and management of their sicknesses. These negative experiences centred around feelings of being attacked, dismissed, and unheard in relation to their sicknesses mainly prior to diagnosis, but also after. From this, I argue that there are major flaws in the approach to biomedical healthcare, which is inherently patriarchal. This is also why a feminist anthropological lens is important to incorporate into this analysis.

In a feminist anthropological approach to the study, the study was carried out by a woman, for women, and to provide women with the space to explore and explain their experiences of chronic reproductive health sicknesses, namely, endometriosis and/ or PCOS. In addition to this, as the researcher, I brought an emic perspective to the study in identifying with the struggles of my participants because I share the medical condition and medical journey of treatment. In line with the first wave of feminist anthropology, I look at women's issues independently of males in their lives and society in general. The focus has not been around marriage, kinship and family, but on the individual's experiences themselves. My study has not sought to understand these sicknesses in terms of the impact on male partners, but rather the focus is on the women themselves and their experiences. Dominguez et al (2021, 2) explain that women's issues have traditionally been treated as insignificant in comparison to men's issues. Especially so in the health sector. When they are talked about, reproductive health tends to include men and the effect of women's reproductive health on men. This is very common, for example, in the USA where women are still, in many States, fighting for bodily autonomy and the right for safe and secure abortions. In South African and Zimbabwe, which are both patriarchal countries, women's agency in relation to their bodies is also minimised. Women are often viewed as reproductive machines and their value is centred around the ability to have a child. Lobola and dowry negotiations, in some cultures, take into account whether the wife-to-be is a virgin, if she is able to have children, and if she has had children out of wedlock the value of the lobola is reduced. Women have been socially and culturally conditioned for motherhood since childhood, and reproductive health issues are geared towards the notion that childbearing must be fixed, and not simply for the woman's better health. One of the common things that my participants experienced when being diagnosed was that the they (the doctors) would work to ensure that their fertility was saved, without a consideration for whether the woman wanted a child or not. As some participants have alluded, one of the common things said to them to combat their disease was to have a baby, and in these cases disregarded the age of the patient, and whether they were ready (psychologically and financially), or even wanted a baby.

The second wave of feminist anthropology highlighted the Eurocentric nature of the discipline and recognises that whilst women all over the world face oppression, there is an added layer to the oppression experienced by women-of-colour (Travis et al, 2012: 206; Dominguez et al, 2021: 4). Most of my participants had expressed that in their treatment by biomedical practitioners, they had felt ignored and the pain dismissed. This was echoed in survey responses and in observations that were made online. The three black Zimbabwean women who participated in interviews had explained that they felt that the healthcare practitioners who interacted with them were excessively hard on them, and demanded that they bare their pain better, almost in a sense that black women are expected to be able to take more pain and should be quiet. From conversations with these three participants, and observations from online support groups, there seems to be a polarised continuum of black women either being resistant to pain or overreacting, (i.e., being too hysterical) about their pain, and there is no in between. The idea of black women being resistant to pain comes from a history of biases and misconceptions in medicine (Sacks, 2018: 59; Rao, 2020). Sacks (2018: 60) makes reference to experiments done in the 19th century which created the assumption that black people have thicker skin than white people, and so do not feel as much pain. This has translated into black people, and in the case of my study, specifically black women having their pain not only ignored but also dismissed as an overreaction, and in some cases medication for pain was not even provided. Tendai was left alone in an emergency ward while she was in excruciating pain and was labelled hysterical. Tendai has a medical background, and so knew that the advice that she received when she eventually attended to unsatisfactory to her needs, yet she was still dismissed in her please. White participants, whilst having experiences similar in that their pain was ignored or dismissed, were still given pain medication to relieve their symptoms. This was echoed in comments seen online, in response to black women who wrote about either the lack of pain medication or who were given low dosages of pain medication. Black women are also seen to be held more responsible for health in the sense that they could have prevented their sickness if they had been paying more attention to their bodies. Rao (2020) emphasises the fact that black women are less likely to be diagnosed with reproductive health sicknesses because there is a bias that black women are very fertile and as such do not suffer from such conditions. Chiedza was specifically told that by a biomedical practitioner that people of her race and age do not get endometriosis or PCOS. As a woman, and as a white woman, it is important for me to advocate not only for women in general, but to highlight injustices that are experienced at a deeper level which include race and ethnicity. Through my research I have tried to bring out these experiences and give them a voice. More qualitative research is needed in this area.

Feminist anthropology has, according to Travis et al (2012: 208), played an important role in advocating for female reproductive healthcare and in challenging the patriarchal biomedical system. Through providing women with a voice of their own, that is not tainted in any way by male interpretation or perceptions, research from a feminist anthropological lens has been able to provide important critiques of biomedicine and to bring to light the many inequalities that that exist for women, and particularly women-of-colour (Travis et al, 2012: 207).

Through the use of a feminist anthropological lens and its application, I chose to analyse the experiences presented by my participants, through the framework of structural violence. As mentioned in Chapter Two, structural violence is centred around the way in which social structures are arranged in society that either provide or prevent access of certain things to the people of that society (Ho, 2007: 3). From this it is clear that social structures or arrangements are created in ways which benefit some over others. Johan Galtung, who proposed the theory, mentioned many structures in society that do this, and for this study I have chosen to focus on sexism as a structure in society, which favours men and subsequently has led to the fundamental impairment of the needs of women (Ho, 2007: 3). I consider that sexism is the umbrella term, and in the case of my study, misogynistic norms more accurately frame the biomedical healthcare system. Farmer et al's (2006: 1686) description of putting "individuals and populations in harm's way" aptly describes the female experience in the biomedical healthcare system. Women have been side-lined in their own experiences and made to feel as though their health issues are not important or are trivial. Hysteria is a common term that is mentioned in relation to women's experiences, and makes one seen as emotionally excessive implying a lack of rationality. This is not something that men have to deal with. Participants in my research indicated feelings of dismissal surrounding their healthcare concerns. In addition to this, they felt that they were not taken seriously within the biomedical sphere. Participants explained that not only were their pain levels trivialised and invalidated, (as overreactions, and hysteria), their true diagnosis took a long period of time to get to. Women who took part in this study expressed that they were often misdiagnosed and as a result mistreated, which created further health complications through diagnostic delays. Endometriosis and PCOS are not new diseases, but are still understudied and reliance is on treatment of symptoms, as opposed to the need of finding a cure that does not, for example, require the removal of ovaries or the uterus.

In addition to feelings of being dismissed and invalidated, my participants expressed that there still seems to be too much uncertainty around these diseases and that everything seems to be trial-and-error responses. As mentioned above, these diseases are understudied, and this fits in with the narrative that women's bodies are not as clearly defined as male bodies are, in medicine, and is still somewhat of a mystery and underrepresented (Global Citizen, 2020). Take the prescription of the contraceptive pill, for example. All my participants expressed that they had been on the pill at some point, and some still were. This was the same from online observations. However, which pill is the most beneficial cannot be agreed on, and often women have had to try multiple different pills to find the one that would work best for them. This meant that women would have to wait months (sometimes up to six months on one pill), before having it changed and the doctor believing that they had given enough time to testing the pill. For those where the pill did not seem to work, an IUD (a popular choice by doctors is Mirena) was suggested which required an invasive procedure and dealing with pain, sometimes for months, afterwards. The IUD would be expected to reduce pain and bleeding, but this was not always the case. Some comments on online forums show than many women had experienced more problems with the IUD than they did on the pill, and they ended up back at square one, after having the IUD removed. Removal of the IUD was also not an easy thing to get as doctors would keep saying to give it more time. All of this mystery surrounding reproductive health sicknesses has led to women doing their own research online and taking note of testimonials by other women who have had similar experiences. The only real validation seems to come from other women with the same/ similar experiences as opposed to biomedical healthcare practitioners who are meant to assist with healthcare. It is important to note that my participants and online posters had shown that their research into these diseases only took place after they had been diagnosed, which for one was believed to be late, and two, biomedical practitioners provided unsatisfactory support and information. Much of the research that my participants and online observations alluded to doing was around finding information relating to a better quality of life and ways to maintain health. My participants and online observations have pointed to finding lifestyle changes, that are inclusive of dietary adjustments, exercise regimes, and methods of relaxation, that lead to living a more holistic lifestyle. In many instances when such findings are raised with biomedical practitioners, they are dismissed as being unscientific and not real research, and yet many women have stated that the information they received from other women has been very helpful on their journeys. In this instance it is women who help out other women through expressions of experiences and so it becomes important in areas of health, such as this, that women are given a voice to their experiences so that other women may benefit from it.

It becomes evident then, that that the patriarchal culture and nature of biomedicine and its processes justify and legitimise the unequal distribution of power between women and men's healthcare. The cultural scripts which exist in the biomedical system have entrenched sexism within the system, and as such guide the behaviour of those who are part of the system which becomes internalised, shared narratives for members and new members (Christie and Wessells, 2008: 1956). My research illustrates this through the fact that even female doctors, and specifically gynaecologists, have acted and reacted to my participants in the same way as male practitioners. Conversations observed online, and in person, showed that female gynaecologists were preferred at first and this was because participants believed that a female doctor would be more open and understanding about their issues. They found, however, that female practitioners[29] were no better than their male counterparts. Conversations and observations have highlighted that, in their experiences with female practitioners there was also a seemingly lack of interest and care coming through. One comment observed online by a woman who has been diagnosed with PCOS, (and who suspects that she also has endometriosis), was that the first gynaecologist she went to, who specifically chose to be female for comfort reasons, diagnosed her with PCOS in about five minutes and told her in a very off-handed manner that they would deal with any fertility issues later, when she was ready to have children. This woman was already 26 years old at the time, and says that even though she was not interested in having children, she felt that this was a very off-handed way in which to speak to someone. A visit to another, female, gynaecologist resulted in what she called a waste of time and money, because she was not fully informed about the procedure that was to happen and so was not fully prepared. The female doctor spoke to her rather rudely and in a manner that showed that the doctor expected her to know what to do to prepare for the appointment. There was nothing more than an ultrasound and breast check done, which the commenter said as cold and harsh,

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[29] Practitioners refer to both physicians and gynaecologists.

and dismissive. It did not seem important to this doctor that a second ovary could not be found, and the doctor was more concerned with pushing the insertion of an IUD (Mirena) to stop the woman's periods. This woman, and others, expressed that stopping the period was not the issue but wanting to find out what was causing the problem was, and this was brushed off. Another aspect is the issue with weight. Women with endometriosis and PCOS are commonly known to put on weight, which is also exacerbated by the use of the contraceptive pill. Participants and online users, alike, have said that even their female practitioners have stressed weight loss and created a sense that the woman was not doing enough to lose weight. This was regardless of whether a woman exercised and ate healthy. Female practitioners, generally, also ignored their patients' explanations and the impact of the disease and the medication in weight gain, and placed it squarely at the feet of their patients. Thus, it becomes clear that female practitioners do not fare any better in their treatment of and interactions with their patients. The deduction is that female practitioners are enculturated into a male dominated environment and in order to keep up and be accepted by their male peers, they succumb to the very behaviours that they may have previously had problems with. Female practitioners, unconsciously, internalise the cultural norms in medicine that are inherently patriarchal and follow the dominant narrative in place.

The type of healthcare that is administered to men and women are vastly different. Whilst women have been expected to quietly ingest a contraceptive pill every day, regardless of the side-effects, and to simply be okay with these effects, men on the other hand have had their concerns listened to and acted on. Women have to go through different contraceptive pills in order to find the one that causes the least disruptions in their lives, but nonetheless still causes disruptions. An example of this the recent creation of the male contraceptive pill, which was recalled from the market due to the negative side-effects that men in the trials experienced. The side-effects of the male pill is very similar to the female pill, for example mood swings and depression, but it was felt that these were important enough in how they affected the men taking the contraceptive that it needed to be removed. Women have expressed problems with the contraceptive pill for years, which also lowers one's libido in many instances, and yet their pleas have been ignored by the biomedical community. If the side-effects are too severe, then the woman has to try another pill, and so on.

These structural inequalities that exist in the biomedical healthcare system must be addressed in order for women to have equitable access and treatment. There has been movement in making access for females better but this is not happening at the rate at which it needs to, in order to positively influence the nature of biomedical healthcare that women can access. The experiences that have been highlighted in the course of this dissertation have led to women actively seeking out alternative treatments and CBD has been a strong contender here. CBD practitioners have been seen to be more interested in their patient's well-being and provide a holistic approach to the healthcare that they offer. It is not just about managing pain, but other associated symptoms such as restless sleep and migraines, and thus allowing the patient to have a better quality of life. CBD has proven to be non-invasive as a treatment for management of symptoms, and to have little to no side-effects for the individual taking them. It is also interesting to note that in the past CBD has often been dismissed by biomedical practitioners, as attested to during conversations with my participants and online observations, but recently Pfizer (an international pharmaceutical company) has launched trials into the use of CBD. Participants and online observations have reflected the move away from biomedical intervention to CBD usage has not just affected their pain, but also levels of anxiety, settled mood instability, and provided overall calmness in their lives.

From the preceding discussions, structural violence against women in the biomedical healthcare system need to be addressed more urgently if any change and improvement can be expected in women's health. Feminist anthropology has worked toward attempting to break down the hierarchy and structurally violent nature of the biomedical healthcare system, and bring to the fore the voices of women and their experiences to centre stage in women's health.

Chapter eight: Conclusion and recommendations for future studies

Endometriosis and PCOS are lifelong reproductive health diseases that impact on every aspect of a woman's life. The research into causes of these diseases have not provided conclusive information on the origins of these diseases and as such, the discovery of a cure remains elusive. Women who suffer from endometriosis and PCOS experience high levels of bleeding, heightened and debilitating pain levels, insomnia, and mood swing, among others. The aim of this research study was to investigate the impact of cannabidiol (CBD) usage amongst women who live with PCOS and endometriosis. This study has explored the experiences that women face in the biomedical healthcare system in direct relation to PCOS and endometriosis. Through the interviews that were conducted, issues and concerns around equal and fair access to biomedical healthcare, inherent structural violence and lack of alternative methods of treatment were highly discussed topics. The personal critiques of the biomedical system are those that have been analysed through a structural violence lens and a feminist anthropology stance. The interviewing process and collection of survey responses showed how women who are currently suffering from PCOS and endometriosis are utilising alternative treatment methods. Women who have moved to using CBD products to maintain their overall health have noted that the additional benefits of the products, whether it is oils, creams, or tablets, have positively impacted their daily life and these additional benefits have made it easier to maintain their health and well-being. The pain management on its own is something that has been helpful and beneficial, but seemingly works best with a combination of alternative methods of healing as opposed to CBD products on their own.

There is, without a doubt, more knowledge that needs to be produced on this topic. The limitations of this study lie in its small number of participants and not being able to provide a wider base for a study. Despite a small sample size, the data collected has provided a rich data set that has brought out important conversations that need to be tabled in biomedical and feminist spaces. Anthropology, as a true social science, is a discipline that is perfectly positioned to provide much needed insight into these areas of healthcare. Through the exploration of lived experiences, chronic illness sufferers are able to offer deep insight into the reactions to and impacts of medication and alternative forms of treatment. This would be beneficial to wider society not only for purposes of knowledge generation, but in relation to the application of healthcare interventions that may be more personalistic and direct to a group's, in this instance women who live with endometriosis and PCOS, needs.

Addressing the gap in the literature has been a big achievement for this research study and a recommendation that comes out of this study would be a push in education and awareness around female reproductive health issues, namely PCOS and endometriosis, and more studies conducted on CBD products as an alternative treatment for these female reproductive health issues. An educational drive would aid this development and create the space that is needed to research and openly discuss and debate these products. The potential acquisition of Arena Pharmaceutical by Pfizer may deeply impact the legal issues that currently surround CBD and Cannabis products. Clinical and medical studies are needed on CBD products and from these studies, there is a possibility that CBD products may be used globally and offer alternative treatments and avoid unnecessary, invasive biomedical interventions.

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