An exploratory study of female South African university students' knowledge and perceptions of subdermal contraceptive implants.

A treatise submitted in partial fulfilment of the requirements for the degree

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Declaration

I Sikander A.R. Kalla hereby declare that this treatise submitted in the month of September of the year 2017 in partial fulfilment of the requirements for the degree Master of Arts in Clinical Psychology in the Faculty of Health Sciences at Nelson Mandela University, is my own work and I have not misappropriated the work of any other researcher or theorist. I also declare that this treatise has not been submitted to another university for the fulfilment of requirements for any other degree.

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Sikander A.R. Kalla

Acknowledgments

First and foremost, I would like to acknowledge all the participants of this study for having the courage to voice their knowledge and perceptions on a topic that is not always easy to talk about. I extend my sincere gratitude for the faith you bestowed on me in believing that I will share your views with utmost integrity and dignity. I hope this study demonstrates that I viewed your trust in me not only as a call for responsibility, but also a privilege to be cherished.

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Lastly, I would like to cite the words of one participant in this study that serves as a reminder to the responsibility we have as social change agents to leave the world in a better state than we found it.

"*…we're never gonna be able to create a contraceptive that has no stigma attached to it, we can only create a society that is less stigmatising…*" – Participant 3

Abstract

South Africa's recent efforts to improve contraceptive uptake include the public launch of the subdermal contraceptive implant (branded Implanon NXT®). The launch of this modern contraceptive was welcomed as an initiative that holds promise in addressing elevated unintended pregnancy rates in the country. However, a paucity of research regarding the uptake of this contraceptive exists. This study sought to narrow this research gap by exploring the knowledge and perceptions that young female South African university students have of contraceptive implants, as well as investigate how these views may shape the willingness for these females to incorporate contraceptive implants into their birth control regimen. Semi-structured interviews were conducted with young female students enrolled at Nelson Mandela University and data from these interviews was analysed using thematic analysis. Findings were examined through a lens of social constructionism and critical psychology. Analysis revealed the following key findings: (1) the function, suitability, and negative perceptions, of a particular contraceptive are notable considerations taken into account by young female university students when investigating contraceptives; (2) psychosocial challenges are prominent in the arena of contraception; (3) contraceptive implants possess the potential to reduce stigmatisation and empower women; (4) however, participants asserted that there are significant psychosocial and structural barriers to the uptake of this contraceptive. These findings highlighted that contraceptive knowledge and perceptions are influenced by an interplay of psychosocial and structural factors. These factors were ultimately noted to influence young female South African university students' willingness to incorporate contraceptive implants into their birth control regimen.

Keywords: Subdermal contraceptive implants; contraceptive implants; Implanon NXT®; young female; university students; knowledge; perceptions; social constructionism; critical psychology.

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Chapter 1: Introduction

1.1 Introduction

Contraception is not a neutral and fixed aspect of reproductive health and sexual activity. Instead, contraception involves a dynamic process of navigation and decision-making in matters related to reproductive health and safer sexual practice. Considerations regarding birth control are usually guided by a social process, which is accompanied by a vast array of knowledge and perceptions, as well as multiple role-players and their respective agendas. All of this may ultimately govern contraceptive decision-making (Protogerou, Flisher, & Wild, 2014). Furthermore, such social influence, viz. the knowledge, perceptions, and ideological interests of individuals, is not the only factor at play in contraceptive decision-making. Structural factors, such as contraceptive availability, accessibility, and affordability, must also be considered when discussing birth control, reproductive health, and safer sexual practice (Sitruk-Ware, Nath, & Mishell Jr, 2013).

Birth control methods and contraceptive devices are also not static. Instead, medical innovation and technological advancement allows for the development of new contraceptives, and the refinement of older contraceptive methods. New contraceptive options, as well as improvements made to existing methods of birth control, may ultimately result in a vast array of modern contraceptives that offers greater convenience, safety, and efficacy.

Developments in the domain of contraception, and the emergence of new contraceptives, might play a significant role in addressing contemporary challenges related to birth control and reproductive health. On a micro level, individuals might seek contraceptive options that are particularly suited for their modern lifestyles, such as a long-acting and low-maintenance contraceptive, which can accommodate the needs of busy individuals living in a fast-paced society. On a global level, good reproductive healthcare, and access to modern contraception, are both foregrounded as universal human rights (United Nations Population Fund, 2013). Nevertheless, fulfilling such obligations is often a difficult feat. Different contexts face unique healthcare challenges. In this regard, it is well-documented that developing countries disproportionally carry the global burden of unintended pregnancies, when compared to their developed counterparts (Sedgh, Singh, & Hussain, 2014).

Southern Africa, which is identified as a developing sub-region, carries the highest proportion of unintended pregnancy on the African continent. With regard to the HIV and AIDS pandemic, Southern Africa is identified as the worst-affected sub-region in the world (Joint United Nations Programme on HIV and AIDS, 2016). These sub-regional challenges highlight the necessity for contextually-relevant intervention. Such intervention must be guided by in-depth investigations that take into account the unique needs of a specific population within a given context. In light of this, the researcher seeks to investigate the contraceptive dynamics shared by a young female student demographic in South Africa. Specific attention is given to investigating the knowledge and perceptions of one particular modern contraceptive: the subdermal contraceptive implant.

Subdermal contraceptive implants, hereafter also referred to as 'contraceptive implants' or 'implants', are part of a category of modern contraceptive methods known as long-acting reversible contraceptives (American College of Obstetricians and Gynecologists, 2011). Two contraceptives fall under this category, namely, contraceptive implants, and intrauterine devices. Long-acting reversible contraceptives, as the name suggests, offer reversibility, and are effective for longer periods of time when compared to short-acting birth control methods, such as oral contraceptives. In this regard, long-acting reversible contraceptives are effective for more than three years, and fertility is quickly restored after discontinuing use (Department of Health, 2012).

A subdermal contraceptive implant is a small plastic rod, roughly the size of a matchstick, which gets inserted under the skin of the recipient's upper arm. The implant, which is branded Implanon NXT® in South Africa, works by slowly releasing a small amount of the hormone progestogen on a consistent basis for up to three years. This results in the inhibition of ovulation and a thickening of cervical mucus, thereby preventing conception (Department of Health, 2012). The subdermal contraceptive implant is the most effective form of contraception available in the world and requires almost no maintenance after being inserted. The only maintenance required revolves around remembering to have the implant replaced after three years of use (American College of Obstetricians and Gynecologists, 2011). The unsurpassed efficacy of contraceptive implants makes them particularly suitable for addressing unintended pregnancy concerns. Furthermore, the low-maintenance benefit of this contraceptive might make it a preferred method of birth control among individuals that have a

relatively busy schedule, such as young female university students (Anyanwu, Goon, & Tugli, 2013).

1.2 Aims

The aim of this research study is: to explore the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants. Such investigation is essential given that these views may shape the willingness for these females to incorporate subdermal contraceptive implants into their birth control regimen.

1.3 Rationale

Given Southern Africa's challenges related to elevated unintended pregnancy, as well as those related to the HIV and AIDS pandemic, one would assume that a country which is situated in this sub-region faces similar healthcare challenges. Focusing specifically on South Africa, unintended pregnancies that occur within the country are estimated to result in a national cost of more than three billion Rand each year (Le, Connolly, Yu, Pinchevsky, & Steyn, 2015). South Africa is also noted to have more people living with HIV and AIDS than any other country in the world (Joint United Nations Programme on HIV and AIDS, 2014). These healthcare challenges ultimately add to a per capita health burden that is higher than that of any other middle-income country (Le et al., 2015).

In response to these challenges, South Africa now embodies the largest HIV and AIDS treatment programme in the world (Beyrer et al., 2017). To address unintended pregnancy, South Africa has pledged commitment to global initiatives that seek improved access to reproductive healthcare, as well as desired birth control options. In this regard, the country has specifically highlighted a need to improve modern contraceptive availability and accessibility at public health facilities (United Nations Foundation, 2012). During the year 2012, South Africa updated its contraceptive policies and released two key legislative documents, namely, the National Contraception and Fertility Planning Policy and Service Delivery Guidelines, as well as the National Contraception Clinical Guidelines (Lince-Deroche et al., 2016). These two legislative tools that work in conjunction with one another ultimately make provision for the national availability and accessibility of modern contraceptives, as well as other important provisions in the domain of good sexual and reproductive health (Lince-Deroche et al., 2016).

In line with this concerted effort to improve modern contraceptive availability and accessibility, the South African Minister of Health, Dr. Aaron Motsoaledi, nationally launched the subermal contraceptive implant to the public on the 27th of February 2014. During this launch, the Health Minister expressed that the contraceptive implant will be freely available at all public health facilities (Department of Health, 2012; Myeza, 2014, February 27). Since this national launch more than three years ago, a paucity of quantitative and qualitative research regarding the uptake of this modern contraceptive still exists (Lince-Deroche et al., 2016). This study seeks to narrow this research gap by exploring the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants.

Chapter 2: Literature Review

2.1 Elevated Unintended Pregnancy Rates

2.1.1 Contextualising unintended pregnancy.

Unintended pregnancy (which is often expressed interchangeably with the terms 'unplanned pregnancy' or 'unwanted pregnancy') may be understood as an umbrella term that encompasses scenarios in which conception is either ill-timed (pregnancy is desired, but at a relatively later time in life) or unwanted (pregnancy is not desired at all) (Exavery et al., 2014; Zakar, Nasrullah, Zakar, & Ali, 2016). The distinction between ill-timed and unwanted pregnancy is of particular importance for two reasons. Firstly, the study at hand draws specific attention to a reversible form of contraception, allowing for pregnancy to be postponed rather than permanently averted (American College of Obstetricians and Gynecologists, 2011). Secondly, the population under investigation is young group of females not older than 25 years of age, representative of a demographic that has been shown to have higher incidence of ill-timed pregnancies rather than unwanted pregnancies (D'Angelo, Gilbert, Rochat, Santelli, & Herold, 2004).

This emphasis on reversible contraception and ill-timed pregnancy among a young demographic is further substantiated by the findings of a study that investigated how unintended pregnancy is perceived among university students in Limpopo (a province in the northern region of South Africa) (Anyanwu et al., 2013). The transition from young adulthood to adulthood is often conceptualised as a transitional period encompassing greater autonomy, independence, and exploration on the one hand; but also a transitional period offering precursors to the responsibility, stability, and life-planning demands that often characterise post-tertiary education adulthood (Rutherford & Pickup, 2015). In this regard, Anyanwu et al.'s (2013) study highlighted that unintended pregnancy is particularly perceived as ill-timed by young females due to the potential implications it may have on their success in navigating through the liminal development from young adulthood to adulthood.

Specific implications highlighted by the young student demographic included impaired psychological and physical health, truncated educational/career pursuits; as well as socially-constructed implications such as shame, stigma, and social withdrawal, (Anyanwu et al., 2013). With the aforementioned in mind, a long-term reversible contraceptive such as the

subdermal contraceptive implant that offers contraceptive protection for up to three years and the ability to rapidly restore fertility after removal may be particularly useful and contextually relevant among a young demographic that seeks to postpone pregnancy until a relatively more suitable life stage, rather than permanently averting conception (American College of Obstetricians and Gynecologists, 2011; Anyanwu et al., 2013).

2.1.2 Unintended pregnancy rates.

Sedgh et al.'s (2014) study on global intended and unintended pregnancy rates revealed that approximately 213 million pregnancies occurred globally during the year 2012. Elaborating on the abovementioned statistic, the researchers went on to highlight that 89% of these pregnancies occurred in developing countries (Sedgh et al., 2014).

Focusing specifically on unintended pregnancies Sedgh et al. (2014) found that 40% of the pregnancies that occurred worldwide in the year 2012 were in fact unintended pregnancies. Of particular contextual relevance here, the abovementioned study also highlighted that the highest regional rate of unintended pregnancy was found within the continent of Africa and more than 18 million unintended pregnancies occurred on the continent in the year 2012 (Sedgh et al., 2014). Contextualising the aforementioned even further and looking at the results from a sub-regional perspective, Southern Africa is identified as the sub-region with the highest proportion of unintended pregnancies on the African continent, 55% of pregnancies in the sub-region are unintended (Sedgh et al., 2014).

In light of the abovementioned statistics, particularly those revolving around elevated unintended pregnancy rates, potential explanations for such figures are often foregrounded as consequences of negative individual factors and/or negative structural factors (Wekesa, 2016). With regard to individual factors, existing literature suggests that high unintended pregnancy rates are often the result of limited knowledge of modern contraceptive options; misperceptions about the safety of certain contraceptive methods; and incorrect or inconsistent use of available contraception (Sitruk-Ware et al., 2013). On the other hand, structural factors resulting in elevated unintended pregnancy rates are often cited to be limited availability of modern contraceptive options, poor awareness of such options, unaffordability of certain contraceptives among lower-socioeconomic groups, and socio-cultural influences (Sitruk-Ware et al., 2013).

Cognisant of these findings that highlight developing contexts as regions that carry the highest proportion of unintended pregnancies and the understanding that such pregnancies are often the result of individual and/or structural factors, one is then inclined to investigate the complexities of unintended pregnancy in South Africa, a developing country that has had its fair share of healthcare-related challenges since attaining political freedom in 1994 (Coovadia, Jewkes, Barron, Sanders, & McIntyre, 2009). Limited literature is available on the dynamics of unintended pregnancy in the country, however, a study conducted by Le et al. (2015) estimated that more than six hundred thousand unintended pregnancies occur annually in South Africa and the national costs incurred as a result of these pregnancies surpass three billion Rand annually. Furthermore, these estimated figures are foregrounded amid a backdrop of a per capita health burden that is the highest of any middle-income country in the world (Le et al., 2015).

2.1.3 Addressing unintended pregnancy.

Existing literature in the domain of reproductive health makes mention of three specific international initiatives targeted at combating elevated unintended pregnancy rates; increasing access to modern contraceptives; and generally improving reproductive health on a global scale (Lince-Deroche et al., 2016). The three global initiatives (all of which are driven by the United Nations) are referred to as: the Millennium Development Goals (MDGs); the Sustainable Development Goals (SDGs); and the Family Planning 2020 (FP2020) initiative. The first of these initiatives, namely, the Millennium Development Goals, reached the end of its fifteen-year lifespan in the year 2015, however, some of the initiative's aspirations revolving around reproductive health have been incorporated in the Sustainable Development Goals initiative which was established in 2015 (United Nations General Assembly, 2015).

The Sustainable Development Goals initiative foregrounds 17 global goals with each global goal encompassing numerous targets to be attained by the year 2030 (United Nations General Assembly, 2015). Of particular importance in this literature review is target 3.7. This target falls under the third global goal of the initiative (titled Good Health and Well-being) and specifically aspires towards achieving universal access to sexual and reproductive healthcare services by the year 2030 (United Nations General Assembly, 2015). This particular target represents an extension of one of the targets for the year 2015 which was set out by the

Millennium Development Goals back in the year 2000 (United Nations General Assembly, 2015).

Although not clearly delineated in the title of the third global goal and the description of target 3.7 cited above, from a measurement and reporting perspective however, specific attention is given to the necessity of addressing unintended pregnancy and fulfilling unmet needs for modern contraception (Barclay et al., 2015). In this regard, preliminary indicators that may be utilised in 2030 to evaluate the progress made in pursuit of universal access to sexual and reproductive healthcare services, specifically recommend scrutinising the global percentage of women that fall within the reproductive ages of 15 to 49 years, whose needs for modern contraception have been met (Barclay et al., 2015). In this regard, improvement in the availability and accessibility of modern contraceptives is noted to be imperative for promoting better global reproductive health, fostering women empowerment, and ensuring a sense of autonomy in contraceptive decision-making (Barclay et al., 2015).

The Family Planning 2020 initiative mentioned earlier may be summarised as a global partnership with the key goal of enabling 120 million more women and girls globally who are in need of modern contraception, to have accessibility to a contraceptive that best suits their family planning needs (Lince-Deroche et al., 2016). Core partners driving this initiative include the United Nations Foundation, the United Nations Population Fund, the Department for International Development, the United States Agency for International Development, and the Bill and Melinda Gates Foundation (United Nations Foundation, 2012). The role of individual countries is to make formal pledges to the initiative. These pledges serve to outline the country's specific domestic challenges in the domain of unmet contraceptive needs, as well as foreground an intervention-based commitment which is targeted at addressing these unique contraceptive concerns (Lince-Deroche et al., 2016). This intervention-based commitment is to be implemented domestically by the respective countries that have made a pledge to the Family Planning 2020 global initiative. Progress is then tracked collaboratively by the respective countries and other stakeholders involved in the initiative (Lince-Deroche et al., 2016).

South Africa pledged commitment to all of the abovementioned global initiatives, namely, the MDGs, SDGs, and the FP2020 initiative. In this regard, South Africa's desire to address unintended pregnancy encompasses the old MDGs target and current SDGs target of

achieving universal access to sexual and reproductive healthcare services by the year 2030 (Lince-Deroche et al., 2016). South Africa's unique commitment to the FP2020 initiative specifically identifies high teenage pregnancy rates as an area of concern and foregrounds policy changes targeted at prioritising widespread availability and accessibility of all modern contraceptive options at public health facilities (United Nations Foundation, 2012). The country's commitment simultaneously emphasises the importance of dual protection in promoting safer sex among intimate partners that want to avoid unintended pregnancy (United Nations Foundation, 2012).

2.2 Availability, Accessibility, and Affordability of Contraceptive Implants

2.2.1 Availability and accessibility of contraceptive implants.

The notion of an "unmet need for contraception" was mentioned numerous times in the abovementioned discussion that revolved around the responsive ways in which multiple stakeholders, functioning on both an international as well as domestic level, are committed to promoting universal access to healthcare services and reducing elevated unintended pregnancy rates. Issues revolving around the availability, accessibility, and affordability of contraceptive implants will now be explored in the context of unmet needs for modern contraception.

Singh, Sedgh, and Hussain (2010, p. 246) offer the following description for what is usually meant by the notion of an unmet need for contraception: "A woman has an unmet need for contraception if she is fertile, sexually active, and does not want to have a child in the next two years but is not using any form of contraception". Numerous stakeholders identify unmet needs for contraception as a significant global concern. In this regard, improved contraceptive availability and accessibility is often noted to be a viable solution. An example of this is the United Nations' unwavering commitment to improve global availability and accessibility of modern contraceptives (Barclay et al., 2015). The FP2020's key goal of improving modern contraceptive availability to 120 million women with an unmet need for such contraception, serves as another example (Lince-Deroche et al., 2016). Lastly, South Africa's responsive policy changes, driven by the country's FP2020 commitment to address unmet needs for contraception, also revolve around the prioritisation of increased availability and accessibility of modern contraception (United Nations Foundation, 2012).

With regard to the abovementioned goals and targets, one must remain cognisant of the reality that best-outcome aspirations sometimes fall short of expectation. An example of this is the shortcoming of the MDGs target for 2015, which consequently had to be carried over as a SDGs target for the year 2030 (Lince-Deroche et al., 2016). From a legislative standpoint, ambitious policy change, such as South Africa's prioritisation of widespread availability and accessibility of modern contraception, is also not exempt from falling short on expectation. Such shortcomings are often the result of poor implementation or other bureaucratic inefficiencies (Coovadia et al., 2009). In light of this critical stance, it is important to highlight existing literature that foregrounds a concrete indication of the realities faced in the arena of modern contraceptive availability, accessibility, and affordability. In this regard, particular attention will be given to long-acting reversible contraceptives such as the subdermal contraceptive implant.

By analysing global trends over a forty-five year period, the United Nations Department of Economic and Social Affairs (2015) found that an inverse correlation exists between modern contraceptive availability and an unmet need for modern contraception. In conjunction with providing concrete evidence that when contraceptives become more readily available, unmet needs for modern contraception and consequent unintended pregnancy drop, the study also went on to highlight a significant contrast between high modern contraceptive availability in developed contexts and low modern contraceptive availability in developing contexts, particularly sub-regions in Africa (United Nations Department of Economic and Social Affairs, 2015).

Shortages in the availability of long-acting reversible contraceptives is a well-documented reality in developing countries, (Adjei et al., 2015; Asnake, Henry, Tilahun, & Oliveras, 2013; Khu et al., 2013). In this regard, a study conducted in Ghana revealed that the availability of long-acting reversible contraceptives is extremely low with only 7 out 51 public and private hospitals/clinics having stock of such contraceptives (Adjei et al., 2015). In hospitals that did have stock of such contraceptives, availability to the public was further hindered by relevant health professionals not offering the option because they felt inadequately trained to administer long-acting reversible contraceptives, such as subdermal contraceptive implants (Adjei et al., 2015). A study seeking to investigate the uptake of long-acting reversible contraceptives among HIV discordant couples in Rwanda and Zambia also highlighted insufficient availability of such modern contraception and cited inadequate

training among relevant healthcare practitioners as a contributing factor (Khu et al., 2013). Research conducted in Ethiopia foregrounds a similar backdrop of limited long-acting reversible contraceptive availability (Asnake et al., 2013).

With regard to the sub-Saharan Africa region and more specifically the Republic of South Africa, two conclusions are particularly worthy of mention when discussing the availability of modern contraceptives such as the subdermal implant. The first point worthy of mention is that in year 2015, twenty four percent of women residing within the sub-Saharan region had an unmet need for modern contraception (Lince-Deroche et al., 2016). Secondly, the work of Le et al. (2015) estimates that more than six hundred thousand unintended pregnancies occur on an annual basis in South Africa (Le et al., 2015).

The abovementioned information highlighting the magnitude of unmet needs for modern contraception is not particularly surprising given that the sub-Saharan Africa region, including the Republic of South Africa, are regarded as developing contexts. One would hence infer that they share similar challenges with other developing contexts in the African region, such as Ghana, Rwanda, Zambia, and Ethiopia, all of which have already been discussed in this regard. Findings by Hubacher, Mavranezouli, and McGinn (2008) highlighted significant challenges in modern contraceptive availability within the sub-Saharan Africa region and noted that these challenges usually arise from structural deficiencies such as limited stock and inadequate medical expertise, which consequently hinders the administration of such contraception.

Focusing on South Africa specifically, there appears to be a disconnect between grand legislative aspirations and what actually occurs on an implementation level (Lince-Deroche et al., 2016). During the year 2012, South Africa updated its contraceptive policies and released two key legislative documents, namely, the National Contraception and Fertility Planning Policy and Service Delivery Guidelines, as well as the National Contraception Clinical Guidelines (Lince-Deroche et al., 2016). These two legislative tools that work in conjunction with one another ultimately make provision for the national availability and accessibility of modern contraceptives, as well as other important provisions in the domain of good sexual and reproductive health (Lince-Deroche et al., 2016).

The abovementioned guidelines stipulate that all forms of long-acting reversible contraceptives such as subdermal contraceptive implants and copper intrauterine devices,

should be nationally available at all service levels where public health facilities are found (Department of Health, 2012). Nevertheless, research by Lince-Deroche et al. (2016) highlighted that on an implementation level, such widespread availability is seldom realised and availability of certain contraceptives is extremely limited.

The disconnect between legislative aspirations and successful implementation is no secret to public sector role players and the Minister of Health's foreword to the National Contraception Clinical Guidelines clearly highlights this awareness (Department of Health, 2012). The Health Minister's own words succinctly capture this awareness and lay a foundation for the five key recommendations he offers to healthcare personnel to address implementation concerns: "the realisation of a sound, innovative policy can only be measured by its successful implementation" (Department of Health, 2012, p. 3). The Minister's five recommendations include: (1) the provision of quality contraceptive health services; (2) stimulating community awareness and demand; (3) putting integration into practice; (4) strategic multi-sectoral collaboration; and (5) evidence guided planning and provision (Department of Health, 2012). The first of these recommendations particularly seeks to address challenges in availability and accessibility of modern contraceptives such as the subdermal contraceptive implant. This is to be achieved by stressing the importance of consistent stock availability, as well as through the provision of on-going training and skills development for healthcare providers (Department of Health, 2012).

2.2.2 Affordability of contraceptive implants.

Earlier in this literature review, potential causes for unintended pregnancies were foregrounded as a dynamic interplay of individual factors and/or structural factors (Wekesa, 2016). Individual factors were noted to encompass limited knowledge and misperceptions (Wekesa, 2016) and structural factors were noted to encompass monetary constraints and the complexities of socio-economic realities (Wekesa, 2016). Literature focused on the affordability of modern contraceptives, specifically long-term reversible contraceptives such as the subdermal contraceptive implant, also emphasises the role played by individual and/or structural factors, regarding the affordability of such contraception (Eisenberg, McNicholas, & Peipert, 2013).

A study focused on the relative perspectives of young patients and healthcare providers with regard to long-acting reversible contraceptives such as the contraceptive implant, went on to

find that perceptions revolving around the cost implications of such contraceptive options, was indeed a primary source of frustration among clinic healthcare providers when making provision for options (Kavanaugh, Frohwirth, Jerman, Popkin, & Ethier, 2013). In this regard, instances of reimbursement gaps from insurers and the potential expense of device removal, both of which may ultimately result in the absorption of such costs by the clinic, were highlighted as concerns that preoccupied the thoughts of providers (Kavanaugh et al., 2013). The study went on to indicate that such cost-related perceptions ultimately resulted in some clinic healthcare providers discouraging the uptake of long-acting reversible contraceptives (Kavanaugh et al., 2013). Another finding of the study was that certain patients' perceptions revolving around the cost-effectiveness of long-acting reversible contraceptives resulted in these patients identifying cost-efficacy as a significant advantage of such contraception (Kavanaugh et al., 2013).

Placing emphasis on developing contexts and the direct costs involved in the up-scaling of modern contraceptive availability, a study conducted in 2012 suggested that the monetary implications of fulfilling unmet needs for modern contraception in all developing contexts requires the expenditure of 8.1 billion U.S. Dollars on an annual basis (Singh & Darroch, 2012). Nonetheless, Singh and Darroch (2012) asserted that the provision of such funding is essential to realising universal access to modern contraception in the future.

The direct cost of a long-acting reversible contraception such as the subdermal contraceptive implant, is often outlined as a combination of the cost of the device itself, i.e. the implant, as well as the service delivery expenses inherent in its uptake, such as medical equipment to implant the device and the labour cost of the healthcare practitioner inserting the device (Singh & Darroch, 2012). Although the uptake cost of a subdermal contraceptive implant may differ due to numerous variables such as competitive supplier pricing, dynamic import costs, and variation in healthcare practitioner tariffs, an average may still be calculated. In this regard, the average annual cost per subdermal contraceptive implant in developing contexts during the year 2012 was $7.75 (Singh & Darroch, 2012).

The subdermal contraceptive implant is usually considered to have a higher uptake cost when compared to other forms of modern contraception, particularly those that are not considered long-acting, such as the combined oral contraceptive pill and the condom (Singh & Darroch, 2012). However, Mavranezouli and Wilkinson's (2006) research on the cost-efficacy of long-

acting reversible contraceptives found that when the inherent benefits of such contraception, viz. lower failure rates and longer duration of efficacy, is factored in and contrasted against the expenses incurred when utilising contraceptives that are not considered long-acting. The result is that long-acting reversible contraception, such as that provided by the subdermal contraceptive implant, is overall more cost-effective when contraceptive compliance is adhered to, and the prevention of pregnancy is sought for the entire duration of a year, or longer than one year. Under these conditions, the cost-efficacy of subdermal contraceptive implants is higher than the cost-efficacy of combined oral contraceptive pills and condoms (Mavranezouli & Wilkinson, 2006).

With regard to South Africa in particular, the Department of Health's National Contraception Clinical Guidelines, as well as the Health Minister's media briefing at the launch of the subdermal contraceptive implant in South Africa on the 27th of February 2014, promote the implant as a modern contraceptive that is accessible at no cost to recipients at all public health facilities (Department of Health, 2012; Myeza, 2014, February 27). A few days before the abovementioned launch, the Minister of Health presented a speech to the South African National Assembly in which he shed some light on the uptake cost of the contraceptive implant in private healthcare contexts in South Africa, which he stated as one thousand seven hundred Rand per recipient, before moving on to reiterate that it would be freely accessible at all public healthcare facilities after its imminent launch (South African Government, 2014, February 19).

2.3 Perceptions of Subdermal Contraceptive Implants

2.3.1 Side effects of contraceptive implants.

Qualitative research focused on subdermal contraceptive implants in the South African context is noted to be limited and could potentially be a result of the contraceptive's fairly recent introduction by the Department of Health (27 February 2014), a national introduction that has been identified as relatively late when compared to other countries on the African continent (Lince-Deroche et al., 2016). In this regard, insight revolving around the perceptions of the subdermal contraceptive implant in South Africa cannot be adequately outlined here. This study ultimately seeks to assist in narrowing this research gap.

Moving on to existing literature in other contexts, specifically qualitative research that scrutinises how subdermal contraceptive implants are perceived, two patterns are identified. Firstly, research appears to revolve around how subdermal contraceptive implants are perceived by a young female recipient demographic, and how such perceptions contrast with the views held by relevant healthcare providers. Secondly, qualitative investigations also seem to focus on common misconceptions related to the potential side effects of long-acting reversible contraceptives such as the contraceptive implant (Kavanaugh et al., 2013; Murphy, Stoffel, Nolan, & Haider, 2016; Russo, Miller, & Gold, 2013).

Kavanaugh et al.'s (2013) study focused on long-acting reversible contraceptives and the perspectives shared by adolescent and young adult female patients in this regard, as well as the views of their healthcare providers. This study went on to highlight the knowledge of potential side effects that may be accompanied by the use of long-acting reversible contraceptives, as a significant consideration in contraceptive decision-making. This was an important factor to take into account, not only for patients, but also for their relevant healthcare providers (Kavanaugh et al., 2013). The possibility of subdermal contraceptive implants causing irregular menstrual bleeding, or the cessation of menstruation altogether, were some of the points repeatedly queried by patients, and/or mentioned by their respective providers. In light of this, some providers expressed tolerance for irregular menstrual bleeding as a criterion for recommendation of the contraceptive implant (Kavanaugh et al., 2013). Interestingly, this study also found a dichotomy revolving around the perception of such adverse effects among certain patients, with one cohort of patients viewing menstrual suppression as a concerning side effect, while another cohort of patients highlighted menstrual suppression as a desired benefit (Kavanaugh et al., 2013).

In a review article focusing on common myths and misconceptions held by patients with regard to long-acting reversible contraceptives such as the contraceptive implant, Russo et al. (2013) analysed data from online surveys completed by two hundred contraceptive healthcare providers. Their findings revealed numerous misguided myths and misconceptions expressed by patients regarding the potential side effects of long-acting reversible contraceptives. An original study conducted by Murphy et al. (2016) and a review article by Pritt, Norris, and Berlan (2017) primarily investigated common barriers experienced when trying to increase the uptake of long-acting reversible contraceptives among a young female demographic. Their findings also went on to highlight misguided myths and misconceptions related to

potential side effects. The conclusion foregrounded by both of these articles was that inadequate knowledge on, and misconceptions of, the potential side effects of long-acting reversible contraceptives, ultimately go on to be significant barriers to the uptake of such modern forms of contraception (Murphy et al., 2016; Pritt et al., 2017).

These studies that serve to highlight how potential side effects are perceived and the ensuing consequences of such views, also went on to provide recommendations for healthcare practitioners to make a concerted effort in debunking the misguided beliefs some patients have with regard to potential side effects. The ultimate intention of these recommendations being the provision of accurate information to patients (Kavanaugh et al., 2013; Murphy et al., 2016; Pritt et al., 2017; Russo et al., 2013). Comprehensive contraceptive counselling that encompasses accurate information on potential side effects has been found to significantly improve uptake of, and satisfaction with, long-acting reversible contraceptives such as the subdermal contraceptive implant (Russo et al., 2013).

In a white paper published by the Jacobs Institute of Women's Health that sought to present an overview of research on long-acting reversible contraceptives, the subdermal contraceptive implant was identified as a safe form of birth control. Its use was noted to come with the possibility of minor side effects, and in rare instances, the possibility of severe side effects (Strasser, Borkowski, Couillard, Allina, & Wood, 2016). In this regard, irregular menstrual bleeding is noted to be the most common side effect and some women may experience complete cessation of menstruation while utilising the implant, however, this does not necessarily equate to, or warrant, discontinuation of use (American College of Obstetricians and Gynecologists, 2011). Literature reveals high continuation rates in both developing and developed countries, with research in a multitude of contexts foregrounding figures that range from 78-96% of administered implants being continually utilised for one year post-insertion and 50-86% being kept for three years (Jacobstein & Polis, 2014).

Contextualising these findings to the South African context is difficult as research in the area is limited. However, data obtained during the year of the contraceptive implant's launch by the Department of Health offers provincial preliminary data that is suggestive of high uptake and low discontinuation (Lince-Deroche et al., 2016). According to this preliminary data, 807 079 subdermal contraceptive implants were provided to women in South Africa free of charge by public health facilities between February 2014 and December 2014 (Lince-

Deroche et al., 2016). Within this timeframe, the preliminary data also suggested that 820 of these implants were removed. This indicates that approximately 0.1% of provided implants were removed between February 2014 and December 2014. More rigorous research is needed to give a clear account of removal rates and the reasons for discontinuation (Lince-Deroche et al., 2016). The Department of Health has heeded this call for further investigation by incorporating a new performance indicator in its Annual Performance Plan 2015/2016 to 2017/2018 with the specific target of monitoring potential side effects among users of contraceptive implants in all provinces and reporting findings on a quarterly basis (Department of Health, 2015).

2.3.2 Efficacy and safety of contraceptive implants.

Qualitatively-oriented literature in the domain of long-acting reversible contraception consistently identifies misguided beliefs revolving around the efficacy of such forms of birth control, as well as the potential impact such contraception may have on general reproductive health and long-term fertility. In this regard, patients often express suspicion about the efficacy and reversibility of such contraception (Kavanaugh et al., 2013; Murphy et al., 2016; Pritt et al., 2017; Russo et al., 2013).

In a study investigating factors that influence the uptake of modern contraception among a young female demographic, Chacko et al. (2016) found inaccurate perceptions on the efficacy of long-acting reversible contraceptives to be the strongest predictor for non-utilisation of such contraception. Outlining the awareness of long-acting reversible contraceptives among female adolescents and young adults, a review article by Teal and Romer (2013) highlighted that these females either underestimated the effectiveness of such contraception, or simply expressed that they do not know how effective such contraception is. With regard to the perceived efficacy of subdermal contraceptive implants in particular, one study identified a cohort of young women that doubted the implant's contraceptive efficacy primarily because of its location within the body, i.e. its insertion on the upper arm, rather than near the uterus (Kavanaugh et al., 2013).

Efforts to challenge such misperceptions are corroborated by an abundance of empirical research that has investigated the efficacy of long-acting reversible contraceptives, and established consensus on identifying this form of contraception as the most effective reversible contraception in the domain of birth control (American College of Obstetricians

and Gynecologists, 2011). In its National Contraception Clinical Guidelines, the South African Department of Health identifies the subdermal contraceptive implant as the most effective form of contraception available, highlighting the implant as more effective than either male or female sterilisation (Department of Health, 2012). Furthermore, the Department of Health (2012) cites the contraceptive implant's efficacy to be almost 100%, a figure that is in line with the American College of Obstetricians and Gynecologists' (2011) efficacy figure of 99.95%.

From a safety standpoint, investigations primarily revolve around perceptions related to the potential impact of long-acting reversible contraceptives on long-term fertility, as well as general reproductive health (Kavanaugh et al., 2013; Murphy et al., 2016; Russo et al., 2013; Teal & Romer, 2013). Teal and Romer (2013) highlight permanent infertility as one of the most common fears expressed by young women when discussing their perceptions related to the safety of long-acting reversible contraceptives, such as the contraceptive implant. This fear was located amid a backdrop of very limited information pertaining to long-acting reversible contraceptives among the participants in the study (Teal & Romer, 2013). Furthermore, a review article by Russo et al. (2013) challenged the accuracy of such safety concerns, i.e. those related to permanent infertility. In this regard, the article ultimately identified the concern as a myth and corroborated this stance with empirical evidence from numerous studies, all of which found no link between long-acting reversible contraception and permanent infertility (Russo et al., 2013).

The reversibility of long-acting reversible contraceptives has been strongly established, in the case of contraceptive implants in particular, fertility is rapidly restored after removal of the implant (American College of Obstetricians and Gynecologists, 2011). The South African Department of Health's National Contraception Clinical Guidelines stipulate that the hormone released by the contraceptive implant is undetectable in a patient's blood seven days after removal of the implant. Hence, fertility is rapidly restored in a week (Department of Health, 2012). Lastly, the utilisation of long-acting reversible contraceptives such as the contraceptive implant, is considered safe for almost all women, and noted to have very few contraindications, as well as minimal metabolic effects, and no effect on blood pressure (American College of Obstetricians and Gynecologists, 2011; Department of Health, 2012).

2.4 The Role of Gender, Culture, and HIV/AIDS

2.4.1 The role of gender and culture.

The role of gender and culture in matters pertaining to sexual practice, reproductive health, and contraceptive use, has been at the forefront of global discussions revolving around contextualised healthcare (United Nations Population Fund, 2013). In this regard, emphasis has usually been placed on promoting gender-equality, and imbuing cognisance of cultural diversity, especially when addressing matters related to reproductive health (United Nations Population Fund, 2013). This global emphasis on promoting gender-equality is highlighted by the United Nations' pursuit of a human rights-based approach to female empowerment and greater autonomy in contraceptive decision-making, as reflected in one of its Sustainable Development Goals (Barclay et al., 2015). In line with this, the Family Planning 2020 initiative, and its recommendation for domestic investigation, as well as contextually-relevant implementation, acknowledges the necessity for greater cultural-sensitivity in the global arena of unintended pregnancy and contraceptive need (Lince-Deroche et al., 2016).

The African continent is globally recognised for its cultural diversity, as well as the vivid manner in which such diversity is uniquely articulated and enacted across its encompassed sub-regions (Idang, 2015). South Africa, a post-democratic country that is synonymously referred to as the 'Rainbow Nation', serves as a prototypic representation of cultural diversity, and also encompasses racial, traditional, and gender-based complexities (Buqa, 2015).

Social domains such as culture and gender are not ideologically neutral. Instead, critical psychology suggests that these social domains usually encompass power dynamics and ideological agendas that have historically resulted in imbalances that favour one gender, at the expense of stripping power from the other, or promotion of one cultural view, at the expense of marginalising different views (Hook et al., 2004). These power dichotomies and their accompanied ideological interests have been found to ultimately result in a multitude of social ills, which may manifest overtly, as in the case of gender-based violence, or manifest in more covert forms, such as gender-based stigmatisation (Hook et al., 2004).

Existing literature highlights a high prevalence of both gender-based stigmatisation, and gender-based violence in contemporary South Africa. It is also noted that these social issues

are more prominent when linked to themes revolving around intimate relationships and sexual practices (De Lange, Mitchell, & Bhana, 2012). Literature relevant to understanding this dynamic interplay of gender and culture in the arena of sexual practice particularly focuses on the role of socially-constructed notions, specifically those of masculinity and femininity (De Lange et al., 2012). Drawing on R.W. Connell's seminal work on masculinity, Morrell (2001) utilises an understanding of hegemonic masculinity, i.e. a dominant form of masculinity that establishes and perpetuates cultural guidelines and depictions of what it means to be a 'real man', to explain how some South African men may feel compelled to subscribe to such patriarchal ideals. Morrell (2001) suggests that these men either act in accordance with such ideals 'to fit in', or they ultimately risk facing the socio-cultural consequence of being labelled 'less than a man'.

In line with this, a South African-based qualitative study focusing on concurrent sexual relationships, highlighted how the pursuit of masculine ideals, may ultimately result in the perpetuation of power imbalances and gender-based coercion (Ragnarsson, Townsend, Thorson, Chopra, & Ekstrom, 2009). Elaborating on this finding, the pursuit of one specific masculine ideal, specifically that of the patriarchal breadwinner, resulted in men forcefully taking exclusive control of the finances in their relationships, thereby fostering economic dependence and consequently marginalising their female partner's autonomy (Ragnarsson et al., 2009). This power imbalance was noted to permeate into the sexual practices of certain relationships and some men used economic dependence as leverage to convince their partners to engage in unprotected sex with them. This represents one example amid a plethora of ways in which ideological agendas and gender-based power dynamics may oppose autonomous decision-making in the domain of reproductive health and contraception (Ragnarsson et al., 2009).

Stigmatisation, although more covert than the blatant coercion discussed above, represents another example of social influence that has been found to play a role in sexual practices and contraceptive decision-making in South Africa. In this regard, the work of Gilbert and Walker (2010) outlines three distinct categories of stigma that may be used to better understand the navigation of sexually-sensitive themes in South Africa, namely, (1) stigmas of the body; (2) stigmas of character; and (3) stigmas associated with social collectivities. The role of gender stereotypes, and the desire to avoid stigmas of character, is particularly highlighted in a study by Protogerou et al. (2014) which sought to investigate factors governing condom-

use among a university student demographic in South Africa. The study found that women were reluctant to purchase condoms, or be seen carrying this form of contraception. In this regard, matters related to condom-use were socially-construed as the responsibility of men, and women who took a proactive role in acquiring this particular contraceptive, were ultimately at risk of being labelled "loose" or promiscuous (Protogerou et al., 2014).

This gender-based double standard is also apparent in stigmas of social collectivities. Ragnarsson et al.'s (2009) study revealed cohorts of South African women that are often shamed by males for embracing their sexuality, and expressing their sex appeal with confidence, both of which are social acts that carry praise and admiration when conducted by their male counterparts (Ragnarsson et al., 2009). This corroborates the view that women are socially predisposed to face stigmatisation when playing a proactive role in matters related to sexuality and contraception. In light of this, it is not surprising that Kavanaugh et al.'s (2013) study highlighted the discreet nature of long-acting reversible contraceptives, i.e. the insertion of the contraceptive implant under the skin, as a significant benefit of such contraception.

2.4.2 The role of HIV and AIDS.

From a global perspective, post-democratic South Africa has had to face the biggest burden of the HIV and AIDS pandemic (Beyrer et al., 2017). In response to this, extensive research and policy change has focused on addressing this healthcare challenge. One outcome of such research and policy change is that as of the year 2016, South Africa embodies the largest HIV and AIDS treatment programme in the world (Beyrer et al., 2017).

The emphasis placed on addressing the HIV and AIDS crisis in the country is further highlighted by South Africa's Family Planning 2020 commitment. In this regard, the country's commitment promotes policy changes that are targeted at prioritising widespread availability and accessibility of all modern contraceptive options. This commitment also highlights the importance of dual protection, which seeks to prevent the transmission of sexually transmitted infections (United Nations Foundation, 2012). Cognisant of this, the country's National Contraception Clinical Guidelines outline long-acting reversible contraceptives, such as the contraceptive implant, as forms of modern contraception that encompass the highest efficacy in preventing unintended pregnancy, but offer no protection against sexually transmitted infections. Accordingly, such forms of contraception are usually

recommended in conjunction with the use of barrier-methods, i.e. condoms (Department of Health, 2012).

This chapter sought to review literature related to subdermal contraceptive implants and the unmet need for such modern contraception in developing countries such as South Africa. Psychosocial and structural challenges that commonly affect the uptake of modern contraception, as well as various stakeholders' interventions to address such challenges, were also reviewed. Existing literature highlights the multifaceted nature of contemporary reproductive health challenges and modern contraceptive uptake in South Africa (Lince-Deroche et al., 2016). In this regard, research may revolve around a multitude of domains and role-players, such as the medical and logistical challenges faced by healthcare practitioners and patients on a local level, to the legislative and administrative challenges faced by the Department of Health on a national level. For the purposes of this study, attention will be given to investigating the psychosocial aspects of contraceptive implant use, particularly knowledge and perceptions revolving around this modern contraceptive. Due to this focus on psychosocial factors, social constructionism will be foregrounded in the discussion chapter of this treatise as a suitable theoretical framework to unpack the findings of this study. Critical psychology will also be drawn upon to discuss certain themes or sub-themes.

The following chapter seeks to outline the methodology employed by the researcher to explore the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants.

Chapter 3: Methodology

3.1 Research Aims

The aim of this research study was to explore the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants. Such investigation is essential given that these views may shape the willingness for these females to incorporate subdermal contraceptive implants into their birth control regimen.

3.2 Research Objectives

i) To explore and describe the knowledge and perceptions of young female South African university students with regard to subdermal contraceptive implants.

ii) To explore how the knowledge and perceptions of these young females relate to their inclination to utilise subdermal contraceptive implants as a birth control method.

3.3 Research Design

As noted in the literature review chapter, research on the uptake of subdermal contraceptive implants in South Africa is extremely limited. Quantitative investigations focusing on the uptake of contraceptive implants, as well as qualitative research revolving around the factors that influence the use of this contraceptive, are much needed (Department of Health, 2015; Lince-Deroche et al., 2016). The researcher sought to narrow this research gap by utilising a qualitative exploratory research design to investigate the knowledge and perceptions of young female South African university students with regard to subdermal contraceptive implants.

Qualitative research has been described as a multifaceted approach to intellectual inquiry that encompasses a myriad of investigative techniques and guidelines, however, a common feature of qualitative research is the desire to study phenomena in a social context and reveal the complexities inherent in this "real world" setting (Babbie & Mouton, 2012; Leedy & Ormrod, 2014). A qualitative approach acknowledges the value of unique experiences and diverse perspectives held by different social actors, thus allowing for more in-depth investigation and a richer understanding of phenomena (Flick, 2009).

An additional benefit of qualitative methods is that they usually allow for clarification and elaboration during the data collection stage of the research process (Neuman, 2012), thus being useful for the exploration of a multifaceted topic. In this regard a qualitative approach

that gives recognition to social complexities and different subjectivities is particularly suitable for investigating knowledge and perceptions related to birth control, a domain of reproductive health that is often governed by a multitude of individual and structural factors, as well as ideological agendas (Ragnarsson et al., 2009; Wekesa, 2016). The suitability of this research design is further informed by a South African-based study that successfully utilised a qualitative approach to investigate contraceptive perceptions among a similar sample demographic (young university students) (Protogerou et al., 2014).

Babbie and Mouton (2012) highlight that qualitative methodological frameworks do carry inherent drawbacks, namely, the possibility of placing cumbersome demands on the researcher, as well as a predisposition for qualitative research findings to have poor transferability. In this regard, committing to an in-depth exploration of the nuances revolving around contraceptive knowledge and perceptions may prove to be a very time-consuming process and the findings that emerge from such a process with a given sample of participants may not necessarily be representative of the wider social context. Being cognisant of the aforementioned, the researcher delineated the scope of this study to be exploratory in nature and refrained from generalising research findings beyond the demographic boundaries of the acquired sample.

3.4 Data Collection

3.4.1 Sample.

Theory on psychosocial development highlights an individual's early twenties as a key period of young adulthood that encompasses the navigation of social dynamics that particularly revolve around intimacy (Louw & Louw, 2013). During this period a desire to establish mutually satisfying relationships is at the forefront of psychosocial development and this preoccupation to pursue an intimate and reciprocal relationship often accompanies increased sexuality and sexual activity (Louw & Louw, 2013). This understanding of young adulthood, combined with an evaluation of the sample composition of Protogerou et al.'s (2014) research on contraceptive perceptions among university students in South Africa, ultimately informed the sample age criterion of 18 to 25 years old for this study.

The sample inclusion criteria for this study was stipulated to be: English-speaking female students currently enrolled at Nelson Mandela University, falling within an age range of 18 to 25 years, and currently utilising some form of contraception. Non-probability purposive

sampling was utilised to acquire participants that met the inclusion criteria and were willing to participate in the study. This sampling strategy is often used in qualitative research, and is specifically appropriate for studies that do not necessarily seek to generalise research findings, primarily because the acquired sample is usually not representative of the wider population (Babbie & Mouton, 2012).

Theoretical saturation was reached after conducting interviews with eleven participants. All of the acquired participants were English-speaking female students registered at Nelson Mandela University. The age of the participants ranged from 21 to 25 years. Of the eleven participants, seven were postgraduate students and four were undergraduate students. At the time of data collection, four participants were utilising condoms as a form of contraception, four other participants utilised oral contraceptive pills, and three participants were utilising some form of long-acting reversible contraception, viz. two of them using the contraceptive implant and one utilising an intrauterine device.

3.4.2 Instruments.

The data collection method utilised in this study was semi-structured interviews. Semi-structured interviews have proven to be an effective method of data collection when exploring contraceptive perceptions among a young university student demographic (Protogerou et al., 2014). An advantage of semi-structured interviews is that they provide a platform for comprehensive data to be acquired from participants, and if necessary, also allow for clarification and elaboration during the data collection process, thereby reducing the possibility of misinterpretation (Haugaard, 2008). Another benefit of this data collection tool is the incorporation of an interview schedule (Appendix F) that assists in the exploration of pertinent themes revolving around multifaceted topics such as contraception (Kumar, 2010; Protogerou et al., 2014). Due to the in-depth and detailed nature of such data collection, an audio recording device was utilised to record the semi-structured interviews and the researcher later transcribed the audio recordings verbatim before proceeding to analyse the data. Lastly, it must be noted that semi-structured interviews can often be a very time-consuming method of data collection and the researcher remained cognisant of this throughout the planning and implementation stages of this research endeavour (Kumar, 2010).

3.4.3 Procedure.

Subsequent to receiving approval from the Department of Psychology (Nelson Mandela University) and the Health Sciences Faculty Postgraduate Studies Committee, an application for ethical clearance was submitted to the Research Ethics Committee (Human). Upon receiving ethical clearance for the study (Appendix A), the researcher contacted the Nelson Mandela University Campus Health Service Department to explain the focus of the study and ask for their assistance in participant recruitment. Following the guidelines of the sample inclusion criteria, potential participants that showed interest in acquiring more information regarding modern contraceptives, such as the subdermal contraceptive implant, were handed two participant information sheets (Appendix B & C). These sheets served two purposes. Firstly, they outlined the scope of the study. Secondly, they served to encourage potential participants to contact the researcher should they require more information regarding the research, or should they want to participate in the study.

Upon confirming their interest to participate in the study, participants were contacted by a female research assistant to establish a suitable time for their semi-structured interview to be conducted. These one-on-one interviews took place in a confidential environment, specifically an office located within the UCLIN Psychology Clinic on the South Campus of Nelson Mandela University. Upon arrival at this location, each potential participant was handed two participant information sheets outlining the scope of the research, the role of participants, and the voluntary nature of participation (Appendix B & C). This was followed by handing-out of two consent forms (Appendix D & E), the first acknowledging consent to participate in the study, and the second, acknowledging consent for the interview to be audio recorded by the research assistant, for later transcription by the researcher. After ensuring full comprehension of these documents and receiving signed consent forms from the participant, the research assistant commenced the interview process.

The research assistant involved in this study is registered with the Health Professions Council of South Africa under the Professional Board for Psychology and as such, is bound to an ethical code, as well as rules that seek to ensure the integrity of human rights and dignity. As the topic under investigation is of a sensitive nature and often encompasses gender-based complexities (Gilbert & Walker, 2010; Protogerou et al., 2014; Ragnarsson et al., 2009), a female research assistant was utilised to assist in the data collection process by conducting all the individual interviews with participants. The research assistant's experience in data

collection includes fulfilment of undergraduate research requirements in basic interviewing, as well as six months of practical experience in conducting intake interviews with clients visiting the University Psychology Clinic (Nelson Mandela University). Additionally, the researcher prepared the research assistant for data collection by familiarising the assistant with basic information regarding subdermal contraceptive implants and the research process. This preparation included a review of the study's ethical considerations, viz. informed consent, anonymity, and confidentiality; as well as a review of the two participant information sheets, two consent forms, and the interview schedule used for data collection (Appendices B-F).

Although the researcher could not identify any foreseeable emotional distress that might have been precipitated by the data collection process, the researcher nonetheless took necessary precautions to manage any unforeseeable distress that may have been precipitated as a result of participation in the study. In this regard, the Nelson Mandela University Student Counselling, Career and Development Centre (SCCDC) was contacted and informed about the study. The researcher also asked the centre for potential assistance in the form of counselling if such a service came to be required by participants involved in the study. Information pertaining to this resource was highlighted in the participant information sheets (Appendix B & C) that were handed-out to participants before commencing the interview process.

3.5 Data Analysis

Thematic analysis was employed to analyse the collected data. This method of data analysis has been noted to be useful in qualitative exploratory research and primarily involves the identification, analysis, and reporting of patterns or themes that are prominent within the data that is being analysed (Braun & Clarke, 2006). Braun and Clarke (2006) foreground six phases of thematic analysis that are useful in directing the data analysis process of a given study. The six phases and how they guided the analysis of data in this study are briefly outlined below:

i) **Familiarising oneself with the data.** This initial phase of thematic analysis revolves around immersing yourself within the acquired data and becoming familiar with the content of this data. Repeatedly listening to each audio recording and rereading transcribed material for the purposes of corroborating

accurate transcription ultimately allowed for content immersion and established familiarity between the researcher and the acquired data

ii) **Generating initial codes.** This phase involves the identification of recurring patterns and the initial categorisation of this similar data. Through the evaluation of transcribed material, the researcher was able to cluster recurrent data and generate initial codes.

iii) **Searching for themes.** The establishment of distinct themes was accomplished by grouping generated codes that are similar to each other.

iv) **Reviewing themes.** This phase required the researcher to scrutinise the themes established in phase three. During this process, themes that lacked sufficient data to support the presence of a clear pattern, or themes that were too broad in content were reviewed and potentially revised.

v) **Defining and naming themes.** This phase required a final review and clear delineation of themes.

vi) **Producing the report.** The outcome of this thematic analysis is reported in the findings chapter of this treatise.

3.6 Trustworthiness

"The basic issue of trustworthiness is simple: How can an inquirer persuade his or her audiences (including him or herself) that the findings of an inquiry are worth paying attention to or worth taking account of?" (Babbie & Mouton, 2012, p. 276). In this regard, the trustworthiness of qualitative research primarily revolves around the neutrality of research findings (Lincoln & Guba, 1985).

There are four aspects of trustworthiness that are vital for qualitative research, namely, credibility, transferability, dependability, and confirmability (Babbie & Mouton, 2012). Credibility is concerned with making sure that research findings are a valid representation of the acquired data, simply put, credibility refers to ensuring that research findings truly reflect the sentiments shared by participants. Referring back to the audio recordings of the interviews allowed for referential adequacy and hence credibility was established in this regard (Babbie & Mouton, 2012). Transferability refers to the potential for research findings to be applied to multiple contexts or various groups of people (extending beyond the immediate context and sample of the study). By outlining comprehensive and detailed information on the sample inclusion criteria and research methods utilised in this study, the

reader, as well as other researchers, are reasonably equipped to make an educated decision on the transferability of the study (Krefting, 1991).

Dependability refers to the capacity of a study to be replicated and allow for consistent findings. Transparency is vital in this regard, having comprehensively outlined the methodological approach and procedural steps of this study, as well as ensured the credibility of research findings through referential adequacy, the dependability of this study was established (Babbie & Mouton, 2012). Lastly, confirmability seeks a neutral delineation of research findings, as well as an avoidance of personal agendas and/or researcher bias permeating through the study's findings (Guba, 1981). Using direct quotations in the findings section of this treatise to outline data that was transcribed verbatim from audio recordings of interviews, as well as the critical scrutiny inherent in research supervision, assisted in checking for researcher bias and promoting confirmability.

3.7 Ethical Considerations

Research ethics "concern the responsibility of researchers to be honest and respectful to all individuals who may be affected by their research studies or their reports of the studies' results" (Gravetter & Forzano, 2011, p. 59). Research ethics encompass principles such as informed consent, anonymity, and confidentiality. Informed consent foregrounds the notion that participants should be provided with comprehensive information about the study, as well as given concrete indication of the role participants play in the research process, so as to make an informed decision on whether or not they want to voluntarily participate in the study (Gravetter & Forzano, 2011). Informed consent was established by furnishing participants with two participant information sheets (Appendix B & C) and two consent forms (Appendix D & E), one for general participation and the other for audio recording permission.

Anonymity is upheld when data cannot be specifically linked to the identity of a participant (Babbie & Mouton, 2012). Due to the interactional nature of interviews, complete anonymity could not be upheld, however, confidentiality was maintained. Confidentiality refers to safeguarding potentially identifying information in a secure and private manner, as well as ensuring that such potentially identifying information is not disclosed in research findings (Babbie & Mouton, 2012). Confidentiality was maintained by ensuring that only the researcher, research supervisor, and research assistant came into contact with confidential information. Furthermore, no potentially identifying demographic information pertaining to

the participants was revealed in this treatise and all collected data has been privately secured, with access restricted solely to the researcher. This stored information will be kept for five years as per ethical clearance stipulations and thereafter be destroyed by the researcher.

Lastly, an ethically-bound female research assistant was utilised to assist in the data collection process, due to the gender-based sensitivity of the topic under investigation (Gilbert & Walker, 2010; Protogerou et al., 2014; Ragnarsson et al., 2009). Participants were also informed of available counselling services that were on stand-by should they have experienced any psychological distress as a result of participating in the study. Information pertaining to this voluntary service offered by the Nelson Mandela University Student Counselling, Career and Development Centre, as well as the centre's contact details, was outlined in the participant information sheets provided to participants (Appendix B & C).

The following chapter outlines the findings of data analysis. Findings are presented here, with more in-depth discussion being reserved for subsequent chapters.

Chapter 4: Findings

The aim of this research study was to explore the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants. Such investigation also allowed the researcher to explore whether or not, levels of knowledge and/or perceptions regarding contraceptive implants, ultimately affect the willingness for these females to use this particular form of contraception. In this chapter, the findings of this investigation are presented. This involves thematically outlining the findings of data analysis.

4.1 Introduction of Findings

Thematic analysis of the eleven transcribed interviews identified four main themes: (1) considerations and concerns; (2) psychosocial challenges related to contraception; (3) barriers to contraceptive implant use; and (4) advantages of contraceptive implants. Each of these main themes encompassed numerous sub-themes that were reflective of participants' knowledge and perceptions of contraceptive implants, as well as the inherent complexities revolving around contraception in South Africa. These sub-themes are outlined below.

Table 1

Identified Themes and Their Corresponding Sub-themes

Themes:	Sub-themes:
4.2 Theme One: Considerations and concerns.	4.2.1 Function and suitability of contraceptives. 4.2.2 Negative experiences and adverse effects.
4.3 Theme Two: Psychosocial challenges related to contraception.	4.3.1 Stigmatisation. 4.3.2 Gender-skewed responsibility.
4.4 Theme Three: Barriers to contraceptive implant use.	4.4.1 Inadequate awareness and knowledge of contraceptive implants. 4.4.2 Limited availability and accessibility of contraceptive implants.
4.5 Theme Four: Advantages of contraceptive implants.	4.5.1 Long-term efficacy and low-maintenance of contraceptive implants. 4.5.2 Potential for female empowerment and reduced stigmatisation.

The researcher will now proceed to outline the four main themes and their corresponding sub-themes. The incorporation of direct quotes from transcribed interviews is used to maintain the integrity of collected data and ensure the credibility of findings.

4.2 Theme One: Considerations and Concerns

Commonly shared views emerged as participants elaborated on their motivating factors for contraceptive use and their key considerations before utilising a different form of contraception. In light of this, two sub-themes were prominent when discussing considerations and concerns, namely, (1) the function and suitability of contraceptives, and (2) negative experiences and adverse effects related to contraceptives.

4.2.1 Function and suitability of contraceptives.

Despite individual nuances held among participants with regard to the function of various contraceptives and the personal suitability of incorporating certain contraceptives, a commonly shared desire to avoid unintended pregnancy, as well as an inclination to ensure safe and responsible sexual interaction was prominent within all eleven interviews. This sub-theme seeks to outline how these perceptions related to function and suitability were expressed and elaborated on by participants.

With regard to the prevention of unintended pregnancy, the pattern identified among participants exclusively revolved around postponing conception rather than indefinitely avoiding pregnancy. Explanations for this outlook predominately revolved around a desire to postpone having a baby until both relationship partners were in a more suitable life position to care for a dependent child. Participant 6 summarised this stance in one sentence.

"*Our long-term plans together. He knows what I would love to accomplish in the next five years and he knows if I were to have a baby, it would in a way inconvenience that.*" (Participant 6)

Participant 5 shared the same sentiment and also expressed that she wants to avert pregnancy for the next five years.

"*…I must say that's something I liked about the Mirena® (intrauterine device) and things like that, the implant, things like that. They usually are for three to five years you know, but also, you can take it out if you are wanting to fall pregnant, I'm not in a life stage right now*

where that's on the cards for at least another five years you know, so to kind of be able to put it in (long-acting reversible contraceptives) and not worry is quite a relief." (Participant 5)

In this regard, other participants expressed a similar view regarding the function of contraception and the implications of unintended pregnancy. Participant 3 particularly perceived unintended pregnancy as a threat to her future as well as a threat to the future of the male partner playing a reciprocal role in an intimate relationship.

"*…so when I'm having a conversation with my boyfriend and I say 'oh I'm on Implanon® (contraceptive implant) or whatever', he's supposed to know what it is because he's putting his life at risk just as much in the sense of future, uhm, but yeah, the guy is also putting a certain element of risk in, they should know, I shouldn't have to educate him on what I'm taking to protect both of us, so I think that's important…*" (Participant 3)

Another important function of contraceptives reported by participants is the maintenance of safer sexual practice and the prevention of spreading sexually transmitted infections (STIs). In this regard, condoms and regular testing for STIs and HIV were foregrounded as necessary measures for safer and more responsible sex. Related to this pattern, data analysis also revealed that numerous participants, particularly those that were not solely using condoms as their choice of contraception repeatedly referred to condoms as something separate from contraception, more specifically condoms were viewed as an add-on to contraception rather than a standalone contraceptive.

An excerpt from Participant 5's interview highlights the abovementioned and adds on the discussion by taking a critical stance on long-acting reversible contraceptives. In this regard, Participant 5 felt that although contraceptive implants may be more empowering and may offer women more autonomy in contraceptive decision-making, such forms of contraception may also go on to diminish the importance of condom use and hence predispose individuals to risky sexual behaviour.

"*…obviously I'm just talking about contraception now, I'm not talking about STDs and the spread of HIV, I mean we know obviously that condoms and things like that are needed for that, but I'm just talking contraception now. Uhm, then I do think that these things (long-acting reversible contraceptives) have less stigma attached, uhm, but I think that it can become dangerous in now it removes the need for the condom and then you've got things like*

STDs and HIV coming into play. So ja (yes), it puts a lot of responsibility on the woman, but it also allows her to take control, but in taking that control, it might also take away her power to say you will wear a condom…" (Participant 5)

Rather than identifying condoms as an add-on to her birth control regimen, Participant 1 utilised condoms as a standalone contraceptive. However, she did not refer to this barrier-form of contraception as a contraceptive.

"*…I'm not on contraceptives at the moment, we only use condoms…*" (Participant 1)

4.2.2 Negative experiences and adverse effects.

Upon elaborating on contraceptive considerations, numerous participants highlighted negative experiences faced by themselves and/or those within their social circle as a key concern in the domain of contraceptive perceptions. In this regard, most participants expressed a desire to know more about potential adverse effects. This was cited as a major consideration for them when investigating other forms of modern contraception. This sub-theme outlines participants' views regarding their negative experiences with modern contraceptives and the role that potential adverse effects play in contraceptive decision-making.

Participant 1 expressed ambivalence regarding her openness to modern forms of contraception and linked this ambivalence to the adverse effects she had previously encountered while utilising a progestogen-only injectable contraceptive.

"*I'm pretty open when it comes to contraceptives but I always try to find out the side effects first because I was on Noristerat®, the injection, and I had a lot of side effects there. I had acne, well I initially got onto it because I wanted to gain weight but I didn't get the weight gain. I started losing weight instead and I got acne, and I got headaches. Then I had heavy bleeding for a while and then I stopped bleeding altogether. So that wasn't a nice experience for me, so whenever I think of trying something, I always try to find out the side effects…*" (Participant 1)

Upon querying her openness to other forms of contraception, Participant 8 also expressed ambivalence related to the use of injectable contraceptives. In contrast to Participant 1's

account, Participant 8's ambivalence stemmed from word of mouth, rather than personal experience.

"*…at one point I was considering the injection actually, because you know, I've never used it, but my concerns would be, like the side effects, so the weight gain, because I've heard things about that, acne [as well]…*" (Participant 8)

Hearing about negative experiences via word of mouth or via electronic social platforms played a significant role in the perceptions and openness of participants to consider utilising certain forms of modern contraception. Upon querying the knowledge held by Participant 7 on contraceptive implants, she expressed that her knowledge is limited to the negative accounts shared by others on her Facebook social media platform.

"*I've seen it (contraceptive implants) on Facebook, and people were only talking about the side effects that they had, I think some people actually had bad experiences with it, so they were just sharing them to warn other people about it.*" (Participant 7)

Later in her interview, Participant 7 went on to highlight the role that negative experiences shared by others may play in contraceptive decision-making and the potential impact this influence may have on contraceptive perceptions, especially in a context characterised by limited accurate information.

"*…imagine if someone else doesn't read up on it [contraceptive implants] and just sees the stuff that has been posted on Facebook, so they would have been put off from it already without actually getting the necessary information…*"

Participant 6 reiterated these sentiments by expressing concern over a social trend she has witnessed. In this regard, Participant 6 expressed her observation that positive experiences are seldom highlighted in contraceptive discourse, in contrast to how negative experiences are spotlighted. Similar to Participant 7's view, contraceptive scepticism was understood to stem from a lack of comprehensive information, amid a social context saturated with negative information.

"*…people are now sceptical about trying it [contraceptive implants] out, because so much, of uhm, the worst experiences are circulating, as compared to the positives, so I think there's a*

lack somewhere when it comes to informing the general population about this form of contraception." (Participant 6)

Rather than expressing uncertainty and scepticism with regard to exploring other forms of contraception, some participants were quite stern in asserting their loyalty to a certain form of modern contraception. Nonetheless, this unwavering certainty was also governed by accounts of negative experiences and considerations revolving around potential adverse effects.

When asked if she was open to other forms of contraception, Participant 2 stated:

"*Uh, no, I'm quite happy with the pill, because I've been using it for so many years now and I'm used to the side effects and I don't wanna start something new and then get other side effects that I'm not getting from the pill…*" (Participant 2)

Similarly, Participant 6's stern desire to stick to her current form of contraception (contraceptive implant) also stemmed from considerations revolving around the potential adverse effects of other contraceptives.

When queried on whether or not she was open to other contraceptives, Participant 6 stated:

"*Uhm, other forms, no. Simply because it affects the menstrual cycle, so that's why I would never consider any other form of contraception.*" (Participant 6)

4.3 Theme Two: Psychosocial Challenges Related to Contraception

This theme was primarily elicited by inquiring how psychosocial dynamics inherent in an intimate relationship, as well as the wider context in which people find themselves functioning within, ultimately go on to influence contraceptive decision-making. Two sub-themes are encompassed under this theme, namely, (1) stigmatisation, and (2) gender-skewed responsibility with regard to contraception.

4.3.1 Stigmatisation.

Almost every participant, at some point during their interview, expressed concern over their perception that contraceptive use is often accompanied by some form of stigmatisation. While elaborating on the matter, potential reasons included perceptions of promiscuity, religious values, moral standards, and gender-based cultural expectations.

Frequently visiting healthcare facilities for contraceptive purposes was repeatedly flagged by participants as a key predisposing factor that could result in young females such as themselves being perceived (or perhaps even labelled) as a promiscuous woman. In this regard, many participants highlighted an inclination to conceal contraceptive use in order to avoid potential stigmatisation from various social role-players.

"*…embarrassment now comes into play when you have to go to the clinic every other month, what exactly are you doing there? That's when people start to raise their brows and then the stigma… I think the only thing that plays on to the stereotypes is the regular visits to the clinic.*" (Participant 6)

"*…when you go to the clinic for contraceptives then you have to go every month and get your pills. You kinda get the stigma that oh this person is like this, sleeping around. So that's why they're taking pills every time… so it would be nice to have something that would prevent you to go to the clinic every month.*" (Participant 7)

Reiterating her sentiments, Participant 7 went on to give an example of the social challenges one may experience when trying to acquire contraception in a small community.

"*…everyone in the thingy, in the township clinic knows each other, so if I go there once a month, or I start going there, and then the nurses will start telling my parents "ja, your child is having sex and all of that…*" (Participant 7)

Participant 9 made specific mention of racial and age-related dynamics when discussing her view of stigmatisation within the arena of contraception.

"*…I know with us, especially us black girls… especially young teenagers, when you go the clinic to ask for contraceptives, you do get the stares from you know, your elderly nurses and what not…*" (Participant 9)

Other participants expressed how the specific characteristics of certain contraceptives such as their visibility and the side effects that may accompany their use, ultimately go on to play a role in sparking stigmatisation. In this regard, Participant 3 highlighted a side effect of weight gain experienced by some women that use oral contraceptive pills to typify how such adverse effects may precipitate stigmatisation and consequently affect contraceptive decision-making.

"*…there's a lot of stigma, especially in the public health sector, uhm, around… you know, you still hear people saying oh the pill will make you fat and I don't wanna be on it because, you know, he doesn't want me to, I can't be on it because my parents will know…*" (Participant 3)

Potential weight gain was also cited by participant 11 as a significant side effect of contraceptive use that could elicit stigma and perhaps even deter birth control. In this instance, contraceptive injections were singled-out rather than oral contraceptive pills.

"*…if you're using the injection we will see you by your weight gain you know, yeah, so a lot of people end up running away from that, and then they fall into the trap of getting… of being open to getting pregnant…*" (Participant 11)

Participant 8 questioned whether or not contraceptive implants leave a post-insertion scar on the recipient's arm. Participant 8 went on to express that the potential visibility of such a scar may predispose one to being stigmatised by others.

"*…in terms of the physical appearance, how will it appear, because people even stigmatise you on things like that. So if it's a… if they see that there's a mark, then you like 'oh okay, you're one of those people'….*" (Participant 8)

Lastly, Participant 3 summed up her views by foregrounding the role played by varied personal backgrounds and different religious beliefs in potentially precipitating the stigmatisation of others that may not share the same background or beliefs.

"*I think obviously, depending on the person, uhm, depending on the background of that person… people stigmatise for different reasons, it might be that 'oh you must be having sex, I have a different religious view to you, so now that's bad'…*" (Participant 3)

4.3.2 Gender-skewed responsibility.

Upon inquiring who is primarily responsible for contraception in their relationship, numerous participants expressed a desire for equally shared responsibility, but were faced with a reality of gender-skewed responsibility. In this regard, participants felt that a disproportionate amount of contraceptive responsibility rests on them as the female partner in their relationships.

When asked who is primarily responsible for contraception in their relationship, Participant 3, Participant 9, and Participant 10 had the following to say:

"*Usually, contraceptives as such, usually the girl (is primarily responsible), uhm I think it's just gender norms, uhm, and also in my specific relationships because I've had to be on contraceptives for my hormones anyway it wasn't really like… a issue, uhm, but I feel like, usually in gender norms the girl is responsible for contraceptives and then the guy would be responsible for condoms.*" (Participant 3)

"*I am (primarily responsible). It's my body, and if I fall pregnant, I'm gonna have the big bump.*" (Participant 9)

"*Me, the female (takes primary responsibility), because I personally don't wanna get pregnant. Apart from that, I mean uhm, look at the, how many teenagers are pregnant or how many people are pregnant and at the end of the day, you're sitting there and you're a single mother, I personally wouldn't wanna find myself in that, it's like, it's a major factor that's happening throughout SA, I don't wanna be in that place, so definitely I'll take care of my life.*" (Participant 10)

"*…us females, we do the whole initiation of things, guys don't really care, they don't get affected by anything…*" (Participant 10)

Some participants did not express such a strong responsibility differential in their relationships; rather, both partners shared some level of responsibility when it came to contraceptive decision-making. Nonetheless, some disparity was still noted as participants felt that they carried more responsibility than their male partners.

"*…he will initiate the conversation but he's not taking responsibility, he's not saying 'I will use a contraceptive' but he wants to know what I would use.*" (Participant 1)

"*…so although I was primarily responsible for the pill I would regularly get phone calls or messages from him saying 'did you take it this morning? Don't forget!' […] So he very much knew and was involved in, sort of my reproductive life, but the responsibility lay on me, I always used to joke with him and tell him when they bring out the male pill, he's gonna take it (laughs).*" (Participant 5)

Alongside the remarks mentioned above, numerous participants reiterated a desire for their male partners to become more involved in the birth control process of their relationship. This plea for men to be better informed regarding contraception and to subsequently play a more active role in contraceptive decision-making is summarised by Participant 3 and Participant 5 below.

"*…I think that it is a conversation that should be had with men as well, with boys and men, uhm… because I think it is important for both sides you know, both partners, uhm, in a… well… straight relationship, but both partners, they should also know… you know when I'm having a conversation with my boyfriend and I say 'oh I'm on Implanon® or whatever', he's supposed to know what it is because he's putting his life at risk as much in the sense of future, uhm, but yeah, the guy is also putting a certain element of risk in, they should know, I shouldn't have to educate him on what I'm taking to protect both of us, so I think that's important…*" (Participant 3)

"*…I think advertising needs to be done to men as well, I don't think that contraception is just a conversation for women to have, men should be involved in the conversation, I gave my boyfriend a copy of the booklet on the Mirena and said to him 'you must read about this, because I'm not only doing this for me, it's also benefitting you and you must know what is happening in my body and this is what could go wrong', so I think the focus needs to be on empowering women, but also educating men around contraception and what it all means…*' (Participant 5)

4.4 Theme Three: Barriers to Contraceptive Implant Use

Upon querying the knowledge and perceptions specifically related to contraceptive implants, all eleven participants identified certain barriers that limit the uptake of this long-acting reversible form of contraception. Related to this, two sub-themes were identified during data analysis, namely, (1) inadequate awareness and knowledge of contraceptive implants, and (2) limited availability and accessibility of contraceptive implants.

4.4.1 Inadequate awareness and knowledge of contraceptive implants.

All eleven participants felt there is not enough awareness of contraceptive implants and expressed that more awareness needs to be fostered. Some participants attributed this paucity

of awareness to societal influences and some participants blamed specific role players such as governmental departments and healthcare establishments.

Participant 3 drew reference to her perception of the social fabric of South Africa to substantiate her view that more awareness is needed with regard to contraceptive implants, as well as other contraceptives in general.

"*…I think it needs to be promoted a lot more, I don't think enough is being done generally, specifically Implanon®, but also generally with contraceptives, I think we're very conservative in South Africa and we live under this 'girls don't have sex and you shouldn't' so it's not spoken about.*"

Pointing to the social diversity found in contemporary South Africa, Participant 5 commended the South African Department of Health for promoting the contraceptive implant in public healthcare facilities, but felt that there is gap in awareness specific to contraceptive implants in middle-class private healthcare settings.

"*…I don't think enough women are aware of it, I wouldn't have known about it if I didn't know this person that had it, so uhm, ja, I think especially in your kind of upper middle-class, middle-class kind of gynaecologist setting… I think it's more widely used in clinics, which is great, uhm. that it's being rolled-out in clinics, but uhm, yeah it's kind of like, there seems to be a gap in the market, in terms of gynaecologists.*" (Participant 5)

Some participants turned their attention to specific role-players, rather than general societal factors. Alongside other stakeholders, the South African Department of Health was highlighted by multiple participants as the primary role player that should be held accountable for the limited awareness related to contraceptive implants. Elaborating on this, emphasis was also placed on the Department of Health's responsibility to take action and address concerns surrounding limited awareness.

"*…when it comes to the Department of Health informing people, they not doing so much, as a matter of fact, people are now sceptical about trying it (contraceptive implants) out […] so I think there's a lack somewhere when it comes to informing the general population about this form of contraception.*" (Participant 6)

In line with this view, Participant 1 also perceived the promotion of this modern contraceptive by the National Department of Health to be inconsistent. In this regard, Participant 1 was of the opinion that contraceptive implants were initially promoted by the Department on a national level, but with the passing of time, fostering of awareness narrowed down and became exclusively localised to clinics.

"*…I don't think enough is being done right now, when they (Department of Health) first started, when they rolled it out in KZN, before they spread it throughout the country, a lot was said about it, but then once it got, uhm, spread across the country, then not much was said, like you'd only hear about it when you're at the clinic at that time, but what if you don't go to the clinic, then what?*" (Participant 1)

Some participants stressed that the promotion of contraceptive implants is inadequate even at a local clinic level.

"*…clinics do not advertise, they do not advertise! Honestly, I've been to the clinic many times for family planning, they never said anything about it (contraceptive implants), never ever…*" (Participant 11)

"*…I feel like with condoms and other types of contraceptives you know, they have campaigns of things like posters in clinics and stuff, the last time I went to a clinic here was like April, and I've never seen it anywhere, where I can say there's a poster on subdermal (contraceptive implants) you know, I've never.*" (Participant 8)

Cognisant of the abovementioned, some participants spontaneously offered their own suggestions for addressing this paucity of awareness. Participant 8 emphasised the need for more campaigns that highlight the free availability and accessibility of contraceptive implants at clinics.

"*I think it's just important that they get like, really, visible, campaigns about this thing, because I'm really shocked about the fact that it's free and it can be done at a clinic…*" (Participant 8)

Participant 8 emphasised a lack of publication related to contraceptive implants in the South African context as a key barrier to the awareness and uptake of this modern contraceptive.

She went on to express her view that rectification in this regard, should be informative and educational in nature.

"*...I feel like, I feel like the lack of publication is rather depriving most people of this experience, because I know a lot of people who would be happy to go on to this contraception (contraceptive implants), but because there's not much information available about it, [there's misconceptions about it], I feel like they have to, I don't wanna say start campaigns, but rather teach people.*"

Participant 3 alluded to a deficiency in the basic education syllabus that may potentially hinder the awareness of modern contraceptive options in South Africa. Elaborating on this, Participant 3 suggested that there is a gap in relevant school subjects such as Life Orientation when it comes to comprehensively outlining available contraception. The importance of educating the public in this regard was reiterated.

"*...you look at what children are taught in school, in LO (Life Orientation), it's so basic and it doesn't really cover this topic much. So I think they should really… I think it should be something that should be promoted more.*"

4.4.2 Limited availability and accessibility of contraceptive implants.

Many participants expressed concern over the availability and accessibility of contraceptive implants. More specifically, these participants stated that contraceptive implants were not as readily available and accessible as one would expect. Some participants came to this conclusion based on word of mouth and/or their general perception of the South African contraceptive climate; other participants had first-hand experience of barriers affecting contraceptive implant availability and accessibility.

From a word of mouth standpoint, Participant 6 expressed frustration over hearing that contraceptive implants were not accessible at her local clinic due to inadequate training on the insertion of this modern contraceptive.

"*It's not available everywhere, in the sense that, I'm from Motherwell (town in Eastern Cape Province), so the last time I had a conversation like this with someone, they said that the nurses at that public clinic could not insert it…*" (Participant 6)

Participant 7 linked her perception of limited availability to the already highlighted theme of poor promotion of contraceptive implants in local clinic contexts.

"*I've never been offered it (contraceptive implants) as an option when I go to a clinic, so I don't think it's that available…*" (Participant 7)

From a personal experience standpoint, numerous participants reflected on the obstacles they encountered while trying to access contraceptive implants in a different contexts. In this regard, limited availability and/or accessibility were highlighted as significant barriers to contraceptive implant up-take in contexts such as public healthcare clinics, university student clinics; and private healthcare facilities.

Elaborating on their experiences, some participants expressed that they had previously decided on utilising contraceptive implants but were unable to access this form of contraception upon inquiring at their healthcare facility of choice. For two participants in particular, this meant that they were unable to receive this form of modern contraception at their university clinic. Explanations provided for this inaccessibility revolved around side effects, high removal rates, and financial constraints related to implant insertion and removal.

"*…NMMU ([now] Nelson Mandela University) sent out an email saying it (contraceptive implants) was available at our clinic, but then, I tried to, I actually tried to get it here last year, but then by the time I had inquired, they had already stopped doing it because they said too many people were removing it. They said no, they are busy with removals right now, it's costing them too much to implant it for free and then still have to remove it, so they said no.*" (Participant 1)

"*…I think last time I asked about this (contraceptive implants), they (university clinic officials) said they don't have it, because I wanted to try this one out, because I dislike injections and I dislike pills, uhm, then they said they didn't, they said there was side effects, I don't know what was going on at that time when they said they're not able to give it out.*" (Participant 10)

Other participants reflected on the challenges they experienced while trying to access contraceptive implants in private healthcare facilities. In this regard, Participant 9 briefly highlighted the inconvenience of a multi-step process that she found to be an inherent hindrance in private healthcare contexts when trying to access contraceptive implants.

"*…when you go, let's say to a clinic outside, let's say Clicks (South African retail chain pharmacy with in-store clinics) or something, they usually ask you to go get a prescription from your doctor and what not, so, the availability, maybe in public clinics is much better.*" (Participant 9)

Discussing the challenges she experienced while trying to access contraceptive implants in private healthcare settings, Participant 5 foregrounded the role that healthcare practitioners may play in contraceptive decision-making and the uptake of certain modern contraceptives.

"*…I spoke to my gynae about it and… my gynae was very honest with me and said look, uhm, it's better when you get the implant done at like a clinic, because the nurses there put so many in, whereas in the gynaecologist kind of setting, they don't really put that many in, so she felt more comfortable putting in a Mirena® (intrauterine device), so I ended just going with that because I didn't know what clinic to go to.*" (Participant 5)

Lastly, two participants went on to highlight the cost of contraceptive implants in the private healthcare sector as a potential barrier to uptake of this modern form of contraception. Participant 1 contrasted the high cost for a contraceptive implant at a private facility against the free accessibility but poor efficiency of public sector service one encounters when trying to obtain the implant at a local clinic.

"*In terms of getting it (contraceptive implants) privately, it's quite pricey, very pricey, because uhm… what's this… there's this clinic, uhm… they operate in Pier 14 (shopping centre in Port Elizabeth), but they are all over the country, what are they… Marie Stopes, yes! They charge about seven hundred bucks for it, which is a lot, but it is available at clinics, but again, it's a waiting game, you have to queue up, you have to see the nurse and they have to decide if they can give it to you or not, and then set-up an appointment and all of that, so it's not as available… but it's there, but it's not really accessible, and then the costs are quite high depending on where you go.*" (Participant 1)

Participant 3 shared similar sentiments regarding service costs in private healthcare settings and the desire to avoid cumbersome processes in public clinics.

"*…I actually went and got mine because my gynae told me, and she said she can write a prescription for it, for me and then I would go to a doctor and get it, but I think it's like 200 hundred Rand or something like that, she was like you could just go to a clinic and get it for*

free. So then when I was in a small town, so when I was home I knew that I could get it quick and easy, so I just went and waited for an hour and got it for free…" (Participant 3)

4.5 Theme Four: Advantages of Contraceptive Implants

Almost every interviewed participant identified one or more advantages of contraceptive implants. This theme was corroborated by the identification of two sub-themes that shared praise revolving around the advantages or potential benefits of contraceptive implant use. The two sub-themes that were identified during thematic analysis are: (1) the long-term efficacy and low-maintenance of contraceptive implants; and (2) the potential for female empowerment and reduced stigmatisation.

4.5.1 Long-term efficacy and low-maintenance of contraceptive implants.

This sub-theme was saturated with the shared opinion of numerous participants that foregrounded the convenience of utilising a contraceptive that is effective over a long period of time and requires almost no maintenance on the part of the recipient after having the implant inserted. Participants went on to highlight forgetfulness, busy lifestyles, and their desire to postpone conception as key reasons for perceiving the long-term efficacy and low-maintenance nature of contraceptive implants in a positive light.

Comprehensively elaborating on both the long-term efficacy and low-maintenance benefit of contraceptive implants, Participant 6 and Participant 10 had the following to say:

"*It's actually very convenient, given the fact that one has to be on campus, one has submissions and everything, so it's easier to like, uhm, miss a date, and then you are more or less putting yourself at risk of falling pregnant , but you know, uhm, sometimes, it happens that people don't use protection all the time, so a longer period of contraception is actually very convenient, especially as a student with a busy schedule, so that's why I love it, because you know okay I'm covered for three years.*" (Participant 6)

"*…I mean pills, you have to, I think you have to take them at the same time every day, I mean we're students, you forget, you just forget, ah, problem, and with injections, you still have to go there, three months what not, that's still another problem, this, just three years, done, I think that's good.*" (Participant 10)

Participant 5 broadened the discussion to both forms of long-acting reversible contraceptives, namely, the intrauterine device and the contraceptive implant.

"*I must say that's something I liked about the Mirena® (intrauterine device) and things like that… the implant, things like that, they usually work for like three to five years you know… but also, you can take it out if you are wanting to fall pregnant, I'm not in a life stage right now where that's on the cards for at least another five years you know, so to kind of be able to put it in (intrauterine device/contraceptive implant) and not worry is quite a relief.*" (Participant 5)

Participant 3 concisely reiterated the low-maintenance benefit of long-acting reversible contraceptives.

"*I used to be on the pill and then I changed to the implant, uhm… and yeah I'm open to… I was considering the Mirena® as well… also because it's a longer-term one and it's not something that I need to remember to take every night.*" (Participant 3)

Lastly, it must be mentioned that of the eleven participants interviewed, nine asserted that they would prefer a long-acting contraceptive, specifically described as a form of contraception that is effective in averting pregnancy for more than a year. The two participants that did not share this view explained that their hesitance stemmed from a lack of information about long-acting reversible contraceptives and concern over the potential adverse effects that may accompany this form of birth control, particularly permanent infertility.

4.5.2 Potential for female empowerment and reduced stigmatisation.

Many participants drew on the long-term efficacy, low maintenance, reversibility, and discreet nature of contraceptive implants to explain why they believe contraceptive implants have the potential to foster female empowerment and alleviate stigmatisation. In this regard, participants felt that these characteristics of contraceptive implants meant that women could utilise such contraception without alerting other members of society such as their partner, family, and/or friends of such use, thereby strengthening autonomous decision-making and lowering the possibility of stigmatisation.

Elaborating on why she believes contraceptive implants have the potential to reduce stigma, Participant 1 shared the following:

"*…no one sees that you have it, because I've seen someone with it and you can only feel it, you can't really see it, so if nobody knows it's there then nobody can really say anything, because a lot of people assume that if you use contraceptives then you're not using a condom…*" (Participant 1)

Participant 11 also expressed that the discreet nature of a contraceptive implant helps one to be less vulnerable to stigmatisation.

"*There will be less stigma, there will definitely be less stigma, because it's hidden, no one is gonna see you, it's not like a pill where people are gonna see you waking up every morning, drinking a pill.*" (Participant 11)

Participant 10 shared the same sentiment.

"*…yeah, uhm, no one else knows, you don't have to take pills in front of people, uhm, yeah (I think it will be less stigmatising).*" (Participant 10)

The long-term efficacy of contraceptive implants was also cited by numerous participants when discussing the potential for such birth control options to reduce stigma in the contraceptive arena. In this regard, not being forced to frequently visit a clinic or some other healthcare facility for the collection of short-term contraceptives was described as an advantage that would alleviate the burden of stigmatisation.

"*I think there's less stigma on it (contraceptive implants) because you'll only go to the clinic once…*" (Participant 9)

"*I think so (implants have potential to be less stigmatising), because you take it once a year…*" (Participant 7)

Some participants also referred to the discreet and low-maintenance characteristics of contraceptives implants to substantiate their view that such a form of birth control could empower woman to autonomously navigate through contraceptive decision-making in relationships where power struggles impact sexual practices. Elaborating on this, potential explanations included religious and/or cultural beliefs and participants went on to highlight

the role contraceptive implants may play in empowering women that find themselves in such situations and seek a sense of autonomy with regard to contraceptive decision-making.

"*...where you want to be concerned is where a person who maybe doesn't have their own voice in a relationship, where they don't have a voice to say 'I don't want another baby!'. Then there's a chance of hiding it a bit more (concealing the contraceptive implant) rather than taking the pill...*" (Participant 3)

Participant 5 made specific reference to the role religion and/or culture may be playing in the navigation of contraceptive matters.

"*I think in communities where asking your partner to wear a condom is frowned upon, where the responsibility lies on that. I think that's always problematic, uhm, because culturally there seems to be issues around that, and religious issues as well, so uhm, I do think that something like an implant where you can take control and you can put it in, but it's not something you have to do every day. It's done once off, for free, it's finished. Uhm, I think that leaves one with a bit more sense of peace and I think that there is less stigma around that because it's not like you have to have that awkward conversation of 'sorry, please can you, you know, wrap it up!' and then he doesn't believe in condoms, or he doesn't like the way it feels and then you've got this kind of argument going on...*" (Participant 5)

This chapter sought to outline the findings of thematic analysis by outlining identified themes and their corresponding sub-themes. Direct quotes from transcribed interviews were used to present the content of each theme and sub-theme, thereby maintaining the integrity of collected data and ensuring the credibility of findings. The following chapter seeks to discuss these research findings.

Chapter 5: Discussion

This chapter serves to provide an in-depth discussion of the findings presented in the findings section of this treatise. The content of identified themes and corresponding sub-themes will be discussed systemically in the same order that they were presented in the findings section. Existing literature will be incorporated to guide this discussion of research findings.

Reiterating the sentiments shared in the literature review chapter of this treatise, existing literature highlights the multifaceted nature of contemporary reproductive health challenges and modern contraceptive uptake in South Africa (Lince-Deroche et al., 2016). Being mindful of the aforementioned, the researcher decided to focus on investigating psychosocial aspects of contraceptive implant use, specifically the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants. In conjunction with drawing on existing literature, the findings of this study will be viewed and discussed through a lens of social constructionism and critical psychology.

5.1 Social Constructionism and Critical Psychology

Social constructionism is a theory of knowledge which postulates that reality is constructed through a dynamic interplay between social actors and the contexts in which they find themselves on a daily basis (Burr, 2015). In this regard, a key focus of social constructionism is to highlight how human beings ascribe meaning to their lives based on a constant interaction between self and society, with the latter often being composed of systems such as community, culture, politics, and religion (McLeod, 2013). From a social constructionist stance, "meaning is the product of the prevailing cultural frame of social, linguistic, discursive, and symbolic practices" (Galbin, 2015, p. 48).

Four key assumptions of social constructionism may be foregrounded to better outline the theoretical framework (Burr, 2015). Firstly, social constructionism entails taking a critical stance towards knowledge that is often taken for granted. This assumption suggests that as individuals, we must make a concerted effort to engage with knowledge as critical thinkers that question the ways in which we perceive aspects of daily functioning, as well as the manner in which we attribute meaning to occurrences in our society (Burr, 2015). The second assumption of a social constructionist lens is that of historical and cultural specificity. In this regard, social constructionism asserts that people do not function within a vacuum, but rather,

individuals continuously operate within cultural boundaries and are ultimately a product of their cultural history (Cojocaru, Bragaru, & Ciuchi, 2012). Drawing on Gergen's seminal work on social constructionism, McLeod (2013) elaborates on the assumption of historical and cultural specificity by stating that "people are social beings. Personal identity is a product of the history of the culture, the position of the person in society and the linguistic resources available to the individual" (McLeod, 2013, p. 258-259).

Thirdly, social constructionism postulates the idea that knowledge is maintained by social processes, i.e. our knowledge of the world is constantly evolving and being reinforced by the social interactions we have with others. This is predominately achieved through discourse (Galbin, 2015). Lastly, social constructionism assumes a dynamic interplay between knowledge and social action. Through social interaction, we construct meaning in our world, and just as this constructed meaning is constantly evolving, so too does the way we subsequently respond and act (Burr, 2015). These four assumptions of social constructionism will be drawn upon to discuss the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants.

Emphasising that aspects of daily functioning, such as reproductive health and contraceptive decision-making, are informed by socio-cultural and socio-political processes, as well as the highlighting the importance of critically engaging with how we perceive and make meaning of the world, also represent central tenants of critical psychology (Painter, Terre Blanche, & Henderson, 2006).

Hook et al. (2004, p. 15) explain the following regarding mainstream psychology:

> The great majority of psychological discourse typically assumes that the self-contained individual is primary and the world of the social, political, cultural and economic power secondary. This is a prioritisation (of individual over social) and a division (of social and individual) that has remained remarkably firm in the history of psychology.

Critical psychology is an approach to psychological knowledge and human behaviour that challenges the abovementioned emphasis placed on the individual over societal influence, and ultimately seeks to highlight that structural factors and social actors/institutions play a

significant role in guiding psychological knowledge and human behaviour (Hook et al., 2004). From a critical psychology perspective, socio-cultural and socio-political influence is noted to stem from power imbalances and ideological agendas (Painter et al., 2006). Exploring the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants through a lens of critical psychology will allow the researcher to unpack the psychosocial aspects of contraceptive decision-making, a theme that features prominently in existing literature related to modern contraception.

5.2 Contextualising the Findings

Existing literature revolving around the contemporary contraceptive complexities faced by a young female student demographic in developing contexts primarily highlights the following: (1) an inclination to postpone pregnancy to a relatively more suitable life stage; (2) a desire for modern contraceptives that offer greater convenience; safety; and efficacy; (3) individual and structural barriers that hinder the uptake of such contraception; and (4) the influence of psychosocial factors on contraceptive decision-making (Anyanwu et al., 2013; Kavanaugh et al., 2013; Protogerou et al., 2014; Wekesa, 2016). Amid these considerations and concerns commonly cited in literature, long-acting reversible contraceptives, specifically contraceptive implants, were foregrounded as a potential solution for addressing these complexities shared by a young demographic in developing countries (Lince-Deroche et al., 2016).

Guided by a review of existing literature, this particular study sought to address the paucity of qualitative research investigating the uptake of contraceptive implants in South Africa following their public launch on the 27th of February 2014 (Lince-Deroche et al., 2016). In this regard, the researcher attempted to explore the knowledge and perceptions that young female South African university students have of contraceptive implants, as well as how these views may shape their willingness to utilise this particular contraceptive. The findings of this investigation outlined the following themes and sub-themes:

Table 1

Identified Themes and Their Corresponding Sub-themes

Themes:	Sub-themes:
4.2 Theme One: Considerations and concerns.	4.2.1 Function and suitability of contraceptives. 4.2.2 Negative experiences and adverse effects.
4.3 Theme Two: Psychosocial challenges related to contraception.	4.3.1 Stigmatisation. 4.3.2 Gender-skewed responsibility.
4.4 Theme Three: Barriers to contraceptive implant use.	4.4.1 Inadequate awareness and knowledge of contraceptive implants. 4.4.2 Limited availability and accessibility of contraceptive implants.
4.5 Theme Four: Advantages of contraceptive implants.	4.5.1 Long-term efficacy and low-maintenance of contraceptive implants. 4.5.2 Potential for female empowerment and reduced stigmatisation.

5.3 Discussing the Themes and Sub-themes

The abovementioned themes and corresponding sub-themes will now be systematically discussed. These findings will be compared or contrasted with existing literature, thereby respectively supporting or challenging research conclusions, and guiding future research. Social constructionism and critical psychology will also be drawn upon to discuss these themes and sub-themes.

5.3.1 Considerations and concerns.

Data analysis revealed that the function served by a contraceptive, as well as its relative suitability for the individual, are two important considerations taken into account by this participant group of young female university students when making decisions about contraception. In this regard, participants expressed that the key function contraception served for them was to postpone pregnancy until a relatively more suitable life stage. This consideration is in line with Anyanwu et al.'s (2013) study that investigated how unintended pregnancy is perceived among a young university student demographic in South Africa.

Similar to the findings of the abovementioned study, participants perceived unintended pregnancy as an ill-timed possibility, rather than a life event that is indefinitely unwanted. Participants' reasons for this stance also resonates with Anyanwu et al.'s (2013) findings that unintended pregnancy is perceived as ill-timed among a young student demographic because of the potential consequences it may have on successfully navigating through the development from young adulthood to adulthood. In this regard, numerous participants identified ill-timed pregnancy as a hindrance to future goals and aspirations. From a social constructionism perspective, this finding highlights the dynamic interplay between knowledge and social action. Through discourse and experience, social actors form expectations of how social events may unfold and then act in accordance with these expectations (Burr, 2015). An example of the aforementioned is the finding that participants perceive unintended pregnancy as particularly ill-timed due to their relative life stages and the potential detriment this may have on their development. This perception is then followed by social action, i.e. exploring modern contraception and following a birth control regimen. In summary, this finding suggests that social discourse and norms inform contraceptive decision-making.

From a functional perspective, preventing the spread of sexually transmitted infections and HIV was also cited as an important consideration. Elaborating on this point, numerous participants identified condoms as a key preventative measure, but did not recognise this barrier-method of contraception as a contraceptive. Instead, these participants identified condoms as an add-on or an additional measure that should complement ones' birth control regimen. This perspective is congruent with South Africa's Family Planning 2020 commitment and the country's National Contraception Clinical Guidelines, with the former highlighting the importance of dual protection and the latter recommending that dual protection be promoted and implemented by recommending the uptake of non-barrier contraceptives, such as contraceptive implants, in conjunction with barrier contraceptives, i.e. condoms (Department of Health, 2012; United Nations Foundation, 2012).

With regard to participants' concerns, prior negative experiences and the possibility of adverse effects were identified as significant considerations when exploring different contraceptives. Some participants recalled negative first-hand experiences to explain their ambivalence regarding a willingness to try new contraceptive methods. Another group of participants specifically cited negative word-of-mouth, as well as negative social media, to

substantiate why they are often hesitant to explore a new contraceptive. This ambivalence and hesitancy was also noted to stem from a lack of comprehensive information regarding certain modern contraceptives. In this regard, some participants identified a paucity of information regarding the benefits of modern contraceptives. Participants simultaneously contrasted this paucity of positive information with what they believed to be a skewed plethora of negative information that dominates discourse regarding certain modern contraceptives.

The abovementioned finding ties in with the third assumption of social constructionism, i.e. the suggestion that knowledge is maintained by social processes, and our knowledge of the world is constantly evolving and being reinforced by the social interactions we have with others (Galbin, 2015). Drawing on this theoretical understanding, participants' knowledge and perceptions regarding modern contraception appear to be heavily informed by negative social discourse via verbal communication and/or electrical mediums. This finding also reveals that socially informed knowledge and perceptions of modern contraceptives consequently affect the willingness for young female South African university students to incorporate such contraception in their birth control regimen, with negative perceptions resulting in ambivalence about modern contraceptives and a hesitancy to utilise such contraception.

Literature suggests that an interplay of structural and individual factors is primarily responsible for unintended pregnancies and/or challenges regarding modern contraceptive uptake (Wekesa, 2016). In this regard, the finding that knowledge and perceptions related to certain modern contraceptives are predominately governed by negative information may point towards a structural deficiency, such as insufficient awareness campaigns that offer comprehensive information to the public. Alternatively, this inclination for negative experiences to dominate discourse related to certain modern contraceptives may be the result of a negativity bias, i.e. a psychological phenomenon whereby negative information is automatically given greater consideration than positive information (Vaish, Grossmann, & Woodward, 2008). Extensive literature highlights that such skewed perceptions regarding modern contraceptives, whether as result of structural or individual factors, or a combination of both, ultimately foster misconceptions and influence contraceptive decision-making (Kavanaugh et al., 2013; Murphy et al., 2016; Russo et al., 2013). Addressing the paucity of information regarding modern contraceptives such as the contraceptive implant, as well as promoting comprehensive information that encompasses both the pros and cons of a

particular modern contraceptive might prove useful in debunking misconceptions and fostering informed decision-making.

5.3.2 Psychosocial challenges related to contraception.

Participants identified stigmatisation and gender-skewed responsibility as significant social challenges related to contraceptive use. Elaborating on stigmatisation specifically, participants stated that if a woman is seen to be using contraception, she consequently faces a social risk of being perceived as a promiscuous woman. Drawing on this perception, the visibility of contraceptive use was noted to be a significant social concern for many participants. Adverse effects such as sudden weight gain and post-insertion scarring were identified as concerning due to their overt visibility, and hence their potential to suggest whether or not a woman is utilising a contraceptive. Furthermore, age, race, culture, religion, and context were noted to influence this social challenge, thereby corroborating the social constructionist assumption that people continuously operate within socio-cultural boundaries (Cojocaru et al., 2012). In this regard, being young, or of African-descent, or having some religious affiliation, or residing in a small community, were all identified as predisposing factors that increase the possibility of a woman being stigmatised when seen to be using contraception.

This social challenge, i.e. the stigma faced by South African women who are seen to use contraception, is commonly noted in existing literature. Protogerou et al.'s (2014) finding that young South African women are at risk of being labelled "loose" when acquiring condoms, as well as Ragnarsson et al.'s (2009) finding that many South African women are shamed for embracing their sexuality, both stand testament to this common social reality. However, further investigation is required to explore the extent by which variables such as age, race, culture, and context influence a woman's chances of being stigmatised for contraceptive use in South Africa (Lince-Deroche et al., 2016).

Participants also went on to highlight gender-skewed responsibility as a common social challenge in the arena of contraceptive use. Elaborating on this, participants expressed that young females such as themselves disproportionately carry the responsibility of contraceptive use in their relationships, when contrasted with the role played by their male partners. One reason provided for this imbalance revolved around gender norms, thus highlighting how contraceptive perceptions may be influenced by socially-constructed roles. Participants also

cited the potential repercussions they could personally face in the absence of contraceptive use, viz. unintended pregnancy or single parenthood, as motivating factors for why they may feel obliged to take on greater responsibility for birth control in their relationships. These findings tie in with Anyanwu et al.'s (2013) finding that young South African women perceive ill-timed pregnancy as a threat to their individual well-being and development.

Some participants went on to express that they would like male partners to be equally involved in the birth control responsibilities of their relationship. In this regard, participants stated that unintended pregnancy can negatively impact both partners' lives and hence their male counterparts should give strong consideration to playing a more active role in contraceptive decision-making. These participants also went to reiterate that more comprehensive information regarding modern contraceptives needs to be targeted towards men and a greater awareness in this regard is warranted for young male partners in sexually-active relationships.

The abovementioned plea for males to take a more active role in matters pertaining to birth control ultimately ties in with the first assumption of social constructionism, i.e. that social constructionism entails taking a critical stance towards knowledge that is often taken for granted (Burr, 2015). In this regard, the notion that females are exclusively responsible for birth control within their intimate relationships is being critically evaluated and actively challenged by participants. Critical psychology also promotes an awareness of power imbalances and ideological agendas that are often inherent in gender-skewed aspects of psychosocial functioning, and suggests taking a critical stance that challenges such power differentials in pursuit of a more equitable society (Hook et al., 2004). Investigations that seek to explore young South African males' knowledge and perceptions regarding modern contraceptives such as the contraceptive implant is much needed as research on the topic is noted to be limited (Seutlwadi, Peltzer, Mchunu, & Tutshana, 2012).

5.3.3 Barriers to contraceptive implant use.

Participants identified inadequate awareness and knowledge of contraceptive implants, as well as limited availability and accessibility of this particular modern contraceptive, as significant barriers to the uptake and use of the device. Elaborating on inadequate awareness and knowledge, all eleven participants identified a lack of awareness regarding contraceptive implants. Psychosocial influence and institutional role-players were particularly blamed for

this lack of awareness. In this regard, one participant identified South Africa as a conservative society and suggested that this may potentially hinder awareness and discourse related to contraception, thereby highlighting how socio-cultural specificity, i.e. the second assumption of social constructionism (Cojocaru et al., 2012), may ultimately influence perceptions related to modern contraceptives and a willingness to utilise such contraception. Drawing on South Africa's social diversity, one participant expressed that although public healthcare efforts targeted at catering for lower socio-economic groups at a clinic-level are appreciated, this specific focus may inadvertently result in a lack of awareness among middle-class or upper middle-class individuals that rely on private healthcare for contraception.

Other participants turned their focus to specific role-players and suggested that institutions such as the South African Department of Health and the Department of Basic Education should be doing more to promote awareness of modern contraceptives such as the contraceptive implant. In conjunction with being identified as the primary institution to be held accountable for this limited awareness, the Department of Health was also noted to be inconsistent in its promotion of contraceptive implants, with national awareness campaigns eventually being narrowed down to local clinic-level campaigns. Furthermore, some participants reiterated that even at a clinic-level, promotion of contraceptive implants is inadequate. Lince-Deroche et al.'s (2016) research corroborates these findings by highlighting that more awareness regarding modern contraceptives is required in South Africa, specifically for the country's young demographic.

Participants also highlighted limited availability and accessibility of contraceptive implants as a significant barrier to the uptake of this modern contraceptive. Word-of-mouth complaints, as well as negative experiences, were cited by participants to substantiate their view that contraceptive implants are relatively unavailable and inaccessible. Reasons mentioned for these barriers include inadequate healthcare practitioner training, as well as certain public facilities no longer offering contraceptive implants due to high removal rates and the financial constraints inherent in implant insertion and removal. Inaccessibility in the private sector was also identified as a significant challenge, particularly stemming from bureaucratic inefficiencies and the influence of healthcare practitioners. Existing literature corroborates these findings, as witnessed in Kavanaugh et al.'s (2013) study that specifically identified

financial constraints and healthcare providers' negative perceptions as key barriers to accessing modern contraceptives such as the contraceptive implant.

5.3.4 Advantages of contraceptive implants.

The long-term efficacy and low-maintenance benefit of contraceptive implants; as well as their potential to empower women and reduce stigma, were identified by numerous participants as significant advantages of contraceptive implants. In this regard, contraceptive implants were identified as convenient because of the long-term birth control they offer and minimal maintenance they require from recipients post-insertion. This was noted to be particularly suitable for the busy lifestyles of young university students.

Participants foregrounded two points to contrast the benefits of contraceptive implants against other modern contraceptives. Firstly, participants outlined the high-maintenance of short-term contraceptives and alluded to the repercussions they would face if they forgot to meet these maintenance responsibilities. Secondly, participants expressed that they are in a life stage that is relatively better-suited for long-term contraception. In this regard, nine of the eleven participants that were interviewed expressed that they would prefer to use a contraceptive that is effective for longer than one year. The two participants that did not share similar sentiments regarding long-acting contraceptive use, ultimately went on to explain that their stance stems from a lack of comprehensive information, as well as fear of serious adverse effects such as permanent infertility. Similar findings feature prominently in existing literature. This is seen in Kavanaugh et al.'s (2013) study that highlighted how young women identify the low-maintenance benefit of contraceptive implants as a significant benefit of long-acting reversible contraceptive use. Furthermore, the ability for inadequate knowledge and misconceptions to influence modern contraceptive uptake is well-documented by other researchers (Kavanaugh et al., 2013; Murphy et al., 2016; Russo et al., 2013).

Subsequent to expressing that the stigmatisation faced by young women in the South African contraceptive arena primarily stems from visibility of contraceptive use, participants went on to suggest that the long-term efficacy, low maintenance, reversibility, and overall discreet nature of contraceptive implants, make this birth control option particularly suitable for empowering women and reducing the potential for stigmatisation. The fact that contraceptive implants possess long-term efficacy and are inserted under the skin, was noted to carry two particular benefits. Firstly, participants suggested that a women utilising a contraceptive

implant would have less need to frequently visit a healthcare facility for contraception, hence reducing her chances of being identified as a sexually-active and potentially promiscuous individual. Secondly, participants suggested that the discreet nature of having an implant inserted under one's skin (thereby rendering contraceptive use relatively invisible), also carries the potential for contraceptive implants to be less stigmatising.

Lastly, participants highlighted that the discreet characteristics of contraceptive implants, viz. their low maintenance and insertion under the skin, may be particularly empowering for women. In this regard, some participants were of the opinion that being able to conceal a contraceptive could be of benefit for women that seek to avert unintended pregnancy, but their male partners, for some individual or socio-cultural reason, do not want to incorporate birth control in their sexual practices. From a critical psychology standpoint, this finding sheds light on the existence of socially-constructed power imbalances within sexual relationships (Hook et al., 2004). This study's findings, as well as existing literature, suggests that these imbalances may be fuelled by religious or cultural ideologies, as well as socially-constructed and perpetuated gender norms (Ragnarsson et al., 2009). This in turn may ultimately limit the autonomy of young females with regard to contraceptive decision-making. It is thus understandable that birth control that is discreet in nature, such as contraceptive implants, might prove useful in fostering autonomy and female empowerment.

The following chapter seeks to conclude this research endeavour by summarising findings, outlining the limitations of this study, and offering recommendations for future research.

Chapter 6: Conclusion

This study sought to explore the knowledge and perceptions that young female South African university students have of subdermal contraceptive implants. Such investigation allowed the researcher to identify that differing levels of knowledge and perceptions regarding contraceptive implants ultimately inform the willingness for these females to use this particular form of contraception. Key findings in this regard include: (1) the function, suitability, and negative perceptions, of a particular contraceptive are significant considerations and concerns taken into account by young South African females when investigating contraceptives; (2) psychosocial challenges, particularly the potential to be stigmatised, as well as the circumstance of gender-skewed responsibility, in matters related to birth control, ultimately inform contraceptive decision-making; (3) contraceptive implants possess the potential to reduce stigmatisation and empower young South African women, however; (4) there are significant barriers to the uptake of this modern contraceptive, specifically inadequate awareness and knowledge, as well as limited availability and accessibility.

6.1 Limitations

As this study was exploratory in nature, identified themes and sub-themes could not be extensively investigated. In this regard, the researcher is of the opinion that future research should aspire towards an in-depth investigation into some of the findings revealed here that lack clarity and corroboration by other studies. The absence of a probability sampling strategy that takes into account certain demographic variables, viz. race; religion; residential context, to name a few, is also noted to be a limitation of this particular study, as participants expressed that these variables ultimately play a role in informing contraceptive decision-making. Lastly, this study exclusively explored the views of young female South African university students, the perspectives of other role-players functioning within the arena of contraception, i.e. male partners and social institutions such as the Department of Health were not investigated.

6.2 Recommendations

Building on the exploratory nature of this research endeavour, future research should investigate some of the themes and sub-themes identified in this study in a more in-depth

manner, particularly those that are known to require further investigation, viz. inadequate awareness and knowledge, as well as limited availability and accessibility of contraceptive implants in South Africa (Lince-Deroche et al., 2016). Quantitatively-oriented studies that employ sampling strategies targeted at acquiring representative samples might also prove useful in accurately outlining the factors that influence contraceptive implant uptake in South Africa. Lastly, similar research investigations that include the perspectives of male partners and/or relevant social institutions such the South African Department of Health is recommended. Such investigations will probably result in a greater understanding of the psychosocial complexities inherent in modern contraceptive uptake in South Africa.

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Appendix A: Ethical Clearance

• PO Box 77000 • Nelson Mandela University
• Port Elizabeth • 6031 • South Africa • www.mandela.ac.za

Chairperson: Research Ethics Committee (Human)
Tel: +27 (0)41 504-2235

Ref: [H16-HEA-PSY-020/Approval]
Contact person: Mrs U Spies

13 September 2016

Prof D Elkonin
Faculty: Health Sciences
South Campus

Dear Prof Elkonin

AN EXPLORATORY STUDY OF FEMALE SOUTH AFRICAN UNIVERSITY STUDENTS' KNOWLEDGE AND PERCEPTIONS OF SUBDERMAL CONTRACEPTIVE IMPLANTS

PRP: Prof D Elkonin
PI: Mr SAR Kalla

Your above-entitled application served at Research Ethics Committee (Human) for approval. The ethics clearance reference number is **H16-HEA-PSY-020** and is valid for three years. Please inform the REC-H, via your faculty representative, if any changes (particularly in the methodology) occur during this time. An annual affirmation to the effect that the protocols in use are still those for which approval was granted, will be required from you. You will be reminded timeously of this responsibility, and will receive the necessary documentation well in advance of any deadline.

We wish you well with the project. Please inform your co-investigators of the outcome, and convey our best wishes.

Yours sincerely

Prof C Cilliers
Chairperson: Research Ethics Committee (Human)
cc: Department of Research Capacity Development Faculty Officer: Health Sciences

Appendix B: Participant Information Sheet 1

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Good day. My name is Sikander Kalla, I am a Masters student studying clinical psychology at the Nelson Mandela Metropolitan University and I am currently completing this research investigation as a requirement for my Masters degree in Clinical Psychology. This research concerns views on contraceptive implants, more specifically about the relationship between South African females' knowledge and perceptions of subdermal contraceptive implants and their willingness to use this contraceptive method.

If you agree to participate in this study, you will be required to present yourself for a semi-structured interview at a time that is suitable for you and at a venue that ensures confidentiality. Furthermore, because the topic of this study is of a sensitive and confidential nature, a female research assistant will be conducting the interviews to ensure more comfort in discussing the topic of the research. Participation in this study is voluntary and confidentiality will be ensured by restricting the access of data (and any identifying information) to only the researcher; research assistant; and research supervisor. Feel free to ask for clarification at any time during the interview if confusion arises and remember that you may withdraw from participation at any time during the process.

If you agree to participate in the study, you will need to complete two forms. One is an informed consent form to participate in the study; while the other is a consent form requesting permission to record the interview with an audio tape recording device so that the interview may later be transcribed by me (confidentiality will be upheld by ensuring that only the researcher; research supervisor and research assistant come into contact with personal and confidential information). Due to the sensitive nature of the research topic, counselling services from the NMMU Student Counselling, Career and Development Centre (SCCDC) may be arranged should you feel any distress during or after the interview. They may be contacted on (041) 504 2511.

Sikander Kalla (Researcher)
0415042598/**SikieKalla@gmail.com**

Prof. Diane Elkonin (Supervisor)
0415042916/diane.elkonin@nmmu.ac.za

If interested, please contact me via email.

Appendix C: Participant Information Sheet 2

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- A subdermal contraceptive implant is a small (matchstick-sized) device that is implanted under the skin by a doctor or a nurse (usually a five minute procedure).
- Once implanted, the device provides long-term contraception for up to three years.
- No instructions or rules are necessary for you to learn and abide to, after having the device implanted for you by a medical professional; it begins to function automatically until it is removed.
- Contraceptive implants are a reversible form of contraception and fertility is restored fairly quickly upon removal of the device (usually within a few weeks after removal).
- Contraceptive implants have been proven to be more effective than popular contraceptive methods such as oral contraception (the pill) and condoms.
- Possible side effects include: headaches; acne; weight gain; breast tenderness; and irregular periods.
- Subdermal contraceptive implants do not prevent the spread of sexually transmitted diseases (including HIV/AIDS) and are therefore not a substitute for condoms.

Pushpa, B. Sangita, N. Shivani, A. Chitra, T. (2011). Implanon: Subdermal Single Rod Contraceptive Implant. *The Journal of Obstetrics and Gynecology of India*, 61(4), 422-425.

Appendix D: Consent Form for Participation

• PO Box 77000 • Nelson Mandela University
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By completing this form, you are hereby giving your consent to participate in the study.

I, _____ (full name), agree to participate in this study which is undertaken by Sikander Kalla (researcher).

_____ _____

Signature Date

I understand that:

- Participation is voluntary.
- I may withdraw from the participating in the study at any time during the interview should I become uncomfortable.
- Confidentiality will be upheld.

Thank you for your participation.

Signed _____

Appendix E: Consent Form for Audio Recording

• PO Box 77000 • Nelson Mandela University
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By completing this form, you are hereby giving your consent to be recorded via an audio tape recording device during the interview so that it may later be transcribed by the researcher.

I, _____ (full name), agree to be audio recorded during the interview for later transcription by Sikander Kalla (researcher).

_____ _____

Signature Date

I understand that:

- Participation is voluntary.
- I may withdraw from the participating in the study at any time during the interview should I become uncomfortable.
- The audio recording will be used by the researcher to transcribe the interview.
- Confidentiality will be upheld.

Thank you for your participation.

Signed _____

Appendix F: Interview Schedule

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1. Are you open to trying other forms of contraception and if so, what are your major considerations before doing so?

2. Would you prefer a form of contraception that provides long-term protection from pregnancy (more than a year)?

3. Who is primarily responsible for contraception in your relationship and why do you think this is the case?

4. Have you ever heard about subdermal contraceptive implants; If so, how?

5. Do you have opinions on the awareness, availability, affordability, and safety of subdermal contraceptive implants? Please elaborate.

6. Are you aware that this contraceptive method is freely available at public health facilities such as clinics; and do you think enough is being done to bring about awareness on this free accessibility?

7. Other contraceptive methods have sometimes been accompanied by stigmatisation and embarrassment. Do you think contraceptive implants have less potential for such embarrassment and stigmatisation? Please explain.

8. What do you think is the most important information that needs to be put forward in order for women to start investigating the use of contraceptive implants?