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DETERMINANTS OF NATURAL FAMILY PLANNING USE AMONG MEN IN THE LAWRA MUNICIPALITY

BY

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DECLARATION

I, Paschal Kob, declare that, the findings of this thesis are my original research work conducted independently under the supervision and guidance of my supervisors. Acknowledgement of all articles and textbooks used in the work has been duly done in accordance with the University of Ghana's standard of citation and referencing. This study was conducted under the direction and guidance of Dr. (Mrs) Patience Aniteye of the School of Nursing and Midwifery, University of Ghana and Rev. Dr. Thomas Akuetteh Ndanu, School of Medicine and Dentistry, University of Ghana. This work, has never been fully or partially presented for the award of any other degree. Neither has it been submitted simultaneously in candidature for any other degree.

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DEDICATION

This work is dedicated to my late father and brother of blessed memory: Mr. Kob Tonye and Mr. George Beyiwore Kob. The thesis is also dedicated to Madam Sarah Bellilaar Kob (Mother), Madam Lucy Niber (Wife), Miss Del-Ngmene Paaku Kob and Mr. Dengmene Paaku Kob (Children) and all family members who supported me throughout my education.

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LIST OF ABBREVIATIONS

CINAHL	Cumulative Index of Nursing and Allied Health Literature
FP	Family Planning
HINARI	Health InterNetwork Access to Research Initiative
IRB	Institutional Review Board
NFP	Natural Family Planning
NMIMR	Noguchi Memorial Institute of Medical Research
PBC	Perceived Behavioural Control
PUBMED	Public/Publisher MEDLINE
SDM	Standard Days Method
SPSS	Statistical Package for Social Sciences
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UG	University of Ghana
UPSI	Unprotected Sexual Intercourse

ABSTRACT

Family planning is a useful strategy to improve quality of life and help people to alleviate poverty. The need for partners to agree on the type of method to use, is critical in achieving this goal. A simple, cost-effective, low risk and easy to use method is the Standard Days Method (SDM) of Natural Family Planning. However, this method is least practised in the Lawra Municipality of the Upper West Region of Ghana. This study examined the determinants of the use of the Standard Days Method (SDM) of natural family planning by married men and their partners in the Lawra Municipality. The study used the cross-sectional design; four hundred and thirty-three (433) respondents were recruited and interviewed. This was followed by the collection of some qualitative data using three Focus Group Discussions from a sub-group of men and their wives. Data analysis was done using Statistical Package for Social Sciences (SPSS) version 23.0. Pearson Product Moment Correlation and Binary logistic regression tests were performed. The qualitative data was analyzed using thematic and content analysis. The findings of the study indicated that, the majority of the men (74%, n = 294) had intentions to participate in SDM use and almost every man (98%, n = 374) who had coitus with his partner within the three months preceding data collection participated in the use of SDM. The study further revealed that, men's intentions to participate in SDM use with their partners, had significant positive relationship with their attitudes ($r = 0.55$, $p < 0.001$), significant positive relationship with their subjective norms ($r = 0.18$, $p < 0.001$) and significant positive relationship with their perceived behavioural control ($r = 0.23$, $p < 0.001$). Factors that significantly predicted men's intentions to participate in SDM use with their partners included attitudes (OR = 1.07, 95%CI = 1.05 – 1.09, $p < 0.001$) and perceived

behavioural control (OR= 1.02, 95%CI = 1.01 – 1.03, p = 0.006). Cultural beliefs and partners' role were found to influence men's intentions and participation. However, no factor had had a significant relationship with men's participation in SDM use with their partners. Not even the intention to participate in SDM use that was high among the respondents had any significant relationship. Family planning service providers should render appropriate SDM counselling services and make available, the requisite resources to men and their partners to choose and practise the method. Family planning policy framework proposal on including family planning services and supplies in the health insurance benefit package should be broadened to include SDM to make it available to clients who need them.

Keywords: Standard Days Method, Men's Participation, Intention, Attitude, Subjective Norm, Perceived Behaviour Control.

CHAPTER ONE

1.1 Background of the study

Ensuring individuals and couples have access to reproductive health services has reached a critical mass as a priority action the world over, aimed at cutting down on maternal mortality (Adai, 2017; United Nations [UN], 2017). The 1987 safe motherhood initiative identified family planning as a major strategy among several others, to reduce deaths of mothers through birth related causes, especially in low-income countries. The International Conference on Population and Development (ICPD) of 1994 acknowledged the relevance of family planning as a basic right for all individuals and couples to freely decide, among other things, the type of method to use and to have the required information to make those decisions (UN, 2014). In this regard, the involvement of men was cited as critical to achieving desired outcomes.

Successive global actions such as the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) and other studies have encouraged and supported universal access to reproductive health services in addition to family planning. All these creativities are intended to ensure that, individuals have control over their fertility so as to eliminate maternal and child morbidity and mortality (Adai, 2017; UN, et al., 2015). The right for every sexually active individual and couple to decide the family planning method to use is based on specific method factors such as knowledge of the method, efficacy, safety, reversibility, comfort, cost, availability and limitations of the method (Dehlendorf, Rodriguez, Levy, Borrero, & Steinauer, 2010). The inability of people to choose, practise and to continue practising their preferred family planning method results in unwanted pregnancies and their attendant problems (Ochako et al.,

2015; Tilahun, Coene, Temmerman, & Degomme, 2015). The consequences of unwanted pregnancies are well documented, including closely spaced children, premature births, delayed prenatal care, poor physical and mental health for children (Wendt, Gibbs, Peters, & Hogue, 2012). Also, births that are unplanned are a major contributory factor to increased population growth globally. Lack of awareness, limited access to FP services, expensive FP methods, fear and experiences of side effects or health related concerns for some methods are identified as contributory factors to FP non-use.

It is estimated that, 222 million women in low-income countries wish to postpone childbirth, yet they are not using any modern family planning method. The inability of women or couples to access an affordable and effective method of FP are cited as concerns confronting family planning use in these countries (Malalu, Alfred, Too, & Chirchir, 2014; Ochako et al., 2015; Tilahun et al., 2015). Also, perceived and experienced side effects and health related concerns associated with the hormonal methods are major factors affecting a couple's choice, use and continuation of use of these methods, especially hormonal contraceptives (Modey, 2018).

However, the Standard Days Method (SDM) of Natural Family Planning is a cost-effective FP method (UN, et al., 2015) developed by the Institute for Reproductive Health, Georgetown University, Washington, DC and approved by WHO as an effective modern family planning method for couples who desire to space births (Mulcaire-Jones et al., 2016). This method is easy to use and has no side effects or health related concerns, unlike the hormonal methods.

A woman who desires to use this method must have a menstrual cycle range of 26 to 32 days. Days 8 to 19 (12days) of the cycle is recognized as a "fertile period" when the

couple must avoid engaging in unprotected sexual intercourse or abstain if they want to prevent pregnancy (Arévalo, Sinai, & Jennings, 1999; Stanford, 2015). A menstrual cycle variance of ±2 is documented as effective within the SDM range of 26 to 32 days. This method is effective for preventing pregnancies and with the perfect and typical use effectiveness at 93 percent and 76 percent, respectively have been documented (Evans, 2012; Fehring, Schneider, Barron, & Pruszynski, 2013; Fehring, Schneider, & Bouchard, 2017; Fehring, Schneider, Raviele, Rodriguez, & Pruszynski, 2013; Smoley & Robinson, 2012).

It is established that, SDM yields low pregnancy rates when practised correctly, with its failure rates comparable to many hormonal contraceptive methods such as injectables and condoms (Bekele & Fantahun, 2012; Frank-Herrmann et al., 2007; Freundl, Sivin, & Batar, 2010; Kursun, Cali, & Sakarya, 2014). This effectiveness is achievable, provided both partners are offered appropriate counselling services on how to use the method (Lundgren, Karra, & Yam, 2012). This counselling does not only equip couples with knowledge on how to use SDM but also, provides an entry point for service providers to discover partner communication, intimate partner violence, condom use and HIV/STIs prevention. The author argues that, the introduction and acceptance of SDM also broadens FP methods mix in low-income countries for possible selection and use.

Global surveys conducted on FP methods revealed that, women prefer Fertility Awareness-based Methods (FABM) because, they have no side effects and limited health concerns as compared to other contraceptive methods with 3.60% of women using FABM (Freundl et al., 2010; Gribble, Lundgren, Velasquez, & Anastasi, 2008).

Other women prefer to use SDM because, it is relatively affordable (one-time purchase) and easy to use (Bekele & Fantahun, 2012). Numerous authors also claim that, SDM use enhances couples' communication and helps couples to prevent and achieve pregnancy (Arévalo, Jennings, & Sinai, 2002; Arévalo et al., 1999; Kabonga, Baboo, & Mweemba, 2010; Smoley & Robinson, 2012). Standard Days Method appeared to have a high level of acceptance, satisfaction and continuation rates among couples who effectively practise the method compared to other modern FP methods such as hormonal contraceptives and condoms (Bekele & Fantahun, 2012; Kursun et al., 2014).

The use of safe, acceptable, effective and affordable birth control method such as SDM can help reduce maternal and child morbidity and mortality, as well as reduce the fertility rates of women, which is reportedly high in most low-income countries such as Nigeria and Ghana (Ieda, 2012; Machiyama & Cleland, 2014; Mallick et al., 2018; Sedgh, Ashoford, & Hussain, 2016) in addition to reducing abortion (Miller & Valente, 2016; Sedgh et al., 2016). It also helps address the unmet need for family planning services (Evans, 2012; Fehring, Schneider, Barron, et al., 2013; Sedgh et al., 2016; Tommaselli, Guida, Palomba, Pellicano, & Nappi, 2000; Witt, McEvers, & Kelly, 2013).

However, the use of SDM and other NFP methods have been criticized globally on grounds of unreliability, low efficacy rates, and inability to prevent sexually transmitted infections (Gulland, 2012; Peck & Norris, 2018; Singh & Darroch, 2012; Witt et al., 2013). Also, the effectiveness of SDM is hindered by physiological changes that alter the regularity and length of the menstrual cycle such as previous use of contraceptive methods, recent pregnancies or child birth, breast feeding, menarche, menopause and illness (Fehring, 2005). Also, high motivation and good knowledge of both partners about

SDM use is required to achieve desired outcomes (Beeman, 2010; Fehring, Schneider, Barron, et al., 2013; Mikolajczyk, Stanford, & Rauchfuss, 2003). These challenges associated with NFP methods have been contested by other authors (Fehring, Schneider, Barron, et al., 2013; Fehring, Schneider, Raviele, et al., 2013; Pallone & Bergus, 2009).

Yet, SDM is a preferred family planning method for some minority group of individuals and couples because of cultural, religious, personal and other reasons cited above at achieving their reproductive intentions (Arévalo et al., 2002; Fehring et al., 2017).

Globally, the use of natural family planning is unsatisfactorily low (6%) (UNPD, 2017b), though a review of some Demographic and Health Survey data in Ghana and Burkina Faso revealed underreporting of NFP use (Machiyama & Cleland, 2014). In a systematic literature review on family planning studies, Glasier (2010) observed that, the use of a particular family planning method is influenced by attitudes of health care professionals (Choi, Chan, & Wiebe, 2010). Evidence available also suggests that, the use of FP is influenced by men's beliefs of family planning as women's business (Hardee, Croce-Galis, & Gay, 2017; Lundgren, Cachan, & Jennings, 2012). Hence, the joint decision making needed by couples with respect to FP services may be affected in this context. Nonetheless, Hardee et al. (2017) hold that, men show positive attitudes and desire for family planning services, support existing FP programmes and encourage their wives to take up family planning services. This corroborates with a study finding in the Philippines where men offered financial support to their wives to seek reproductive health services including family planning (Oyieke & Galang, 2016).

The belief of inconveniences associated with the use of SDM are common in South and South East Asia (Najafi-Sharjabad, Yahya, Rahman, Hanafiah, & Manaf, 2013). This belief is also a major concern in Pakistan (Sajid & Malik, 2010). In Korea and Cambodia, the belief of permanent harm associated with the use of hormonal methods have been reported to influence FP use in general among couples (Esike et al., 2017; Wiebe, Henderson, Choi, & Trouton, 2006). Although these studies were specific to contraceptive users, it may as well have a negative impact on men's decision to participate in SDM use with their wives.

In Africa, 28.5 percent of married women within their reproductive age (15-49years) use modern contraceptives with 24.2 percent of them having unmet need for modern contraception. This unmet need is attributed to men's negative attitudes towards the use of contraception (Amu et al., 2017). The attitudes of men in Africa towards family planning especially, SDM is not different from the global perspectives where most men expect women to take charge of family planning decisions among others (Adongo et al., 2013; Lundgren et al., 2012; Wambui & Alehagen, 2009; Withersa et al., 2015). Meanwhile, every decision to be taken by women pertaining to FP must meet men's approval (Amu et al., 2017; Withersa et al., 2015). A similar study finding in Turkey revealed that women's interest to use SDM received disapproval from their partners due to mistrust for the method (Kursun et al., 2014).

Patriarchal norms in Africa lean towards men as family heads, thus offering men undue advantages over women in respect of decision making (Wambui & Alehagen, 2009; Withersa et al., 2015) which ultimately influence family planning, decision making. It is

therefore suggestive that, the kind of attitude (negative or positive) and behaviour men put up towards a particular FP method such as SDM will influence its use.

Studies conducted in Ethiopia on how beliefs influence contraceptive attitudes and behaviour among men and women revealed that, men have positive attitudes to father more children and therefore, developed negative behavioural attitudes towards approving the use of contraceptives so as to satisfy their reproductive desires (Davidson, Fabiyi, Demissie, Getachew, & Gilliam, 2017; Kassa, Abajobir, & Gedefaw, 2014; Tilahun et al., 2013). The authors observed that, the influence of significant others seems to have a telling effect on men's intentions to participate or use FP methods with their partners. For instance, men seem to have learnt from friends that, giving birth to many children signifies wealth, in that, these children act as alternative sources of income to the family. Therefore, men see their participation in the use of any family planning method not to serve their interest.

The use of NFP methods in the African sub-region are either decreasing or stagnant in countries such as Madagascar, Malawi, Namibia, Zambia and Zimbabwe. In countries such as Ghana, Kenya, Tanzania and Uganda, the uptake of natural family planning methods are static (United Nations, Economic;, Social Affairs, & Population Division, 2015; UNPD, 2017a). In the West African countries such as Benin, Burkina Faso, Cameroon, Senegal, and Togo, NFP use has declined (Sharan, Ahmed, May, & Soucat, 2011). A review of literature in sub-Sahara Africa by Ackerson and Zielinski (2017) established the use of FP methods in general to be influenced by social factors such as partners' and community members' opposition or disapproval of the methods. The authors also cited desires or intentions of couples to have larger families, and

unsatisfactory service delivery on the part of service providers as factors responsible for the low utilization of some methods. The authors further claimed that, fear of pregnancy and lack of knowledge about some methods such as SDM, despite couples' probable desire to space and limit child birth, negatively influenced their motivations or willingness to use SDM.

Males' dominance and control over whether women should use a particular family planning method to delay conception influenced utilization of family planning in Africa (Ackerson & Zielinski, 2017). The authors noted that men in the sub-region believed their wives are their property, because they claimed they have paid for them. Women are again, seen as mothers and caretakers of families and this puts women at a disadvantage to access education and employment opportunities (Petroni, Steinhaus, Fenn, Stoebenau, & Gregowski, 2017). These discriminatory attitudes and beliefs of men, deprive partners their reproductive rights and empowerment and at the same time, render women good for marriage and childbearing, regardless of their age and interest. These gender norms, the authors critiqued, do not only affect sexual relationships between couples but may lead to unintended pregnancies due to the sabotage on women's efforts to have access to their preferred family planning methods.

In response to the challenges that confront the use of FP methods and men's participation, various strategies such as training of males as health volunteers and use of behaviour change communication strategies targeted at men have been adopted to mitigate the concerns. Also, the delivery of family planning information and services at males dominated settings, provision of FP counselling services to couples but not women alone have been implemented in most family planning provision centres (Lundgren et al., 2012).

The establishment of refresher training courses for FP service providers focused on gender sensitivity are also offered to address men's negative attitudes towards participation in FP use with their partners (Hartmann, Gilles, Shattuck, Kerner, & Guest, 2012; Kraft, Wilkins, Morales, Widyono, & Middlestadt, 2014; Rottach, Schuler, & Hardee, 2009). Similarly, FP service providers routinely provide counselling services to couples on a full range of available FP methods including SDM for them to make informed choices (Ramesh & Chandrababu, 2018).

The question that remains unanswered is, are men's attitudes, beliefs and the influence of significant others sufficient to predict their intentions and participation in SDM use with their partners? Numerous family planning studies conducted in the Upper West Region of Ghana in the past, focused on women and or couples regarding hormonal and other FP methods neglecting NFP methods, especially SDM (Adanu et al., 2009; Eliason, Baiden, Quansah-Asare, Graham-Hayfron, Bonsu, James, et al., 2013; Staveteig, 2017). All these studies also paid little attention to factors that influence men's intentions and participation in SDM use (Adongo et al., 2013; Eliason, Baiden, Quansah-Asare, Graham-Hayfron, Bonsu, Phillips, et al., 2013; Withersa et al., 2015). This study sets out to examine the determinants of men's use of natural family planning method with their partners in the Lawra Municipality. This study will be guided by the Theory of Planned Behaviour (TPB).

1.2 Problem Statement

Generally, the uptake of natural family planning services have been consistently low and fluctuating in Ghana, from 4.0% (1980), 10.1% (1994), 8.7% (1999), 2.7% (2006), 6.9% (2008), 1.6% (2013), 6.0% (2015) to 5.0% in 2016 (Ghana Statistical Service[GSS], 2014; Modey, 2018; UNPD, 2017). The report also indicated an unmet need for family planning to be high (32%) for married women. The rate of discontinuation is reportedly high (60%) with the next follow up visits among women who use contraceptives compared to users of other methods (Modey, 2018). The author identified reduced need for contraceptives, fear and experiences of side effects to contribute to increased risks of discontinuation of contraceptive use compared to all other reasons cited. Yet a cost-effective FP method such as SDM, which has no side effects, accepted by all cultures and religions is among the NFP methods that is least practised. The cooperation and support of men is needed to achieve desired outcomes of preventing pregnancy with the use of this method. It is documented that, men's inability to cooperate or abstain from coitus due to alcoholism or lack of self-control and sexual indiscipline during the fertile period negatively influence SDM use (Nakiboneka & Maniple, 2008).

Even though the fertility rate has dropped over the years from 4.2 per 1000 live births (5.2 in rural areas) to 3.9 per 1000 live births per woman (4.7 in the rural areas) in the country (Ghana Statistical Service & Rockville, 2014), the fertility rate in Ghana is higher compared to high income countries in Europe which have a total fertility rate of 1.6 births per woman (UNPD, 2017b). The fertility rate in Ghana should have reduced much faster to help ameliorate poverty and unemployment situations confronting the country.

This slow decline in the fertility rate of women has negative implications for maternal and child health in the country, more especially in the rural areas.

It is reported that, 5 percent of all women in Ghana use natural family planning methods with their partners (GSS, 2014). However, its uptake is lowest (0.4%) in the Upper West Region and highest (9.3%) in the Greater Accra Region - the country's capital (GSS, Ghana Health Service [GHS], & ICF International, 2014).

Latest information on the uptake of SDM in the Upper West region showed an increase from 35 in 2017 to 137 women in 2018 (GHS, 2018, unpublished). In the Lawra Municipality (which is predominantly rural), natural family planning methods' uptake which includes SDM, has been consistently low since 2013 (GHS, 2017, unpublished). The Municipality has many Community-based Health Planning and Service (CHPS) facilities and clinics evenly distributed and well-resourced with Community Health Officers (CHOs), where comprehensive family planning services, including SDM are offered, yet the municipality continues to record low uptake of this method.

What exactly influences the low uptake of SDM in the Lawra municipality? Is it their belief systems and the dominance of Christian and Islamic religions in the Lawra Municipality (GSS & Rockville, 2014) that influence men's intentions and participation in SDM use with their partners? Does the role of men as family heads and their dominance over women in decision making in the municipality have any influence on men's intentions to participate in SDM use with their partners? Many studies have investigated factors that influence women and couples' intentions to use family planning services in the Upper West region of Ghana (Eliason et al., 2013; Thummalachetty et al., 2017; Tirah, 2014), but whether the same factors can predict men's intentions and participation in SDM

use with their partners in the Lawra Municipality is unknown. This study sought to find answers to the questions posed.

1.3 Purpose of the study

The purpose of this study is to examine the determinants of men's use of a natural family planning method (Standard Days Method) in the Lawra Municipality.

1.4 Objectives of the study

The specific objectives of the study were to:

1. Determine the attitudes of men towards participating in Standard Days Method (SDM) use.
2. Assess the subjective norms of men about participating in SDM use.
3. Evaluate the perceived behavioural control of men about participating in SDM use.
4. Examine men's intentions to participate in the use of SDM.
5. Analyse the relationship between men's attitudes, subjective norms, perceived behavioural control, intentions and participation in the use of SDM.

1.5 Hypotheses

1. Men's attitudes, subjective norms and perceived behavioural control will have a significant positive relationship with their intentions to participate in SDM use.

1.6 Significance of the study

The study will identify factors that determine men's intentions to participate in SDM use with their partners as a means of birth control in the Lawra Municipality. The study outcomes will provide relevant information to nurses, midwives and stakeholders to aid in the formulation of family planning policies, educational and counselling strategies for clients seeking to use SDM in the study area. The study outcomes will also contribute

to addressing the unmet need for family planning services in the Lawra Municipality by increasing the method mix. In addition, the study findings will contribute to knowledge addition in the area of Natural Family Planning using the Theory of Planned Behaviour as a conceptual framework.

1.7 Operational definitions

Attitude: This is a value judgment towards participating in SDM use.

Contraception: The process of regulating fertility using **s**ubstances (medicines or herbal preparations), mechanical and surgical means.

Determinants: Factors that identify the outcome of an event.

Family Planning: A means of birth control adopted by individuals or couples to control or regulate fertility.

Intention: This represents the individual's preparedness to carry out a particular behaviour.

Natural Family Planning: Also known as fertility awareness-based method. It comprises of several methods that enable couples to identify fertile and infertile periods of a woman's menstrual cycle using natural physical signs and symptoms of fertility to avoid or achieve pregnancy. It does not include the use of drugs, medical devices or surgical procedures.

Perceived behavioural control: This refers to an individual's perceived ease or difficulty of performing a particular behaviour.

Significant others: These are the people an individual trust and rely upon for help. These persons include partner (husband or wife), family members, religious leaders and personal healthcare professionals.

Subjective norm: This is how much the individual feels social or significant others want him or her to perform a behaviour or not.

Supportive subjective norm: This is the social pressure approving of the use of SDM**.**

Unsupportive subjective norm: This is the disapproval of social pressure about the use of SDM.

Use: Participation in the method

Unmet need of family planning: The gap between couple's contraceptive use and their reproductive intentions.

1.8 Organization of work

Chapter one outlined the introduction to the study, the problem statement, purpose of the study, objectives of the study and operational definition of terms. Chapter two reviewed the theoretical framework (Theory of Planned Behaviour) and literature relevant to the study. The literature was reviewed on men's attitudes towards participating in SDM use and other related literature, men's subjective norms about participation, men's perceived behavioural control about participation, men's intention to participate and men's actual participation. Chapter three described the research methods, data collection procedures and how the data was analyzed. Chapter four presented the findings of the study. Chapter five talked about discussion of the results and findings, while Chapter six presented the summary, conclusion and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

This chapter deals with extensive review of published and unpublished studies concerning natural family planning and other related studies which are considered relevant to the study. Literature relevant to natural family planning, men's participation in health-related studies and SDM were obtained from journals, books and online articles. Online databases such as HINARI, PUBMED, Elsevier, ScienceDirect, Wiley Oxford Journals, SCOPUS, SAGEPUB, Taylor and Francis online and other databases were used in the search. Various search strings were used on the databases during the literature search by combining the following key words: "Men", "Males", "participation", "use", "involvement", "natural family planning", "Standard Days Method", "Fertility-based awareness method", "determinants", "contraceptives and prevalence". Articles that were retrieved from the search, only those that were germane to the study and are of empirical quality were included in the review. The articles used in the study included those published from 2008 to date except older classified literature pertinent to the study.

2.1 Theoretical Framework of the study: Theory of Planned Behaviour

The conceptual framework of the Theory of Planned Behaviour (TPB) was adapted and described. All its constructs such as behavioural attitude, subjective norm, perceived behavioural control, behavioural intention and behaviour are described. Also, all their corresponding sub-constructs: behavioural beliefs, outcome evaluations, normative beliefs, motivation to comply, control beliefs and influence on control beliefs are described. A scientific literature review on SDM of Natural Family Planning was carried out with respect to all the constructs of the framework.

The Theory of Planned Behaviour (TPB) was proposed and developed from the Theory of Reasoned Action (Bitran, 1995) by Ajzen (1985). The Theory of Reason Action (TRA) was propounded by Ajzen and Fishbein (1975). TRA predicts the influence of beliefs on attitudes, subjective norms and their combine effects on intentions and ultimately on behaviour outcomes. This theory hypothesized that, if one's beliefs are favourable with a particular behaviour, they shape one's attitudes and subsequently influences one's intentions to perform that behaviour. The theory also assumes volitional control of behaviour by individuals. However, there are some behaviours that an individual might control unconsciously which are not explained by this theory.

As a result, TRA was modified with the introduction of "perceived behavioural control" to cater for non-volitional intentions that are missing in TRA. Perceived behavioural control is an adaptation from self-efficacy theory (Bandura, 2004) to explain the direct and indirect influences this construct has on behaviour and other constructs of TPB respectively.

According to TPB, the intention of an individual to perform a behaviour is influenced by the individual's: Attitude, subjective norm and perceived behavioural control.

Attitude: This refers to the individual's valued judgment (favourable or unfavourable) towards performing a behaviour of interest. According to the theory, the individual's attitude is also influenced by the individual's behavioural beliefs and evaluation on the outcome of the beliefs (outcome evaluation). An evaluation of a behavioural belief is either favourable or unfavourable. Whereby favourable behavioural beliefs promote the intention of the individual to perform the behaviour, while unfavourable behavioural

beliefs inhibit the intentions to execute the behaviour. Attitude influences intentions to perform a behaviour both (in)directly and behaviour indirectly.

Subjective norm: This is how much the individual feels social or significant others' (religious leaders, teachers, spouse, parents) pressure to perform the behaviour (Amjad & Wood, 2009). Subjective norm is also influenced by normative beliefs of society or referent others and the individual's motivation to comply with the normative beliefs. Normative belief refers to a person's view of societal normative pressures or significant others' beliefs, either objecting or endorsing the performance of a particular behaviour that the person intents to carry out. If the motivation to comply with the normative belief is strong it results in a supportive subjective norm, while a weak motivation to comply produces unsupportive subjective norms. Supportive subjective norms increase the intention of an individual to perform a behaviour while unsupportive subjective norms result in decreased intentions.

Subjective norm influences intentions to perform a behaviour (in)directly and behaviour indirectly.

Perceived behavioural control: This refers to an individual's perceived ease or difficulty of performing a particular behaviour (Ajzen, 1991).The assumption of this construct is that, it is determined by all accessible control beliefs of the individual. This construct has two sub-constructs; control belief and influence on control belief. Control belief refers to the individual's conviction about the availability or absence of factors that promote or impede his/her ability to carry out the behaviour (Ajzen, 2001). If the individual has the capabilities, resources and can overcome challenges confronting his/her intentions to perform the behaviour, then the behaviour will be performed and vice versa.

Perceived behavioural control influences behaviour directly and indirectly through behavioural intention and other constructs of the theory (Ajzen & Fishbein, 1975).

Behavioural intention: This represents the individual's preparedness to carry out a particular behaviour. The assumption of this construct is that it is "an immediate antecedent of behaviour" (Ajzen, 2002). This construct is influenced by attitudes towards the behaviour, subjective norms about the behaviour and perceived behavioural controls about the behaviour. Each construct plays varied roles in influencing intentions depending on the behaviour and "population of interest".

Behaviour: This refers to an individual's measurable or "observable" reaction towards a particular event relative to a goal or "target". Ajzen (1985) argues that, behaviour is a function of compatible intentions and perceptions of behavioural control in that perceived behavioural control is expected to moderate the effect of intention on behaviour, such that favourable intentions produce the behaviour only when perceived behavioural control is strong.

This theory has been used in various fields of health related studies to predict the link between beliefs and behaviour such as dieting (Shepherd, Sparks, & Guthrie, 1995), blood donation (Giles, McClenahan, Cairns, & Mallet, 2004), leisure (Ajzen & Driver, 1992), smoking (Lee, Hubbard, O'Riordan, & Kim, 2006) and condom use (Albarracín, Johnson, Fishbein, & Muellerleile, 2001; Asare & Sharma, 2010; Sheeran & Taylor, 1999).

As applied to this study, this theory holds that, attitudes of men to participate in the use of Standard Days Method (SDM), approval or disapproval by significant others to participate (subjective norms), men's ability and control over challenges associated with

SDM use (perceived behavioural control), men's willingness, commitment and the capacity to participate in SDM use (intention) will explain men's actual participation in SDM use (behaviour) with their partners in the study area (Hardeman et al., 2002). This is so because, if men's attitudes to participate in SDM use is endorsed by their wives, parents and friends, and men are convinced that they can participate in its use, they will develop a strong intention to participate in SDM use with their partners. Also, if they have the knowledge, capacity and ability to control for other factors (internal and external) that will promote or impede their intentions to participate, then they are most likely to participate in SDM use with their partners to prevent pregnancy.

In using TPB as a theoretical framework in this study, the assumption considered was that, a particular behaviour was measured in the form of a goal rather than a need, which inculcated in it the "action", "target", "context", "time" for that behaviour. For instance, "I will participate in SDM use (action) to prevent pregnancy (context) every month (target) from now to the end of December (time).

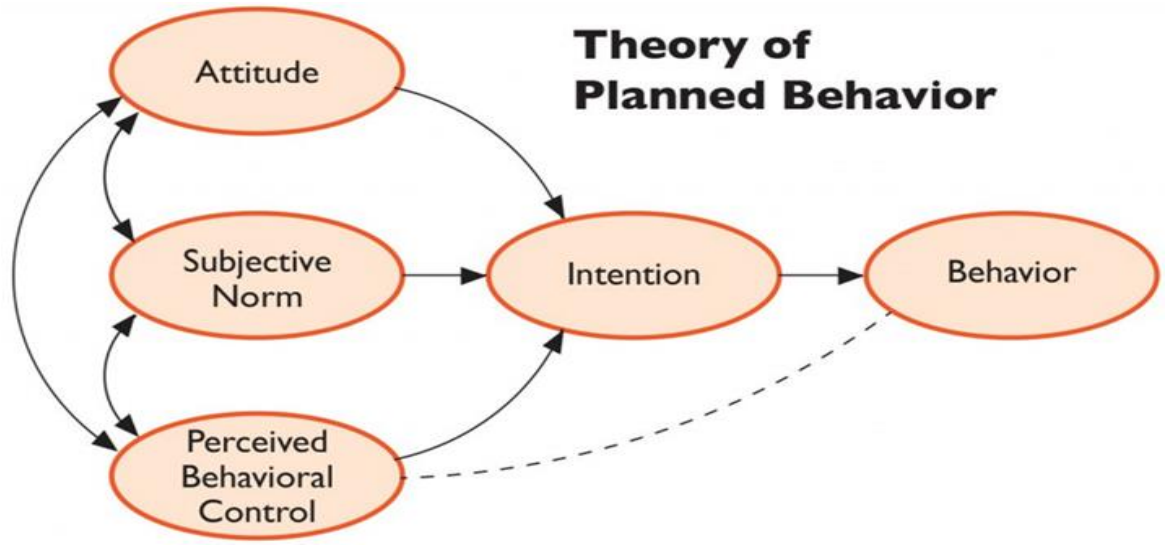

Figure 2.1 Model of the Theory of Planned Behaviour

Source: Ajzen (1991)

2.2 Justification for the use of the theory

In this thesis, I draw on the work of Ajzen (2001) to make an argument that men's use of the Standard Days Method (SDM) is critical for some women in realizing their reproductive intentions in view of religious taboos and other restrictions in male-controlled societies. Ajzen emphasizes on attitudes, subjective norms, perceived behavioural control and intentions as especially useful in determining the behaviour of an individual in a specific context. This is useful for purposes of analysis as it allows the researcher to think through how these constructs influence men's use of SDM with their partners in the Lawra Municipality. This brings to light Ajzen's attention to the dominant roles played by "intention" and "perceived behavioural control" in influencing men's decisions in behaviours of interest; thus reflecting the determinants of SDM use among men in a hegemonic society such as Lawra Municipal.

In addition, several studies have compared the predictive power of the Theory of Planned Behaviour with those of other models, including the information-motivation-behavioural skills model (Fisher & Fisher, 1992) the health belief model (Skinner, Tiro, & Champion, 2015) and the self-efficacy theory (Bandura, 1977). Although, these theories are designed for application in specific domains, the alternative models were found to perform unsatisfactorily, and sometimes worse, than the general, content-free Theory of Planned Behaviour (Ajzen, 2001). Hence, the choice of the theory.

2.3 Men's knowledge of Natural Family Planning and influence on their intentions and participation

A quantitative study conducted in Nigeria involving 380 men, to investigate their degree of involvement at the family level within sub-urban communities revealed that, males who had good knowledge of their partners' menstrual and ovulation dates were more likely to embrace public health interventions as well as reproductive and sexual services (Taiwo, Kehinde, Kayode, & Adedokun, 2017). In the same study, men who were above 30 years, men who had been married for long, men who had education above secondary level and men who had good knowledge of the menstrual dates of their wives influenced their reproductive health intervention behaviours and use.

The authors further established that, men's level of involvement at the family level influenced their knowledge, intentions and use of reproductive services. The more involved men are at the family level, the more they are likely to have intentions to use reproductive services.

Similarly, a study in Papua New Guinea among men, discovered a significant relationship between men's level of literacy and knowledge of sexual and reproductive issues. Men's discussion of these reproductive issues with their partners and their partners' use of sexual and reproductive health services were significantly related to their knowledge level (Kura, Vince, & Crouch-Chivers, 2013). In the study, increased knowledge in HIV/AIDS among some men were showed to have influenced a change in their sexual behaviour. The authors identified poor knowledge, socio-cultural factors, men's limited support for their partners, inadequate and inappropriate services provided to men by healthcare professionals as challenges affecting NFP use.

Evidence available also supports the claim that, men who have higher education have a higher tendency to have increased knowledge in reproductive and sexual health issues than those with low educational status (Amu et al., 2017). The authors identified a strong significant relationship between education and occupational status of respondents and family planning practise. A statistically significant relationship between religion, educational status and family planning practise among men was established in the study ($P< 0.05$). The authors explained that men's increased level of awareness in family planning might lead to the development of good intentions (UN, WHO, et al., 2015). They further explained that, this might not lead to actual practise of FP at the same magnitude.

An inference can be made from the above findings that, educational level of men and their duration of marriage have an impact on their knowledge and understanding of reproductive issues of their partners. Higher education, older male partners and being married for many years are believed to promote communication and increase men's knowledge and understanding about reproductive issues of their partners. This seems most likely to influence men's intention and use of reproductive and sexual health services such as SDM in the future.

However, younger age and low educational levels of men appeared to be associated with inadequate knowledge of their partners' reproductive system. This may lead to decrease intentions and participation in reproductive services such as family planning. This notwithstanding, men's desire for a particular sex and more children were showed to be associated with an increased in men's knowledge about their partners' menstrual cycles. This is less likely to influence men's intentions to participate in SDM

use to prevent pregnancy, but rather to achieve pregnancy (Amu et al., 2017; Taiwo et al., 2017).

Good knowledge of modern family planning methods by men does not necessarily lead to the development of favourable attitudes towards contraception as this is sometimes affected by patriarchal norms, poverty, backwardness on the part of men and lack of diffusion and cultural lag (Banerjee, 2016). Some other factors that are believed to influence men to use FP include, lack of spousal communication about reproductive issues, incompetent service providers, limited government support for and little promotion of males' specific contraceptive methods. The study further revealed that, the desire of men to have more children negatively influenced their intentions to use contraceptives. This was more common with poor unemployed rural women and women whose partners were uneducated farmers.

The relationship between men's knowledge and use of contraceptive is disproportionate in Ghana and India. It is reported that, an increased in knowledge about contraceptive methods led to an unfavourable intentions of men to use family planning services (Banerjee, 2016; Eliason, Baiden, Quansah-Asare, Graham-Hayfron, Bonsu, Phillips, et al., 2013). The authors argued that, this discrepancy is due to the availability and popularity of female-centred methods of contraception, fear and experience of side effects and difficulty of husbands consenting for their wives to use FP.

A study conducted in Ghana identified personal conviction as a major factor influencing pregnant women's intentions to adopt postpartum family planning (PPFP) method (Eliason, Baiden, Quansah-Asare, Graham-Hayfron, Bonsu, Phillips, et al., 2013). This was however, insufficient to grantee actual use of PPFP among them due to the

influence of social, patriarchal, cultural and religious norms. This supported the study finding that, men have higher knowledge in modern family planning methods but their intentions to use these methods is low (GSS & Rockville, 2014).

Males' levels of education and awareness influence their use of FP services. For instance, a study conducted in India identified the use of sterilization to be common among men who had low level of education and limited knowledge about the various contraceptive methods available (Banerjee, 2016). It was also observed that, Government's policy of giving incentives to couples who choose sterilization affected men's participation in family planning activities. The popularity of certain family planning methods makes men more knowledgeable about those methods and therefore the tendency to have interest for other methods is less likely. For instance, popularity of the female methods in the study influenced men's intentions not to use any male contraceptive method in future. This has created the impression that, women are responsible for family planning services.

According to the 2014 Ghana Demographic and Health Survey reports, men aged 15-49 years have adequate knowledge of modern and traditional family planning methods. The report outlined that, knowledge of the specific methods of natural family planning are influenced by the gender that has most control over the use of that method. Thus, the rhythm method is known more (77%) among women than among men (74%), whiles withdrawal method is known more (77%) among men than among women (74%). Generally, men seemed to know less of the family planning methods than women (8.2 and 8.5 contraceptive methods respectively) (GSS & Rockville, 2014).

Also, knowledge of service providers about FP plays a major role in men's attitudes, intentions and use of NFP with their partners. In a literature review to examine the knowledge of NFP practitioners, it was found that, limited knowledge influenced NFP use as there was a difference between perceived knowledge and demonstrated knowledge about NFP among practitioners (Beeman, 2010). For example, while all the practitioners claimed that they had detailed knowledge of the calendar method, only 70 percent demonstrated a level of knowledge classified as moderate or "high". Also, 95 percent of the practitioners claimed detailed knowledge of Basal Body Temperature method, but only 54 percent were able to demonstrate a level of knowledge corresponding to 80 percent or more of eleven factors deemed essential for the correct use of this method. For the Billing's Ovulation method, their perceived and demonstrated knowledge were at 70 percent and 61 percent respectively. The inadequate knowledge of healthcare professionals about NFP will most likely have negative impact on men's intention and use of any of these methods. This is so because, inappropriate information may be provided to clients leading to undesirable outcomes and possible high discontinuation rates.

It can be inferred from the above literature that; higher education promotes communication between men and their partners as well as increase men's knowledge about their wives' menstrual cycles. Therefore, higher education of men encourages men's participation or use of family planning methods. However, in India 50 percent of men in a study showed correct knowledge of their partners' safe period, yet a greater number of them decided to deliver more children than they actually needed because, they wanted male children (Jayalakshmi et al, 2002).

2.4 Men's attitudes to participate in SDM use

A multi-country study undertaken to describe the perception of men about natural family planning revealed that the majority of them believed that NFP helped them to understand their wives' bodies better, improved upon their relationship and sex life (Unseld, Rötzer, Weigl, Masel, & Manhart, 2017). The authors further revealed that; the majority of the respondents were satisfied with their frequency of sexual intercourse and therefore had interest in NFP use. However, a study in Nigeria revealed that men had an objection to women having the right to independently choose and use family planning (Bukar et al., 2013). This affects women's use of any family planning method.

The financial burden associated with giving birth to many children is recognized by women the world over and as such, they viewed family planning as an important strategy to help reduce this burden on their husbands. Husbands equally acknowledged this and provided financial assistance to their wives to seek family planning services (Adelekan, Omoregie, & Edoni, 2014; Withersa et al., 2015). The majority of the respondents in this study believed males' involvement in FP will improve upon their relationships as it creates an opportunity for the discussion of reproductive issues among couples. The men in this study further believed that, women who used family planning, live a less stress life because they have fewer children to cater for as compared to families with many children.

According to Ieda (2012), men's decision not to use contraception is based on the belief that contraception will deny them various benefits associated with having many children. The author explained that, men perceived having many children as a form of physical defense against another neighbour with a smaller number of children as essential.

Also, some men considered Sexual and Reproductive Health Services (SRHS) as important but gave priority to social obligations (Kura et al., 2013). In the study, it was observed that, men had favourable attitudes towards giving birth to more male children than females due to inheritance and marital norms (Ieda, 2012; Kura et al., 2013).

The role of knowledge in influencing positive attitudes of men towards family planning uptake is documented, though increased knowledge appeared not to result in increased intentions (Renjhen, Kumar, Pattanshetty, Sagir, & Samarasinghe, 2010). In the study, the authors observed that respondents had good knowledge of contraception but this led to low uptake of contraception. This suggests that for men to use a natural family planning method such as SDM with their partners, knowledge of the method is not enough to lead to the development of favourable intentions towards using the method.

The attitude of men in Africa concerning family planning services is positively associated with the use of the various methods (Adelekan et al., 2014; Kabagenyi et al., 2014; Kassa et al., 2014; Tilahun et al., 2013). A study conducted among Ghanaian immigrants in USA established that, favourable attitudes of respondents towards condom use significantly predicted their intentions to use condoms with their partners (Asare, 2015). Nonetheless, men believed that, their active participation in family planning is not necessary and that, it is not in their custom to be involved in matters of family planning (Adelekan et al., 2014; Kabagenyi et al., 2014; Kassa et al., 2014; Tilahun et al., 2013).

Men's opposition to the use of family planning methods by their partners is documented in literature (Adanikin, McGrath, & Padmadas, 2019). The authors explained that an imbalance in power relations between husbands and wives have an impact on FP decision-making in the marriage life of couples. The wives regarded their compliance with

the wishes of their husbands as a sign of respect. As a result, most women achieved their reproductive aims of choosing and using a particular kind of FP method through a third party (significant others). The study further added that, women are not empowered enough to openly use FP methods without the consent of their husbands, though others covertly use them. This covert use is possible for methods that cannot be easily detected by their husbands such as the injectable. However, a method such as SDM requires the support, cooperation and approval of husbands for it to be effectively used. Therefore, for men to fully use SDM with their partners and achieve desired outcomes, their cooperation and acceptance is crucial.

A qualitative study conducted among men and women in Uganda to examine their perceptions on challenges confronting men's support and uptake of modern family planning methods revealed that, men believed their wives will become promiscuous should they be allowed to use any family planning method (Kabagenyi et al., 2014). Also, men's perceived limited time and lack of awareness of the specific roles they were supposed to play in the reproductive health of their partners appeared to have negative impact on their active involvement in fertility regulation. Furthermore, the authors claimed that men's preference for large family sizes deter them from supporting the use of family planning methods such as SDM. The belief that family planning use will prolong their childbirth and deny them the opportunity to achieve their desired family size affected their attitudes.

In a systematic review of qualitative studies, it was revealed that, men's superiority in gender relations made the choice and use of a family planning method revolve around them (Hoga, Rodolpho, Sato, Nunes, & Borges, 2014). Men are generally perceived as

family heads, meanwhile, the responsibility of family planning is shifted to their wives. The authors explained that, many men believed they are not expected to participate in the prevention of unintended pregnancies.

However, other men have developed an attitude of "I don't care", hence whatever method their partners choose and use does not require their approval as long as the method is effective at preventing pregnancy (Hoga et al., 2014). Also, it was observed that, men have little interest in family planning activities and as a result, communication between them and their partners about FP was not encouraging. The authors further argued that, men had an entrenched position of not wanting to use condoms with their partners to prevent pregnancy. This was so because, men believed condoms are used to prevent the transmission of infections, but not to prevent pregnancies. They insisted that, they could not use condoms with their wives as they believed their wives did not have infections.

Men have authority over contraceptive decisions despite their lack of interest to participate in FP use. For instance, the use of hormonal methods of FP by wives are not approved by some husbands because, men believed that the methods alter the bodies of their wives in such a way that, they are not comfortable about (Haider & Sharma, 2012; Hoga et al., 2014). Consequently, some of the men decided to use condoms to avoid pregnancies and the changes in their wives' bodies. Also, when decisions relating to the surgical forms of FP such as vasectomy are to be taken, men's opinion appears supreme. For instance, men in the study believed that, vasectomy was good for them though their partners thought otherwise.

Furthermore, the authors argued that men generally have a poor attitude towards family planning methods. Men in the study believed that, their wives were not at risk of

pregnancy even if they were not using any family planning method and that they also trusted their wives would try to prevent pregnancy by being responsible.

The inconsistent use of any type of family planning method is documented to be influenced by men's opinions (Hoga et al., 2014). Men in the study believed that, their wives were not at risk of pregnancy, hence their inconsistent use of FP. Not even the experience of unwanted pregnancies in the past deterred them from risky sexual behaviours with their partners. They perceived the use of withdrawal as effective in preventing pregnancy and that their wives should not oppose the use of this method. However, when they decided to use effective FP methods such as condoms, the authors claimed, they were inconsistently used. The authors further explained that, when a particular method of birth control was used and challenges were encountered, effective communication strategies were not employed to resolve the challenges. Instead, couples alternatively used ineffective FP methods as and when they think it is necessary at the dictates of their husbands which did not seem to serve the purpose of preventing pregnancy.

The lack of access to male-specific family planning methods and the belief that contraceptive use is harmful to health and fertility are documented as common among men which negatively influence their participation in family planning such as SDM (Hoga et al., 2014). Additionally, men believed that the use of contraception promotes promiscuity among women and that this should not be allowed. Other men also believed and feared that, taking up an FP method such as vasectomy will make them impotent and that, their wives may desire to have more children in the future. Once they cannot father a child any more, they feared that their partners will become unfaithful and bear children with other

men. Therefore, it is expected that, men will develop positive attitudes towards natural family planning method such as SDM since it is not associated with these perceived challenges.

2.5 Men's subjective norms to participate in SDM use with their partners

The influence of significant others such as health service providers, family members, friends and religious leaders on men's intentions to use SDM with their partners have been documented in literature (VanEnk, Shelus, Mugeni, Mukabatsinda, & Cachan, 2018). For instance, a national family planning strategy was adopted in Rwanda which equipped community health workers (CHWs) to supply specific contraceptive methods including condoms to their existing clientele. Standard Days Method (SDM) was added to this strategy and provided to first time users with the aim of expanding the method mix. Following the distribution of SDM, counselling services were provided and assessed with a 12-month prospective, mixed method study. It was observed that, the majority of clients (89%) had adequate knowledge on how to participate or use SDM and expressed intentions to participate in the use of the method with their partners.

In a systematic literature review study on natural family planning, it was established that, limited information exists on NFP in the curriculum for the training of healthcare professionals at undergraduate levels (Beeman, 2010). It was also observed that, clients who sought NFP services from certified Nurses, Midwives and Physicians were most likely to use SDM in the future as compared to those who received services from uncertified family planning service providers (Beeman, 2010; Choi et al., 2010). In other studies, limited knowledge of service providers and their disapproval of the use of NFP based on their perceived ineffectiveness of the method influenced uptake (Choi et al.,

2010; Nakiboneka & Maniple, 2008). In the study, half of the Physicians claimed NFP was not a good birth control method. As a result, the method was not routinely included in their routine family planning counselling services. However, the majority of Physicians in the study believed that, the use of NFP has the possibility of improving partners' relationship. It is therefore envisaged that, positive attitudes of service providers towards NFP is most likely to have positive impact on the willingness and desire of men to use SDM. On the other hand, negative attitudes of service providers will lead to the least chance that, men will use an NFP method such as SDM since these health professionals might be those these men trusted and relied on for their healthcare needs in the past.

In another study, men's childbearing motivations, desires and intentions to use a natural family planning method such as SDM was not realized due to the influence of referent others (Stanford & Porucznik, 2017). The respondents' friends and family members were supportive of their childbearing intentions but not the use of family planning. Hence, the respondents' intentions to use a family planning method was curtailed. This suggests that, men's intentions to participate in an NFP method is influenced by opinions and views of significant others in addition to their personal desires and interest. This may translate into men's actual participation depending on whether or not the method will serve their interest. A method such as SDM, serves both purposes (prevent and achieve pregnancy) and it may be a better option for men who desire to achieve or prevent pregnancy provided they had the knowledge, skills and are supported by their referent others to participate in the use of the method. However, a study finding revealed that, the experiences of friends about family planning methods and their discussions with men were not enough to influence men's use of a specific method as they

believed that their friends counsel were not reliable for their sexual and reproductive health objectives (Capurchande, Coene, Roelens, & Meulemans, 2017; Hoga et al., 2014).

In a systematic literature review to explore men's beliefs, values, attitudes and experiences towards contraceptives use, religion, family and social backgrounds were identified to influence men's use of a family planning method such as SDM (Hoga et al., 2014). The authors identified decision making regarding family planning use to be affected by men's religious denominations due to the diversity in beliefs and values concerning family planning practice. For instance, the authors identified men who were affiliated to the Christian denomination as most likely to use family planning compared to non-Christians. Among the Muslims, the authors argued that, men were against the use of family planning as they believed it was a sin and that God commanded mankind to multiply and fill the earth. Therefore, Muslim men believed that, there is no justification for the use of family planning to prevent the fulfillment of God's word. Also, men in other religious groups believed that, the power to decide whether or not to give birth is dependent on the individual and God.

The social values relating to paternity also impact on the use of FP methods among couples. Men believed society expects them to have a certain number of children and that if this is not achieved, one is not seen as a man (Hoga et al., 2014). The social background of men was also identified to influence men's participation and use of family planning services such as SDM. For example, men from higher social classes in the study embraced family planning because they wanted to be economically stable to cater for their children before considering childbirth. The authors asserted that, the behaviour of men in lower social classes towards family planning use appeared to be unclear. The authors claimed

that, these men discussed about family planning and inconsistently use condoms only after the first child is borne. Following this most of the discussions are focused on childcare and child upbringing.

In societies where gender rights strongly favour men, men wield almost all the power of decision making (Kura et al., 2013). The authors argued that, men are customarily the major decision makers in social, economic and political aspects of family and community life in Africa. These gender norms the authors asserted determine the roles of men and women alike and also predict men's sexual and reproductive attitudes and behaviour. As a result, most decisions regarding sexual and reproductive issues, pregnancy and child birth are predominated by men. Societal norms prohibit (taboos) males from assisting and witnessing child birth in some communities (Choi et al., 2010). This explained in part, why some women deliver at home instead of the healthcare facility. However, men believed that, NFP is effective at achieving and preventing pregnancy and this may predict their use of SDM.

Also, religious prohibitions (Barrett, DaVanzo, Ellison, & Grammich, 2014; Ieda, 2012), wives' refusal to accept a particular family planning method, in-laws disapproval of FP use and men's preference for a particular sex (boy) (Tilahun et al., 2013) are believed to influence men's intentions to support FP use (Amu et al., 2017; Cleland, Ndugwa, & Zulu, 2011; Kassa et al., 2014; Mustafa et al., 2015).

A qualitative study conducted in Ethiopia to explore the influence of gender norms on family planning decision making among married men and women indicated that male's dominance at the family level influenced family planning use. Women's role in decision making relating to family planning was limited to the dictates of their husbands'. Every

decision a woman makes is influenced by the interest of their husbands (Geleta, Birhanu, Kaufman, & Temesgen, 2015). Men may refuse to support (decline to consent for the wives to use) the use of family planning because they believed that having many children gives them social prestige. Therefore, for men to actively support SDM use will mean disrespecting their cultural beliefs and also losing respect from society. As a result, using a method such as SDM posed a huge challenge to women in that women find it difficult to communicate this information to their husbands for adherence.

In Mozambique, a qualitative study conducted to assess the knowledge, attitudes and practices regarding contraceptive methods and fertility intentions established high levels of family planning knowledge. However, there were differences in couples' every day family planning behaviour because they were been pressured by society, religion and traditional norms not to use FP but give birth to more children (Capurchande et al., 2017). The authors cited other factors such as short span of communication between couples and service providers, imposition of FP methods on clients by service providers, non-attendance of husbands at FP clinics as affecting men's intentions to use any FP method.

2.6 Men's perceived behavioural control to participate in SDM use

High level of mutual motivation of couples to avoid pregnancy is required for an NFP use to be effective (Fehring, Schneider, Barron, et al., 2013). In the study, an estimated pregnancy rate of 8 out of 100 couples were observed among the highly motivated group compared to the low motivated group who had 75 pregnancies out of 100 couples at 12 months of SDM use. The likelihood of a pregnancy occurring at 12 months of use was observed to be 80 percent times greater among the low motivated couples. Some of the reasons cited by men in the study for not participating in SDM include: lack

of knowledge about the method and difficulties with periodic abstinence during the fertile period.

Perceived behavioural control significantly predicted couples' condom use behaviour in a study among Ghanaian US immigrants (Asare, 2015). It was established that perceived behavioural control significantly predicted respondents' behavioural intentions and condom use behaviours. A total of 42 percent of the respondents reported that it was very difficult for them to use a condom during sexual activity but 25 percent indicated that, it was not difficult for them to use condoms each time they engaged in sexual intercourse. However, 58.9 percent of them said they were very confident in using condoms during sexual intercourse. On the other hand, 10.7 percent of the respondents reported that they were not confident in using condoms during sexual intercourse. The majority (81.3%) of the respondents reported that, they had control over their own decisions to use condoms.

This suggests that, the ability of men to have control over their sexual behaviour influences their intentions. It is suggestive that men's ability to overcome difficulties associated with the use of SDM such as periodic abstinence and knowledge deficit, will most likely influence their intentions to use SDM with their partners. Also, if men are confident that they have the knowledge, skills and they know the exact roles they are expected to play in SDM use, then it will influence their intentions to use SDM.

In other studies, on the use of SDM among couples, men managed the fertile periods of their wives by isolating themselves from their partners and exercised a great deal of patience. Other men used non-penetrative sexual strategies to satisfy their sexual desires during the fertile period. It is also documented that, men who cannot, abstained

from coitus, advise their partners to use emergency contraceptives after the sexual act or they use condoms (Bekele & Fantahun, 2012; Kamran, Khan, & Tasneem, 2013; Kamran, Tasneem, Parveen, & Niazi, 2015).

2.7 Men's intentions to participate in SDM use

Adequate knowledge of men on family planning methods influence the development of positive attitudes and intentions to use the methods. However, not all positive attitudes of men lead to actual use of a family planning method (Renjhen et al., 2010). A study conducted in the Upper West Region of Ghana among men to explore the barriers to males' active involvement in family planning discovered that, men perceived family planning as a women's issue (Abudu, Namong, & Badu-Nyarko, 2014) as commonly reported in other studies (Kura et al., 2013; Machiyama & Cleland, 2014). Other factors cited as barriers to male's involvement in family planning include: inadequate, attractive and convenient male contraceptive methods, female-centred facilities and service providers dominated by females. Some of these factors may negatively influence men's intentions to use a family planning method such as SDM, though this was not elicited by the study.

In a study to identify factors influencing the intentions of women in rural Ghana to adopt postpartum family planning (PPFP) services, it was identified that, favourable attitudes and acceptance of an FP method was not enough to lead to favourable intentions and use of the method. The study revealed that, 84 percent of women considered PPFP acceptable, but only 70 percent expressed their intention to adopt the method (Eliason, Baiden, Quansah-Asare, Graham-Hayfron, Bonsu, James, et al., 2013). Though the authors did not measure utilization of the method, they maintained that, their partners'

(men) consent was needed to translate their intentions into reality. The authors also observed that the intention to adopt PPFP and the selection of injectable as a method of birth control appeared to be influenced by past experiences of use of the method. This suggests that men's past experiences of participation in a natural family planning method may influence their future participation in SDM use with their partners.

According to Beeman (2010), men have favourable intentions to use NFP methods because of its cost effectiveness, improvement in marital relationship and its ability to promote communication among couples. Despite these benefits of NFP, it is still not widely used as expected. The authors noted that, limited access to appropriate NFP counselling, perceived ineffectiveness of the methods by service providers affected use. Also, fear of the method failure, perceived decreased coital frequency with NFP use, incompatibility of the method with one's lifestyle and preference for another method were challenges confronting the method use.

Three studies conducted in Nigeria (Cleland et al., 2011; Orji & Onwudiegwu, 2008; Ujuju et al., 2011) to assess men's attitude and use of family planning revealed that, the majority (89%) of men approved their spouses to use family planning. Nonetheless, 65 percent of men refused to attend FP clinics with their wives (Cleland et al., 2011). Similarly, in Ethiopia, a greater number of men (above 90%) approved of the use of family planning, but their participation or use of the methods were observed to be unsatisfactory (Vouking, Evina, & Tadenfok, 2014). Overall, 4 in 811 men have reportedly ever used family planning. When males were asked about whether they would support their wives to use family planning, 93 percent (751/811) answered in the affirmative, while 3 percent (22/811) responded in the negative (Ujuju et al., 2011).

A qualitative study conducted in Mozambique to assess the knowledge, attitudes and practises regarding contraceptive methods and their fertility intentions, revealed that, men's contraceptive use intentions differ greatly from that of their partners (Capurchande et al., 2017). Men in the study appeared to believe in the cultural and traditional norms in deciding whether or not to use a family planning method and how many children to have. The more inclined men were and believed in their cultural norms, where childbirth is seen as a gift, a source of wealth and a proof of one's masculinity, the higher their intentions to have more children for economic reasons and social prestige.

In Pakistan, men's intentions to participate in family planning activities is based on their wives' beliefs about the importance of child spacing and the availability of competent staff to provide services (Agha & Do, 2010). Men in the study perceived the use of family planning as good in improving upon their standards of living, protecting and improving upon their wives' health. This appeared to positively influenced their intentions to use condoms, which may also influence NFP use. Also, husbands' limited confidence and uneasiness in discussion family planning issues with their partners in the study influenced their intentions to use the withdrawal. However, the authors revealed that men were most unlikely to approve or participate in the use of a family planning method due to other negative beliefs of their wives. For instance, wives' expression of fear that family planning use will damage their uteruses and that childbirth is determined by God but not humans influenced men's intentions not to use an FP method.

2.8 Men's participation in SDM use

A qualitative study conducted in Namibia to explore the perceptions of respondents on male involvement in reproductive health services (RHS) identified policy, legislation and RHS resources as barriers to male's participation in FP use (Jooste & Amukugo, 2013). It appeared that, the issue of cost regarding transportation of men who have agreed to support their partners in reproductive services but for distance cannot do so are not provided for by any reproductive programme. Such men must avail additional money to participate in RH services and also cater for other pressing needs of the family. Another barrier cited by the authors is policy and legislation, where the infrastructure and human resources needed to network for male's participation is either absent or inadequate. The author further argued that the policy most of the times is unclear about male partners' roles. These barriers seemed to influence men's participation in reproductive services and by extension SDM.

Also, the selection and use of an FP method such as SDM is influenced by unavailability of resources (CycleBeads kits and certified NFP service providers), location of service provision centres, amount of time spent to receive services, privacy issues and attitudes of service providers (Nakiboneka & Maniple, 2008). Also, labelling of service provision centres as "family planning units" is identified as causing embarrassment and stigma for clients to access these services. This may be so because clients patronizing these clinics are perceived as family planning users. Clients with same or similar beliefs avoid such service centres for fear of disclosing their private sexual and reproductive health matters indirectly to the general public. They instead, seek FP services from private

health facilities where the issue of cost makes it seemingly unattractive for many to patronize (Nakiboneka & Maniple, 2008).

The limited access to health care facilities that provide comprehensive family planning services, where males' specific methods can be obtained positively influence men's participation (Hoga et al., 2014). The authors identified men's challenge of having to buy condoms whenever they need them as a major factor affecting condom use. Many men are reportedly interested in using FP methods, but limited access to methods devoid of side effects such as SDM, influenced their inability to use any family planning method resulting in unwanted pregnancies and unplanned births.

Additionally, the use of NFP by couples is influenced by educational status of either one or both partners, access to the media and effectiveness over other methods (Kura et al., 2013). These benefits among others are believed to be the basis for couples' choice and use of NFP method such as SDM over other family planning methods. However, some men fail to select a modern family planning method such as SDM due to limited knowledge about the method, service providers reservations in prescribing the method to clients due to their little trust for NFP methods.

Similarly, knowledge of different modern methods of FP is identified as a major predictor of FP uptake among individuals and couples in Kenya (Malalu et al., 2014). Evidence from the study revealed that, awareness of family planning methods was very high, but this did not translate into high utilization of modern FP methods due to health-related concerns regarding the use of some methods such as hormonal methods. This implies that, for men to participate in SDM use with their partners, adequate knowledge is good but may not be sufficient to influence men's participation. The influence of other

factors such as provision of adequate and relevant information about SDM such as: how to use the method, effectiveness of the method and failure rates and their specific roles should be provided. The study findings under review are supportive of this fact, that increased utilization of modern FP is a function of increased options to wide variety of methods for clients to choose and use, taking into consideration their interest, beliefs and lifestyles.

A quantitative study among men to determine the factors that influence men's involvement in maternal and newborn health (MNH) found spouses' level of education and men's knowledge to influence their participation. It was revealed that, men's involvement in MNH had a positive relationship with their wives' level of education and men's level of knowledge about maternal and newborn health (Ampt et al., 2015). However, a negative relationship was found between men's involvement and the number of children they had. This suggests that, men's involvement in a health related behaviour such as MNH may be influenced by their level of knowledge and the number of children they have. Men's adequate knowledge about MNH empowers them to know the roles they are expected to play to ensure that, the health and well-being of their wives and children are guaranteed. This ultimately led to greater involvement. Also, men with more children may be more involved in MNH, because having more children is associated with increased burden regarding child's care and education and men might be compelled to limit child birth.

Also, limited knowledge in family planning methods influenced family planning behaviours among men (Hoga et al., 2014). For example, the lubricant in male condoms is believed to be associated with the transmission of sexually transmitted infections, while

others perceived condoms to reduce sexual pleasure. Hence, this paved way for some men to refuse using condoms. Other men prefer the withdrawal method despite difficulties and safety concerns. Men in the study claimed that, withdrawal method decreases frequency of sexual intercourse and desire, and that, the tendency for the method to fail is high. Nonetheless, men continued to use the withdrawal method as they believed it is good and not harmful to their wives' health compared to the hormonal methods. This implies that, the issue of health risks is an important factor for men to use a family planning method regardless of the difficulties and effectiveness associated with the method. Some of the men in the study, viewed the health of their partners more important to getting unwanted pregnancies. An effective modern NFP method such as SDM may be a good option for men since it appeared to have no health concerns.

A mixed method study conducted in Nigeria to explore the challenges confronting males' involvement in FP revealed men perceiving their use of FP as alien to their customs, though the majority of them provided financial resources to their wives to seek family planning services (Adelekan et al., 2014). Despite this support, the author argued that, the majority of men have never been involved in family planning by accompanying their partners to service provision centres. This suggests that, customs play a key role in men's family planning decisions and participation. Approval of modern FP methods by significant others and communication between and among partners are major factors that appeared to also influence the use of various FP methods (Gizaw & Regassa, 2011).

Also, the cost of contraceptive services is one of the factors that affect the use of most FP methods among couples whose religions permit the use of such services (Nwokocha & Bakare, 2014). In the study, most respondents lived on less than one dollar

($1.00) per day, which could not support even their basic necessities of life such as food, shelter and clothing. It was observed that, the likelihood of respondents using a family planning method was very low. Even when cost of services were relatively moderate, the ability to procure a family planning service still appeared difficult because of their low incomes. One would expect that a cost-effective method such as SDM would be patronized by such couples with low incomes. However, this was not the case because couples believed NFP is ineffective and the resources needed for quality service delivery are limited (Erfani & Yuksel-Kaptanoglu, 2012).

2.9 Summary of Literature Review

The literature reviewed suggested some factors that determined the use of natural family planning methods and the Standard Days Method (SDM) among men. The literature reviewed comprised of both qualitative and quantitative information relevant to the use of natural family planning and the Standard Days method, globally. However, some of the studies reviewed included men's participation in other family planning methods and health related studies. A gap was identified in literature about men's use of SDM in the African and Ghanaian settings. The studies reviewed identified factors that influenced men's use of SDM and other family planning methods. This notwithstanding, some studies captured the determinants of men's use of SDM of natural family planning with their partners in the Ghanaian context. Also, most of these studies were conducted in the high-income countries with limited studies in low- and middle-income country such as Ghana.

CHAPTER THREE

METHODOLOGY

This chapter presents the research design, setting, population, inclusion and exclusion criteria, sample size determination, sampling methods, data collection tool and pre-testing procedures. Description of the data collection procedure, data management, analysis and ethical considerations are also described.

3.1 Research design

This study is mainly quantitative, that used a cross-sectional design to collect data from men about the factors that predicted their intentions and use of Standard Days Method (SDM) of natural family planning with their partners. Following the quantitative data analysis, an unexpectedly high findings were obtained about men's intentions and participation in the use of SDM. It was necessary to collect few qualitative information from a sub-group of the men (men who participated in the quantitative study) and some of their wives to better understand and explain the quantitative outcomes (Creswell & Creswell, 2017; Morse, 1991). This qualitative approach is described in detail after the quantitative methodology.

3.2 Research setting

The study was conducted in the Lawra Municipality, one of the eleven (11) Districts and the first to be created in the Upper West Region of Ghana. It has a total land area of 527.37 square kilometres (GSS, 2012). According to the 2010 Population and Housing Census, the Municipality has a population of 54, 889 which represents 7.8 percent of the region's total population. Males constitute 48.0 percent while 52.0 percent are females. Also, an estimated 88.2 percent of the population resides in rural areas.

The Municipality is demarcated into five sub-municipalities for the purpose of health service delivery. The municipality has one public hospital, one polyclinic, four clinics, one private clinic, eighteen functional Community-based Health Planning and Service (CHPS) facilities, which provide comprehensive public health services to clients. These CHPS facilities are evenly distributed within the municipality, providing indigents easy access to healthcare services including family planning. The municipality has a good road network linking communities with four telecommunication networks coverage and two radio stations, which are used for the dissemination of health information to people. Home visiting and outreach programmes are being run by community health nurses stationed in these communities.

The major ethnic group in the area is Dagaare with some other minor ethnic groups such as Wala, Brifoh, Sissala and Frafra who also reside in the municipality. There are basically three main religious groups in the municipality: Christianity (61%) who commonly practise monogamous marriages, Traditionalists (26.3%); and Islam (6.6%), both practice polygamous marriages. Within the Christian group, the majority are Catholics (46.3%) followed by the Pentecostal/Charismatic (6.8%) and Protestants (6.1%) and other Christians recording 1.8 percent (GSS, 2012).

3.3 Target Population

The target population was all married men residing in the Lawra municipality.

3.4 Inclusion criteria

The samples were selected based on the following inclusion criteria:

- Married men who were 18 years and above.
- Married men resident in the Lawra Municipality for at least three months.
- Married men who consented and participated in the study.

3.5 Exclusion criteria

Men who qualify per the inclusion criteria but:

- Who were not planning to prevent pregnancy or wanted to have children within the three months preceding data collection.
- Their wives were pregnant in the three months preceding data collection.
- Who tried getting their wives pregnant within two years preceding data collection and failed.

3.6 Sample size

Using the 2010 population and housing census data, the total population of men in the Lawra municipality was 26,347. Using this population as the accessible population and an alpha level of 0.05, the sample was calculated using Yamane (1967) simplified formula for proportions.

$$\mathbf{n = \frac{N}{1+N\,(e)\,2}}$$

Where: n = sample size, N = the population size (men population of men in the Lawra municipality= 26,347),

e = the significant or alpha level (0.05)

Substituting the values into the formula;

$n = \frac{26,347}{1+26,347(0.05)2}$ $n = \frac{26,347}{1+26,347(0.0025)}$ $n = \frac{26,347}{1+65.8675}$ n = 394.018. n = 394

Hence, a minimum sample size of three hundred and ninety-four (394) was used. In order to make up for improperly completed questionnaires, non-response rate and respondents' attrition, the calculated sample size was adjusted by 10 percent (estimated as 39), making 433 in all. Therefore, the final sample size used was four hundred and thirty-three (433) respondents.

3.7 Sampling Technique

In this study, a multi-stage sampling technique was adopted. The first stage consisted of clustering the Lawra municipality into five (5) sub-municipalities. That is, Babile sub-municipal, Lawra sub-municipal, Eremon sub-municipal, Zambo sub-municipal and Dowmine sub-municipal. Using simple random sampling, two communities were selected from each sub-municipality by writing the names of all communities in each sub-municipality on pieces of papers. These papers were folded, put into five separate containers according to sub-municipality and shuffled. This was followed by the picking of two communities from each container with eyes closed. The two communities that were picked from each of the five containers with eyes closed were included in the study.

The second stage used simple random sampling to select households from each of the ten (10) sampled communities. The names of all the households in each selected community were obtained from the community register kept by the health facility in the communities. A random selection of fifteen (15) households from each community's register was done using excel. Each community's households were entered into an excel spread sheet and fifteen (15) households randomly generated and included in the study.

In the final stage, stratified random sampling was used, where married men were grouped into religious backgrounds: Christians, Muslims and Traditionalists and sampled. Upon entering these selected households, every married man who met the inclusion criteria and consented to the study was recruited and interviewed. This method was continued from one household to the other till the sample size of four hundred and thirty-three (433) was obtained.

3.8 Data Collection Tools and Reliability

A standardized survey tool of Asare and Sharma (2010) that they used to predict safer sexual behaviour of Ghanaian immigrants in a large Midwestern U.S City was adapted. The tool was modified for the various constructs of the theory that guided the study. The tool that was modified consisted of 55-items and the items that were not related to this study were deleted and reduced to 30 items to suite the purpose of this study.

The new tool is made up of two sections. Section one contained information on beliefs, attitudes, norms, perceived behavioural control, behavioural intentions and behaviour relating to SDM and section two contained demographic data of the study respondents.

The attitudes of men to participate in SDM use was measured using two subscales that is, behavioural beliefs and outcome evaluation subscales. A three-item7-point Likert-type self-reporting rating scale of strongly disagree (1) to strongly agree (7) was used for behavioural beliefs subscales and a three-item 7-point Likert-type rating scale of extremely unimportant (–3) to extremely important (+3) was used for outcome evaluation subscales. The attitude scale was measured by multiplying the scores on the behavioural

belief subscale scores with their corresponding outcome evaluation subscale scores and summing the products to get composite scores for attitude, which ranged from -63 to +63. A mean score 32.49 ± 19.84 and Cronbach's alpha of 0.78 was obtained for attitude scale.

Men's subjective norms to participate in SDM use were assessed using two subscales normative beliefs and motivation to comply subscales. A three-item 7- point Likert-type self-reporting rating scale of strongly disagree (1) to strongly agree (7) was used for normative belief subscale and a three-item 7-point Likert-type rating scale of not at all important (-3) to very much important (+3) for motivation to comply subscale. Subjective norm scale was measured by multiplying the normative belief subscale scores with their corresponding motivation to comply subscale scores and summing the products to give composite scores of subjective norms which ranged from -63 to +63. A mean score 18.42 ± 21.42 and a Cronbach's alpha of 0.78 was obtained for subjective norm scale.

To measure men's perceived behavioural control to participate in the use of SDM, two subscales were used: control belief and influence on control belief. A four-item 7-point Likert-type self-reporting rating scale of strongly disagree (1) to strongly agree (7) were used for control belief subscale and a four-item 7-point Likert-type rating scale of less likely (-3) to more likely (+3) for influence on control belief subscale. Perceived behavioural control (PBC) scale was measured by multiplying the control belief subscale scores with their corresponding influence on control belief subscale scores and summing the products to give composite scores of perceived behavioural control, which ranged from -84 to +84. A mean score 1.28 ± 21.09 and Cronbach's alpha of 0.47 was obtained for PBC.

Men's behavioural intentions about SDM use was measured by a three-item 7-point Likert-type rating scale of extremely unlikely (1) to extremely likely (7), definitely false (1) to definitely true (7), and strongly disagree (1) to strongly agree (7). This was measured by adding all the scores on each response in each questionnaire on this scale to get composite scores which ranged from +3 to +21 and a mean score of 14.93 ± 4.07 and Cronbach's alpha of 0.82 was obtained for intention scale. Intention scale had no sub-scales. Finally, men's behaviour in SDM use was measured with three items with responses of Yes and No.

3.9 Pre-testing the questionnaire

The modified measurement tool was pre-tested using twenty (20) men in a nearby community (Tuggo), a community under the Jirapa municipality of the Upper West Region of Ghana which did not form part of the actual research setting. This number was chosen because of the financial constraints of the researcher. The purpose of the pretest was to do away with ambiguities, and unnecessary items in the questionnaire. This also helped to discover gaps and confirm the reliability of the tool. The items were refined based on the findings from the pretest which made them simple for the respondents to understand and provide appropriate responses. The pretest also gave the researcher a fair idea of the nature of the responses to be obtained from the main study.

3.10 Data Collection Procedure

Before the commencement of data collection, ethical clearance was obtained from the Institutional Review Board of the Noguchi Memorial Institute for Medical Research, University of Ghana. Copies of the ethical clearance letter together with an introduction letter were collected to seek for permission to carry out the study.

Five male research assistants, who were fluent in both English and the native language (Dagaare), were recruited and trained in each zone on the questionnaire to ensure that they have basic knowledge and techniques in data collection and to adhere to ethical principles particularly, regarding protection of study respondents from any harm. The respondents were personally contacted with the help of a community leader/assembly member to explain the nature of the study to them and also seek respondents consent to participate in the study.

Questionnaire were self-administered by literate respondents while those who could not read and write, were interviewed by the trained research assistants and the researcher who were all fluent in both English and Dagaare languages. Data were collected from 8:00am to 6:00pm to ensure that, all men had equal chances of being sampled for the study. Data collection was done within the months of December, 2018 to February, 2019 and the research assistants helped in the collection of the completed questionnaire from each community. Returned questionnaire from the research assistants were checked for completeness and uniformity on each day before collection to help reduce errors.

3.11 Validity of Data Collection Tools

Validity is the ability of a study instrument to truly measure what it is intended to measure or how authentic the outcomes of the study are (Creswell & Creswell, 2017; Morse, 1991). This was ensured by adapting a validated tool. Also, content validity was ensured by doing an extensive review of current relevant literature. The instrument for data collection was pre-tested with twenty (20) men in a nearby community in the Jirapa Municipality to ensure the items measure what the instrument intends to measure. An opportunity was given to

respondents after the pre-test to comment on the clarity of the questions. Probability sampling techniques were used to certify that the outcomes were a true reflection of the population.

3.12 Data Management

The researcher recruited and trained five (5) research assistants who helped in the distribution and collection of questionnaires in the selected communities. They were educated on strict data protection procedures including maintenance of strict confidentiality. The researcher ensured that, data was collected by meticulously following strict ethical principles sanctioned by the University's Institutional Review Board. The researcher also educated research assistants to check every questionnaire to ensure completeness before they were collected from respondents. The researcher also cross-checked every questionnaire for completeness before data entry and analysis.

The hard-copied data (questionnaire) were securely stored in my place of residence while the soft copy saved on the researcher's personal computer with a password known to only to the researcher. The data was stored as a backup in a google drive with a user identification number and password changed frequently to make it difficult for hackers to break. Another soft copy was saved on an external hard drive with a password. The personal computer used for the processing and storage of electronic data have an updated anti-virus to prevent unnecessary data loss through cyber-attack. Data is accessible to only the researcher and his supervisors.

Data was collected and analyzed using the Statistical Package for Social Sciences (SPSS) version 23.0. Data was cleaned using Microsoft excel 2016 to correct errors that may have an effect on the outcome of the study and also organized them according to the

study's objectives. The researcher ensured that, data was presented exactly as it was collected without adding to or subtracting any part of it.

Findings of the study will be published in relevant journals subject to the university's approval. The researcher holds the intellectual property rights for the research data generated. Data is safely kept from now to at least five (5) years before discarding appropriately.

3.13 Data Analysis and interpretation

The number of respondents from the sample who did and did not return the questionnaire were reported in the results. Response bias was checked using respondent or non-respondent analysis by contacting few non-respondents on phone to determine if their responses differ substantially from respondents'. Data was analyzed using SPSS version 23.0.

Descriptive statistics was used to analyze the socio-demographic characteristics of respondents. Pearson correlation was used to establish relationship among the constructs or variables. Binary logistic regression analysis was employed to estimate the Odds Ratios of men's intentions and participation in the use of SDM. In all the tests, p values less than or equal to 0.05 were interpreted to be statistically significant.

3.14 Ethical Considerations

Ethical clearance was sought from the Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana prior to the commencement of the study. In addition to an introductory letter from the School of Nursing and Midwifery about the study, permission was sought and data collected from the communities. The aims of the study were explained to all respondents. They were assured of the researcher's commitment to their

anonymity and confidentiality. Respondents' names or any other identity that could link their responses to their questionnaire were not captured. They were informed that, their participation in the study was voluntary and that, they could withdraw from participating in the study at any point without any consequences to them. Accepting to participate in the study was considered to be informed consent. Respondents consented, thumb printed or signed on their individual consent forms before data was collected.

3.15 Post-quantitative data analysis: Qualitative methodology

Following the quantitative data analysis, unexpectedly high results were obtained about men's intentions and participation in the use of SDM. It was necessary to collect few qualitative information from a sub-group of the men (men who participated in the quantitative phase) and some of their wives to better understand and explain the quantitative outcomes (Creswell & Creswell, 2017; Morse, 1991). The qualitative data was also collected from the wives to help the researcher confirm or otherwise, some of the statements their husbands made in the qualitative study (Focus group discussion).

Therefore, three focus groups were purposively selected from three Sub-Municipalities that initially formed part of the study. Two of the groups were married men (six in each group) while the remaining one group was made up of a cross-section of their wives (six women). This number of respondents was selected because of the financial constraints of the researcher. Three Focus Group Discussions (FGDs) were then conducted.

The inclusion criteria for the men were:

- Men who participated in the first quantitative phase.
- Men whose wives were available to be sampled for data collection.

The inclusion criteria for women were that:

- Women whose husbands were part of any of the two focus groups.
- Women who were not pregnant.

The exclusion criteria for women:

- Women who had children less than six months (that is women who were doing exclusive breastfeeding).

The data collection tool was a semi-structured interview guide developed by the researcher with the support and direction of his supervisors in line with the objectives of the qualitative inquiry. The objectives for this qualitative inquiry were to capture information on reasons contributing to men's high intentions and participation (reported participation) in the use of Standard Days Method (SDM). This tool was the best because it provided the researcher with an opportunity to probe further to get better understanding or clarification of issues the researcher did not understand initially. It also offered respondents the freedom to express their opinions about their attitudes, subjective norms, perceived behavioural control influencing their intentions and participation in SDM use. Components of the tool included men's attitudes, subjective norms, perceived behavioural control, intentions and participation in the use of SDM.

Pre-testing of the interview guide was done with one focus group in a nearby community that was not part of the study setting. This helped the researcher to develop appropriate skills such as probing for interviewing the respondents in the main study. Following the pretest, analysis of their responses was used to effect changes to the interview guide before it was used for the main data collection. This improved upon the quality of the tool.

The semi-structured interview guide is made up of section A, which consists of demographic characteristics of the respondents and section B comprising of open-ended questions relative to intentions, participation in the use of SDM. All arrangements relating to time, venue and date for the FGDs were at the instance of the respondents. All FGDs were conducted in a classroom within the selected communities when students had closed from school and the environment was conducive for the discussion. The privacy of the respondents was ensured by closing the doors and windows and discussion done in a silent but audible manner. An explanation of the purpose of the study was given and respondents made to sign or thumbprint on their respective consent forms before the discussion started. All the discussions were done in Dagaare and English as the researcher can fluently speak and understand both languages. No answer was regarded as wrong or right and the researcher summarized the opinions and views of respondents and clarified what was discussed with them. The discussion was audio-recorded with a digital recorder with an approval from the respondents. The discussions lasted for an average of one hour. A field note was kept by the researcher where the behaviour of respondents, gestures, researcher's feelings, ideas, thoughts, biases and interpretations were recorded contextually. All the respondents were provided with a soft drink and lunch after the focus group discussion to show an appreciation for their cooperation, sacrifice and time they spent to provide answers to the questions asked. All the respondents were notified of the likelihood of the researcher returning for clarification when the need arises.

Validity of the tool was guaranteed by ensuring that, cultural aspects relating to SDM use and family planning were captured to ensure that it truly measured what it was intended to measure. Also, the tool was cross checked by my Principal Supervisor who is knowledgeable in qualitative research tool development. Furthermore, the tool was pre-tested with one focus

group (made up of six men) in a nearby community in the Jirapa Municipality (not part of the study setting) to ensure the items measured what the instrument intended to measure. An opportunity was given to respondents after the pre-test to comment on the clarity of the questions.

Data analysis in qualitative research uses non-numerical examinations and interpretations of narrative descriptions and observations aimed at finding meanings and patterns of relationships (Creswell & Creswell, 2017). The qualitative data collection was done followed by data analysis using thematic content analysis approach such as familiarizing with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and producing reports (Braun & Clarke, 2006). Verbatim transcription was done following the focus group discussions. The researcher read through the transcripts severally to get an understanding of the data collected and those issues that were relevant to the study, information were extracted. Also, similar words, statements and descriptions which had the same meaning were grouped to form categories. Specific names were assigned to similar categories. The data was organized into meaningful units with codes given.

These generated codes were brought together to form themes in line with the theoretical framework guiding the study. Field notes were also read and analyzed in addition to the transcribed data. With the help of different categories that were created, themes and sub-themes were identified to match men's attitudes, subjective norms, perceived behavioural control, intentions and participation in the use of SDM. Reports of the responses are provided in the results section supported by verbatim quotes from the respondents.

Rigour in qualitative research work refers to ensuring that the study is trustworthy. That is ensuring that, the inferences made from the conclusions of a study are true representation of the respondents. There are four major criteria for establishing trustworthiness in a qualitative piece of work and these were used in my study: credibility, transferability, dependability and confirmability (Lincoln & Guba, 1986).

Credibility:

This was ensured through the following means:

- A purposive sample was selected based on respondents who could share ideas relating to their intentions and participation in SDM use.
- The same questions were asked in different forms in all the focus group discussions so as to ensure that honest answers were given.
- The results were cross checked with the respondents for confirmation or otherwise and possible correction made before conclusions were drawn.
- One focus group discussion was independently coded by the researcher and the supervisor and differences and similarities in answers and amendments made to the final interview guide.
- Anonymity and confidentiality were assured and guaranteed by the researcher by giving each respondent a pseudonym in the study. This made the respondent to freely expressed their views on the topics under discussion without fearing that they would be identified or linked to the data given.

Transferability

This refers to the process of ensuring that the findings can be fairly applicable to similar group, settings and context. This was achieved through:

- Describing the setting of the study.

- A sample size of 18 respondents were used which comprised of married men and some of their wives.
- Respondents were also selected from three different Sub-Municipalities in the study setting who belonged to different religions, various age groups and different educational backgrounds.

Dependability

This refers to whether or not the study can be replicated by a different researcher. To achieve this, the researcher adopted the following strategies:

- Simple and clear questions were posed to respondents to get responses that would address the qualitative objectives.
- The researcher appropriately identified themes from the study data.

Confirmability

This relates to the researcher ensuring that his/her knowledge, experiences, biases or prejudices do not alter the meaning of the data gathered. This was ensured with the researcher doing the following:

- Making sure the findings of the study were presented based on the data obtained from the respondents which are a true representation of the respondents' opinions about their intentions and participation in the use of SDM.
- Thoughts, experiences and values of the researcher about the study were bracketed.
- Respondents' answers or responses were audio-recorded, transcribed verbatim and themes that were obtained were supported by direct quotes from the respondents.

CHAPTER FOUR

RESULTS AND FINDINGS

This chapter presents the demographic characteristics of the respondents and the study outcomes according to the study objectives. The analysis is mainly quantitative with few qualitative aspects.

4.1 Quantitative results

4.1.1 Sub-Municipalities and Respondents

Respondents were recruited from five Sub-Municipalities in the Lawra Municipality. All the respondents for the study were married males, who resided in the Lawra Municipality of the Upper West Region of Ghana for at least, three months preceding data collection. More than a third of the respondents (35%) were from the Lawra Sub-Municipality. This is shown in figure 4.1

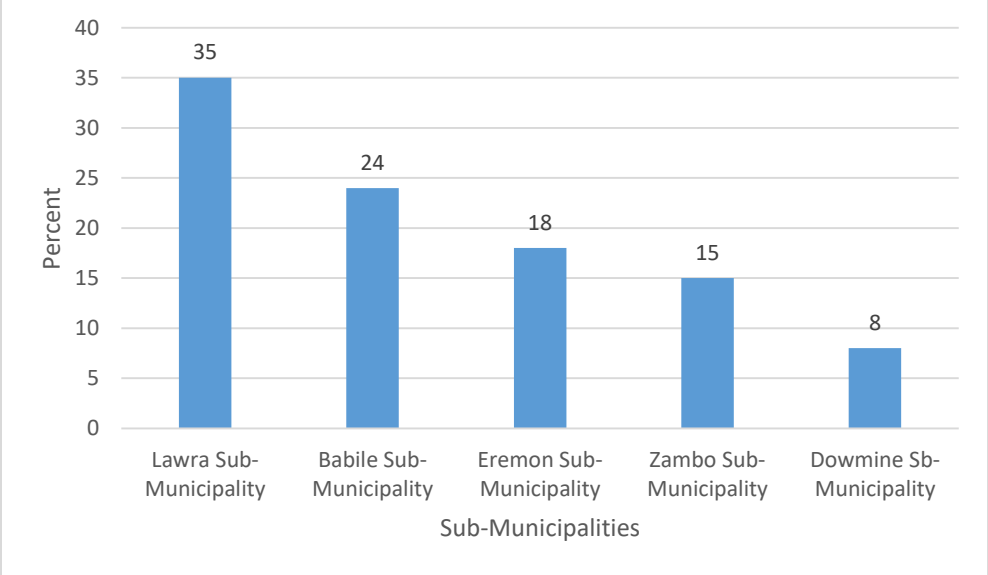

Figure 4.1: Sub-Municipalities sampled for the study

4.1.2 Demographic characteristics of respondents

A total of 408 respondents were interviewed. The mean age of respondents was 35.25 ± 9.76 years. The distribution of ages of the respondents is assumed to be normal and this is shown in a histogram in figure 4.2.

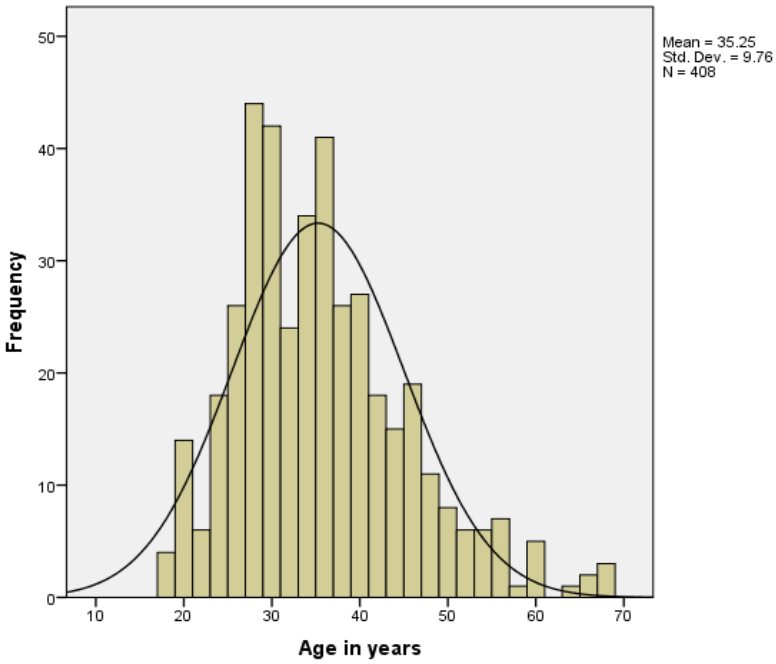

Figure 4.2: Histogram showing age of respondents

The duration of marriage of the respondents showed a mean of 9.30 ± 7.56, median of 7.00, which ranged from 1 year to 45 years. Respondents had a mean number of children of 2.73 ± 1.88 and a median of 2.00, which ranged from 0 to 11 children. Also, the descriptive analysis revealed that respondents' frequency of participation in Standard Days Method (SDM) with their partners in the three months prior to data collection had a mean of 6.38 ± 5.72, and a median of 6.00, which ranged from 0 to 40 times. This is shown in table 4.1 below.

Table 4.1: Descriptive summary of age of respondents, duration of marriage, frequency of participation in SDM use and number of children (alive).

Description		Age in years	Duration of marriage	Freq. of participation in SDM use	Number of children (alive)
N		408	408	396	408
Mean		35.25	9.30	6.38	2.73
Median rank		34.00	7.00	6.00	2.00
Std. Deviation		9.76	7.56	5.72	1.88
Minimum		18	1	0	0
Maximum		68	45	40	11
Percentiles	25	28.00	4.00	2.00	1.00
	75	40.75	13.00	9.00	4.00

About a third (32.80%) of the respondents have never been to school and a few (8.60%) of them had graduate degrees and higher. Also, 17.20% and 18.90% of the respondents had undergraduate degrees and high school certificates respectively. Finally, 19.90% of them had qualifications less than high school and a few (2.70%) had other forms of education. The others category consists of those with diploma qualifications. Figure 4.3 below shows the educational levels of the respondents.

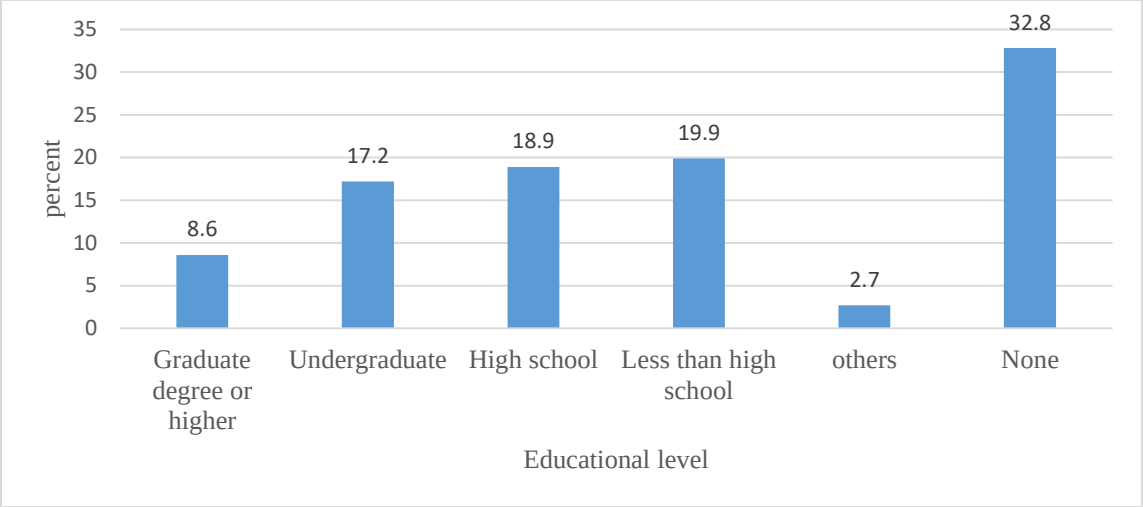

Figure 4.3: Educational levels of respondents

Almost a half (49.50%) of the respondents were Christians and nearly a third (31.10%) were Traditionalists and 19.40% of them were Muslims. This is shown in figure 4.4 below.

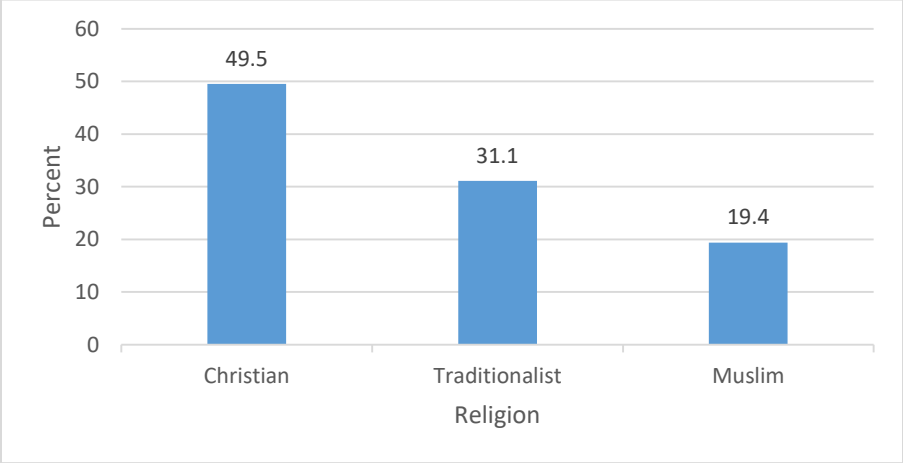

Figure 4.4: Religious **affiliation of respondents**

4.1.3 Sexual behaviours of respondents

Out of the 408 respondents who answered the questionnaire, the majority of them (93.60%) had sexual intercourse with their partners in the three months preceding data collection. Few respondents (6.40%) did not have coitus with their partners within the same period. Also, almost every respondent (96.80%) has ever participated in SDM use with their partner, while a limited number (3.20%) of them have not participated in SDM use with their partners prior to data collection. This is shown in table 4.2 below.

Table 4.2: Men's sexual intercourse and participation in SDM use

	Responses	
	Yes	No
Item (N = 408)	**N (%)**	**N (%)**
Sexual intercourse	382 (93.60%)	26 (6.40)
Ever participated in SDM use	395 (96.80%)	13 (3.20)

It was found that, nearly every one (97.00%) that was sampled had ever participated in SDM use, only a few (3%) of them did not participate in its use. This is shown in figure 4.3

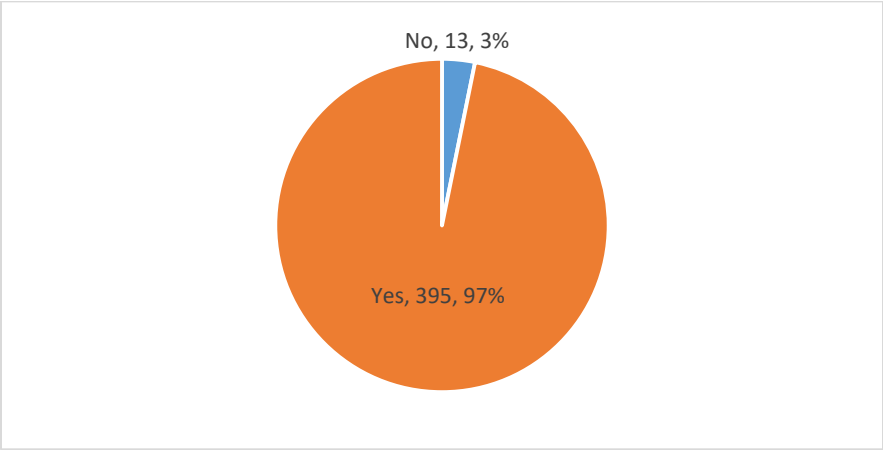

Figure 4.5: Men's participation in SDM use

4.1.4 Relationship between men's sexual intercourse and participation in SDM use

Out of the three hundred and eighty-two (382) men who had sexual intercourse with their partners in the three months prior to data collection, the majority (98%) of them participated in SDM use. Just a few respondents (2%) did not participate in SDM use with their partners during the same period. The relationship between men's sexual intercourse with their partners and participation in SDM use in the three months preceding data collection was found to be statistically significant ($p < 0.001$). This is shown in table 4.3 below.

Table 4.3: Men's sexual intercourse and participation in SDM use with their partners (n = 408)

Coitus in last three months	Participation in SDM use		Total	P-value
	Yes: N (%)	No: N (%)		
Yes	374 ((98%)	8 (2%)	382 (100%)	
No	21 (81%)	5 (19%)	26 (100%)	**< 0.001**
Total	395 (96.80%)	13 (3.20%)	408 (100%)	

4.1.5 Descriptive summary of men's attitudes, subjective norms, perceived behavioural control, intentions and participation in SDM use with their partners

The attitude scale was measured by multiplying the scores on the behavioural belief subscale scores with their corresponding outcome evaluations subscale scores and summing the products to get composite scores for attitude, which ranged from -63 to +63. A mean score 32.49 ± 19.84 was obtained for attitude scale.

The subjective norm scale was measured by multiplying the normative belief subscale scores with their corresponding motivation to comply subscale scores and summing the products to give composite scores of subjective norms, ranging from -63 to +63. A mean score 18.42 ± 21.42 was obtained for subjective norm scale.

Also, the perceived behavioural control (PBC) scale was measured by multiplying the control belief subscale scores with their corresponding influence on control belief subscale scores and summing the products to give composite scores of perceived behavioural control, which ranged from -84 to +84. A mean score 1.28 ± 21.09 was obtained for PBC.

Intention scale was also measured by adding all the scores on each response in each questionnaire on this scale to get composite scores which ranged from +3 to +21 and a mean score 14.93 ± 4.07 was obtained for intention. Intention scale had no sub-scales. This is shown in table 4.6 below.

Table 4.6: Descriptive summary of men's attitudes, subjective norms, perceived behavioural control, intentions and participation in SDM use

Variables (n=396)	Observed range	Mean	Std. Deviation	Median
Attitudes towards SDM use	-63 to + 63	32.49	19.84	36.00
Subjective norms about SDM use	-84 to + 84	18.42	21.42	13.00
Perceived behavioural control over SDM use	-63 to + 63	1.28	21.09	0.00
Intention about SDM use	+3 to + 21	14.93	4.07	16.00
Participation in SDM use		1.28	21.09	

4.1.5 Intentions of men to participate in SDM use

The intentions of men to participate in SDM use were measured using three (3) items with unipolar scores which ranged from definitely false (1) to definitely true (7). Descriptive analysis of the intention scale items revealed that, the majority of men (66.50%) were likely to participate in SDM use with their partners, while 67.90% of them said it was true that they try to participate in SDM use with their partners. The majority of the respondents (66.20%) agreed that, they had planned to participate in SDM use with their partners. This is shown in table 4.4 below.

Table 4.4: Intentions of men to participate in SDM use with their partners

Intention items	Responses	Frequency (N)	Percentage (%)
Intent to use SDM	Unlikely	128	31.4
	Likely	**268**	**66.5**
Trying to use SDM	False	119	29.2
	True	**277**	**67.9**
Planning to use SDM	Disagree	126	30.8
	Agree	**270**	**66.2**

Dichotomizing the intentions to participate in SDM use into "no intent" and "intent" so as to ascertain those who planned and those who did not plan to participate in SDM use with their partners. It was found that, nearly three-quarters (74%) of men showed an intention to participate in SDM use with their partners. This is shown in figure 4.6 below.

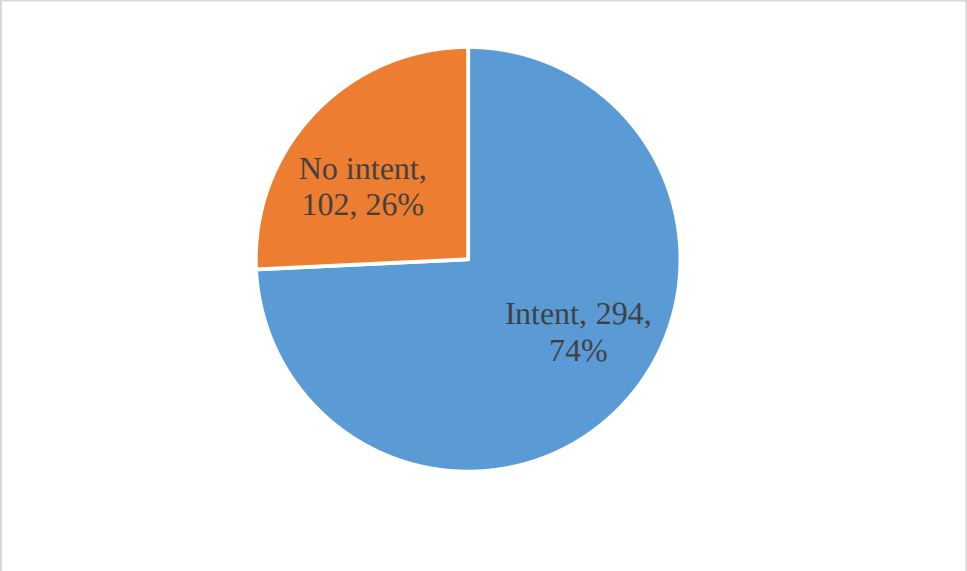

Figure 4.6: Intentions of men to participate in SDM use with their partners

4.1.5 Attitudes of men towards participating in SDM use

The attitude of men towards participating in SDM with their partners was measured using six items. Unipolar scores were used for behavioural belief subscale which ranged from strongly disagree (1) to strongly agree (7) and bipolar scores for outcome evaluation subscale which ranged from extremely unimportant (-3) to extremely important (+3).

Descriptive analysis on behavioural belief subscale revealed that, the majority of men (81.30%) agreed that, they will derive sexual satisfaction from participating in SDM with their partners. Also, 70.20% of them agreed that, their participation in SDM use will help prevent unwanted pregnancies. The majority of men (82.40%) agreed that, participating in SDM will promote communication between them and their partners in their marriages.

Finally, when descriptive analysis on outcome evaluation subscale was conducted, it showed that a greater percentage of men (85.80%) said it was important to participate in the SDM with their partners for purposes of deriving sexual satisfaction. Also, the majority them 86.80% and 82.40% indicated it was important for them to participate in SDM use with their partners to prevent unwanted pregnancies and to improve communication between them and their partners respectively. This is shown in table 4.5 below.

Table 4.5: Attitudes of men towards participation in SDM use with their partners

Attitude items	Responses	Frequency (N)	Percentage (%)
Participating in SDM promotes sexual satisfaction	Disagree	64	15.70
	Agree	**332**	**81.30**
Participating in SDM prevents unwanted pregnancies	Disagree	110	26.90
	Agree	**286**	**70.20**
Participating in SDM improves communication	Disagree	46	11.20
	Agree	**336**	**82.40**
Participating in SDM for sexual satisfaction is……..to me	Unimportant	46	11.30
	Important	**350**	**85.80**
Participating in SDM to prevent unwanted pregnancies is…to me	Unimportant	59	14.50
	Important	**354**	**86.80**
Participating in SDM to improve communication is …….to me	Unimportant	59	14.50
	Important	**337**	**82.60**

4.1.5 Subjective norms of men about participation in SDM use with their partners

The subjective norms of men's participation in SDM use were measured on eight (8) items, using unipolar scores for normative belief subscale items which ranged from strongly disagree (1) to strongly agree (7) and bipolar scores for motivation to comply subscale items which ranged from not at all important (-3) to very important (+3).

Descriptive analysis on subjective norm scale items revealed that, the majority (62.50%) and about two-thirds (67.40%) of men disagreed that, their friends and family members respectively encouraged them to participate in SDM use with their partners. Furthermore, almost seventy percent (69.90%) of men agreed that, their partners encouraged them to participate in the use of SDM, whilst 70.50% of them disagreed that, their religious leaders encouraged them to participate in SDM use.

Descriptive analysis on motivation to comply subscale items revealed that, more than half (56.10% & 52.20%) of men said it was unimportant for their friends and family members to approve of their participation in SDM use respectively. Also, two-thirds (66.90%) of the men indicated that, it was not important for their religious leaders to approve of their participation in SDM use with their partners. However, the majority (83.10%) of men acknowledged that, it was important for their partners to approve of their participation in SDM use. This is shown in table 4.6 on the next page.

Table 4.6: Subjective norms of men about their participation in SDM use

Subjective norms items	Responses	Frequency (N)	Percentage (%)
Friends encourage me to participate in SDM use	**Disagree**	**255**	**62.5**
	Agree	255	34.6
Family encourages me to participate in SDM use	**Disagree**	**275**	**67.4**
	Agree	121	29.6
Partner encourages me participate in SDM use	Disagree	111	27.2
	Agree	**285**	**69.9**
Religious leader encourages me to participate in SDM use	**Disagree**	**288**	**70.5**
	Agree	108	26.4
It is important my friends approve of my participation in SDM use	**Not important**	**229**	**56.1**
	Important	167	40.9
It is important my family approves of my participation in SDM use	**Not important**	**213**	**52.2**
	Important	183	44.9
It is important my partner approves of my participation in SDM use	Not important	57	14
	Important	**339**	**83.1**
It is important my religious leader approves of my participation in SDM use	**Not important**	**273**	**66.9**
	Important	123	30.1

4.1.5 Perceived behavioural control of men over their participation in SDM use

The perceived behavioural control of men over participation in SDM use was measured on six (6) items using unipolar scores for control belief subscale items which ranged from strongly disagree (1) to strongly agree (7) and bipolar scores for influence on control belief subscale items which ranged from extremely less likely (-3) to extremely likely (+3).

Descriptive analysis on control belief subscale items revealed that, almost half of the men (49.30%%) disagreed that, their participation in SDM use with their partners is difficult. Also, the majority of them (60.80%) agreed that, they are confident to participate in SDM use with their partners, whilst 48.80% of them agreed that, the decision to participate in SDM use is beyond their control.

Descriptive analysis on influence on control belief subscale items revealed that, more than two-thirds (76.50%) of men stated they were likely to participate in SDM use with their partners if they are confident that they can do so. Also, the majority of men (64.70%) indicated that, they were less likely to participate in SDM use if it is difficult for them to do so. Finally, the majority of the men (73.50%) revealed that, they are less likely to participate in the SDM use with their partners if the decision to do so is beyond their control. This is shown in table 4.7 below.

Table 4.7: Men's perceived behavioural control (PBC) over participation in SDM use with their partners

PBC items	Responses	Frequency (N)	Percent (%)
It is difficult for me to participate in SDM use	**Disagree**	**201**	**49.3**
	Agree	195	47.8
I am confident I can participate in SDM use	Disagree	148	36.3
	Agree	**248**	**60.8**
The decision to participate SDM is beyond my control	Disagree	197	48.3
	Agree	**199**	**48.8**
If it is difficult for me to participate in SDM use, I will…...participate	**Less likely**	**264**	**64.7**
	Likely	132	32.3
If I am confident that I can participate SDM, I will participate	Less likely	84	20.6
	Likely	**312**	**76.5**
If the decision to participate in SDM use is beyond my control, I will….....participate	**Less likely**	**300**	**73.5**
	Likely	96	23.5

4.1.6 Relationship of men's attitudes, subjective norms, perceived behavioural control, intentions and participation in SDM use with their partners

A Pearson correlation test was conducted to examine the relationships among the variables and men's actual participation (reported participation) in SDM use with their partners. It was found that, intentions of men towards participation had significant positive correlation with their attitudes, ($r = 0.55$, $p < 0 .001$). This implies that, favourable attitudes of men towards SDM will lead to favourable intentions to participate in SDM use with their partners. Also, intentions had a significant positive correlation with subjective norm, ($r = 0.18$, $p < 0.001$). This suggests that, favourable or supportive subjective norms of significant others will lead to favourable intentions of men to participate in SDM use with their partners.

Furthermore, a significant positive correlation was established between intentions and perceived behavioural control ($r = 0.23$, $p < 0.001$). This again suggests that, the availability of factors that will promote ability to participate in SDM use with their partners will lead to favourable intentions to participate.

There was also a significant positive relationship between attitudes and subjective norms ($r = 0.37$, $P < 0.001$). This suggests that, favourable or supportive subjective norms of significant others to participate in SDM use with their partners will lead to favourable attitudes of men to participate and vice versa.

Another significant positive correlation was found between men's attitudes and perceived behavioural control ($r = 0.22$, $P < 0.001$). This suggests that, strong perceived behavioural control of men to participate in SDM use will lead to the development of favourable attitudes.

Overall, this indicates that, favourable attitudes of men to participate in SDM use, favourable or supportive subjective norms of men to participate, strong perceived behavioural control of men to participate will lead to favourable intentions of men to participate in SDM use with their partners. This is shown in table 4.11 below.

Table 4.11: Relationship of men's attitudes, subjective norms, perceived behavioural control, intentions and participation in SDM use with their partners

Variables		Total SDM participation	Total intentions	Total attitudes	Total SN	Total PBCT
Total SDM participation	p-value					
Total intention	p-vale	0.038 0.45				
Total attitude	p-value	0.077 0.124	**.545**** < 0.001			
Total SN	p-value	-0.015 0.765	**.184**** < 0.001	**.366**** < 0.001		
Total PBC	p-value	-0.025 0.626	**.226**** < 0.001	**.224**** < 0.001	0.091 0.069	

Note: **. Correlation is significant at the 0.01 level (2-tailed), **SN**: Subjective norm, **PBC**: Perceived behavioural control

4.1.7 Factors influencing men's intentions to participate in SDM use with their partners

In other to identify the factors that influence men's intention to participate in SDM use with their partners, a binary logistic regression was conducted on the variables under study. The variables entered into the model were composites of attitudes, subjective norms and perceived behavioural control as independent variables and composite of intentions to participate as dependent variable. The factors that appeared to significantly predict men's intentions to participate in SDM use with their partners include attitudes (OR = 1.07, 95%CI = 1.05 – 1.09, p < 0.001). This means that, men's attitudes influenced men's

intentions to participate in SDM use. Also, men's intentions to participate in SDM use was predicted by perceived behavioural control (OR= 1.02, 95%CI = 1.01 – 1.03, p = 0.006). This implies that, men's subjective norms influenced their intentions to participate in SDM use. Overall, this means that, the valued judgment men placed on their participation and their ability to have control over their participation, directly influenced their intentions to participate in SDM use with their partners. This is shown in table 4.8 below.

Table 4.8: Coefficients and Odd ratios of predictive factors on men's intentions towards participating in SDM use with their partners

Variables	B	S. E.	Wald	Df	Sig.	Exp (B)	95% C.I. for EXP(B)	
							Lower	Upper
Total Attitude	0.07	0	61	1	**<0.001**	**1.07**	**1.05**	**1.09**
Total SN	-0.12	0	1.11	1	0.292	0.99	0.98	1.01
Total PBC	0.02	0	7.7	1	**0.006**	**1.02**	**1.01**	**1.03**
Constant	-0.7	0.2	7.59	1	0.006	0.51		

Note: Dependent variable: Intention to participate in SDM use. SN: subjective norms, PBC: perceived behavioural control

4.1.8 Relation between men's intentions and actual participation

The analysis on the relationship between men's intentions to participate and actual participation (reported participation) in SDM use with their partners in the three months prior to data collection revealed that, there was no significant relationship (P = 0.55). This is shown in Table 4.9 below.

Table 4.9: Men's intentions and actual participation in SDM use

Intentions to participate in SDM use	Participation in SDM use	
	Yes: N (%))	No: (%)
No intent	102 (100%)	0 (0)
Intent	293 (99.7%)	1(0.3)
Total	395 (100)	1(100)

Note: P = 0.55

4.1.9 Factors influencing men's participation in SDM use with their partners

A binary logistic regression was conducted on men's attitudes, subjective norms and perceived behavioural controls as independent variables and their possible influence on men's actual participation (reported participation) in SDM use with their partners as dependent variable. It was found that, none of these factors significantly influenced men's participation in SDM use with their partners in the population under study. Not even men's intentions to participate in SDM use had any significant relationship with actual participation. This is shown in table 4.10 below on the next page.

Table 4.10: Factors that may have possible influence on men's participation in SDM use

Variables	B	S.E.	Wald	Df	Sig.	Exp (B)	95% C.I. for EXP (B) Lower	Upper
Total attitude	3.06	102.5	0.00	1	1.00	21.42	0.00	3.41E+88
Total SN	-0.03	0.08	0.16	1	0.70	0.97	0.81	1.15
Total PBC	-0.05	0.08	0.45	1	0.50	0.95	0.82	1.10
Total intent	-7.7	2407	0.00	1	1.00	0.00	0.00	
Constant	188.2	6180	0.00	1	1.00	0.00		

Note: Dependent variable: participation in SDM use.

4.1.10 Summary of results

All the respondents in the study were married males, recruited from five Sub-Municipalities in the Lawra Municipality of the Upper West Region of Ghana. More than a third of the respondents (35.30%) were from the Lawra sub-municipality. The study found an average age of men to be 35 years and have been married for an average of nine (9) years and with an average number of three children (alive). Also, 32.80% of the men had never been to school. The study further revealed that, almost half of the men (49.50%) were Christians.

Attitudes of men to participate in SDM use revealed the majority of them agreeing that, the method promotes sexual satisfaction, prevents unwanted pregnancies and improves communication between them and their partners. Also, the majority of them think that, it is important for them to participate in SDM use for purposes of promoting communication between them and their partners.

Subjective norms of men to participate in SDM use showed the majority of them disagreeing that their friends, families and religious leaders encouraged them to participate in SDM use. However, the majority of them agreed that, their partners encouraged them to participate in SDM use and that, their partners' approval is important for them to participate.

The perceived behavioural control of men to participate in SDM use showed the majority of them disagreeing that, it is difficult for them to participate in SDM use with their partners. Also, the majority of them agreed that they are confident and have control over their participation in the use of the method. However, the majority of them said they

are less likely to participate in SDM use if it is difficult and if they do not have control over their participation.

The majority of the men intend to participate in SDM use with their partners. Men's intentions to participate in SDM use with their partners was found to have significant positive relationship with their attitudes, subjective norms and perceived behavioural control. This finding fully supported the hypothesis of the study.

Also, men's attitudes to participate in SDM use was found to have significant positive relationship with their subjective norms and perceived behavioural control. This finding supported the theory of planned behaviour, which posits that, attitudes of an individual to perform a behaviour is influenced by perceived behavioural control and subjective norms of significant others.

The majority of men, who had sexual intercourse with their partners in the three months preceding data collection, participated in SDM. This indicates that, almost every man who had sexual intercourse with the partner participated in SDM use. However, no factor or variable of the Theory of Planned Behaviour (TPB) was able to predict men's actual participation (reported participation) in SDM use. Interestingly, not even intentions of men to participate in SDM use which was found to be high had any significant relationship with actual participation.

4.2 Qualitative findings

This section focuses on the findings of the qualitative data collected from a sub-group of the men (and their wives) who participated in the quantitative phase of the study. This was necessary in view of the high participation of men in SDM use with their partners contrary to what is documented in literature in the study setting (GHS, 2017., GHS, 2018).

The demographic characteristics of the respondents are described first, followed by the presentation of the themes identified.

4.2.1 Demographic characteristics of respondents of the qualitative inquiry

Eighteen respondents (three focus groups, six in each group) were interviewed. Two of the focus groups were made of a sub-group of married men while the remaining one group was made up of some of the wives of these men in the two focus groups.

There were twelve (12) males and six (6) females who participated in the focus group discussion with a mean age of 38 years. Ten (10) of the respondents had formal education while eight (8) of them had no formal education. In relation to their religious background, eight (8) respondents were Christians, four (4) Traditionalists and six (6) were Muslims. Also, seven (7) out of the eighteen (18) respondents were in polygamous marriages while eleven (11) were in monogamous marriages. All the respondents are Ghanaians and belonged to the "Dagaara" tribe. This is shown on table 4.11 on the next page.

Table 4.11 Demographic characteristics of respondents

Demographics	Specification	N (%)
Type of marriage	Monogamy	11 (61)
	Polygamy	7 (39)
Religion	Christians	8 (44)
	Muslims	6 (33)
	Traditionalist	4 (22)
Educational status	Formal education	10 (56)
	No formal education	8(44)
Mean age	38years	

Source: Field data (2019)

From the data collected, five (5) main themes with thirteen (13) corresponding sub-themes were extracted. These main themes with their sub-themes are presented with supporting verbatim quotes from the data. All the five main themes were generated in line with the objectives and the theory guiding the study. The main themes developed were: attitudes towards participation in SDM use, subjective norms about participating in SDM use, perceived behavioural control over SDM use, intentions about participating in SDM use and participation in SDM use. This is shown in table 4.12 on the next page.

Table 4.12: Summary of themes and sub-themes

Theoretical themes	Sub-themes	Codes
Attitudes to participate in SDM use	Favourable attitudes to participate in SDM use. Unfavourable attitudes to participate in SDM use. Mixed attitudes to participate in SDM use.	ATT
Subjective norms to participate in SDM use	Supportive subjective norms. Unsupportive subjective norms.	SBN
PBC to participate in SDM use	Perceived ease. Perceived difficulty.	PBC
Intention to participate in SDM use	Intention to participate. Intention to discontinue. Mixed intentions.	INT
Participation in SDM use	Favourable behaviour. Seeking for help	PAT

Field data (2019)

4.2.2 Attitudes of men towards participation in SDM use with their partners

This theme centres on information about the value judgment of men relative to their participation in SDM use with their partners aimed at preventing pregnancy and delaying childbirth. Three sub-themes were obtained from the data gathered: favourable attitudes, unfavourable attitudes and mixed feelings/attitudes of men towards participating in SDM use with their partners.

4.2.2.1 Favourable attitudes of men towards SDM use

Three men and one woman indicated that, they prefer to use SDM among all the family planning methods available because, they believed that, SDM has the dual purpose of preventing and achieving pregnancy. They also claim that, participating in SDM use

improves communication between them and their partners. It is affordable, it has no health risks and that, it is a continuation of their tradition.

This is how one of the respondents puts it:

> *In my candid opinion, the counting days' method of family planning (SDM) is good because, it is able to improve upon communication or bring about unity in the house only if both husband and wife agree in principle to use the method. This is because I and my wife are compelled to communicate more frequently than before, to ascertain whether she is in her menstrual period or not. This makes it good. (**Peeca, male respondent).***

Female respondents confirmed that, SDM use improves upon communication between them and their husbands. One female respondent had this to say:

> *"Count days makes my husband to talk with me more and ask me questions about my menstrual cycle". (**Bayuomah, female respondent).***

Men claimed that, their support for the use of SDM will not make their wives to experience prolonged menstrual bleeding compared to hormonal contraceptive use. This is what one male respondent presented this:

> *"My wife used to go for the injectables and experienced heavy bleeding any time she had her menstrual flow. Using SDM with her will not give her these problems". (**Ngozee, male respondent).***

Some female respondents affirmed that, using SDM with their partners is better than the hormonal methods because, they believed the hormonals are associated with health problems. Aakuremeh, a female respondent shared her thoughts:

> *I don't like the artificial methods because they give heart problems, cancer, headache, heavy bleeding, make one grow fat or slim. I am using this method (SDM) with my husband because it does not give me problems, my husband only needs to understand me and that is all, no side effects associated with this method.* (**Aakuremeh, female respondent).**

It appeared men have chosen to participate in SDM use with their partners because of the perceived benefits which they cited as: it helps prevent and achieve pregnancy, it provides sexual satisfaction and it is affordable as compared to other methods.

This is what Denuo, a male respondent shared:

> *It helps me and my wife to prevent pregnancy, it does not cost us anything to practise this method. I just have to abstain for a short while. This method makes me feel satisfied after sex unlike using condoms. How do you enjoy a wrapped candy without removing the covering?*. **(Yipaaga, male respondent).**

Issues of cost or affordability regarding men's participation in SDM use was also confirmed by their wives. This is how one respondent stated it:

> *"It is able to help us achieve the intended purpose of pregnancy prevention as well as help us to achieve pregnancy. The amount that I pay to get services for this method (SDM) is cheap compared to the injectables."* (***Ayuo, female respondent).***

4.2.2.2 Unfavourable attitudes of men towards SDM use

These are the perceived ill feelings of men and some of their partners about the use of SDM. Two men and two women considered that, participating in SDM use with their partners is not good. They claim that, they are having limited knowledge about SDM. The male respondents added that, they have difficulties abstaining periodically from coitus during the fertile period. They added that, changes in the menstrual cycle of their partners and the perceived unreliability of the method makes it difficult for them to participate. One respondent stated his bad feelings about the method as follows:

"If one misses out with the counting of the days, the woman can get pregnant". (**Migyima, male respondent).**

Some female respondents confirmed that, SDM can fail to produce the desired results of preventing pregnancy leading to embarrassment in the community. This is the assertion of one respondent:

*"Counting days can easily fail resulting in pregnancy and people within the community will talk about you, liken you to somebody who is not civilized simply because you have delivered children without adequate spacing". (***Aanomaalia, female respondent).**

The above narratives give the impression that, men are conscious of the perceived failure rates associated with SDM use which in their view makes its use problematic.

Another respondent shared his experience of participation in SDM use with the aim of preventing pregnancy and how it has failed him and his partner.

I can confess that two of my children I had were as a result of this wrong calculation (wrong identification of fertile and infertile periods). It was not our

intention to have babies at those times. But once it happened, we did not want to abort because the other children were one-year-old each and we could manage. ***(Danzinkaar, male respondent).***

Some female respondents shared that, SDM use has not received the best of participation from their partners, and that it rather breeds conflicts and abuse in the family.

…. the counting days method of family planning (SDM) results in the following challenges confronting couples: quarrels between us and our husbands, domestic violence, divorce, refusal of our husbands to provide what the family needs, cheating in marriage and polygamy. This makes its use not attractive. (**Ayuo, female respondent).**

It is suggestive that, men's participation in SDM use with their partners is associated with frustration and abuse in the family.

4.2.2.3 Mixed attitudes to participate in SDM use

One man and two women had mixed feelings about whether or not to continue using SDM. They were considering using other methods such as condoms and emergency contraceptives during the fertile period. Men seemed not to have these mixed feelings to participate in SDM use but rather reported the doubts and uncertainties of their partners about the method, as indicated in the quotes that follow:

She expresses fear about the risk of unwanted pregnancy. I think we need to contact somebody who knows the method very well to teach us how to use it. I am sure this will solve her continuous fear and doubts. (**Ngozee, male respondent).**

Some respondents had this to say about their feelings about SDM use and their partners' participation. This is what Kuremah, a female respondent said:

> *What I don't like about it (SDM) is that, I don't have adequate knowledge about how to use it though I am doing it any way. On the other hand, I like it because it has no side effects. I am not able to follow the rules of the method all the time. Denying my husband sexual intercourse most of the time during my fertile period is an indirect way of encouraging him to cheat on me as he does if I deny him coitus. If I am not ready, others are ready. (**Kuremah, female respondent).***

The men's dislike in participating or to participate in SDM use appeared to originate from their limited knowledge about the method and difficulty with abstinence during the fertile period.

Another respondent stated her feelings differently but conveying the same message:

> *"I like the counting days method because it has no side effects. Why I don't like this method is just because men are sometimes unwilling to cooperate making it practically impossible to use the method".* **(Ayuo, female respondent).**

It can be inferred from the respondents' narratives that, most men acknowledged the importance of participating in SDM with their partners, meanwhile they are reluctant or refusing to abide by the rules. The participation of men (husbands) in SDM use from the wives' perspectives appeared to be inadequate.

4.2.3 Subjective norms of men about SDM use

This theme talks about the social pressures being exerted on men to either influence them to participate or refuse to participate in SDM use with their partners. These pressures according to the theoretical framework guiding the study maybe in two forms:

beliefs from referent others expecting men to participate or not to participate in the use of the method and their willingness to accept these beliefs and participate or refuse to participate in its use.

In an attempt to get more information to answer the research objective relating to what determines the subjective norms of men about their participation in SDM use, the following two sub-themes were identified from the data that appeared to influence their participation. These are supportive subjective norms (motivation to comply with the normative beliefs) and unsupportive subjective norms (motivation not to comply with the normative beliefs).

4.2.3.1 Supportive subjective norms about SDM use

Four men and two women outlined cultural beliefs and traditions in their communities in relation to approval of SDM use by their significant others (parents, grandparents, partners) as reasons for their intentions and participation. This is how one respondent put it.

> *I heard about SDM from my parents, grandparents and uncles during family teaching and informal interactions. Also, when I was of age and preparing to marry, I was prepared for marriage including teachings on SDM. When I got married my wife also recommended this method. (**Kyereda, male respondent).***

Some female respondents also cited their mothers and mothers-in-law pieces of advice; supportive traditional beliefs as reasons for encouraging their husbands to participate in SDM use.

> *SDM is part of our culture and it is part and parcel of our everyday life. It is a taboo to prepare food for men to eat if any lady in our village menstruates.*

…….so, before I started menstruating, I was informed by my mother and my grandmother not to prepare food when I am menstruating. It was later that my mother and mother in-law taught me how to use my menstrual cycle to prevent pregnancy. It is a good birth control method. (**Aakuremeh, female respondent).**

Some men cited the influence of their wives led them to their participation in the use of SDM to prevent pregnancy in their marriages. This is how Nyanyaa, a male respondent explained it:

…….SDM is a method of birth control that has been handed down to us by our grandparents and therefore using this method is not much of a difficulty if couples really understand the culture and traditions of this community. My wife too encourages me to support her to use this method. It is not anything new to us. ***(Nyanyaa, male respondent).***

Some husbands further explained how cultural and traditional beliefs positively influence their participation in the use of SDM, whereby the fertile period is regarded as "dirty" and a taboo for men to have any close relationship with their wives. This is how one husband explained it:

*You know, SDM is part of our culture and traditions. When women are in their menstrual period, they are not allowed to prepare or serve food to males in the family because they are considered not to be clean. It is also a taboo for her to share the same bed with her husband, unless her menstrual period is over. Following this, an additional one or two weeks must elapse before she is permitted to prepare and serve food to males in the family including sharing a bed with her husband. (***Migyima, male respondent).**

The wives appeared to have a direct influence on their husbands' intentions and participation though mothers and mothers-in-law also contribute indirectly.

Some male respondents specified important roles their partners and significant others played in their knowledge gain about SDM use. Terbom, one of the male respondents had this to say:

> *Women know this method more than most men. My wife and other women in the house who know about this method are beneficial to me. I didn't know much about the method though it is part of our culture, but now I am somehow ok and will continue to use it. (***Terbom, male respondent).**

This is how another woman described the pressure and motivation behind her use of SDM and influence on their husbands' participation.

> *I heard about SDM from my mother, my mother in-law and maternal grandmother. When I started menstruating my mother told me that, I will get pregnant if I have sexual intercourse with men, then at another time, around age 20 years, that was the time I was preparing to get married, my mother and grandmother invited me as part of preparation for marriage, I was told a whole lot of things including how to prevent pregnancy in marriage using my menstrual cycle. I was warned that; it is a taboo to go for injection to prevent pregnancy. –***Aanomaalia, female respondent.**

Motivation and education on the use of SDM from associates appeared to have a positive impact on men's participation in the use of SDM.

4.2.3.2 Unsupportive subjective norms

One man and five women revealed some behaviours from their significant others that thwart their efforts to participate in the use of SDM with their partners despite the

cultural and traditional backings. The wives of the men appeared to have numerous negative influences from significant others affecting their husbands' participation in the use of SDM. Their husbands on the other hand acted as though they had fewer unfavourable factors from referent others affecting their participation as indicated below:

> *I think my husband's behaviour towards SDM use means he does not like it. He sometimes fails to abstain from sexual intercourse during the fertile period. When I resist engaging in coitus, he sometimes beats me or forces me to agree or he refuses to give me chop money, if I succeed in denying him sex*. (**Kuremah, female respondent)**.

Husbands' inappropriate behaviour and intolerance during the fertile period were mentioned by female respondents as challenges affecting their intentions and participation. This is how one respondent put it:

> *We (husband and wife) both like the method, but I have come to realize that staying away from my husband by spending the night in my mother in-law's room is not an effective way of controlling my husband's behaviour. He sometimes takes into drinking and bad influence from friends to misbehave by beating me. Also, the continuous refusal or postponement of the sexual activity makes him impatient and easily angered. His anger indirectly provokes mine, resulting in quarrels at home, all because I have persistently asked him to wait.* (**Nuo, female respondent).**

The data gathered from men give the impression that, there are limited influences from significant others impeding their intentions and participation in SDM use. However, men claimed that, fears and suspicions of unfaithfulness from their partners during the fertile period frustrate them. One respondent stated his concern as follows:

My wife is always worried during the fertile period more especially when I walk out of the house to buy something. I know she is always thinking that I am going out with other ladies and this behaviour of hers demoralizes me about participation. (**Terbom, male respondent).**

Husbands' unfaithfulness and abusive behaviours during the fertile period are described as challenges for an effective participation of men in SDM use with their partners as indicated in the following quotes.

My husband sometimes beats me when I deny him sexual intercourse during the fertile period. He argues that engaging in sexual intercourse for only one day will not result in pregnancy. He cheats on me when I deny him by going outside to sleep with other women. (**Aanomaalia, female respondent).**

The participation of men in SDM use with their partners appeared to breed mistrust and conflict among couples in some families.

4.2.4 Perceived behavioural control of men over SDM use

This reflects the extent to which men feel or think they have control over their participation in SDM use with their partners. Two sub-themes were obtained from the data: perceived ease of participation in SDM use (Perceived power) and perceived difficulty of participation in SDM use (Perceived difficulty).

4.2.4.1 Perceived ease of participation in SDM use

Three men shared how they control themselves to effectively participate in SDM use with their partners. Also, two of their wives spoke about how their husbands manage the fertile period.

*I think that counting days is about marrying more than one wife such that, when one is in her fertile or dangerous period, the husband will go to the other woman that is not in her dangerous period. Basically, that is what I am using to effectively practise the counting days. Though that is not the only reason for marrying two wives. Also, during the fertile period we either engage in Bible discussion or visit friends. (***Kyereda, male respondent).**

Similarly, women perceived their husbands' difficulties with the periodic abstinence as reasons for them marrying an additional wife or wives. The women explained that, men with two or more wives only abstain from coitus from one wife who is in her fertile period whiles having coitus at the same time with another wife (wives) who is/are unlikely to get pregnant. This is how one woman puts it:

*My husband has two other wives in addition to me. So, controlling himself during the fertile period means going to his other wives that are in their infertile period. It is that easy for him. He does not disturb me for sexual intercourse in my danger period. (***Aakuremeh, female respondent).**

Polygamy appeared to be a buffer for men to satisfy their sexual desires during the fertile period of one wife. In such instances, the men resort to other wife/wives who may less likely get pregnant. This appeared to be a control measure for periodic abstinence and effective participation in SDM use.

Mutual understanding and patience are reportedly good strategies for some men in monogamous marriages to manage or abstain from coitus during the fertile period. One man indirectly shared his experience as:

*"I also know that other men practise the counting days with just one wife. It is about being patient and showing understanding towards my wife when she is in her dangerous period". (***Migyima**, **male respondent)**.

Some male respondents gave reasons for cooperating with their wives during the fertile period. This was what Nyanyaa, a male respondent said:

"……counting days is a method of birth control that has been handed down to us by our grandparents and therefore using this method is not much of a difficulty if couples really understand our culture and traditions". (**Nyanyaa, male respondent).**

These narratives and assertions of men were confirmed by some of their wives. For instance, a woman had this to share.

"It is helpful that in our tradition when I am menstruating my husband does not come close to me, he doesn't eat my food, we don't sleep on the same bed. I either stay in a different room or stay with my mother in-law until a week or two before we can be husband and wife again. He also shows understanding and patience during this period". (**Aanomaalia, female respondent).**

4.2.4.2 Perceived difficulty to participate in SDM use

Three wives also presented the difficulties their husbands go through and four male respondents outlined the bottlenecks confronting their intentions and participation in SDM use with their partners as indicated in the following quotes.

"Men who are into alcoholism, drug addiction or other behaviours that will make them forget the fertile and free days, the method will fail and result in unwanted pregnancy". (**Korniji, male respondent).**

One wife indirectly confirmed the above challenge, which does not only negatively affect husbands' intentions and participation in the use of SDM, but also leads to domestic violence.

> *"Men generally are not always happy about the use of counting days but our culture is forcing them to do so. If he has the desire for sexual intercourse today and you deny him and this is continued for one or two weeks, he will get upset, beat you up or refuse to perform other responsibilities in the house as a husband. He will refuse to buy you toiletries, provisions among others. I was once beaten and chased out of the room on one faithful night by my husband because I denied him sexual intercourse during my fertile period".* (**Aanomaalia, female respondent).**

Extrinsic and intrinsic factors such as drug abuse and bad attitudes respectively, appear to render men incapable of participating in SDM use.

Some men are confronted with issues of irregular menstrual cycles of their partners, making it challenging for them to participate in SDM use.

> *My concern is that, sometimes my wife's menstrual period becomes irregular mostly after a sickness and sometimes I don't know what causes it. It therefore becomes confusing and difficult to track or identify her safe period and the dangerous period*. (**Ngozee, male respondent).**

This was confirmed by another female respondent.

> *I have irregular periods. It happens either every 24, 25, 28 and sometimes 30 days. Because of this, I and my husband are always uncertain about my menstrual days. So how will my husband know when I am in my fertile period to abstain from*

coitus? So, I can say it is difficult for him and for me as well. (**Kurema, female respondent).**

Lack of knowledge on how to use the method effectively has a negative impact on men's participation in SDM. This was how one respondent portrayed his knowledge deficit about the method:

"I will say it is difficult to participate in SDM use with my partner. Some of us have little understanding and the patience that is needed to use it effectively". (**Kyereda, male respondent).**

Another male respondent described his knowledge deficiency in participating in SDM use this way:

"……. because I do not have enough knowledge, I have difficulty participating". ***(*Danzinkaar, male respondent).**

The female respondents cited other difficulties encountered by their husbands in addition to inadequate knowledge about the method. One wife had this to say:

*I do not have enough knowledge about how to use SDM with my partner. However, I like it because it does not worry me like the other methods (hormonal methods). My husband has limited knowledge, no patience and lack understanding. I will say it is difficult regarding his participation. (***Aanomaalia, female respondent).**

Finally, male respondents perceived their participation in SDM use challenging because, they do not have the required information and guidance from experts to do so.

4.2.5 Intentions of men to participate in SDM use

These were the perceived motivational factors that influence men to participate in the use of SDM with their partners. These showed how firm men were getting ready to try; how much effort they were planning to put in, to effectively participate in the use of SDM.

From the data gathered, the following themes were derived regarding the efforts and plans men are making to participate or not to participate in SDM use with their partners. These were: intention to participate, intention to discontinue participation and mixed intentions (ambivalence).

4.2.5.1 Intention to participate

Three males indicated how they are motivated intrinsically and also by their wives to support in the use of SDM. Two female respondents confirmed some of these statements.

> *What has even made the use of the artificial methods worst is the fact that, if one runs out of money, you cannot continue to use the method with your partner and this will result in pregnancy. But for the counting days (SDM), it comes at no cost to me, I only need to learn it and to practise. Therefore, I will use this method any day any time*. (**Kyereda, male respondent).**

Other women motivated their husbands to develop interest to participate in SDM use through encouragement and notification of their husbands about their fertile and infertile days:

> *I count the days after my menstruation to identify the fertile and infertile periods then I inform my husband about it, then he abstains from sexual intercourse on the*

unsafe days. This is the one I am also using and it is good for me. I am encouraged to continue using it because it has never failed me and my husband is supportive. (**Ayuo, female respondent).**

This was how a man explained his source of inspiration to continue participating in the use of "counting days":

*"With the encouragement and support from my wife I will continue to participate in its use I will also encourage friends to learn and use it in their marriages because it is good". (***Peeca, male respondent).**

Other men were inspired to continue with the practice by their wives' support

"I may also use counting days because it was the method my parents and grandparents used to prevent and delay child birth and I know it will also be good for me and my wife". **(Yipaaga, male respondent).**

Some women hold the belief that, their husbands' knowledge of perceived side effects and health related concerns raised by users of the hormonal methods are indirectly motivating them to participate or continue participating in SDM use. One of them said:

*Some women find it difficult to conceive again after they have even stopped using the hormonal methods, the woman may conceive but may end up in spontaneous abortion. All these result in divorce or separation. ……. many women and their husbands are afraid of using the hormonal methods. I always encourage my husband to continue supporting me to use counting days. (***Aakuremeh, female respondent).**

4.2.5.2 Intention to discontinue participation

Men in the study were silent about their intention to discontinue participating in SDM use with their partners. However, inferring from their partners' submissions this was what the wives think about their husbands' intentions as indicated in the following quotes:

*"Counting days has ever failed me and my husband was not happy about it. I think if we get education on its use or get a better method of family planning, he may welcome it". (***Kuremah, female respondent).**

Other women perceived their husbands as having intentions to stop participating in SDM use because they claimed to have limited understanding of the method.

Men of today lack understanding relating to the use of counting days method (SDM). Therefore, to be on the safer side I will continue to go for the artificial methods, though I know I may suffer some of the side effects just as I am suffering it now. (**Bayuoma, female respondents).**

Some female respondents subtly presented their husbands' frustration regarding their participation in SDM use as follows:

*The continuation of use of the counting days' methods (SDM) with my husband depends on getting a professional service provider to guide us on how to use the method. If we don't get training, we will stop using counting days, he is aware we are struggling with its use. (**Nuo, female respondent).***

Other women shared similar concerns:

Men are worrying us too much. ..... when we ask them to use condoms, they say no, claiming that sex with condoms do not satisfy them, ……..some men too are wicked, they will make a hole on the tip of the condom and use it for sexual

*intercourse with the intention of making you pregnant. …because of some of these behaviours of theirs, husbands are indirectly telling us to reconsider the injection before it is too late for us. (**Aakuremeh, female respondent).***

4.2.6.3 Mixed intentions to participate in SDM use with their partners

Again, men have not explicitly expressed any uncertainty about participating in SDM with their partners. Two of their wives explained that their husbands' indecisions as:

*"I like the counting days method (SDM) but how to continuously use this with my husband is the problem. My husband sometimes doubts about its effectiveness". **(Nuo, female respondent).***

Some women also indicated their husbands' intentions as:

"I may use the counting days method provided my husband will openly agree and consistently support its use. Sometimes he tries hard to support and other times he is something else. I cannot predict him". (**Aanomaalia, female respondent).**

4.2.6 Participation in SDM use

This presents the actual participation of men in the use of SDM with their partners. The data revealed two themes regarding men's participation in the method use. These are favourable participation and seeking for help.

4.2.6.1 Favourable participation

Four men explained how they participate in counting days use with their partners. These explanations were to some extent in line with what some of their wives presented:

"Me and my wife engage in sexual intercourse after an additional one or two weeks preceding her menstrual flow and this prevents pregnancy". (**Migyima, male respondent).**

This was confirmed by some of their wives though withdrawal or condoms are used when they are in doubt. One wife had this to say:

> *I practise the counting days' method. In the use of this method, we have identified day six (6) to twenty (20) as my fertile period when we usually abstain from sexual intercourse. Meanwhile from day twenty-one (21) to the beginning of the next menstrual period, we engage in unprotected sexual intercourse. When I am not sure of the days, we use condom or withdrawal. This helps to prevent unwanted pregnancies. We have used this method for the past eight years*. (**Kuremah, female respondent).**

Some of the male respondents gave varied days for the fertile and infertile periods of their wives. This was how one male respondent stated the fertile and infertile periods:

> *….in using counting days (SDM) we abstain from sexual intercourse from day six (6) to eleventh (11) of her menstrual cycle. We engage in unprotected sexual intercourse from day twelve (12) till the next menstruation flow begins. By this she cannot get pregnant.* (**Kyereda, male respondent).**

Some male respondents did not specify the fertile and infertile days of their wives' menstrual cycles. However, this was how they managed the safe and unsafe periods as presented by one respondent.

> *"I use the counting days with my wife, but when she is in her fertile period and I cannot abstain or when I am not sure about the fertile and infertile periods, I use condom or withdrawal"*. (**Danzinkaar, male respondent).**

Other female respondents indicated that, they take emergency contraceptives when they are uncertain about their menstrual cycle.

I know that my unsafe period begins immediately after the end of the menstruation (I bleed for 5days) to the 9th day. The remaining days are safe, when I engage in sexual intercourse. Sometimes I take a pill after the act when am not sure. – ***(Aanomaalia, female respondent).***

A covert use of other methods by some wives to help them avoid disgrace and name-calling from the community members was revealed in this woman's narrative.

….. I will most likely go for the artificial methods without letting my husband know, just to save myself the embarrassment and humiliation from the community people, should my husband find it difficult to abstain. After all, men do not carry pregnancy or put babies on their backs. I am the one that people will insult in the community. (**Ayuo, female respondent).**

Also, those in polygamous marriages seem to manage their abstinence by abstaining from coitus with the wife who is most likely to be pregnant, while at the same time engage in coitus with another who is less likely to get pregnant. This was how one husband put it:

"I have two wives, so I move away from one wife who is in her dangerous period to the one that is in her safe period. This is how I practise my counting days". (**Terbom, male respondent).**

This practise in polygamy was confirmed by some women. One wife had this to say:

"I think because we are three wives, he doesn't have problems with periodic abstinence because he gets what he wants every time by going to other wives if I am not ready". (**Ayuo, female respondent).**

4.2.6.2 Seeking help to participate in SDM use with their partners

Respondents requested the services of health professionals especially certified SDM providers to train and guide both current and prospective users of the method. This was what one man said:

> *We will be grateful if a trained professional who is knowledgeable about how to use this method train most of us who are interested or practising the method*. (**Ngozee, male respondent).**

Similarly, this was how another man puts it:

> *……. getting a professional who knows how to effectively use SDM to teach those who want to use it. This will be helpful because I may use only the counting days' method if somebody comes to train us on its use and I am confident I can use it*. (**Danzikaar, male respondent).**

This was confirmed by some of their wives who acknowledged that they need guidance on how to use the method. This was how Kuremah a female respondent presented her request:

> *"I will be happy if we are taught how to practise counting days the proper way. What I know is that, our grandparents who used to practise this method knew it very well"*. (**Kuremah, female respondent).**

A few respondents believed that they have not received adequate guidance on the use of SDM and implicitly called for assistance. She stated this as follows:

> *Some of us know that, what we are practicing is not accurate because, any time I listen to my mother in-law and friends I hear different answers about the fertile period, which ranged from three to one week after menstruation. This cast doubts*

on the truthfulness of the fertile and infertile periods. (**Bayuoma, female respondent).**

4.2.7 Summary of findings

This study set five objectives based on the Theory of Planned Behaviour to explore the factors that determine men's intentions and participation in SDM use with their wives in the Lawra Municipality. Three Focus Group Discussions were carried out with sub-group of men who participated in the first phase of the study (quantitative phase) and some of their wives. Two of the groups were made up of six men in each group and one group consisted of six women. The findings showed that men had varied reasons for wanting to participate or for participating in SDM use with their partners.

Men developed favourable attitudes to participate in SDM use informed by the perceived dual benefits of the method which they claimed help to prevent and achieve pregnancy. They also indicated that, participating in SDM use helps in improving communication, and that it is affordable, that it has no side effects and health related concerns.

Furthermore, men maintained that, cultural norms, encouragement and education on SDM use received from significant others influenced their intentions and continued participation in the use of the method with their partners.

Additionally, polygamy was cited as a control measure for men who cannot abstain periodically. Also, men in monogamous marriages manage the fertile days by using condoms or withdrawal to prevent pregnancy. Another group of monogamous men intimated that, mutual understanding between them and their partners is key to ensuring that they abstain from coitus during the fertile days.

Men had intentions to continue participating in SDM use due to encouragement and support they receive from their partners. This support received is in the form of monthly notification of men (their husbands) about their fertile and infertile days of their menstrual cycles.

This notwithstanding, men's participation in SDM use appeared challenging in view of the short falls of the method and human weaknesses. The perceived weaknesses of the method as cited by the men included perceived unreliability, inability of men to participate in its use due to irregular periods. Also, peer group pressure and drug abuse on the part of men were mentioned as other factors weakening the will power of men to appropriately and effectively participate in SDM use.

The majority of men requested for the services of professionals to provide counselling and education to couples on how to effectively participate in SDM use with their partners due to their limited knowledge. The next chapter will discuss these main findings into detail.

CHAPTER FIVE

DISCUSSION

This chapter discusses the results of the study based on the study objectives. The purpose of this study was to examine the determinants of the use of a natural family planning method (Standard Days Method) among men with their partners in the Lawra Municipality. It was aimed at identifying the factors that predict men's actual participation (reported use) in SDM use, using the Theory of Planned Behaviour (TPB) as a guiding framework.

5.1 Demographic characteristics of respondents

All the respondents in the main quantitative phase were married men with a mean age of approximately 36 years, ranging from 18 to 68 years and six women for the qualitative phase, with a mean age of approximately 38 years. The minimum age of the respondents was in tandem with the minimum age of marriage for males in the Upper West Region of Ghana (GSS, 2012). Almost one-third (32.8%) of the respondents had never been to school and this is in line with the level of illiteracy in the Upper West Region of Ghana which showed that, a little above a third (39.20%) of the population cannot read and write (GSS, 2012). Also, the duration of marriage and the number of children respondents had (alive), had a mean of ten (10) years and three (3) children respectively. The duration of marriage is explained by the youthful nature of the population with more than half of the population of the region under twenty (20) years (GSS, 2012; GSS et al., 2014). Most of the respondents were young who got married not long ago. This can also be due to people's awareness of the need to be economically stable before getting married. Hence, they delayed marriage to learn a trade or get formal

education, get a job so as to meet the needs of their families. Also, the fewer number of children (3) respondents had in the study is in harmony with the total fertility rate of women in the Lawra Municipality of the Upper West Region of Ghana (GSS, 2012).This number may be attributed to respondents' use of effective family planning methods, one of which is SDM to delay pregnancy and limit child birth.

Also, about half (49.50%) of the respondents were Christians which is similar to the 2010 population and housing census findings (GSS, 2012), where majority of the people were reportedly Christians. However, the number is lower than the 2010 census figure because the study was conducted in the dry season and most of the indigents (predominantly Christians) usually travel to the Southern sector of the country during this period to do farming.

5.2 Attitudes of men towards Standard Days Method (SDM) use

Attitude is an integral part of every individual's thoughts and it controls whether or not the individual performs a particular behaviour. This attitude of the individual is ever changing in relation to the kind of behaviour to be performed (Bhugra & Cutter, 2001). A favourable attitude will result in the performance of a behaviour of interest, while an unfavourable attitude will lead to a non-performance of the behaviour. However, not all favourable attitudes lead to behaviour (Ajzen., 1985).

The results obtained from the study showed that, men had favourable attitudes to participate in SDM use which corroborates the findings of a study in Pakistan (Kamran et al., 2015), where men had preferences and favourable attitudes towards modern contraceptive methods. Men in the current study had favourable attitudes to participate in SDM use because, they claimed using the method gives sexual satisfaction, helps prevent

and achieve pregnancies as well as help to improve communication between them and their partners. The qualitative study findings also confirmed this assertion but also highlighted the challenges that come with men's participation such as conflicts and domestic violence.

In the present study, the majority of men (81.30%) agreed to participate in SDM use with their wives on grounds that, it guarantees sexual pleasure compared to using condom. This seems to partly explain men's development of positive attitudes towards participation. This was evident in the focus group discussion findings, where men argued that, a "wrapped candy" cannot be enjoyed unless one takes off the covering. Further evaluation of men's attitudes towards the use of SDM found that, 85.80% of them said it was important for them to participate in SDM use with their partners for purposes of sexual satisfaction. This appeared to be the second highest indicator for men wanting to participate in SDM use with their partners in the study. This was confirmed in the FGD with both men and their partners explaining that using condoms for sexual intercourse makes the sexual encounter unsatisfactory unlike SDM as found in another study (Mulumeoderhwa, 2018). Also, traditional beliefs and cultural norms were seemingly the major reasons for men wanting to participate in SDM use with their partners. They asserted that, SDM is a birth control method similar to an old system of family planning (only infertile periods of the woman's menstrual cycle are identified and used to engage in coitus) which their grandparents and parents used to delay and prevent child birth and that, their participation in its use is a continuation and respect for their culture.

Furthermore, more than two-thirds (70.20%) of men agreed that using SDM with their partners prevents unwanted pregnancy and this seems to contribute to their level of

satisfaction and acceptance to participate in SDM use with their partners. They further lamented in the FGD findings over perceived side effects and health related concerns raised by past and current users of hormonal methods of family planning as contributory to their decisions to participate in the use of SDM. They again explained that, users of hormonal contraceptive methods stand the risks of suffering infertility, developing cancer related conditions and giving birth to children with deformities or giving birth to children who may develop abnormalities in the future. They also argued that, participating in SDM use is effective. These findings are similar to findings of other studies (Kursun et al., 2014; Sedgh et al., 2016; Sedgh et al., 2006; Uprety, Khatri, Baral, Regmi, & MacDonald, 2016), where issues of fear and experience of side effects or health related concerns and cost influenced family planning use.

Additionally, it appeared men's desire to achieve their reproductive intentions of preventing pregnancy and delaying childbirth while ensuring their wives do not experience these perceived side effects motivates them indirectly to participate in the use of SDM. This finding is consistent with that of an integrative literature review conducted in Singapore, which found that, fathers who have positive attitudes towards the health matters of their wives, got involved in their wives' pregnancy and child birth (Xue, Shorey, Wang, & He, 2018). The finding is also similar to Zvara, Schoppe-Sullivan, and Dush (2013) study findings in California which revealed that, men's attendance of antenatal clinic (ANC) with their wives led to the development of good attitudes and continued participation in ANC activities.

In addition, the majority (86.80%) of men further intimated that, using SDM to prevent unwanted pregnancies is important to them. This was the highest indicator of

men's attitude score towards SDM use with their partners. This probably means that, men are satisfied with the use of the method to delay pregnancy. It was also obvious in the FGDs with both men and their wives that, the method is effective in preventing pregnancy, provided partners have mutual understanding and motivation to use it, as found in Fehring, Schneider, Barron, et al. (2013) scholarly work.

The qualitative findings revealed that, couples perceived SDM as the best method for controlling and limiting child birth, though some couples did not agree in principle to use this method. This disagreement between some wives and their husbands was evidenced by the covert use of injectables by some wives to protect themselves against possible failure of the SDM method. Men however perceived their participation in SDM use with their wives as effective and part of their everyday married life. Meanwhile, some of their wives were practising SDM in addition to other methods.

Also, the majority of men (82.40%) agreed that, using SDM improves communication between them and their partners as found in other studies (Amu et al., 2017; Arévalo et al., 2002; Capurchande et al., 2017; Wilson, 2002). This is probably because men have to, in agreement with their partners, monitor and ensure that, the menstrual cycle's duration of 26 to 32 days works for them in order to choose and use SDM. Following this, continuous and effective daily interaction is needed between couples for them to know when the menstrual flow will begin and end for an estimation of the fertile and infertile days. This continuous engagement between couples possibly fosters cohesion, understanding and love.

The importance of communication in every family is critical and cannot be over emphasized. It is a medium for planning and taking decisions between husbands and their

wives concerning child care and reproductive health services. Through communication couples are able to decide the number of children to have, at what time to have them and the kind of family planning services to use (Dehlendorf et al., 2016). This observation is similar to the findings of the current study, where men participated in SDM use to improve communication between them and their partners revealed the majority of them (82.60%) suggesting that, it is important for them to participate in SDM use to improve communication. Other study findings contradicted some of the current study outcomes (Bukar et al., 2013; Croce-Galis, Salazar, & Lundgren, 2014; Kamran et al., 2013; Kamran et al., 2015), where in patriarchal societies decision making is dominated by men with the views of women least considered in their marital homes. As a result, communication between men and women in these societies appeared to be of little importance to men. Meanwhile, findings of other studies confirmed this study finding that, men have a strong stake in women's family planning decisions making in relation to the kind of method they wish to use (Bukar et al., 2013; Geleta et al., 2015; Yadav, Singh, & Goswami, 2010). This suggests that, men appear to have reservations about the views of their partners regarding sexual and reproductive health services.

5.3 Subjective norms of men about SDM with their partners

An individual's tendency to behave in a particular manner is partly influenced by the approval or disapproval of the individual's behaviour by significant others, people the individual trusts or holds in high esteem. Family members, trusted friends, trusted health care providers and religious leaders are mostly the significant others guiding individual's actions and inactions (Ajzen., 1985; Akin & Rous, 1997; Bandura, 1977).

In the current study, the majority of men (83.10%) considered that, it is important their partners approve their participation in the use of SDM. The study findings also revealed that, the majority (69.90%) of men indicated that their partners encourage them to participate in the use of SDM. This may imply that, men's participation in SDM use with their partners is influenced by their partners' approval. This was also supported by the focus group discussion findings, where some of the wives of these men indicated their influential roles on their husband's participation, where they give monthly notification of their fertile and infertile days to their husbands. The disadvantages of the hormonal methods of FP (side effects and health related concerns) seem to indirectly encourage men to participate in SDM use. Men's participation might also have been motivated by the supposed challenges some wives might have learnt from users of other modern family planning methods or personal experiences. Also, the benefits of using the method to prevent and achieve pregnancies as explained by some wives might have informed men's involvement. This is similar to what was found in other studies (Kabonga et al., 2010; Kamran et al., 2013; Kamran et al., 2015; Pallone & Bergus, 2009; Smoley & Robinson, 2012). Another reason supporting this finding was that, men perceived family planning as the responsibility of their wives and therefore expected them to take decisions in that respect (Uprety et al., 2016). Hence, some wives recommended this method to their husbands. This finding contradicts the findings of a study in Nigeria which shared that, men have interest and play active roles in family planning decision making (Sedgh et al., 2006). The variance in these findings might be due to differences in cultural beliefs and norms in the two countries and settings.

Furthermore, the educative roles played by men's trusted associates and partners on how to participate in SDM use influence their intentions and participation. However, some couples think that, the information received from these referent others are inappropriate, deficient in content and cannot be relied upon for the purpose of preventing pregnancy. Nonetheless, the qualitative focus group discussion findings succinctly showed that significant others played vital roles in the dissemination of information about SDM from one generation to the other, though incorrectly done as asserted by some female respondents. Male respondents on the other hand were inclined to believing and trusting that their wives had the right kind of information required for the use of SDM, while they as husbands, played supportive roles. Meanwhile, a cross section of their wives in the focus group discussion findings displayed inadequate knowledge about how to use the method.

This notwithstanding, one male and one female respondent were able to state the correct dates of the fertile and infertile periods. Some husbands exhibited adequate knowledge of participation in SDM use based on reported abstinence during the fertile periods. For instance, one wife stated that, the fertile period of her menstrual period ranged from day 6 to day 20, while the man's answer cited as day 5 to day 19 of the woman's menstrual cycle. This finding is in line with the correct period of low probability of pregnancy (Arévalo et al., 1999), though there are some extremes. This finding is different from a study outcome in Nigeria which established that, all the males and females in the study exhibited correct knowledge of the fertile period. The respondents in the Nigerian study were all users of SDM while in my study, the respondents were not all known users of SDM. This might be the reason for this difference in the finding.

Additionally, cultural and traditional norms and beliefs are reported to have a dominant role at influencing men's intentions regarding their participation in SDM use. This is similar to findings from other studies where traditional beliefs influenced the use of modern contraceptives (Babalola, Kusemiju, Calhoun, Corroon, & Ajao, 2015; Gueye, Speizer, Corroon, & Okigbo, 2015; Sedlander et al., 2018). These norms and beliefs were elicited from the qualitative findings of the current study, where it was found to be reported as a taboo for men to eat food prepared by their wives and share items with their wives when they are in their menstrual periods. As part of their beliefs, men are temporarily separated from their wives in the matrimonial room for a specified period. This practise coincides with the fertile periods of the wives' menstrual cycle and the practice acts as a form of periodic abstinence for the men. In Nigeria, cultural beliefs of hormonal methods of birth control as a foreign idea positively influenced men's intentions and participation in SDM use (Ujuju et al., 2011).

The results further showed that 52.20%, 56.10% and 66.90% of men said it was not important for family members, friends and religious leaders respectively to give approval for them to participate in SDM use with their partners. The study results further revealed that 67.40%, 62.50% and 70.50% of the men disagreed that their family, friends and religious leaders respectively, encouraged them to participate in the use of SDM. These results were justified in the qualitative results. Some of the couples affirmed that, the knowledge and skills received from their family members and mothers-in-law to effectively participate were inappropriate. In an attempt to clarify this position, some wives explained that, different people stated varied views on the fertile and infertile periods of the menstrual cycle. This accordingly cast doubts on the accuracy and usability

of the information received for the purpose of preventing pregnancy. This assertion was further confirmed by both men and women as they requested for the services of a skilled family planning service provider to sensitize them on how to effectively participate in SDM use.

This finding is not consistent with the position of Ajzen. (1985) in the theory of planned behaviour which postulates that, supportive subjective norms of referent others are relevant considerations (in addition to other factors) in an individual's intentions and performance of a behaviour of interest. It was expected that, men would consider the views and opinions of significant others as important regarding their decision to participate in SDM, however this was not the case. Also, a study finding in Nigeria identified the roles of community and religious leaders as helpful in the provision of information about SDM and where to receive services were reported to positively influence men's intentions and participation in SDM use (Ujuju et al., 2011).

These discrepancies in findings between my study and that of other studies might be due to a limited trust some men might have for their significant others in relation to SDM use and differences in beliefs about family planning use in the two settings (Nigeria and Ghana).

5.4 Perceived behavioural control of men to participate in SDM use

The ability of an individual to perform a behaviour is a function of the presence or absence of knowledge, abilities and skills to execute that behaviour (Ajzen., 1985). The ability of men to participate in SDM use is most likely to be influenced by some of these factors in addition to periodically abstaining from coitus or use other protective FP devices to avoid pregnancy.

Findings from this study revealed that, about half of the men disagreed that it was difficult for them to participate in SDM use with their partners. Although the men claimed they had no difficulty abstaining periodically from coitus during periods of high probabilities of pregnancy, they exhibited inadequate knowledge about the fertile and infertile periods of their partners' menstrual cycles as similarly reported in a study where men exhibited limited knowledge about SDM (Lundgren et al., 2012). This was also obvious in the focus group discussion findings where some men affirmed this knowledge deficiency. This finding was again confirmed by some of their wives, who demonstrated inadequate knowledge about SDM use as inaccurate responses were given to questions posed on effective ways of participating in SDM use to prevent pregnancy, unlike reported study findings in Nigeria, where majority of the men in the study had good knowledge of SDM use (Ujuju et al., 2011).

Furthermore, men explained how they were able to withstand or overcome difficulties associated with periodic abstinence during periods of high probabilities of pregnancy in monogamous and polygamous marriages. Some men in monogamous marriages claimed they exercised a great deal of restrain and understanding during this period. Other men with difficulties abstaining during the fertile period went into polygamous marriages as an effective measure to manage or overcome their difficulties. These men periodically abstained from coitus with one wife who might be in her fertile period whiles engaging in coitus with the other wife who might be in her infertile period as found in other studies (Kamran et al., 2013; Kamran et al., 2015; Ujuju et al., 2011).

The evaluation of men's behaviour outcomes relating to their participation in SDM use showed that, they were less likely (64.70%) to use the method with their partners if it

turns out to be difficult for them to do so. This difficulty appeared to be due to limited knowledge and self-control on abstaining from coitus as indicated in the focus group discussion findings. This finding corroborates the study finding in Myanmar (Burma) where knowledge influenced married males' involvement in maternal and newborn care (Ampt et al., 2015). In other studies, knowledge and experiences of the side effects of hormonal contraceptives influences men's intentions and participation in SDM use.

In evaluating men's behaviour outcomes relating to their perceived behavioural control to participate in SDM use with their partners, it was established that, if it was difficult for them to participate in the use of SDM, they were less likely (64.70%) to participate in its use. This appeared to imply that, men might not participate in the use of this method or stop participating in its use if they encounter challenges with their involvement. This proposition was supported by the FGD findings, where some of their wives pointed out that, their husbands found it difficult to abstain from coitus during the fertile periods. Other married women further explained that, their husbands sometimes compelled them to adopt preventive strategies to avoid unintended pregnancies during the fertile period. These women claimed that, they either persuaded their husbands to either periodically abstain from coitus or to use other modern family planning methods during the fertile period. Few husbands occasionally grant the request and use condoms, emergency contraceptives or ineffective traditional methods such as the withdrawal as documented in other studies (Bekele & Fantahun, 2012; Kamran et al., 2013; Kamran et al., 2015), where men managed the fertile periods of their partners by using condoms or withdrawals. Unfortunately for some women who failed to effectively persuade their

husbands to use other family planning, some wives are sometimes subjected to verbal and physical abuses in the process.

The fertility-based awareness method of FP is documented as effective at achieving desired results (preventing or achieving pregnancy) for couples who have mutual understanding, motivation and effective communication between them (Capurchande et al., 2017; Witt et al., 2013). These findings are similar to what was found in the current study, where more than half (60.80%) of the men expressed confidence in their ability to participate in SDM use with their wives. This confidence was evident and explained in the FGD sessions. The men explained that, they exercised a great deal of patience and understanding in communicating with their wives during the fertile periods and on other matters relating to the family. Other men indicated that, they were able to abstain from coitus because they knew this was temporary and that, they owed it a duty to support their wives to avoid the perceived side effects and health related concerns associated with the use of the hormonal methods.

Furthermore, a study conducted in Kenya to ascertain how the use of SDM with CycleBeads could help prevent pregnancy among couples, established that couples manage their fertile periods using other preventive strategies (Shelus, Ashcroft, Burgess, Giuffrida, & Jennings, 2017). This is in line with the current study findings, where men (husbands) manage the fertile periods by adopting non-sexual related activities that take their minds off sexual pleasures and desires. For instance, in the focus group discussion, men indicated that, during the fertile periods, they engaged their wives in Bible discussions, visiting friends and spending the night in separate rooms. However, other men managed the fertile period by either engaging in protected sexual intercourse using

male condoms or coitus interruptus as reported in another study (Bekele & Fantahun, 2012). The practice of managing the fertile period using coitus interruptus poses many pregnancy risks. There is an urgent need for healthcare professionals to provide education to men and their partners on the high rates of failure associated with the use of coitus interruptus to prevent pregnancy. Also, a full package of modern family planning methods should be included in the education programme for couples to help them make other informed choices.

Further, evaluation of the level of confidence men had towards participating in SDM use showed that men were likely (76.80%) to use SDM with their partners to prevent pregnancy if they were confident that they could use the method. This suggests that, men's ability to use the method is partly depended on their confidence level. This intrinsic energy might come about when men get the required knowledge and skills to help them participate effectively in the use of the method. Similarly, this confidence will help men in initiating and engaging their partners in effective communication to aid in developing trust, respect and love for each other which will promote use of the method. Through the development of trust and love in the marriage, other ways of expressing intimacy for each other during the fertile periods may be learnt and used without necessarily resorting to coitus (Fehring, Schneider, Barron, et al., 2013; Unseld et al., 2017).

Governments, healthcare professionals and practitioners of fertility-based methods of family planning must involve men in decision making and education on SDM in order to provide the level of understanding and confidence required for them to actively participate in its use.

This notwithstanding, the decision of men to participate in SDM use showed that, almost half of them (48.80%) do not have control over the use of the method. This is due to the same reason of limited knowledge about how to effectively participate in the method use, or problems of periodic abstinence associated with managing the fertile period. Some men believed and trusted that their wives had a better understanding of how to use SDM to prevent pregnancy. Men in monogamous marriages who had limited control over the use of SDM sometimes force to engage in with their reluctant wives. Some of them also abused their wives to compel them to comply to what give out what they considered as their right as reported in the FGD sessions. Some men appeared to hold the idea that, marrying more than one wife is a lasting solution to their challenge of lack of self-control in SDM as found in another study (Shelus et al., 2017).

Finally, considering men's level of control over their participation in SDM use with their partners, it was revealed that, they are less likely (73.50%) to participate in SDM use if the decision to do so is beyond their control. It was established that, effective participation and use of SDM by couples depend on getting the right kind of training and information from professional service providers to achieve desired results. In addition, couples who desire to use this method must be highly motivated and committed for the method to be effective. In view of this, it can be predicted that men who are deficient in these areas are most likely to have difficulties using the method. Also, certain changes (diseases), including change in diet may alter the regularity of the menstrual cycle of the women thereby making men's use of the method less likely.

It could be that, men do not have the requisite knowledge, skills and disposition to accommodate the challenges (such as periodic abstinence) associated with SDM use but

have to rely solely on their wives, health professionals and significant others for information to effectively participate. This has implications for couples. In most cultures where male domination is strong, women may be prevented from using other family planning methods. There is an urgent need to engage men to discuss matters of family planning including male-dominated cultural norms and challenges confronting their effective participation in SDM use in such communities.

5.5 Men's intentions to use SDM with their partners

In this study, the majority of men (66.5%) had intentions to participate in SDM use with their partners because they thought that it was important to do so. This suggests that men view SDM as an important birth control method for preventing pregnancy and delaying child birth. This result is consistent with a Kenyan study which found that, using SDM with the aid of the CycleBead is good at preventing pregnancy among couples (Shelus et al., 2017). This study's finding is also in line with Yadav et al. (2010) scholarly work in rural Ballabgarh- India, where husbands had greater intentions towards family planning services because, it helps them to limit and space child birth. However, a study conducted in Ethiopia revealed that, men's intention to participate in SDM use was influenced by the fact that the method has no side effects and it is easy to use (Bekele & Fantahun, 2012).

Also, results from the focus group discussion revealed that men's intention to participate or continue participating in SDM was due to their personal motivation and commitment to do so in addition to support and encouragement they received from their partners. Men's main sources of encouragement was claimed to be from their wives who observe and inform their husbands about the fertile and infertile days of their cycles.

Secondly, culture was also perceived by men as the major reason behind their continuous desire and participation in the use of SDM. This was not only seen by men as a show of respect for their culture and traditions but also, for ensuring the continuity of the use of SDM, which they claimed is effective at preventing pregnancies. This is similar to a study finding where respondents were willing to continue using SDM to prevent pregnancy (Bekele & Fantahun, 2012). Thirdly, the focus group discussion results further showed that, men's knowledge of side effects and health related risks as reported by some users of the hormonal methods of family planning invariably motivated them to have interest to participate or continue participating in SDM use with their partners.

However, some of qualitative findings in the study outlined the difficulties some men had in participating in SDM use due to their inability to consistently observe periodic abstinence during the fertile period. Meanwhile, these men dislike the use of hormonal contraceptives. As a result, their wives reported that, they covertly use the injectable methods to protect themselves against unwanted pregnancies. This corroborates with a study finding in South Sudan, where culture prevents women from using a family planning method, yet they had concealed use of the methods to avoid pregnancy (Tancioco, Perry, Sim, & Sridhar, 2016). This calls for an engagement between traditional and community leaders to discuss on alternative

The perspectives of some wives about whether or not their husbands had intentions to participate or continue participating in SDM use indicated that, men were divided between participation and discontinuation of SDM use. However, they eventually affirmed that their husbands and community members were against the use of the injectable methods of FP and other modern hormonal methods of birth control. This in line with

other studies (Kursun et al., 2014; Tancioco et al., 2016) which revealed partners opposition to the use of family planning due to experience or fear of side effects of contraceptives.

Men who had intentions to continue participating in SDM use cited cultural taboos and personal dislikes for hormonal methods of family planning method as contributing to their positive intentions as found in another study (Bekele & Fantahun, 2012). Hence, the need to participate or continue participating in SDM use. Also, those planning to discontinue participating in SDM use complained about their limited knowledge and inability to consistently and periodically abstain from coitus during the fertile period. Nonetheless, some couples were willing and participating in the use of SDM in combination with other methods such as the male condom and withdrawal to engage in sexual intercourse during the fertile period.

Conversely, most husbands expressed satisfaction with the use of the method and indicated their full intention to continue participating in its use with their wives on the grounds that, it is culturally friendly and that, it is at no cost to them. This finding is similar to a study's finding in Pakistan, where men had intentions to use family planning to prevent pregnancy because of financial and economic challenges including child care and inflation (Kamran et al., 2013; Kamran et al., 2015).

The majority of men (67.90% & 60.20%) in the study agreed that they were trying as well as planning to use SDM with their partners respectively. This suggests that men who are currently involved or planning to get involved in SDM use are committed to participating in the use of this method with their partners to prevent pregnancies, regardless of the difficulties and limited control they have over their involvement. Their

motivation to participate or continue participating in SDM may be due to the benefits they are deriving from it or the potential benefits they stand to get as found in other studies (Bekele & Fantahun, 2012; Kamran et al., 2013; Kamran et al., 2015).

On the relationship between men's attitudes and intentions, this study found a moderate significant positive relationship between men's intentions and attitudes ($r = 0.55$, $p < 0$ .001) to participate in SDM use with their partners. This suggests that favourable attitudes of men may lead to favourable intentions to participate in SDM use with their partners. This may be due to the fact that men have some knowledge about SDM use especially its benefits (Kamran et al., 2013; Kamran et al., 2015; Ujuju et al., 2011). Also, in the qualitative findings it appeared that, cultural and traditional norms played a major role in influencing men's desire to participate in SDM use. Hence, men mostly desire to participate so as to derive the benefits associated with its use and also to satisfy the cultural and traditional demands. This finding is corroborated with a study finding in Nigeria, which reported that culture and religion influence the use of the Standards Days Methods (Ujuju et al., 2011). However, this contradicts a study finding in Southern Sudan, where culture and husbands' opposition prevented their wives from using family planning (Tancioco et al., 2016).

Also, on the relationship between men's intentions and subjective norms about SDM, this study found a weak significant positive relationship between men's intentions and subjective norms ($r = 0.18$, $p < 0.001$). This suggests that, supportive subjective norms of men result in the development of favourable intentions to participate in SDM use with their partners. This suggests that men had more trust in the views and opinions of their wives regarding the choice of SDM as a family planning method. However, further

findings revealed that, family members, friends and religious leaders do not play significant roles in men's intentions to participate in the use of SDM. This may be due to men having little trust for these referent others. The focus group discussion revealed similar findings but acknowledged the importance of grandparents, parents and trusted friends as helpful in their knowledge acquisition regarding SDM use. This merits mention, that the pieces of information received from referent others are inadequate or inappropriate for the effective practise of SDM as explained by a cross section of their wives as the fertile and infertile days were noted to be wrong. This study finding is inconsistent with a study finding in Pakistan where fathers-in-law, mothers-in-law and wives influenced men's intentions to participate in the use of family planning. The findings further showed that, a male service provider and societal pressure on men to have more children, negatively influenced men's participation in SDM use (Mustafa et al., 2015).

Furthermore, on the relationship between men's intentions and perceived behavioural control, a small significant positive relationship was found between men's intentions and perceived behavioural control to participate in SDM use ($r = 0.23$, $p < 0.001$). This suggests that, men's ability to have control over factors that inhibit or promote their participation in SDM use lead to favourable intentions to participate. The prevailing traditional and cultural taboos mentioned in the qualitative findings restraining men from having any close relationship or having coitus with their partners during the fertile period. This seemed a good control measure for men, which directly influence their intentions to participate. It may also be due to the qualitative findings that, polygamy is a good control measure for some men to periodically abstain from coitus during the fertile period with the wife who may be in her fertile period but have coitus with another wife

who may be in her safe period as found in other studies (Kamran et al., 2013; Kamran et al., 2015; Ujuju et al., 2011).

Additionally, on the relationship between men's attitudes and subjective norms, a small significant positive relationship was found between their attitudes and subjective norms about participating in SDM use ($r = 0.37$, $P < 0.001$). This may mean that, men had favourable attitudes to participate in the use of SDM, making them agree with the supportive subjective norms of significant others or favourable subjective norms of referent others caused men to develop positive or favourable attitudes to participate in the use of SDM. This finding was confirmed by findings of the focus group discussion, where wives' opinions and societal norms influenced men's attitudes to participate in the use of SDM with their partners. These influential roles of wives and culture/tradition influence men's intentions through encouragement and enforcement of societal taboos that prohibit them from coitus during the fertile period. This finding is in line with other studies where positive attitudes of wives (easy to use nature of the method and no side effects) and family planning service providers influenced men's development of positive attitudes to participate or accept the use of family planning methods (Ujuju et al., 2011).

Also, a small significant positive relationship was found between men's attitudes and perceived behavioural controls over their participation in SDM use ($r = 0.22$, $P < 0.001$). The ability of men to manage their sexual desires during the fertile periods by abstaining, using condoms or withdrawal method appeared to influence the development of positive and or favourable attitudes among men towards participating in the use of SDM as found in other studies (Bekele & Fantahun, 2012; Kamran et al., 2013; Kamran et al., 2015).

However, men's attitudes (OR = 1.07, 95%CI = 1.05 – 1.09, p < 0.001) and perceived behavioural control (OR= 1.02, 95%CI = 1.01 – 1.03, p = 0.006) about SDM influenced their intentions to participate in the use of the method with their partners.

There is the need for education and counselling for men on SDM and how to effectively participate in its use. This will provide them with the required information and skills set relating to the use of the method and also enhance the development of positive attitudes towards participation.

5.6 Predictors of men's participation in SDM use with their partners

An individual's intention to perform a health related behaviour is established to be influenced by a host of factors (De Vries, Dijkstra, & Kuhlman, 1988; Jose et al., 2016; Martins, Alves, Chaves, Canavarro, & Pereira, 2019). However, the combination of attitudes, subjective norms and perceived behavioural control seems to accurately predict behavioural intentions (Godin & Kok, 1996; Schifter & Ajzen, 1985). Hence, the use of these factors to determine how each influences men's participation in SDM use is crucial.

On the relationship between men's attitudes, subjective norms, perceived behavioural control, intentions and participation in the use of SDM, no significant relationship was established between attitudes (p = 0.98), subjective norms (p = 0.70), perceived behavioural control (p =0.50), intentions (p = 0.99) and their participation in SDM use with their partners. This means that, men's favourable attitudes, subjective norms, perceived behavioural control and intentions are not directly related to their participation in SDM use. This suggests that men's participation in SDM use is not directly dependent on favourable attitudes, supportive subjective norms, favourable perceived behavioural controls and favourable intentions or vice versa but there are other

factors that come into play. Men participated in the use of SDM with their partners regardless of whether they had favourable intentions, supportive subjective norms, favourable attitudes and perceived behavioural controls or not. This finding is in line with a study finding in Uganda, where men's knowledge about the importance of natural family planning use such as increased sexual satisfaction and the promotion of communication between partners did not translate into significant use of any of the methods but rather, the artificial methods (Nakiboneka. & Maniple., 2008).

The reasons for this outcome may be explained by their beliefs about the use of SDM as having cultural and traditional significance in their marriage and community lives. Whether men are comfortable with the use of the method or not, they are mandated to do so for purposes of continuing their cultural heritage, from one generation to the other as shown in the qualitative findings. Another reason attributable to this finding could be explained partly by the little trust men had for information received from their significant others relating to the fertile and infertile days of their partners to help them participate effectively. This was obvious in the focus group discussion findings. Men's participation in SDM use was based on the belief that it is the best method and that, every married couple should use it. This informed their desire to continue using the method despite the challenges associated with. Despite inadequate knowledge about their participation in the method, men were determined to cooperate with their wives to prevent pregnancy. However, a study finding in Ethiopia revealed that, men's continued use of SDM was due to perceived ease of use of the method and the absence of side effects (Bekele & Fantahun, 2012).

The extant literature on the relationship between human intentions and behaviour established that, not all intentions lead to actual behaviour (Ajzen., 1985; Asare & Sharma, 2010). This is in line with the current study finding where men's intentions could not predict their participation in the use of SDM with their partners in the study area.

CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents summaries of the entire study and discusses the limitations, implications, conclusions and recommendations based on the study outcomes.

6.1 Summary

The Standard Days Method (SDM) of natural family planning is a cost-effective family planning method approved by WHO as a modern family planning method and accepted by all religions and cultures. It has a dual advantage of helping couples to prevent and achieve pregnancy. It can be used by the majority of individuals and couples who desire to prevent pregnancy but have cultural and religious prohibitions, fear or experience of side effects and health related concerns for other methods. The effective participation of men in the use of this method is key, taking into consideration their ability to abstain during the fertile period or engage in protected sexual intercourse.

This study investigated men's intention and participation in SDM use with their partners focusing on men's attitudes, subjective norms, perceived behavioural controls, behavioural intentions and actual participation in the Lawra Municipality of Ghana. The theory of planned behaviour was adopted as the guiding framework for the study.

The constructs of the theory of planned behaviour were to organize the literature review. A cross-sectional design was used to collect quantitative data using a structured questionnaire. A sample of 433 married men were randomly selected from a population of 26,347 men. A fairly representative sample was recruited from the population of married men in the Lawra Municipality. The questionnaire used for the study was structured into

two sections: section one was made up of the beliefs, intentions and participation of men in the use of SDM, while section two covered the demographic data of the research respondents. Ethical clearance was obtained from the Institutional Review Board of the Noguchi Memorial Institute for Medical Research, University of Ghana. In addition to an introductory letter obtained from the School of Nursing and Midwifery, permission was sought from married men in the communities where data was collected. Data was collected from all the sampled communities with the help of two trained research assistants.

Analysis of the data was done using Statistical Package for Social Sciences (SPSS) version 23.0. Descriptive statistics, such as means and standard deviations were used to summarize the data on men's attitudes, subjective norms, perceived behavioural controls and intentions to participate in SDM use with their partners. Pearson's correlation was used to test the relationship between men's attitudes, subjective norms, perceived behavioural controls and intentions to participation in SDM use with their partners. Binary logistic regression analysis was performed to determine the extent to which men's intentions predicted their participation in SDM use with their partners.

Findings from the study revealed that, almost half (49.50%) of the respondents were Christians and almost a third were Traditionalists. Also, the majority of the respondents (64.60%) were literates. The mean age of the respondents was approximately 36 years.

The majority (74%) of men had favourable intentions to participate in SDM use with their partners. These favourable intentions were influenced by their partners encouragement and notifications of their husbands about the fertile and infertile days of

their menstrual cycles. In addition, cultural and traditional norms played a major role in influencing men's intentions to participate in SDM use with their partners. However, some married men had challenges participating in SDM use due to limited knowledge about the method and difficulty with abstinence.

Finally, no variable or construct of the Theory of Planned Behaviour was able to predict men's participation in SDM use with their partners.

6.2 Implications

The implications of the study findings with respect to nursing practise, nursing scholarship and nursing research are described in the ensuing sections.

6.2.1 Nursing Practice

Nearly every man participated in SDM use with their partners though none of the factors was able to predict their participation. This was so because SDM is a widely accepted and an approved method of birth control for couples in their communities and its use is in conformity with their customs and traditions. The need for family planning service providers to engage traditional rulers and couples in these communities to educate them on how to use SDM is crucial so that, the method would be effectively practised to achieve the desired outcomes.

Furthermore, concerns of couples such as side effects and communities' apparent rejection of the use of hormonal methods of family planning were attributable to their choice to participate in the use of SDM. Nursing professionals, whose duty it is to counsel and provide family planning services to clients should endeavour to educate individuals and couples about the side effects of the hormonal contraceptives. Also, the full range of family planning services should be made available and education provided on all the

methods, including SDM for clients to make informed choices. This will ensure that the reproductive rights of couples' at choosing and using a particular kind of modern family planning methods are respected.

Additionally, encouragement and approval of SDM by family members, friends and religious leaders for men seemed to play no role in their intentions and participation. The status quo of providing family planning services to women alone must change to involve their husbands.

The major challenge influencing men's participation in SDM use from the qualitative findings was their limited knowledge on how to effectively participate in the use of the method. The effective participation of men in SDM use is based on accurate knowledge on the method, couple's motivation or strong will power and mutual understanding. Hence, there is the need for effective and continuous counselling on SDM by service providers to clients who desire to use this method.

6.2.2 Nursing Education

The study established that, couples have limited knowledge on SDM and how to effectively use it. Family planning service providers have the duty to counsel clients who need these services. However, only a few of these professionals are certified family planning services providers, with expertise especially in natural family planning methods. To ensure the availability of certified service providers, the curriculum for training nurses and midwives should include detailed information on family planning methods including SDM. This will guarantee that, the graduates will acquire the requisite knowledge during training so as to render relevant and effective services to clients on successful completion of their course.

Education and counselling on family planning during home visiting should identify clients who desire to use them SDM as a family planning method and educate them on its use.

6.2.3 Nursing Research

Although men had little knowledge of FP to participate effectively in SDM, the study established that, the majority of them participated in SDM use with their partners. The experiences couples go through given the limited knowledge (of both couples on SDM) need to be understood. There is therefore the need for further studies on the experiences of couples using the Standard Days Method of natural family planning to prevent pregnancy.

Furthermore, cultural beliefs (though this was not part of the initial variables under study), were identified in the qualitative findings to play a major role in influencing men's intentions and actual participation in SDM use with their partners. There is the need for further studies on the role of culture in influencing family planning decision making among couples.

6.3 Study Limitations

The tool for collecting data might not be absolutely sensitive to assess the true beliefs and intentions of respondents and whether men participated in SDM use with their partners, as commonly found in socially oriented self-reporting studies (Opoku, 2005). Nonetheless, precautionary measures were taken by the researcher to make sure the questionnaire was clear and easy to understand so as to obtain the needed data.

Also, the researcher did not find any specific validated instrument to measure attitudes, subjective norms, perceived behavioural controls, intentions and behaviour of the Theory of Planned Behaviour (TPB) in relation to the study topic. However, a

validated instrument related to sexual health was adopted and modified. Also, caution was taken to ensure validity and reliability of the tools and the entire instrument used. In addition, the cross-sectional survey design may not provide definite information about cause and effect relationships. It was nevertheless used because of the limited time available to the researcher.

The sensitive nature of the study might have made it difficult for some respondents to provide appropriate responses to the items because of the fear of exposing their private sexual relations with their partners to the researchers though they were reassured of confidentiality and anonymity. Furthermore, the study determined men's participation in SDM use based on reported use of the method within three months preceding data collection. Therefore, there is the likelihood of recall bias in the results. Since all the respondents were men in the quantitative phase, it was statistically impossible to conduct any of the statistical tests to test for women's intention to use SDM with their partners.

A few challenges were encountered in the direct translation of the focus group discussion conducted in "Dagaare" and its translation back into English. Although, the researcher understands and speaks both languages fluently, the services of a language expert in "Dagaare" were sought. He listened to the audio recordings of the focus group discussion and also read through the transcripts thoroughly. The minor errors he identified in the translations were corrected in the final transcripts used for the analysis.

6.4 Insights Gained

The entire study has offered me the opportunity to learn and understand varied ways of searching for relevant literature online and organizing them using a theoretical framework.

6.5 Conclusion

The factors that influenced men's intentions to participate in Standard Days Method use were attitudes and perceived behavioural controls. Also, cultural and traditional beliefs influenced men's intentions and use of SDM in the study population. No factor was able to predict the participation of men in SDM with their partners. However, men's actual participation (reported participation) in SDM use was high irrespective of whether or not they had intentions to do so.

6.6 Recommendations

The following recommendations were made based on the findings of the study. These recommendations were directed to: Ministry of Health, Nursing and Midwifery Council of Ghana, Nursing and Midwifery Training Institutions, Clinical agencies and Service providers, Ghana College of Nurses and Midwives and Nurse Researchers.

Ministry of Health

1. Ghana Action for Acceleration on Family Planning 2020 (FP2020) policy framework on revising health insurance benefits package to include family planning methods and services should be broadened to include SDM which will make them free of charge to those who need it.
2. Publicity on the various family planning services or methods should be given equal prominence for people to be well informed about them.

Nursing and Midwifery Council of Ghana

The Nursing and Midwifery Council should;

1. Consider, in the next revision of their curriculum for training Nursing and Midwifery students; introduce a stand-alone course on family planning. This should cover a full

range of all family planning methods including SDM. The course should include both theoretical and practical components.

2. Introduce a practical assessment component of family planning in the final licensing examination for both Nursing and Midwifery students to ascertain the skills and competencies acquired during training.

Nursing and Midwifery Training Institutions

Nursing and Midwifery Training Institutions should:

1. Ensure the curriculum requirement for training Nurses and Midwives on natural family planning are achieved by inculcating into students the theoretical knowledge for service delivery on successful completion.
2. Collaborate with clinical agencies and service providers to train and equip preceptors and mentors to support the practical training of student Nurses and Midwives on SDM.
3. Ensure the required resources for the training of student Nurses and Midwives on SDM are available and properly maintained.
4. Ensure the clinical aspect of the curriculum is well communicated to clinicians or service providers so that trainees are equipped with the required practical skills and evidenced-based knowledge on SDM for practise.

Clinical agencies and service providers

1. Healthcare agencies should provide in-service and refresher training course on SDM to all Nurses and Midwives working in family planning units on current modern family planning methods. New strategies of counselling and educating clients should be included where both husbands and wives are considered users of family planning services, with husbands not seen as playing supportive roles.

2. Service providers should provide men and their partners with the requisite resources and information needed to choose and use SDM.
3. Healthcare agencies should recruit and train nurses and midwives as certified natural family planning service professionals. Clients who prefer to participate or use SDM with their partners should be screened and offered counselling before services are offered to them.
4. Healthcare agencies should set up specialized natural family planning clinics to include SDM. Clients, who for religious and cultural reasons would not want hormonal methods of family planning, will have an opportunity to seek experts' counselling and care on natural family planning methods.
5. Service providers should routinely mention SDM among the routinely offered family planning methods because many men participate in its use with their wives.
6. The Catholic Health Services who champion natural family planning methods should set up and equip natural family planning clinics with the needed resources in their healthcare and other public health facilities to provide expert counselling and care to clients who prefer SDM.

Ghana College of Nurses and Midwives

The Ghana College of Nurses and Midwives should:

1. Consider developing an associate or membership programme for Nursing and Midwifery professionals to specialize in family planning. These professionals would provide expert family planning services including SDM to clients who need them.

Nurse Researchers

It is recommended that:

1. Nurse researchers should replicate this study in other districts and regions.
2. A longitudinal experimental study should be conducted among couples to determine what informs their continuous participation in the use of SDM. This is because men's participation in SDM use with their partners may not be the same as the current study findings because of differences in design.
3. More studies should be conducted in the field of natural family planning to produce collective evidence to inform policy in natural family planning education and practice.

Traditional/Chieftaincy Council of Lawra/Ghana

Based on the study findings, it is essential for the Traditional/Chieftaincy Council of Lawra/Ghana to:

1. Strengthen the advocacy measures on male support for family planning and ensure the implementation of women's reproductive health interventions.

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APPENDIX A: INTRODUCTORY LETTER FROM SCHOOL OF NURSING AND MIDWIFERY

UNIVERSITY OF GHANA
SCHOOL OF NURSING AND MIDWIFERY

Ref. No.: SON/A.12 December 12, 2018

The Chairperson
NMIMR - IRB
P.O. Box LG 581
Univ. of Ghna
Legon.

Dear Sir/Madam,

LETTER OF INTRODUCTION

This is to introduce to you Paschal Koh, an MPhil second year student of the School of Nursing and Midwifery.

The student has done the necessary corrections and the supervisor has approved the revised thesis topic as: **"Determinants of Natural Family Planning use among Men in the Lawra Municipality".**

I hope that the Institutional Review Board of Noguchi will approve the proposal to enable him collect data.

Counting on your usual co-operation.

Thank you.

Yours faithfully,

Dr. (Mrs.) Patience Aniteye
Supervisor

COLLEGE OF HEALTH SCIENCES

P. O. Box LG 43, Legon, Accra, Ghana.
• Telephone: (0) 303 970 801 / 0553 089 267 • Email: nursing@ug.edu.gh • Website: www.nursing.ug.edu.gh

APPENDIX B: ETHICAL CLEARANCE LETTER FROM NOGUCHI MEMORIAL INSTITUTE OF MEDICAL RESEARCH

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979A Constituent of the College of Health Sciences
University of Ghana

INSTITUTIONAL REVIEW BOARD

Phone: 1233-302-916438 (Direct)
233-289-522574
Fax: –233-302-502182/513202
E-mail: nirb@noguchi.ug.edu.gh
Telex No: 2556 UGL. GH

Post Office Box LG 581
Legon, Accra
Ghana

My Ref. No: DF.22
Your Ref. No:

20th November, 2018

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CFN 033/18-19 **IORG 0000908**

On 20th November 2018, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL : **Determinants of natural family planning use among men in the Lawra Municipality**

PRINCIPAL INVESTIGATOR : Paschal Kob, MPhil Cand.

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 19th November, 2019. You are to submit annual reports for continuing review.

Signature of Chair: .....
Mrs. Chris Dadzie
(NMIMR – IRB, Chair)

APPENDIX C: QUESTIONNAIRE

HEALTH AND SAFER SEX BEHAVIOUR SURVEY TOOL

Consent and Directions: This research is voluntary. You may choose not to participate without any consequences. I hope you choose to answer all questions of this research study. However, you may skip any questions you do not want to answer.
The results of this study may be used to help guide and develop programs to improve the health of people in the Lawra Municipality concerning the use of "counting days" or the Standard Days Method (SDM) of natural family planning.
Your responses will be kept strictly anonymous and confidential. Your participation in this survey implies your consent.

Section 1: Please put √ against the response that correctly describes your Standard Days method (SDM) use.

1. Have you had sexual intercourse with your partner within the last three months?

☐ Yes ☐ No

2. Have you ever used SDM during sexual intercourse?

☐ Yes ☐ No (If **NO, skip to question 27**)

3. In the past three months, how many times did you use SDM during sexual intercourse? Please write your response in whole numbers _____

Questions #4 to #6 are about your intentions to use SDM anytime you engage in sexual intercourse with your wife. Where sexual intercourse is defined as vaginal penetration by penis.

Please circle one that reflects your intention toward SDM use with your partner.	Extremely Unlikely						Extremely likely
4. I intend to use SDM every time I engage in sexual intercourse.	1	2	3	4	5	6	7

Please circle one that reflects your intention toward SDM use with your partner.	Definitely false						Definitely True
5. I will try to use SDM every time I engage in sexual intercourse.	1	2	3	4	5	6	7

Please circle one that reflects your intention towards SDM use with your partner.	Strongly Disagree						Strongly Agree
6. I plan to use an SDM every time I engage in sexual intercourse.	1	2	3	4	5	6	7

Questions # 7 to #9 measures your behavioural beliefs about SDM usage with your wife. Please circle each of the following behavioural belief about SDM that describes you.

If I use SDM every time I engage in sexual intercourse with my partner.	Strongly Disagree						Strongly Agree
7. I will enjoy the sexual experience.	1	2	3	4	5	6	7
8. I will prevent unwanted pregnancies.	1	2	3	4	5	6	7
9. I will have an improved/better communication with my partner.	1	2	3	4	5	6	7

Questions # 10 to #12 measure your outcome evaluation about SDM usage with your partner. Please circle each of the following that reflects your attitudes about SDM use.

Please circle the one that reflects your SDM use with your partner.	Extremely Unimportant						Extremely Important
10. My use of SDM to enjoy the sexual experience is…….to me.	-3	-2	-1	0	+1	+2	+3
11. My use of SDM to prevent unwanted pregnancies is ……to me.	-3	-2	-1	0	+1	+2	+3
12. My use of SDM to improve communication between me and my partner is …..to me.	-3	-2	-1	0	+1	+2	+3

Questions # 13 to #16 measure normative beliefs about SDM use with your partner. Please circle each of the following subjective norms about SDM that describes you.

Who encourages you to use SDM?	Strongly Disagree						Strongly Agree
13. My friends encourage me to use SDM whenever I have sexual intercourse.	1	2	3	4	5	6	7
14. My family encourages me to use SDM whenever I have sexual intercourse.	1	2	3	4	5	6	7
15. My partner encourages me to use SDM whenever we have sexual intercourse.	1	2	3	4	5	6	7
16. My religious leader encourages me to use SDM when ever we have sexual intercourse.	1	2	3	4	5	6	7

Questions #12 to #20 measure your motivation to comply with SDM use. Please circle each of the following subjective norms about SDM that describes you.

How important is the approval of the following people to your SDM use?	Not at all Important						Very much Important
17. It is important that my friends approve of my SDM use.	-3	-2	-1	0	+1	+2	+3
18. It is important that my family approves of my SDM use.	-3	-2	-1	0	+1	+2	+3

19.	It is important that my partner approves of my SDM use.	-3	-2	-1	0	+1	+2	+3
20.	It is imprtant that my religious leader approves of my SDM use.	-3	-2	-1	0	+1	+2	+3

Questions #21 to #23 measure your control belief. Please circle each of the following that reflects your perceived behaviour control of SDM use.

	Indicate your ease or difficulty of use of SDM.	Strongly Disagree						Strongly Agree
21.	It is difficult for me to use SDM each time I engage in sexual intercourse.	1	2	3	4	5	6	7
22	I am confident that I can use an SDM during sexual intercourse.	1	2	3	4	5	6	7
23	The decision to use SDM during sexual intercourse is beyond my control.	1	2	3	4	5	6	7

Questions #24 to #26 measure your influence on control belief. Please circle each of the following that reflect your perceived behaviour control of SDM use.

	Indicate what you will do based on your ease or difficulty of SDM use.	Less Likely						More Likely
24.	If it is difficult for me to use SDM each time I engage in sexual intercourse with my partner, I will …….use it.	-3	-2	-1	0	+1	+2	+3
25	If I am confident that I can use an SDM during sexual intercourse with my partner, I will ….. use it.	-3	-2	-1	0	+1	+2	+3
26	If the decision to use SDM during sexual intercourse with my partner is beyond my control, I will ….. use it.	-3	-2	-1	0	+1	+2	+3

Section 2. Demographic data. Please indicate the following about yourself. Responses are anonymous and confidential.

27. How long have you been married or in- union? _____ (years)

28 Number of children_____ (alive)

29. What is your age: _____ (years)

30. Religious affiliation? (Please select one)

☐ Christian_____ (specify denomination) ☐ Muslim

☐ Traditionalist ☐ Others_____ (please specify)

31. What is your level of education? (Please select one)

☐ Graduate degree or higher ☐ Less than high school

☐ Undergraduate ☐ Others_____ (please specify

☐ High school ☐ None

The end

Thank you

APPENDIX D: SEMI-STRUCTURED INTERVIEW GUIDE

DEMOGRAPHIC INFORMATION

Code number ……...

Age: .....

Gender: .....

Religion: .....

Tribe: .....

Educational level: .....

Type of marriage: .....

1. Attitudes towards Standard Days Method (SDM) use

a) Tell me what you know about Natural Family Planning?

b) Why do you practise or not practise NFP?

c) What do you know of Standard Days Method (SDM)?

d) What do you like and what do you not like about SDM?

e) Would you recommend SDM to friends and associates? Why?

2. Subjective norms about SDM use

a) How did you get to know about SDM?

b) Who encourage you to participate in SDM use and why did you agree to participate?

c) What would you say are your spouse's reaction or sentiments about SDM?

d) Is SDM a practise you both like? Why and why not?

3. Perceived behavioural control about SDM use

a) Tell me, the challenges you may have had with SDM use, if any?

b) How do you manage the fertile period?

c) What are your genuine sentiments about SDM?

4. Intention about SDM use

a) What are your plans about SDM use with your partner?

b) Would you continue to participate or use SDM? Why and why not?

c) Tell me generally what your views, sentiments, impressions, likes and dislikes about SDM?

5. Participation in SDM use

a) Share with me the family planning methods you practise, if any?

b) Which (if any) of the natural ones do you practise?

c) Are you practising SDM currently or have you done so in the past?

d) What are your thoughts about SDM practise?

e) If you do practise SDM, tell me about its benefits, efficacy, disadvantages, and other issues with its use?

Thank you.

APPENDIX E: INDIVIDUAL CONSENT FORM

Consent form

Title: Determinants of natural family planning use among men in the Lawra municipality.

Principal Investigator: Paschal Kob

Address: Department of Community Health Nursing,

School of Nursing and Midwifery,

University of Ghana

Post Office Box LG 43.

General Information about Research

The "counting days method" of family planning is an option of family planning individuals and couples can use to prevent or achieve pregnancy. This study is intended to find out factors that determine the interest of men to use the "counting days method" of family planning to prevent pregnancy. You are requested to take part in the study which will last for 20 to 45 minutes. The study will take place in your house or at a place you are comfortable with. You are at liberty to accept or refuse to participate in the study at any point in the course of the study but you will not suffer any consequences. Your name will not be written on the paper containing the questions to be answered and the information you will provide will not be shared with anybody accept my supervisors only.

Possible Risks and Discomforts

Most of the questions to be answered concern your sexual affair with your partner. You are free to decide, either to continue or stop answering the questions at any point in the course of the study.

Possible Benefits

You will not benefit immediately by participating in the study. The study findings will inform family planning service providers and policy makers on factors that influence men's interest to use SDM of natural family planning to guide policy formulation and decision making in the future.

Confidentiality

Any information relating to you such as your name and house number will not be provided in the study. Only the researcher, supervisors and policy makers will be able to access the information you provide. Your name or house number will not be mentioned in any research report or presentation. The information you will provide will be kept in my room safely and destroyed after five years.

Compensation

A bottle of canned malt will be given to you to refresh yourself after the study.

Voluntary Participation and Right to Leave the Research

Participation in this research is voluntary. You can choose either to participate or not. Your choice in either case will be respected and there will be no penalties for the choice you make.

Contacts for Additional Information

If further clarification on the research is needed, you can contact me or my supervisors whose contacts are provided below.

Researcher: Paschal Kob, Department of Community Health Nursing, School of Nursing and Midwifery, University of Ghana.

kobpaschal@gmail.com; pkob@st.ug.edu.gh; 0208099326/0248002500.

Supervisors:

Dr. (Mrs) Patience Aniteye, Department of Community Health Nursing, School of Nursing and Midwifery, University of Ghana. paniteye@ug.edu.gh; patienceaniteye@yahoo.co.uk; 0244681352.

Rev. Dr. Thomas Attuekeh Ndanu, University of Ghana, School of Medicine and Dentistry, tandanu@ug.edu.gh; nutcaresoft@gmail.com; 0244872410/0302662072.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.ug.edu.gh

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title "Determinants of natural family planning use among men in the Lawra municipality" has

been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

Date Name and signature or mark of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____ _____

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____ _____

Date Name Signature of Person Who Obtained Consent

SECTION C – SIGNATURES

I. As the **Student Investigator** on this project, my signature confirms that:

1. I will ensure that all procedures performed under the study will be conducted in accordance with all relevant policies and regulations that govern research involving human participants.
2. I understand that if there is any change from the project as originally approved, I must submit an amendment to the NMIMR- IRB for review and approval prior to its implementation. Where I fail to do so, the amended aspect of the study is invalid.

3. I understand that I will report all serious adverse events associated with the study within seven days verbally and fourteen days in writing.
4. I understand that I will submit progress reports each year for review and renewal. Where I fail to do so, the NMIMR-IRB is mandated to terminate the study upon expiry.
5. I agree that I will submit a final report to the NMIMR-IRB at the end of the study.

Name & Signature of Student: _____ Date: _____

II. As the **Student Supervisor** on this project, my signature confirms that I have read the students work which has been reviewed and approved by the departmental review committee/ scientific and technical committee:

Name & Signature of Supervisor: _____ Date: _____

APPENDIX F: CODES AND THEIR DESCRIPTION

Table 4.13: Codes and their description

CODES	DESCRIPTION
ATT	Attitudes
SBN	Subjective Norm
PBC	Perceived Behavioural Control
INT	Intention
PAT	Participation