



**UNIVERSITI PUTRA MALAYSIA**

***KNOWLEDGE, ATTITUDE AND PRACTICE ON SEXUAL  
INTERCOURSE DURING PREGNANCY AMONG FEMALE STAFFS IN  
UNIVERSITI PUTRA MALAYSIA***

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**KNOWLEDGE, ATTITUDE AND PRACTICE**  
**ON SEXUAL INTERCOURSE DURING PREGNANCY AMONG FEMALE STAFFS IN**  
**UNIVERSITI PUTRA MALAYSIA**

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**ABSTRACT**

**Background:** Sexual intercourse during pregnancy is affected by emotional, psychosocial, hormonal, and anatomical factors and varies during trimesters. This study aims to evaluate knowledge, attitude and practices in sexual intercourse during pregnancy and its associated sociodemographic and obstetric factors.

**Materials and Methods:** The cross-sectional study conducted among female staffs in Universiti Putra Malaysia. A self-administered anonymous Google-form questionnaire using validated Female Sexual Function Index (FSFI) was used. Pearson Chi-Square test used to measure the association between the two variables via SPSS.

**Result:** A total of valid 372 respondents analysed. Overall, 48.1% have good knowledge and 88.4% have good attitude. Only 24.7% of total respondents have female dysfunction during pregnancy. The age group (>40), 100%, and group 26-30, 94.1% have the highest percentage of poor knowledge ( $P = <0.001$ ). Indians have the highest percentage, 71.9%, of good knowledge, followed by Chinese 67.7%, and Malay 41.5%. Despite the increase in education level, the percentage of poor knowledge increases (secondary 4.4%, tertiary 45.6%). Increasing miscarriages also worsens the level of knowledge significantly. Attitude does not seem to be affected significantly with the sociodemographic factors except Hindus have the most negative attitude of 29.2% compared to Muslims 11.2%, Christians 8.8% and Buddhist 5.6% ( $P=0.031$ ). FSD also not significantly associated with the sociodemographic factors. Non-significant association between knowledge and attitude level with overall FSD throughout pregnancy is noted.

**Conclusion:** This study shows low percentage of female sexual dysfunction throughout pregnancy among UPM's female staffs and majority have good knowledge attitude about sexual intercourse in pregnancy.

**Keywords:** Sexual intercourse (SI), pregnancy, Female staffs, Universiti Putra Malaysia (UPM), Female sexual Dysfunction (FSD)



**PENGETAHUAN, SIKAP DAN AMALAN**  
**MENGENAI HUBUNGAN SEKSUAL SEMASA KEHAMILAN ANTARA**  
**KAKITANGAN WANITA DI UNIVERSITI PUTRA MALAYSIA**

Oleh

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**ABSTRAK**

**Pengenalan:** Hubungan seksual semasa kehamilan dipengaruhi oleh faktor emosi, psikososial, hormon, dan anatomi dan berbeza semasa trimester. Terdapat kesalahpahaman dan kepercayaan budaya yang boleh mempengaruhi kehidupan seksual dan seksualiti wanita selama tempoh kehamilan.

**Methodologi:** Satu kajian irisan lintang telah dijalankan dikalangan kakitangan wanita di Universiti Putra Malaysia. Soal selidik tanp nama yang dikendalikan sendiri dibahagikan kepada empat bahagian yang berkaitan dengan ciri sosio-demografi dan sejarah obstetrik, pengetahuan, sikap, dan amalan yang diadaptasi dari Indeks Fungsi Seksual Wanita (IFSW) mengenai hubungan seksual semasa kehamilan digunakan. Data populasi kajian dikumpulkan melalui soal selidik yang menggunakan Google form. Ujian Pearson Chi Square digunakan untuk mengukur hubungan di antara dua pembolehubah.

**Keputusan:** Sebanyak 372 responden yang memenuhi kriteria inklusi dan pengecualian turut serta dalam kajian ini. Kadar tindak balas adalah 27.66%. Terdapat hubungan yang signifikan antara kumpulan umur, etnik, agama, tahap pendidikan dan bilangan keguguran dengan pengetahuan tetapi tidak ada hubungan yang signifikan antara bilangan pariti dan pengetahuan mengenai hubungan seksual semasa kehamilan. Terdapat hubungan yang tidak signifikan antara kumpulan umur, etnik, tahap pendidikan, bilangan pariti dan keguguran dengan sikap tetapi terdapat hubungan yang signifikan antara agama dan sikap terhadap hubungan seksual semasa kehamilan. Terdapat hubungan yang tidak signifikan antara kumpulan umur, etnik, agama, tahap pendidikan, bilangan pariti dan keguguran dengan keseluruhan kadar FSD.

**Konklusi:** Kajian ini mendedahkan kadar peratusan Seksual Disfungsi Wanita dalam kalangan responden daripada staf wanita di Universiti Putra Malaysia adalah rendah.

**Kata kunci:** hubungan seksual, kehamilan, Disfungsi Seksual Wanita, Indeks Fungsi Seksual Wanita



## CERTIFICATION

It is hereby certified that we have read this project dissertation entitled “**KNOWLEDGE, ATTITUDE AND PRACTICE ON SEXUAL INTERCOURSE DURING PREGNANCY AMONG FEMALE STAFFS IN UNIVERSITI PUTRA MALAYSIA**” by Thinnesh A/L Arumugam, Nurhani Binti Masjuki, Nur Fatini Najmina Binti Masod, the project is satisfactory in terms of scope, quality and presentation as fulfilment of the requirements for this module.

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## DECLARATION

We declare that the project is our original work except for quotation and citation which have been duly acknowledged. We also declare that it has not been previously, and it is not concurrently, submitted for any other degree at University Putra Malaysia or at any other institution.

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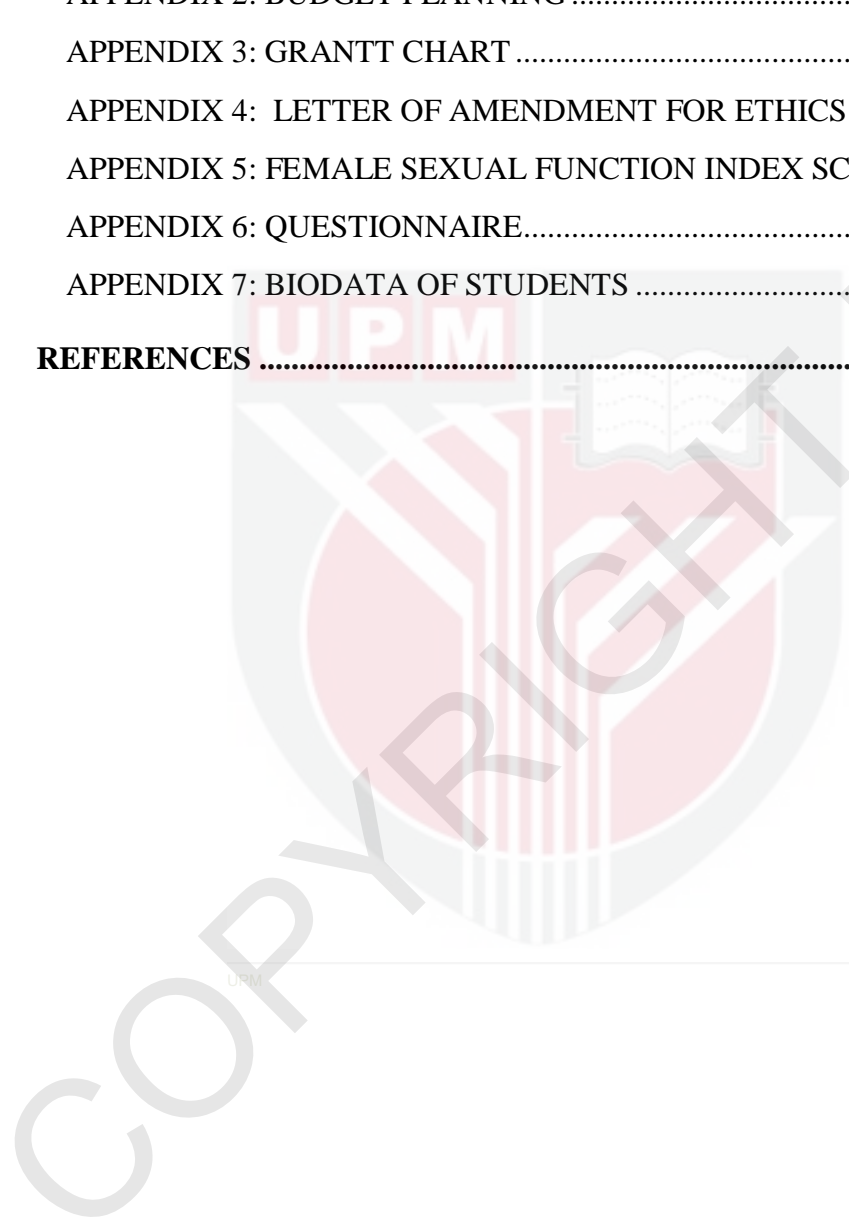
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## LIST OF ABBREVIATION

SI: Sexual Intercourse

FSFI: Female Sexual Function Index

FSD: Female Sexual Dysfunction

UPM: Universiti Putra Malaysia



# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Pregnancy is noted to be a tough period with physical, emotional and physiological alterations for women. Physiological and anatomical changes, such as breast tenderness or growth of the abdomen can decrease sexual desire. Psychological factors, such as changes in women's mental body image, loss of physical attraction to the partner and fear of adverse situations (e.g., abortion, fetal injury and premature labor) [9]. On top of that, there are misconceptions and cultural beliefs that can affect a woman's sexual life and sexuality during these period of life [7]. There is no clear evidence associating hormonal changes in pregnancy with sexual behavioral alterations [3]. Hence, non-hormonal aspects are important to consider also when there are such changes in sexual lifestyle among pregnant mothers. Until today, the topic on sex in pregnancy is hardly discussed by practitioners and most women themselves dare not bring up this subject during their antenatal visits. Despite sex education in schools seem to have taken up interest and shown to be beneficial to young students, education on sex during pregnancy might still be taken a back seat in its awareness.

In Malaysia, it is noted high number of sexual dysfunction during pregnancy in third trimester as compared to first and second trimester is due to lack of desire, woman's negative self-perception of decreased attractiveness, feeling exhausted, anxiety or fear of rupturing the membrane and initiating of the labour process [64]. Furthermore, women's sexual behaviour inevitably affected by both partners; woman sexual belief together with her role as an expecting mother, and her partner's concerns [7,12]. A study done in Germany by Von Sydow et al concurred and also emphasized on the misconceptions concerning the advantages and harms of sexual intercourse throughout these periods [13].

Kiemtore et al reported the pattern of changes in sexual intercourse during pregnancy is affected by misunderstandings and misconceptions regarding consequences of sexual intercourse during pregnancy including miscarriages (19.9%), preterm delivery (8.3%), infection (6.3%), bleeding (3.2%) and pain to the fetus (2.4%) [10]. A study by Bayrami et al. (2009) had shown a reduction SI in pregnancy and 46.6% worried of the harm to the fetus during vaginal intercourse as the important reason [2]. Kheiri & Vakilian (2019) also found sexual desire and activity declined to 1.61% from 6.58% compared with the pre-pregnancy period and the most common problem was fear of detrimental to the fetus and infection during pregnancy [9].

Decreased sexual desire and sexual satisfaction is also attributed to a sense of usual aches and pains of pregnancy. The achievement of orgasm, sexual satisfaction and stimulation are noted to be declined in frequency and length of intercourse as the pregnancy progresses [1]. There is also an increase of pain during sexual activity [1,53]. On the other hand, there are some studies showed those with higher level of education had increased libido during pregnancy, resulting in more sexual intercourse [5].

Self-esteem and relationships of couples can adversely affect women's quality of life attributed to sexual dysfunction. The fears, concerns, and negative attitudes towards sex during pregnancy can have a negative impact on the sexual relationship and sexual performance of couples. This lack of intimacy on top of the stress of expanding the family can strain any relationship, especially if both partners are not open to address the subject. Marital relationships can either deepen or lead to the couple's separation due to negative thoughts about coitus during pregnancy [1, 9, 11, 23].

## 1.2 Objectives

### General Objectives

To determine the knowledge, attitude, the practice of sexual activity during pregnancy and the associated factors that influence sexual intercourse among female UPM staffs

### Specific Objectives

1. To determine the knowledge about sexual intercourse in pregnancy among female UPM staffs
2. To determine the attitude regarding sexual intercourse in pregnancy among female UPM staffs
3. To determine the practice of sexual intercourse in pregnancy among female UPM staffs
4. To determine the socio-demographic and obstetric history factors that are associated with the knowledge, attitude and practice on sexual intercourse in pregnancy among female UPM staffs

### 1.3 Problem statement

Based on the study done in Malaysia, reported that 81% (95% CI 73.18%, 88.82%) of prevalence of sexual dysfunction among pregnant women [68] reported higher than the previous study conducted in Malaysia using the same questionnaire which is Malay Version Female Sexual Function Index (MVFSFI) Questionnaire which found lower prevalence of 37% [69]. However, there is no study in Malaysia reported that sexual dysfunction among pregnant women is affected by negative attitude of sexual intercourse in pregnancy.

In addition, several studies conducted in Iranian women reported most causes of sexual dysfunction were physical problems (eg., backache, pain during intercourse, dyspnea and weight gain) and false belief about sexual intercourse in pregnancy (eg., injury to the fetus, premature delivery or lack of attractiveness for the spouse [70]. Similarly, the study conducted in Hong Kong showed over 60% of the women, as well as more than 40% of their partners, had reduction in sexual desire and enjoyment during pregnancy. Over 80% of the women and their partners worried about the adverse effects of sexual activity on the fetus [34]. Having said that, a study conducted locally will have a clearer understanding where we stand in terms of knowledge, attitude and practice as compared to other countries.

Majority of subjects in Razali et al were Malays [69] and can represent a multicultural Malaysian population. Thus, we aim the female staffs in UPM with multi-ethnicity and different socioeconomic characteristics to have a more comprehensive understanding on Malaysian population.

#### **1.4 Signifant of study**

This study will provide information on knowledge, attitude and practice on sexual intercourse during pregnancy. Many pregnant women are afraid to discuss their sex fulfillment and risk to their doctors or midwives. The result of this study would assist the public health officer and health care provider to develop strategies to encourage sexual intercourse during pregnancy and understand the level of knowledge, attitude and practice on sexual intercourse during pregnancy. Therefore, further identification and elimination of dysfunctional attitudes in pregnant women is necessary for improving their sexual health.

## 1.5 Research Questions

The survey consisted of four parts. The first part included questions regarding the demographic characteristics, obstetric history, and medical details of the pregnancy concerned.

The second part, questions indicating the level of knowledge among participants, and sources of information about sexual intercourse during pregnancy.

The third section of the questionnaire is about attitude to safety and factors influencing the activity of sexual intercourse during pregnancy.

The fourth part is the polished version of the Female Sexual Function Index (FSFI) questionnaire to evaluate the practices of SI when they were pregnant or during their current pregnancy. The FSFI is a validated questionnaire containing 19 questions and measures a women's sexual functioning across six domains: Desire (questions 2 and 3; score range 1–5); Arousal (questions 4,5,6,7; score range 0–5); lubrication (questions 8,9,10,11; score range 0–5); orgasm (questions 12,13,14; score range 0–5); satisfaction (questions 15,16,17; score range 1–5); and pain (questions 18,19,20; score range 0–5) during the previous 4 weeks. The full-scale score range is 2 to 36, with lower scores being associated with worse sexual function.

In addition, in the fourth part of the questionnaire, women will be asked to report the frequency of intercourse during their last pregnancy (Q4.1).

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Definition

Sexual function is how the body reacts in different stages of the sexual response cycle. Relevant aspects of sexual function in women are defined on the basis of a modified version of Female Sexual Function Index to assess sexual dysfunction. From Mc Graw Hill dictionary, sexual activity was defined as any form of sexual practice including vaginal, anal, or oral sex, as well as sexual foreplay and masturbation. State of sexual readiness which has mental components, where increased cortical responsiveness due to sensory stimulation. While, physical component, where increased penile sensitivity causes neural response to stimuli and sense of impending orgasm known as sexual arousal. Next, sexual desire are defined as sensuality for sexual intimacy. Sexual desire used to be related to the term of libido, which mean urge toward sexualism. At the same time, sexual intercourse defined as, act of sexual procreation between a man and a woman. The man`s penis inserted into women`s vagina and repeated thrust until orgasm and ejaculation occurs. Sexual intercourse is one of sexual activity. On the other hand, a buildup of sexual arousal and stimulation can lead men and women to the intense and pleasurable release of sexual tension known as the orgasm. Having an orgasm may also be referred to as having a "climax" or the act of "cum". [63, 64]

Vaginal lubrication is a lubricating fluid that is naturally produced in a woman's vagina. Vaginal lubrication or moistness is present at all times, but production increases significantly during a woman's sexual arousal in anticipation of sexual intercourse. Without vaginal

lubrication, sexual intercourse would be painful to the woman, and sometimes artificial lubricants must be used to augment insufficient natural lubrication. The vagina has no glands, and therefore must rely on other methods of lubrication. While plasma seepage from vaginal walls due to vascular engorgement is considered to be the chief lubrication source, the Bartholin's glands, located slightly below and to the left and right of the introitus (opening of the vagina), also secrete mucus to augment vaginal-wall secretions. Vaginal dryness is the condition in which this lubrication is insufficient. [63]

## **2.2 Sexual Function in Pregnancy and Impact**

Study on sexual function of women during pregnancy by Kiemstore [10] showed 90% of women reported still had SI during pregnancy. Despite the good 58% chose SI to obtain pleasure and satisfy their spouse, there were also 41.8% who agreed so that to satisfy their marital obligations. Other reasons chosen by the respondents noted 25.3% wanted to avoid unfaithfulness to their spouse and another 21.3% had SI to obtain the pleasure of their spouse only. It is unfortunate to note that not all had SI during pregnancy for their own and partner's pleasure. Among those 9.96% of pregnant women who stopped SI, 46.3% noted absence of sexual interest, fear of hurting the fetus (41.5%), physical discomfort (24.4%), the possibilities of miscarriage (22.0%) and non-motivated life partner (17.1%).

The study also found a significant reduction in the frequency of intercourse and sexual desire. The first and third trimester were when the orgasm was less frequent. In fact, compared to the period before pregnancy, 78.0% of pregnant women reported a decrease in frequency of sexual

intercourse with orgasm in the 1st trimester and 69.5% in the third trimester. Minor illness during pregnancy such as gastric discomforts, nausea, and vomiting influence libido negatively in first trimester. The reduced frequency in third trimester was explained by the increasing physical changes and the anticipation of childbirth.

**Sexual Desire:** Francisco et al in 2020 (47) noted that sexual desire reduced for female especially during the first trimester, then slightly increased in second trimester but decreased again in the third trimester. Report by Masters and Johnson [24] showed no significant differentiation between nulliparous and multiparous subjects. Kenny [25] found a decrease in libido during the third trimester only. Others have reported decreases in libido in women during the first and third trimesters, with no change from pre pregnancy levels during the second trimester. Most studies have found a steady decline in libido during pregnancy, regardless of parity. The evidence from the earlier studies is somewhat conflicting, but it seems reasonable to assume that most women experience a decline in sexual interest during the end of pregnancy (24, 47-49). Gokyildiz et al [42] found that women aged 19 to 29 and those in marriages lasting less than two years have a higher frequency of desire compared to other pregnant women. A relative relationship between education level and frequency of desire was also observed. However, sexual interest before pregnancy appears to be the best predictor of interest during pregnancy, regardless of gender.

Although inadequately studied, male sexual interest either remains unchanged [26, 47] or decreases during the third trimester. The effect of the partner's pregnancy on the male may vary, some men find their wives increasingly attractive, whereas others are fearful of “hurting them” or feel that sex was “improper.”

**Sexual arousal:** Sexual arousal is different from sexual desire whereby the sense of excitement and pleasure will in turn cause physical changes such as lubrication and vasocongestion of genitals. Tactile stimulation to the genitals will first trigger the sacral reflex mechanisms (in the lower vertebrae of the spinal cord). It will then relax the muscles in the arterial walls, allowing the arteries to dilate and carry blood into the genitals faster than usual. The excess blood in the arteries compresses the veins, slowing the flow of the blood from the genitals. As a result, blood accumulates in the pelvic area, creating vasocongestion of the genitals. This vascular engorgement of the genitals produces the earliest phase of the sexual response, called the sexual arousal or excitement phase (58). According to H. Fejza and colleagues, the overall sexual arousal decreased in pregnancy with the percentage of those who had excellent arousal before pregnancy has decrease from 31.7% to 18.8% after pregnancy [50].

**Lubrication:** After the sexual arousal or the excitement phase, the female's clitoris will enlarge by a small amount due to the vasocongestion and fluids will then exude through the vaginal wall, lubricating the inside of the vagina (lubrication). Concomitant menopausal, dyspareunia, negative feelings such as fear, anxiety and depression can lead to reduced lubrication. Guleroglu et al looked into three hundred six pregnant women within a year and using the Female Sexual Function Index (FSFI), he found 42.8% had lubrication disorders during pregnancy. The reduced lubrication can result in pain during SI and in a vicious cycle reduce the sexual desire and also lubrication again.

**Orgasmic Function:** Continued genital stimulation after the excitement phase will result reflex control transferred to the thoracic and lumbar sections of the spinal cord (located above the sacral area). This will start off the plateau phase of the sexual response, and the thoracic and lumbar

reflexes cause even stronger vasocongestion, causing additional vaginal lubrication for females and stronger erections for males. Persistent sexual stimulation eventually causes the thoracic and lumbar reflexes to initiate a several-second transition period that leads to orgasm. In females, the transition from plateau to orgasm is similar to that seen in males, but more subtle. For about few seconds before the sacral reflexes cause contractions in the pelvic muscles, women report the onset of pleasurable experiences. Subsequently, they will begin to experience the rhythmic surges and pulses of orgasmic pleasure that occur as their genital muscles begin to contract at intervals of 0.8-sec, gradually slowing to longer intervals. After orgasm, the final phase of the sexual reflex is resolution, whereby there will be reversal of vasocongestion, and blood flows out of the genitals faster than it flows in. Slowly, the genitals return to the relaxed condition prior to the onset of sexual stimulation (58).

Even though the sexual reflexes occur automatically, several factors can inhibit this reflex; either biologically or psychologically. Thus, in pregnancy, the orgasmic function should not be compromised as vasocongestion physiologically already happens during pregnancy, hence should renders the female more sensitive to sexual arousal. However, as mentioned, psychological causes are important in depressing these sexual reflexes.

Solberg and colleagues [27] reported that orgasmic function decreased as pregnancy progressed. The percentage of coital acts leading to orgasm progressively decreased, as did the strength or intensity of orgasm experienced by the patient. In a small percentage of women, however, orgasmic intensity was noted to be increased at all stages of pregnancy. Although most researchers have reported a steady decrease in orgasmic function during pregnancy [28, 29] two authors reported decreases during the first and third trimesters but not during the second trimester.

A small, retrospective study found no change in the frequency of orgasms throughout pregnancy. Another study found orgasmic disorders to be common throughout pregnancy but less pronounced in the second trimester according to objective measurements of the Index of Female Sexual Function (FSFI) (54-57).

**Satisfaction:** H. Fejza et al. reported the number of women participants who have not been satisfied with their sexual lives before pregnancy, has been 7.9%. This number has shown increase to 18.6% during pregnancy. While the number of women that have been satisfied with their sexual lives before the pregnancy has evidently been decreased during pregnancy from 59.5% to 31.3%, which shows that pregnancy affects negatively to sexual satisfaction [49]. The results of study from Košec et al, shows that the majority of respondents had experienced reduced sexual desire during pregnancy in the first trimester, due to altered hormonal activity which causes lack of vaginal lubrication and reduced libido [50].

**Pain and discomfort experience:** According to Kontoyannis and colleagues, among their study population, only about one sixth of the participants experienced minor transient problems of abdominal pain, vaginal bleeding or discharge, pain or soreness in the vagina following vaginal intercourse [51]. Moreover, in terms of the women's experiences of sexual problems, 37.2% of the women experienced problems before pregnancy, and this percentage increased to 59.2% during pregnancy. In terms of the problems experienced during sexual intercourse, pain (31.6%), a burning sensation (21.0%) and reluctant pre-mature ejaculation (12.0%/12.0%) were found to be the three main problems (Erenal et al, 2011) [53]. Similarly, Eryılmaz et al. found that 49.2% of pregnant women experienced pain during pregnancy [14]. In the study by Bartellas et al. vaginal

lubrication and pain were shown to be the two most common problems that were experienced during pregnancy and cause discomfort during sexual intercourse [54].

### **2.3 Physiological Aspects of Sexuality in Pregnancy**

Physiological changes in pregnancy can be a source of discouragement in both women and men when it comes to sexual activities. Nausea and vomiting of early pregnancy can prevent a woman from expressing her sexuality paradoxically at a time when the couple as a unit might feel the closest. Sexual desire and performance are also hindered by the fatigue common in pregnancy. In addition, heartburn associated with reflux esophagitis prevents patients from having the desire to have sexual intercourse. Urinary frequency and urgency can become deterrents to sexual response, as can constipation, fetal movement, and back pain. The breasts can be tender and sensitive in early pregnancy, in response to both hormonal and vascular alterations. If not anticipated, the milk let-down associated with orgasm, which often occurs later in pregnancy, can be very distressing to both a patient and her sexual partner [37,47]. The cervical changes during pregnancy renders it to be more susceptible to bleed during intercourse or post coital and can cause both partners to be alarmed. [37] The normal engorgement of genitalia during pregnancy is further exacerbated during sexual arousal. Vasocongestion is not well relieved, even after orgasm, and the residual sensation of fullness in the pelvic organs may be uncomfortable enough to cause a woman to avoid coital activity. Orgasm may be accompanied by cramping or muscle spasms.

## 2.4 Knowledge and Safety on Sexuality during Pregnancy

Many women have reservations when it comes to the safety of sexual intercourse in pregnancy. The lack of awareness and knowledge has brought aversion towards sexual activity. In Olusegun and Irete's (2011) [40] study, women were asked questions about what they know as guidelines for sexual intercourse in pregnancy. Of the total percentage 7.4% felt that it could be allowed occasionally, 30.9 % felt that it could not be allowed in the first three months, while 2.7 % thought it could not be allowed in the last month, and 39.4 % believed that it was not allowed anytime during pregnancy. They concluded that despite the relatively high level of education of the women studied, there was poor knowledge on the basic guidelines concerning sexual intercourse in pregnancy. More disturbing was the fact that this poor knowledge did not seem to improve with higher order pregnancies.

On the other hand, women in pregnancy, reported by Isajeva and colleagues in a study, 45 women (47.9%) found recommendations on sexual intercourse during pregnancy in popular medical literature, 28 women (29.8%) looked for information on the Internet, 13 participants (13.8%) found out about this while attending classes for pregnant women, 30 women (31.9%) received this information from their doctor and the other 15 women (16%) found out about this from peers and friends. 63.3% of the women with a university degree usually find out about sexual intercourse during pregnancy in popular medical literature ( $p < 0.05$ ) and the women with secondary education trust their friends' opinion and their own feelings ( $p < 0.05$ ). [66]

Knowledge in sexual activity during pregnancy also influenced by cultural and belief because of those beliefs, or because they are looking for a more comfortable position, some couples change their sexual positions during this period and prefer woman on top or side-by-side positions (Afshar, Mohammad-AlizadehCharandabi, Mergheti-Khoei, & Yavarikia, 2012;

Sacomori & Cardoso, 2010). Anzaku et al (52) recorded the various positions the women were practicing when having vaginal intercourse with their partners. Some women noted to experiment various positions to find those that were comfortable to accommodate their body structure changes throughout the pregnancy. This included missionary, side by side, from the rear and also women on top. None of the positions had significant associations with any complications post coital. It was noted the side-by-side and the male on top positions was the most common positions.

## **2.5 Possible complications during sexual intercourse**

It is important that couples be reassured by doctors that sexual intercourse will not normally cause complications. There is not enough strong evidence to establish the risks associated with SI in pregnancy (43).

### **2.5.1 Miscarriage**

Up to date, there is no established data that can significantly associate SI in pregnancy with miscarriage. Andrew et al in his review in the British Journal of General Practice 2011, looked at previous studies until 2009 and concluded there was no paper yet to convince that the miscarriage rate in those practiced SI in pregnancy was solely due to the SI. In fact, some of the papers admitted there were no clear evidence and caution the public to pragmatically avoid SI if they have other risk factors for miscarriage or preterm labour (62).

### **2.5.2 Preterm labour, Pre-labour rupture of membrane (PROM), Induction of labour**

The risk of SI causing preterm labour or PROM depends on presence of other risk factors such as previous preterm labour, multiple gestation and cervical incompetence (59). Thus, in these patients, SI in pregnancy would be advised to avoid. However, there are still a few literatures that contradicts and with reporting bias and small sample size, further studies needed to ascertain the relationship (15, 16, 31, 59-61). There are a few theoretical explanations in terms of inducing labor whether term or preterm (31, 59);

- a) Nipple and genital stimulation may induce oxytocin release from the posterior pituitary, causing uterine contractions.
- b) Prostaglandins released from mechanical stimulation of the cervix may cause cervical ripening.
- c) Prostaglandins in semen may cause cervical ripening.

### **2.5.3 Per vaginal bleeding, antepartum hemorrhage, placenta abruptio**

There is actually paucity of prospective data to support the recommendation to avoid sex to prevent these complications (59). A study on safety of transvaginal ultrasound probes in the setting of placenta previa noted the unlikelihood of a straight probe to injure the placenta without being aligned with the cervical canal. Although there are no studies on penile contact, but it can be extrapolated from this study with transvaginal probes (27,59). Literature on SI causing placenta abruptio is also lacking and only reports on certain cases were found (14).

#### **2.5.4 Infections**

Theoretically, pregnant women should be at decreased risk for developing pelvic inflammatory disease because of natural barriers to ascending infection created by the mucous plug and the obliteration of the uterine cavity by fusion of the decidua capsularis and parietalis by the 12th week of gestation. [21]

#### **2.5.5 Venous thromboembolism or air embolism**

Cases of this complications only reported in case reports and in a few literatures but no significant associations to directly link with SI in pregnancy. A recent review of the literature identified 22 instances of venous air embolism associated with sexual activity; nineteen of the 22 instances occurred during pregnancy or the puerperium (17). However, there are many confounding factors and unable to directly establish the association.

## 2.6 Beliefs on sexuality during Pregnancy

Any belief about sexual behavior or practice during any period of pregnancy was collected in Ribeiro study. This included positive beliefs (e.g., potential benefits of sexual activity in pregnancy), negative beliefs (e.g., harms associated with sexual activity in pregnancy), or any other kind of belief related to this topic (e.g., moral aspects or prohibitions) held by individuals participated. [65]

Religious aspects were cited by Jamali and Mosalanejad (2013) who interviewed 257 pregnant Iranian women and reported that nearly one fourth of them (24.6%, n = 63) regarded sexual intercourse during pregnancy as “a sin” because there would be a third person present during the sexual act. Similarly, a survey conducted in Turkey reported that most men would forgo sexual activity with their pregnant wives because sex during pregnancy is considered a sin (Yangin & Eroglu, 2011).

A baby's health, her husband's sexual interest, and her own body image are the fears faced by pregnant women. Those fears, as stated above, concerning the baby's health and sexual intercourse are largely related to what the woman believes about her sexuality during pregnancy.

Murkoff and Mazel (2008) [41] have stated some fears related to the beliefs of pregnant women: the fear of causing a miscarriage, the fear that having an orgasm will stimulate miscarriage or early labor, the fear that the fetus is “watching” or “aware,” the fear of “hitting” the baby on the head, the fear that sex will cause infection, and the belief that sex in late in pregnancy will cause premature labor [4]. Moreover, pregnant women often fear that vagina intercourse would provoke abortion or that it would harm the fetus, in this manner, pregnant women feel it important to abstinence from sexual intercourse (Andrews, 1997) [32].

The similar concern that can be noticed here is that of their baby. Bartellas, Crane, Daley, Bennet, and Hutchens (2000) reported that 49% of women concerned at some point that sexual intercourse may hurt the fetus [33]. Most of the pregnant women studied by Fok, Chan, and Yuen (2005) were worried about the possible complication of sexual intercourse on the baby (82.9%). Their worries were principally bleeding (74.8%), labor (60.7%), infection (60.7%), rupture of membranes (54%), and fetal damage (71.8%) [34]. Finally, Adinma (1995) revealed that sexual activity might cause abortion in early pregnancy believed by 30.2 percent of her respondents. That common misconception needs to be addressed more often and openly by health practitioners (Denoon, 2010, citing Goldstein) [36].

## 2.6 Conceptual Framework

Figure 2.1 shows the conceptual framework of this research with the independent variable and the dependent variable. The socio-demographic data (age, ethnicity, religion, educational level), obstetric history (parity, gravidity, gestational age) represent the independent variable while the knowledge, attitude and practice on sexual intercourse during pregnancy among female staff of University Putra Malaysia (UPM) represents the dependent variable.

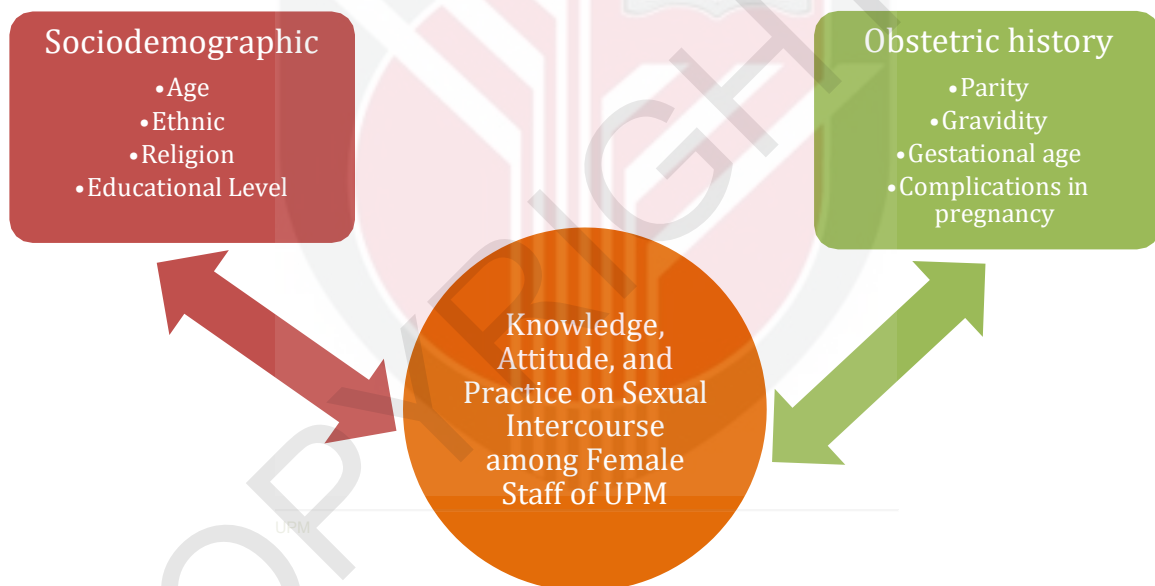


Figure 2.1: Conceptual Framework

# CHAPTER 3

## METHODOLOGY

### 3.1 Study Location

This study will be conducted in Universiti Putra Malaysia (UPM)

### 3.2 Study design

This is a cross-sectional study because it is quick and easy to perform which can be observed in a single point in time, relatively cheaper than other studies and does not require a big sample size. Furthermore, this study has no significant directionality like the cause and effect relationship. Hence, cross sectional study is the best approach.

### 3.3 Study duration

The study duration for this research spans for about 4 months from 1st of June 2020 until 5th October 2020

### 3.4 Sampling

#### 3.4.1 Study population

This study population will be all the female staff from Universiti Putra Malaysia who are pregnant or who have undergone pregnancy. (Those that fit the inclusion criteria). The main reason we aimed this population is because we could obtain results and data from various levels of educations, comparing lecturers, staffs, nurses, surgeons and consultants.

### **3.4.2 Sampling frame**

All pregnant women or women who have undergone pregnancy the last 5 years who fulfilled inclusion and exclusion criteria.

### **3.4.3 Sampling unit**

A pregnant woman or woman who had undergone pregnancy the last 5 years who fulfilled inclusion and exclusion criteria.

### **3.4.4 Sampling method**

Non probability cluster sampling of pregnant woman or woman who had undergone pregnancy in Universiti Putra Malaysia. The sampling will collect from different faculties through online questionnaire until reach the expected number of subjects needed.

### **3.4.5 Sample size estimation**

Using Raosoft sample size calculator, with the crude births in 2018 in Selangor of 16,600 (46), we estimated a sample size of 370 needed to have a 5% margin of error with 95% CI and 50% response distribution. With this number, we aim to have a sample size of 500 to include 30% of the dropout rate, incomplete feedback and also those with high risk pregnancies.

## **3.5 Selection criteria**

### **3.5.1 Inclusion criteria**

- Women who have undergone pregnancy (went through all three trimesters or at least up to 1 month of the third trimester)
- Low risk of pregnancy
- Women who agree to participate
- Women who have undergone their last pregnancy less than 5 years ago

### **3.5.2 Exclusion criteria**

- Refuse to participate.
- Those who did not fulfill inclusion criteria
- High-risk of pregnancy (placenta previa, antepartum haemorrhage, and threatened preterm labour and previous intrauterine death).

## **3.6 Instrument and Data collection**

### **3.6.1 Instrument**

The questionnaire will be emailed to respondents. Those who do not reply will be given to their exact location to be done privately and will be collected immediately after. Any questions can be directed back via email or phone. The questionnaire that will be used encompasses the sociodemographic, obstetric history, knowledge, attitude and practices questionnaire using the Female Sexual Function Index (FSFI).

### **3.6.2 Validity**

#### **3.6.2.1 Content validity**

No validation will be done, as the FSFI questionnaire has been validated. The Malay version is non validated but done by native Malay speaker.

### **3.7 Data Analysis**

The data collected will be analysed using the standard statistical software package IBM SPSS Statistics V25.0 for Windows. Descriptive analysis will be presented as mean, frequency (n) and percentage of the all the variables. Chi square test will be used to measure associations between two categorical variables. The continuous data will be analysed using the t-test if found to be normally distributed and if not, we will utilize non-parametric tests.

#### **3.7.1 Knowledge session**

A total of 12 questions, and the total score will be divided into 3 parts;

0–4: Poor knowledge

5–8: Moderate knowledge

9–12: Good knowledge

#### **3.7.2 Attitude**

Total score 50, > 50 will be considered as positive attitude

#### **3.7.3 Practice**

Analyze as continuous data. Total score for all three trimester is 108 (each trimester 36), and those less than 54 is considered as having female sexual dysfunction ( FSD)

Table 3.7: Female Sexual Function Index (FSFI) Scoring index for every trimester

Domain	Questions	Score Range	Factor	Minimum Score	Maximum Score	Score
Desire	1, 2	1 – 5	0.6	1.2	6.0	
Arousal	3, 4, 5, 6	0 – 5	0.3	0	6.0	
Lubrication	7, 8, 9, 10	0 – 5	0.3	0	6.0	
Orgasm	11, 12, 13	0 – 5	0.4	0	6.0	
Satisfaction	14, 15, 16	0 (or 1) – 5	0.4	0.8	6.0	
Pain	17, 18, 19	0 – 5	0.4	0	6.0	
Full Scale Score Range				2.0	36.0	

### 3.8 Ethical aspects

Research proposal will be submitted to the Ethics Committee for Research Involving Human Subject (JKEUPM) for evaluation and approval. A written permission letter will be submitted to the management of the study location. Informed consent will be obtained from the respondents prior to conducting the study. None of the investigators are members of JKEUPM. Data from the respondents will be kept confidential and will not be identified throughout the study duration and no emolument will be given to respondents.

## **3.9 Variable**

### **3.9.1 Dependent variable**

The dependent variables for this study will be knowledge, attitude and practices on sexual intercourse during pregnancy.

### **3.9.2 Independent Variable**

The independent variables for this study will be age, ethnicity, educational level, religion beliefs and obstetric history.

## **3.10 Operational definition**

### **3.10.1 Knowledge**

Concerns the understanding of pregnant women regarding the act of having sexual intercourse during pregnancy. It is the awareness of sexual intercourse during pregnancy. It will be measured by calculating the mean score gained by each respondent in the questionnaire. They will be categorized into two groups; adequate level of knowledge and inadequate level of knowledge as the mean score will be calculated.

### **3.10.2 Attitude**

The way the community thinks, feels and behaves towards sexual intercourse during pregnancy. All respondents will answer attitudinal questions and compute to obtain total scores; then, mean score will be calculated to categorize as having positive attitude or negative attitude.

### **3.10.3 Practice**

The steps were taken by pregnant women or women whom have undergone pregnancy towards sexual intercourse during pregnancy. The respondents will answer the questionnaire using FPSI validated questionnaire. The score will be calculated to categorize as female sexual dysfunction which is below 26.55 and without sexual dysfunction which is above 26.55

### **3.10.4 Age**

The mean age group will be calculated and also the respondents will be divided into 5 groups (26-30,31-35,36-40,41-45,>45) according to the age during the last pregnancy.

### **3.10.5 Educational level**

The status of education of pregnant women or women who have undergone pregnancy influences the understanding of sexual intercourse during pregnancy.

The respondents will be divided into three groups; primary, secondary and tertiary education levels.

### **3.10.6 Obstetric history**

The respondents will be divided into the number of gravida of the current or the last pregnancy.

### **3.10.7 Orgasm**

The moment during sexual activity when feelings of sexual pleasure are at their strongest

### **3.10.8 Satisfaction**

The good feeling that you have when you have achieved something or when something that you wanted to happen does happen

### **3.10.9 Arousal**

The act of making somebody feel sexually excited; the state of being sexually excited

### **3.10.10 Lubrication**

The act of putting or having lubricant to increase the smoothness of something that comes into contact or has friction

## CHAPTER 4

### RESULT

#### 4.1 Response Rate

This research was conducted to determine the factors associated with knowledge, attitude and practice on sexual intercourse during pregnancy among female staffs in Universiti Putra Malaysia. A cross sectional study was chosen with sample size needed of 384 of study samples. Google-form-based questionnaires were distributed to 1551 female staffs in Universiti Putra Malaysia through email and phone call. A total of 429 responses were received. However, only a total of 390 met both the inclusion and exclusion criteria.

$$\begin{aligned}\text{Overall valid response rate} &= \frac{\text{Number of responses met inclusion and exclusion criteria}}{\text{Total questionnaires distributed}} \times 100 \\ &= (429 / 1551) \times 100 \\ &= 27.66 \%\end{aligned}$$

A low valid response rate noted for this survey.

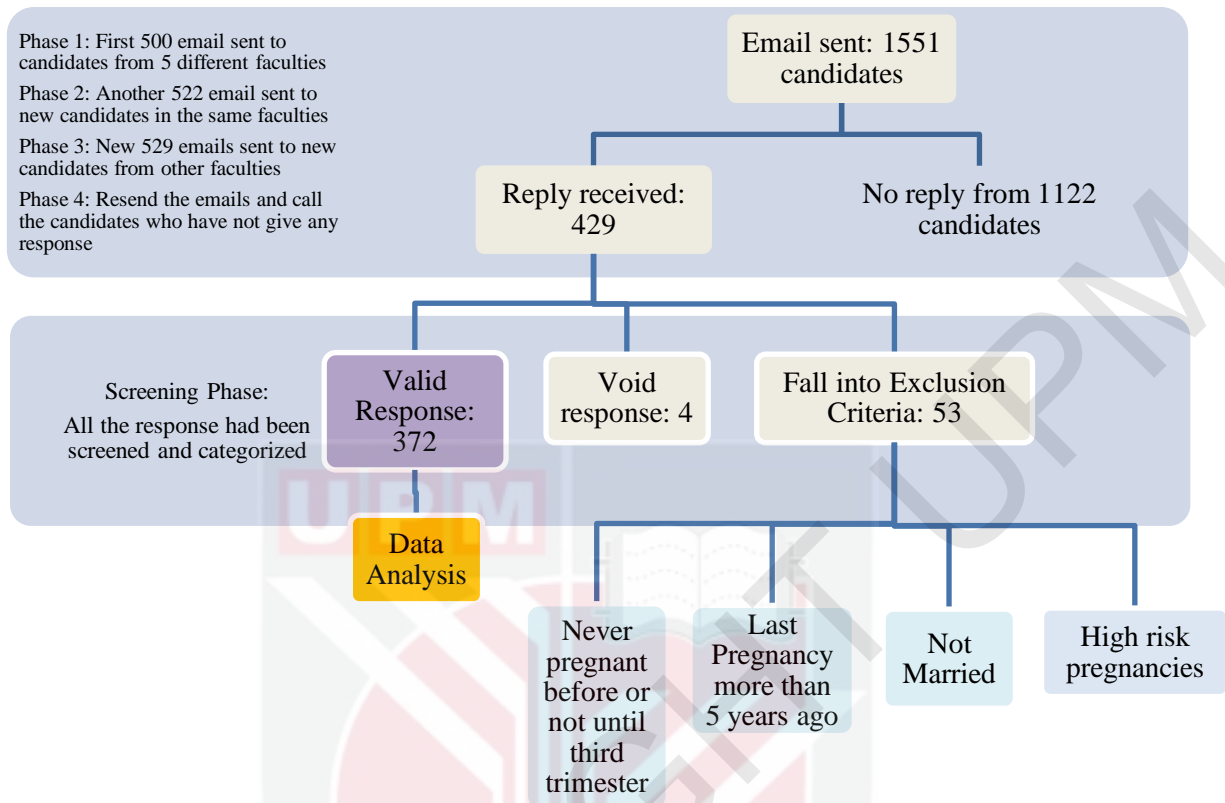


Diagram 4. 1: Response Flow Chart

#### 4.2 Normality and Other Statistical Test.

Normality test for continuous variable such as desire of each trimester, arousal of each trimester, lubrication of each trimester, orgasm of each trimester, satisfaction of each trimester and pain of each trimester were determined statistically using the Kolmogorov-Smirnov and graphically using histogram. Variable are considered normally distributed if the p-value of Kolmogorov-Smirnov is more than 0.05 while for the categorical variable such as ethnicity, religion, educational level, gestational age, parity, miscarriage, information source, knowledge, attitude, Female Sexual Dysfunction (FSD) of each trimester, frequency of sexual intercourse by each trimester and overall FSD were analyzed using frequency and percentage and graphically using bar chart.

#### 4.2.1 Normality Test

Table 4.1: Normality test for, age, parity, miscarriage, desire of each trimester, arousal of each trimester, lubrication of each trimester, orgasm of each trimester, satisfaction of each trimester and pain of each trimester.

	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	df	Sig.
<b>Knowledge</b>	0.319	372	<0.001
<b>Attitude</b>	0.525	372	<0.001
<b>Trimester 1 Frequency</b>	0.230	372	<0.001
<b>Trimester 2 Frequency</b>	0.174	372	<0.001
<b>Trimester 3 Frequency</b>	0.186	372	<0.001
<b>Trimester 1 Desire</b>	0.272	390	<0.001
<b>Trimester 2 Desire</b>	0.186	390	<0.001
<b>Trimester 3 Desire</b>	.165	390	<0.001
<b>Trimester 1 Arousal</b>	0.238	390	<0.001
<b>Trimester 1 Arousal</b>	.157	390	<0.001
<b>Trimester 1 Arousal</b>	0.161	390	<0.001
<b>Trimester 1 Lubrication</b>	0.218	390	<0.001

<b>Trimester 2 Lubrication</b>	0.186	390	<0.001
<b>Trimester 3 Lubrication</b>	0.193	390	<0.001
<b>Trimester 1 Orgasm</b>	0.187	390	<0.001
<b>Trimester 2 Orgasm</b>	0.172	390	<0.001
<b>Trimester 3 Orgasm</b>	0.129	390	<0.001
<b>Trimester 1 Satisfaction</b>	0.211	390	<0.001
<b>Trimester 2 Satisfaction</b>	0.168	390	<0.001
<b>Trimester 3 Satisfaction</b>	0.165	390	<0.001
<b>Trimester 1 Pain</b>	0.168	390	<0.001
<b>Trimester 2 Pain</b>	0.140	390	<0.001
<b>Trimester 3 Pain</b>	0.179	390	<0.001
<b>Trimester 1 FSD</b>	0.396	372	<0.001
<b>Trimester 2 FSD</b>	0.496	372	<0.001
<b>Trimester 3 FSD</b>	0.521	372	<0.001

Based on Table 4.2.1 Kolmogorov-Smirnov Test was performed to check for normal distribution of the data. The P-value ( $P < 0.001$ ). Therefore, the null hypothesis that this data is normally distributed is being rejected. In conclusion, the data on does not assume a normal distribution.

### 4.3 Socio-Demographic Characteristics of Respondents

Table 4.3: Socio-Demographic Characteristics of the Respondents (n=372)

Characteristic	Frequency (n)	Percentage (%)
<b>Age</b>		
26 - 30	17	4.6
31 - 35	139	37.4
36 - 40	154	41.4
41 - 45	49	13.2
> 45	13	3.5
<b>Ethnicity</b>		
Malay	275	73.9
Chinese	62	16.7
Indian	32	8.6
Others	3	0.8
<b>Religion</b>		
Muslim	278	74.7
Buddhist	36	9.7
Christian	34	9.1
Hindu	24	6.5
<b>Education Level</b>		
Secondary	45	12.1
Tertiary	327	87.9

Table 4.3 shows the socio-demographic characteristics of 372 respondents by age, ethnicity, religion and educational level. Out of the 372 respondents, majority of them were in age within 36 to 40, Malay (73.9%), Muslim (74.7%) and up to tertiary level (87.9%) of education.

#### 4.4 Obstetric History of Respondent

Table 4.4: Obstetric History Characteristics of the Respondents (n=372)

Characteristic	Frequency (n)	Percentage (%)
<b>Parity</b>		
1	47	12.6
2	88	23.7
3	93	25.0
4	78	21.0
5	51	13.7
6	13	3.5
7	2	0.5
1	47	12.6
<b>Miscarriage</b>		
0	310	83.3
1	41	11.0
2	20	5.4
3	1	.3

Table 4.4 shows the obstetric history characteristics of 372 respondents by parity and miscarriage. Out of the 372 respondents, majority of them had two parity and zero miscarriage.

#### 4.5 Source of Information of Respondents

Table 4.5: Source of Information Characteristics of the Respondents (n=372)

Source of information	Frequency (n)	Percentage (%)
<b>Doctor</b>		
YES	192	51.6
NO	180	48.4
<b>Healthcare Personnel</b>		
YES	210	56.5
NO	162	43.5
<b>Friends</b>		
YES	229	61.6
NO	143	38.4
<b>Spouce</b>		
YES	106	28.5
NO	266	71.5
<b>Books, Magazine, Newspaper</b>		
YES	211	56.7
NO	161	43.3
<b>Internet</b>		
YES	294	79.0
NO	78	21.0
<b>None</b>		
YES	14	3.8
NO	358	96.2

Table 4.5 shows the source of knowledge of 372 respondents. Out of the 372 respondents, majority of them, 79% have their source of information from the internet.

#### 4.6 Knowledge and Attitude of Respondents

Table 4.6: Knowledge and Attitude of Respondents (n=372)

Characteristic	Frequency (n)	Percentage (%)
<b>Knowledge</b>		
Good knowledge	179	48.1
Moderate knowledge	42	11.3
Poor knowledge	151	40.6
<b>Attitude</b>		
Positive attitude	329	88.4
Negative attitude	43	11.6

Table 4.6 shows the knowledge and attitude of 372 respondents. Out of the 372 respondents, majority of them had good knowledge and positive attitude.

#### 4.7 Frequency of Sexual Intercourse During Pregnancy

Table 4.7: Frequency of Sexual Intercourse During Pregnancy (n=372)

Frequency	Frequency (n)	Percentage
<b>First Trimester</b>		
Never	11	3.0
Almost never	26	7.0
A few times (less than half the time)	115	30.9
Sometimes (about half the time)	163	43.8
Most times (more than half the time)	45	12.1
Almost always or always	12	3.2
<b>Second Trimester</b>		
Never	23	6.2
Almost never	82	22.0
A few times (less than half the time)	110	29.6
Sometimes (about half the time)	115	30.9
Most times (more than half the time)	32	8.6
Almost always or always	10	2.7

<b>Third Trimester</b>		
Never	76	20.4
Almost never	95	25.5
A few times (less than half the time)	67	18.0
Sometimes (about half the time)	105	28.2
Most times (more than half the time)	16	4.3
Almost always or always	13	3.5

Table 4.7 shows the number of respondents fall into the category ‘ a few times’, ‘almost never’ and ‘never’ increase as the trimester advances, indicating more abstain from sexual intercourse as the gestation progresses.

#### 4.8 Female Sexual Dysfunction for Every Trimester

Table 4.8 Female Sexual Dysfunction for Every Trimester (n=372)

Trimester	Frequency (n)	Percentage (%)
<b>First Trimester</b>		
TOTAL SCORE > 26.55	146	39.2
TOTAL SCORE < 26.55 (FSD)	226	60.8
<b>Second Trimester</b>		
TOTAL SCORE > 26.55	70	18.8
TOTAL SCORE < 26.55 (FSD)	302	81.2
<b>Third Trimester</b>		
TOTAL SCORE > 26.55	70	18.8
TOTAL SCORE < 26.55 (FSD)	302	81.2

Table 4.8 shows the Female Sexual Dysfunction increase as increase in trimester but it remains constant in second and third trimester

#### 4.9 Comparison of Each Domain for Every Trimester

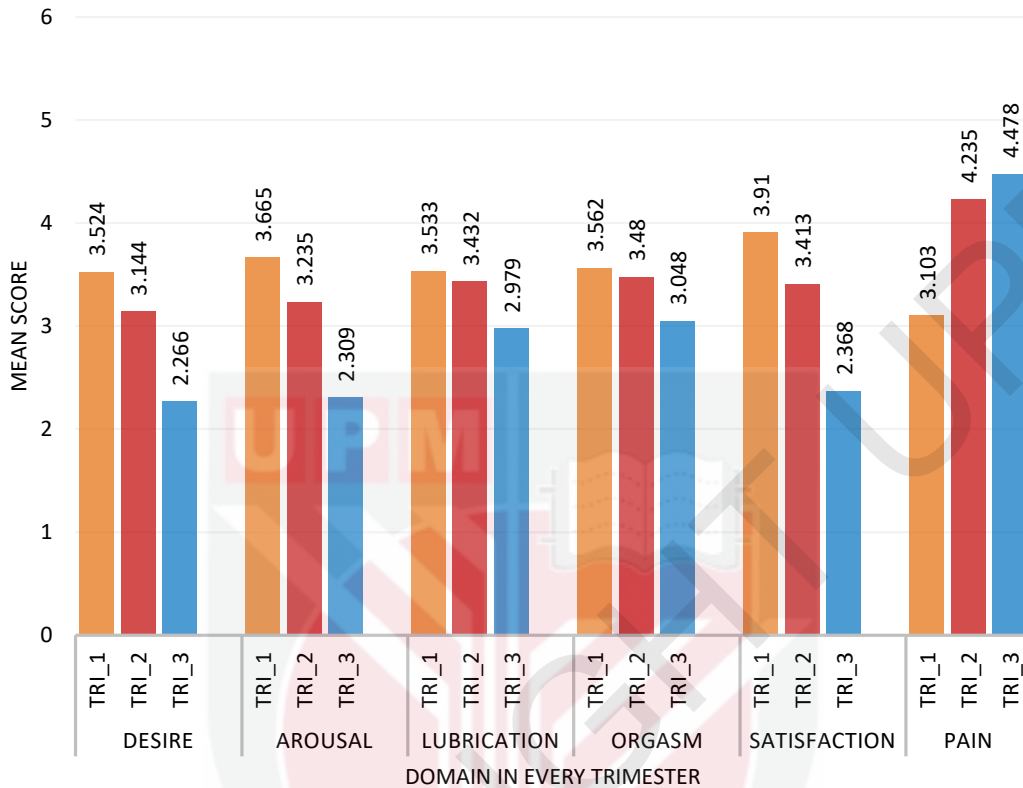


Diagram 4.9: Comparison of Each Domain for Every Trimester (n=372)

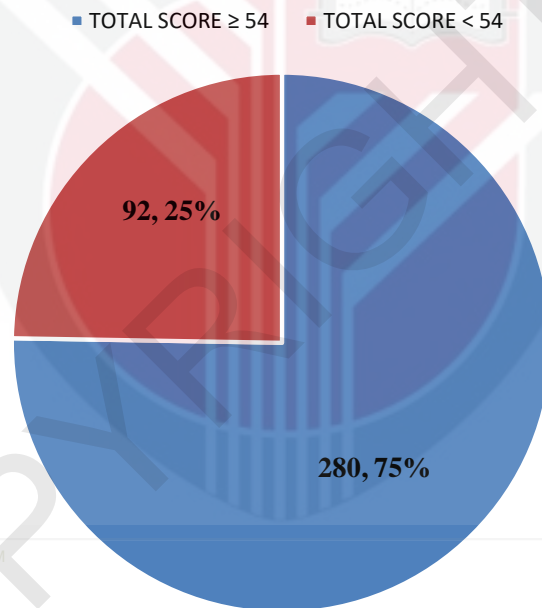
Diagram 4.9 shows majority of respondents have decrease in desire, arousal, lubrication, orgasm, satisfaction as the trimester progresses. It is interesting to highlight that the pain increase as increase in trimester.

#### 4.10 Overall Female Sexual Dysfunction during Pregnancy

Table 4.10: Overall Female Sexual Dysfunction during Pregnancy

Overall FSD	Frequency (n)	Percentage (%)
TOTAL SCORE $\geq$ 54	280	75.3
TOTAL SCORE $<$ 54	92	24.7

Diagram 4.10: Overall Female Sexual Dysfunction during Pregnancy



From Table 4.10 and Diagram 4.10, three quarter of respondents do not have Female Sexual Dysfunction (FSD) during pregnancy.

#### 4.11 Association of socio-Demographic and obstetric history Characteristics with knowledge, attitude and practice on sexual intercourse in pregnancy

##### 4.11.1 Association of Age Group and Knowledge

Table 4.11.1 Association of Age Group and Knowledge

Age group	Frequency (n)	Percentage of knowledge in Si during Pregnancy				P value
		Good knowledge	Moderate knowledge	Poor knowledge	Total	
26 - 30	17	5.9%	0.0%	94.1%	100.0%	<0.001
31 - 35	139	66.9%	12.9%	20.1%	100.0%	
36 - 40	154	50.0%	13.0%	37.0%	100.0%	
41 - 45	49	16.3%	8.2%	75.5%	100.0%	
> 45	13	0.0%	0.00%	100.0%	100.0%	

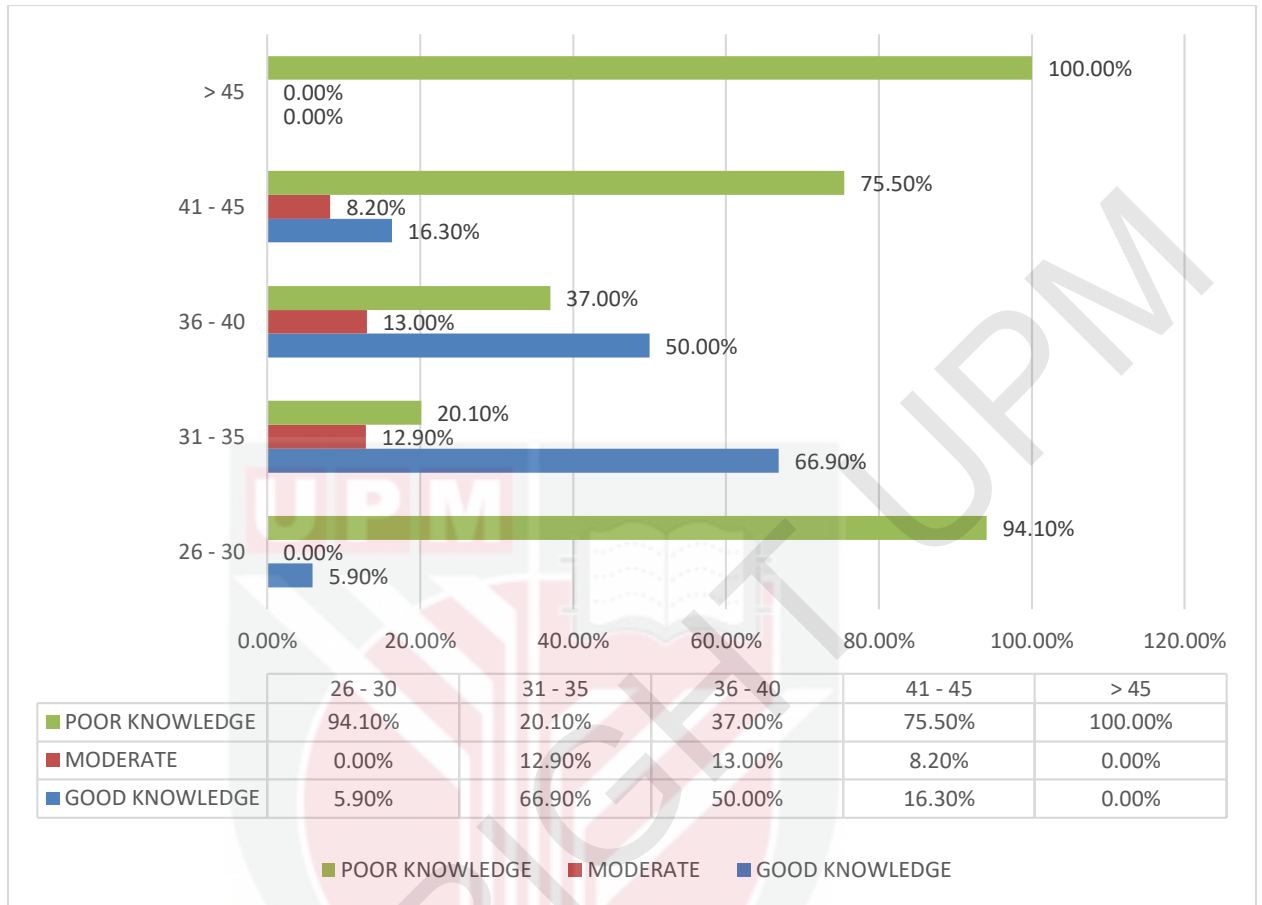


Diagram 4.11.1: Association of Age Group and Knowledge in SI during pregnancy

Based on Table 4.11.1 Chi Square test was performed to test the association between age group and knowledge among female staffs. The age group (>45) and group 26-30 had the highest percentage of poor knowledge, showing both extremes of age have poor knowledge in sexual intercourse in pregnancy with a significant P value <0.001 .

#### 4.11.2 Association of Ethnicity and Knowledge in SI during Pregnancy

Table 4.11.2: Association of Ethnicity and Knowledge

Ethnicity	Frequency (n)	Percentage of knowledge in SI during Pregnancy				P value
		Good knowledge	Moderate knowledge	Poor knowledge	Total	
Malay	275	41.5%	10.5%	48.0%	100.0%	<0.001
Chinese	62	67.7%	12.9%	19.4%	100.0%	
Indian	32	71.9%	15.6%	12.5%	100.0%	
Other	3	0.0%	0.0%	100.0%	100.0%	

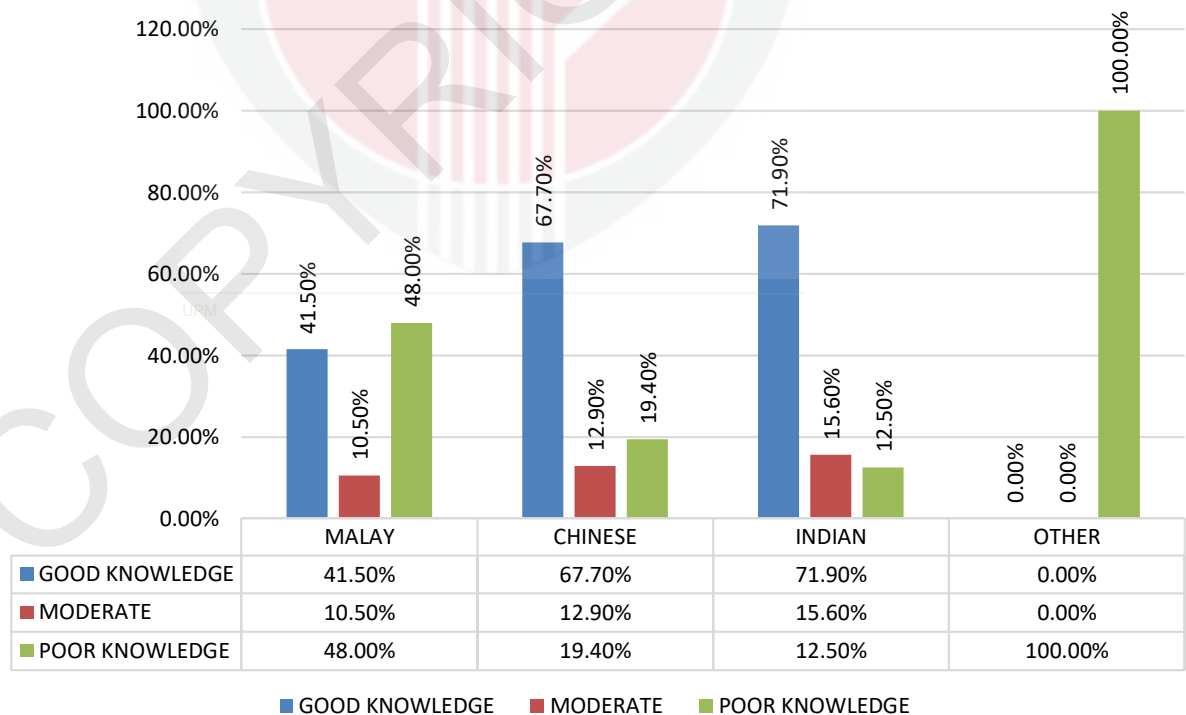


Diagram 4.11.2: Association of Ethnicity and Knowledge

Based on Table 4.11.2 Chi Square test was performed to test the association between ethnicity and knowledge among female staffs and noted P value < 0.001. ‘Other’ ethnicity include those who are Iban ethnicity. The other ethnicity had the highest percentage of poor knowledge (100%) while Indian had the least percentage (12.5%) of poor knowledge. However, these can be attributed to the significantly low number of respondents in the ‘other’ group of only 3.

#### 4.11.3 Association of Religion and Knowledge

Table 4.11.3: Association of Religion and Knowledge

Religion	Frequency (n)	Percentage of knowledge in SI during Pregnancy				P value
		Good knowledge	Moderate knowledge	Poor knowledge	Total	
Muslim	278	41.0%	10.4%	48.6%	100.0%	<0.001
Buddhist	36	61.1%	16.7%	22.2%	100.0%	
Christian	34	73.5%	5.9%	20.6%	100.0%	
Hindu	24	75.0%	20.8%	4.2%	100.0%	

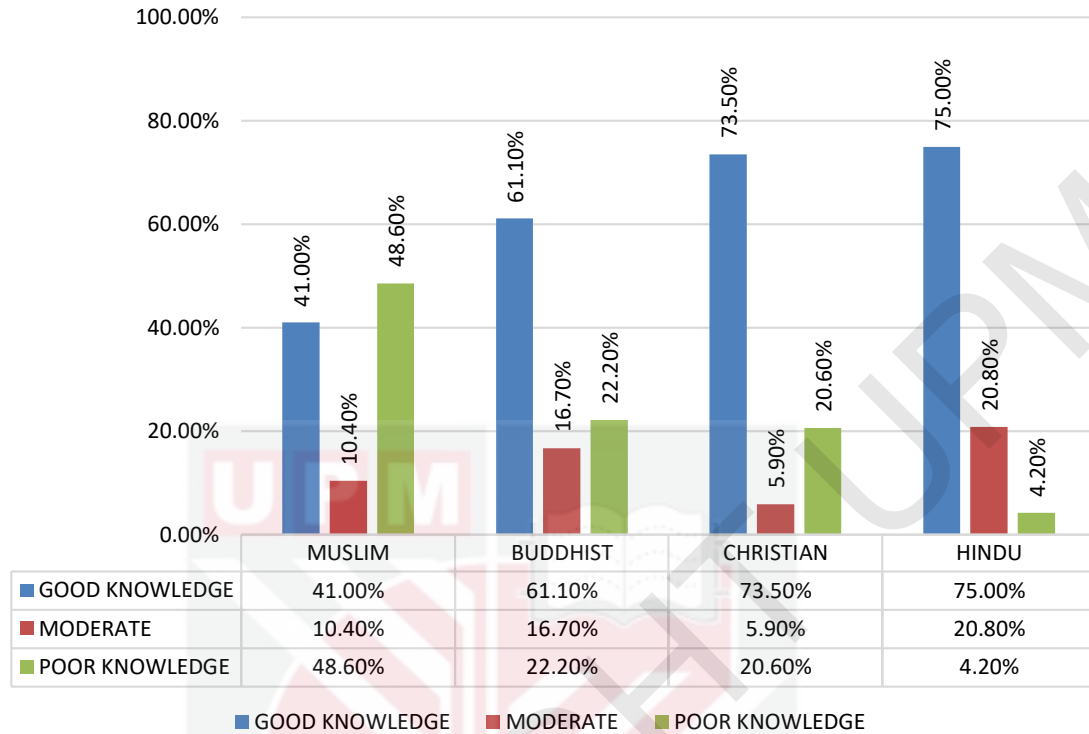


Diagram 4.11.3: Association of Religion and Knowledge in SI during Pregnancy

Based on Table 4.11.3 Chi Square test was performed to test the association between religion and knowledge among female staffs. The Muslim had the highest percentage of poor knowledge (48.6%) while Hindu had the least percentage (4.2%) of poor knowledge. There is significant association P-value ( $P < 0.001$ ).

#### 4.11.4 Association of Educational Level and Knowledge

Table 4.11.4: Association of Educational Level and Knowledge

Educational level	Frequency (n)	Percentage of knowledge in SI during Pregnancy				P value
		Good knowledge	Moderate knowledge	Poor knowledge	Total	
Secondary	45	82.2%	13.3%	4.4%	100.0%	<0.001
Tertiary	327	43.4%	11.0%	45.6%	100.0%	

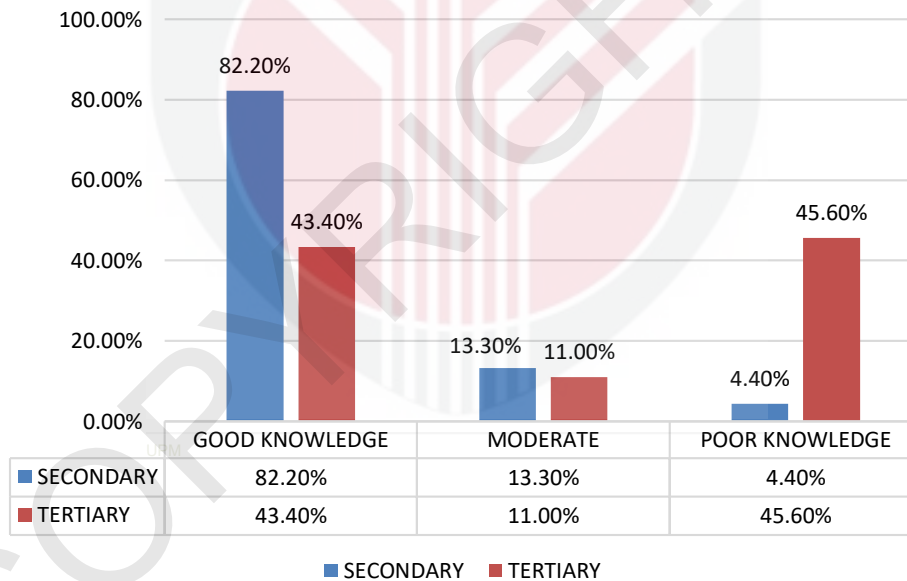


Diagram 4.11.4: Association of Educational Level and Knowledge

Based on Table 4.11.4 Chi Square test was performed to test the association between religion and knowledge among female staffs. It is noted despite the increase in education level, the percentage of poor knowledge increase in tertiary level.

#### 4.11.5 Association of Parity and Knowledge

Table 4.11.5: Association of Parity and Knowledge in SI during Pregnancy

Parity	Frequency (n)	Percentage of knowledge in SI during Pregnancy				P value
		Good knowledge	Moderate knowledge	Poor knowledge	Total	
1	47	46.8%	14.9%	38.3%	100.0%	0.057
2	88	47.7%	17.0%	35.2%	100.0%	
3	93	45.2%	12.9%	41.9%	100.0%	
4	78	55.1%	9.0%	35.9%	100.0%	
5	51	52.9%	2.0%	45.1%	100.0%	
6	13	23.1%	0.0%	76.9%	100.0%	
7	2	0.0%	0.0%	100.0%	100.0%	



Diagram 4.11.5: Association of Parity and knowledge toward SI during Pregnancy

Based on Table 4.11.5 Chi Square test was performed to test the association between parity and knowledge among female staffs and noted P value 0.057. Majority falls in the parity group of 2-4. The percentage of poor knowledge are about the same for all 3 groups.

#### 4.11.6 Association of Miscarriage and Knowledge

Table 4.11.6: Association of Miscarriage and Knowledge in SI during Pregnancy

Miscarriage	Frequency (n)	Percentage of knowledge in SI during Pregnancy				P value
		Good knowledge	Moderate knowledge	Poor knowledge	Total	
0	310	52.3%	12.5%	35.2%	100.0%	<0.001
1	41	29.3%	7.3%	63.4%	100.0%	
2	20	25.0%	0.0%	75.0%	100.0%	
3	1	0.0%	0.0%	100.0%	100.0%	

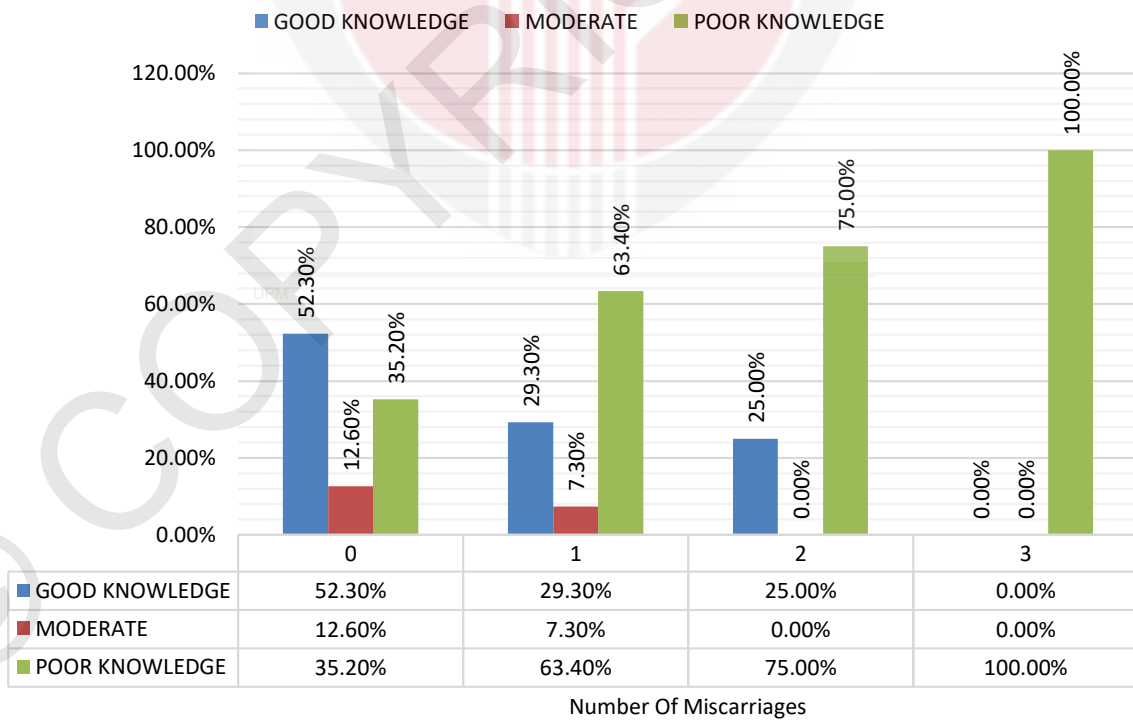


Diagram 4.11.6: Association of Miscarriage and knowledge in SI during Pregnancy

Based on Table 4.11.6 Chi Square test was performed to test the association between miscarriage and knowledge among female staffs and noted P value < 0.001. It is noted the level of knowledge worsens with increasing number of miscarriages. The misconceptions about sexual intercourse increases with the number of miscarriages.

#### 4.11.7 Assosiation of Age Group and Attitude

Table 4.11.7: Association of Age Group and Attitude

Age group	Frequency (n)	Percentage of attitude			P value
		Positive attitude	Negative attitude	Total	
26 - 30	17	100.0%	0.0%	100.0%	0.207
31 - 35	139	84.2%	15.8%	100.0%	
36 - 40	154	90.9%	9.1%	100.0%	
41 - 45	49	89.9%	10.2%	100.0%	
> 45	13	84.6%	15.6%	100.0%	

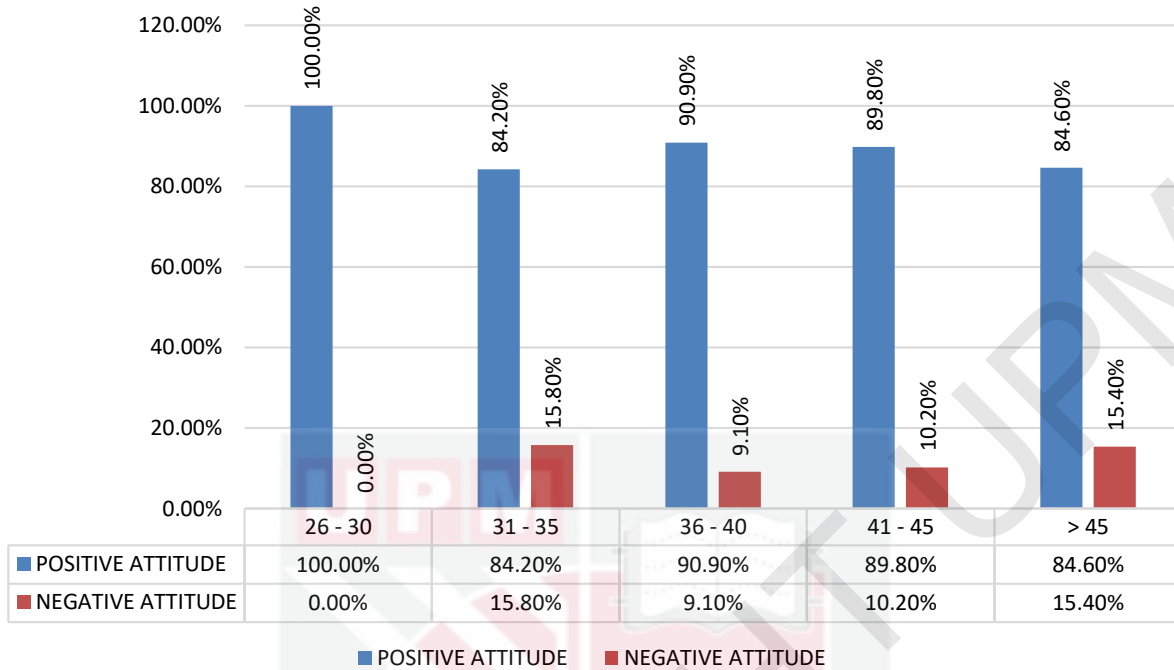


Diagram 4.11.7: Association of Age Group and Attitude

Based on Table 4.11.7 Chi Square test was performed to test the association between age group attitude among female staffs. Generally, all age group have more than 80% of positive attitude. There is no significant association P-value ( $P=0.207$ ).

#### 4.11.8 Association of Ethnicity and Attitude

Table 4.11.8: Association of Ethnicity and Attitude

Ethnicity	Frequency (n)	Percentage of Attitude			P value
		Positive attitude	Negative attitude	Total	
Malay	275	88.7%	11.3%	100.0%	0.054
Chinese	62	93.5%	6.5%	100.0%	
Indian	32	75.0%	25.0%	100.0%	
Other	3	100.0%	0.0%	100.0%	

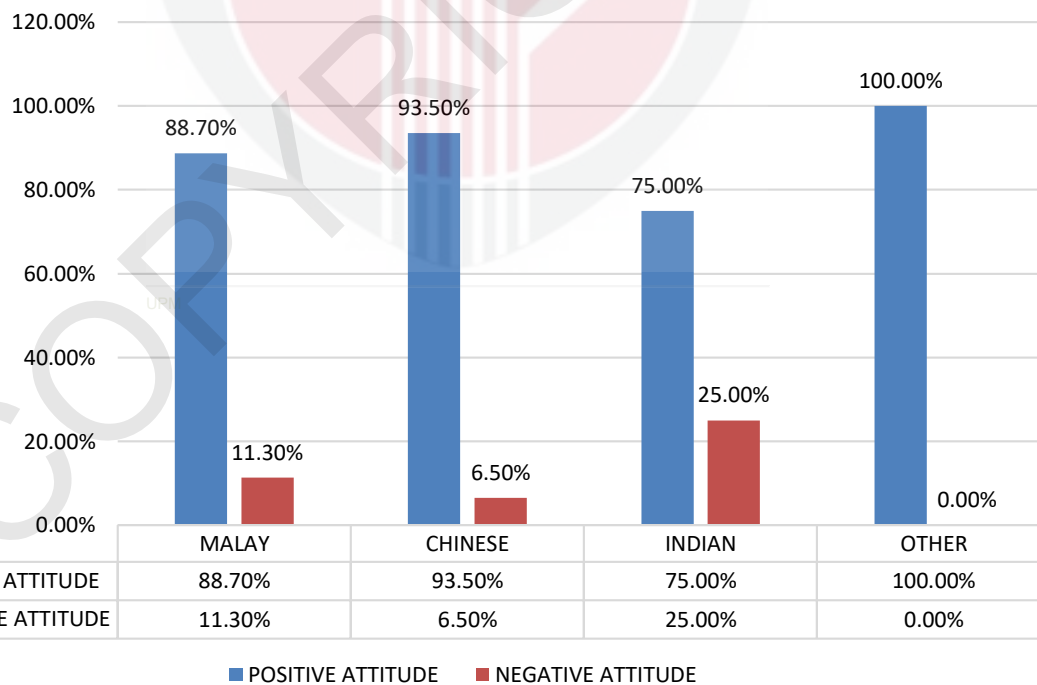


Diagram 4.11.8: Association of Ethnicity and Attitude

Based on Table 4.11.8 Chi Square test was performed to test the association between ethnicity and attitude among female staffs with P value 0.054. It is noted Indian has the highest negative attitude as compared to the rest of ethnicity.

#### 4.11.9 Association of Religion and Attitude

Table 4.11.9: Association of Religion and Attitude

Ethnicity	Frequency (n)	Percentage of attitude			P value
		Positive attitude	Negative attitude	Total	
Muslim	278	88.8%	11.2%	100.0%	0.031
Buddhist	36	94.4%	5.6%	100.0%	
Christian	34	91.2%	8.8%	100.0%	
Hindu	24	70.80%	29.2%	100.0%	

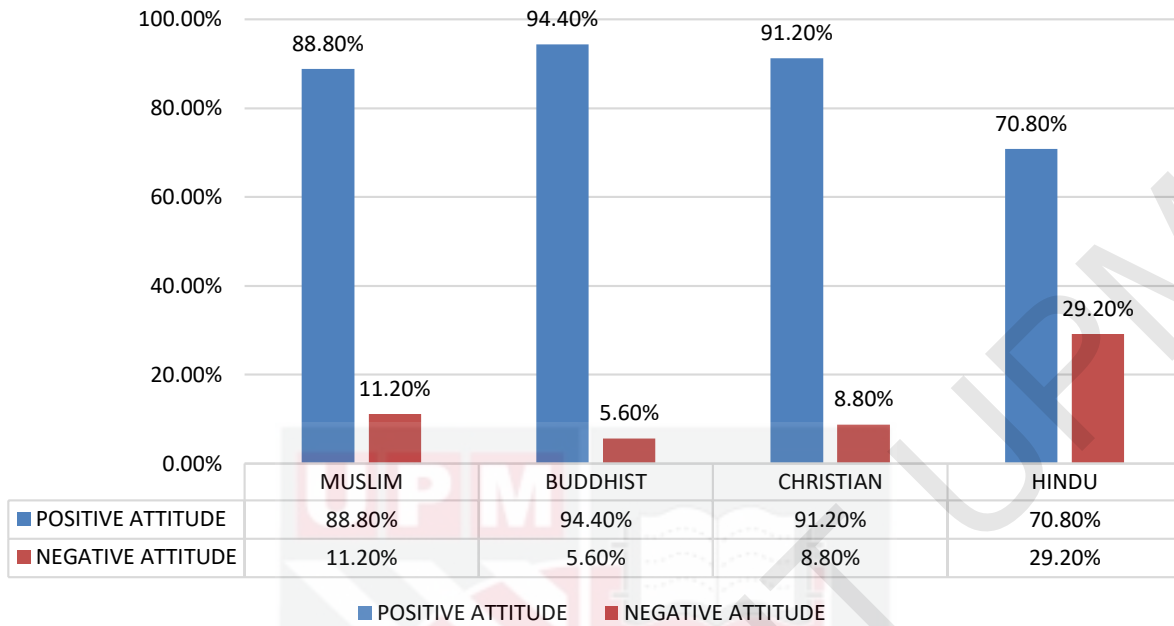


Diagram 4.11.9: Association of Religion and Attitude

Based on Table 4.12 Chi Square test was performed to test the association between religion and attitude among female staffs. The pattern of attitude is similar to the ethnicity and Hindu noted to be highest in the negative attitude. There is significant association P-value, < 0.05 (P=0.031).

#### 4.11.10 Association of Educational Level and Attitude

Table 4.11.10: Association of Educational Level and Knowledge

Educational level	Frequency (n)	Percentage of attitude			P value
		Positive attitude	Negative attitude	Total	
Secondary	45	86.7%	13.3%	100.0%	0.691
Tertiary	327	88.7%	11.3%	100.0%	

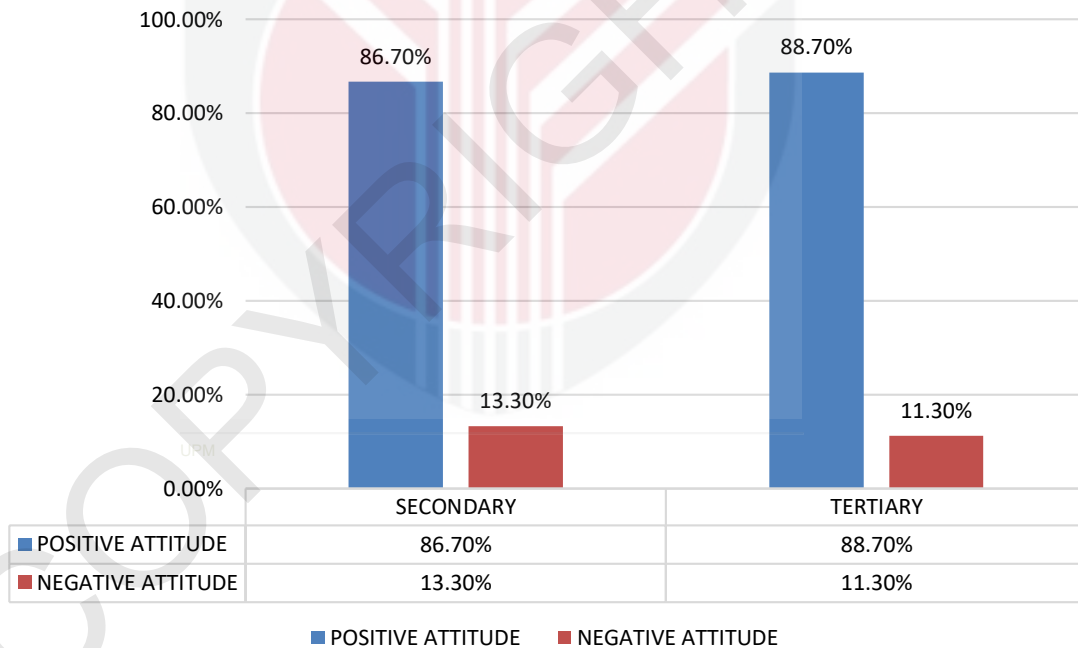


Diagram 4.11.10: Association of Educational Level and Attitude

Based on Table 4.11.10 Chi Square test was performed to test the association between religion and attitude among female staffs with P value 0.691. Both shows almost similar percentage of positive attitude.

#### 4.11.11 Association of Parity and Attitude

Table 4.11.11: Association of Parity and Attitude

Parity	Frequency (n)	Percentage of attitude			P value
		Positive attitude	Negative attitude	Total	
1	47	95.7%	4.35%	100.0%	0.120
2	88	89.8%	10.2%	100.0%	
3	93	90.3%	9.7%	100.0%	
4	78	83.3%	16.7%	100.0%	
5	51	80.4%	19.6%	100.0%	
6	13	100.0%	0.0%	100.0%	
7	2	100.0%	0.0%	100.0%	

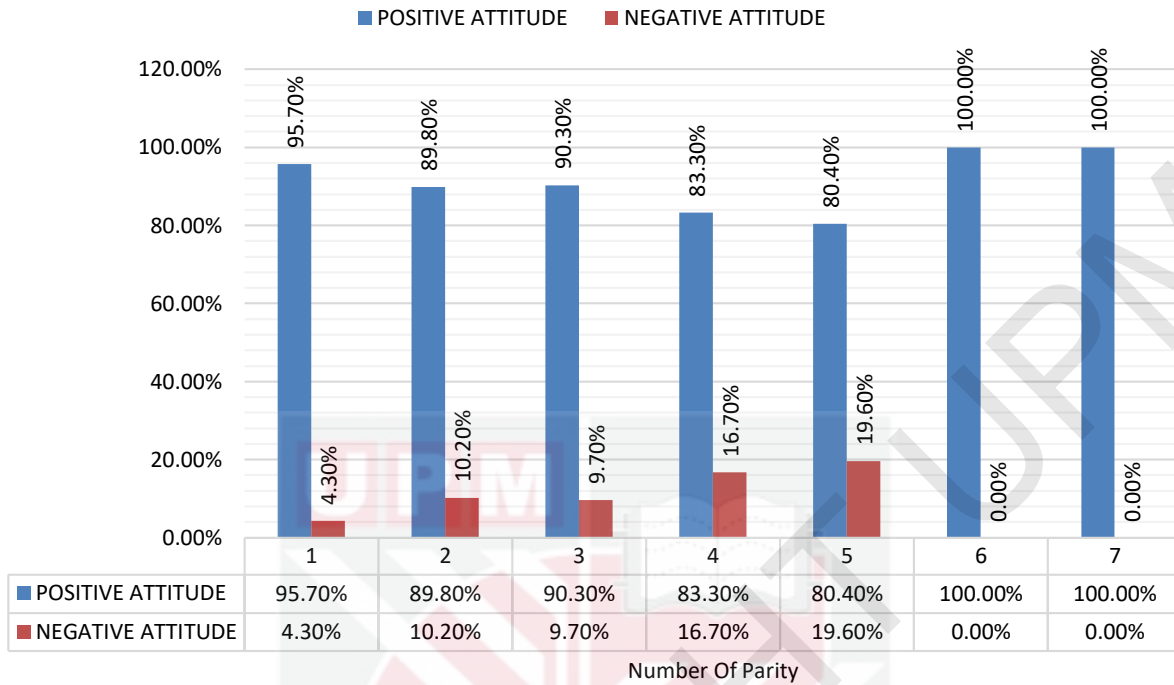


Diagram 4.11.11: Association of Parity and Attitude

Based on Table 4.11.11 Chi Square test was performed to test the association between parity and knowledge among female staffs with no significant association, P-value ( $P=0.120$ ). Generally there are good percentage of more than 80% with positive attitude for all parity groups.

#### 4.11.12 Association of Miscarriage and Attitude

Table 4.11.12: Association of Miscarriage and Attitude

Miscarriage	Frequency (n)	Percentage of knowledge			P value
		Positive attitude	Negative attitude	Total	
0	310	87.4%	12.6%	100.0%	0.570
1	41	92.7%	7.3%	100.0%	
2	20	95.0%	5.0%	100.0%	
3	1	100.0%	0.0%	100.0%	

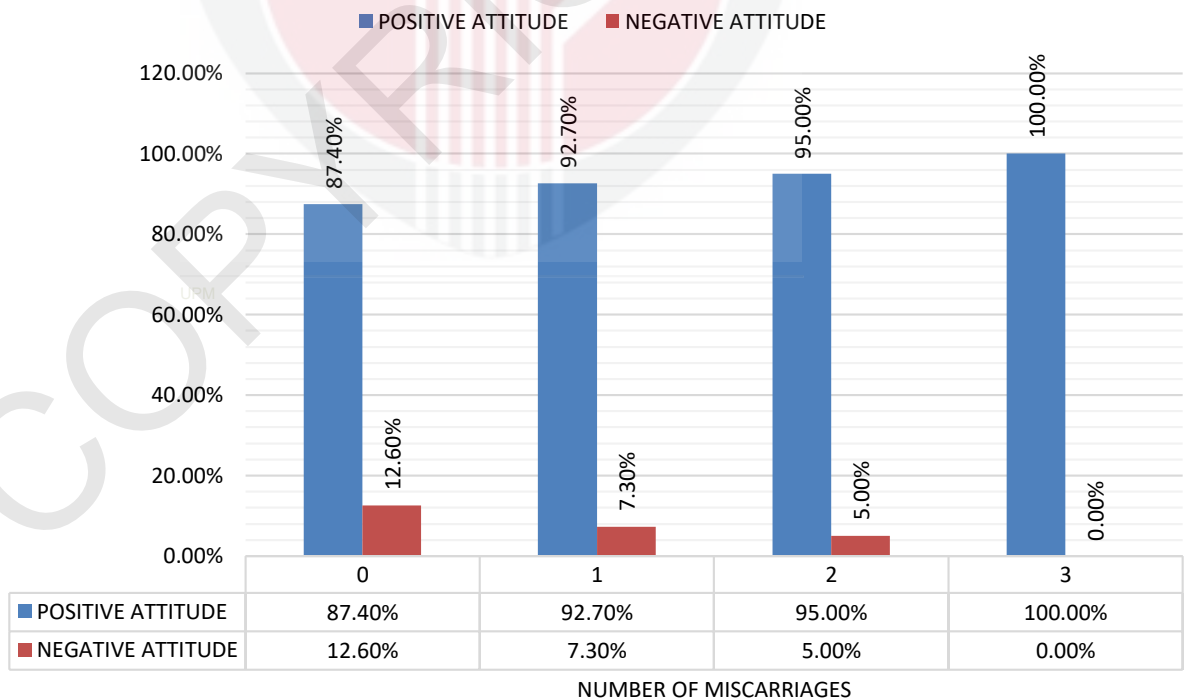


Diagram 4.11.12: Association of Miscarriage and Attitude

Based on Table 4.11.12 Chi Square test was performed to test the association between miscarriage and attitude among female staffs with P value of 0.570. It is noted the decreasing percentage of negative attitude as the number of miscarriages increases. This differs than the association with knowledge, thus the attitude improves but the knowledge decreases with increasing number of miscarriages.

#### 4.11.13 Association of Age and Overall Female Sexual Dysfunction during Pregnancy

Table 4.11.13: Association Age and Overall Female Sexual Dysfunction During Pregnancy

Age group	Frequency (n)	Percentage with overall FSD			P value
		TOTAL SCORE $\geq$ 54	TOTAL SCORE < 54	Total	
26 - 30	17	88.2%	11.8%	100.0%	0.140
31 - 35	139	69.1%	30.9%	100.0%	
36 - 40	154	76.0%	24.0%	100.0%	
41 - 45	49	83.7%	16.3%	100.0%	
> 45	13	84.6%	15.4%	100.0%	

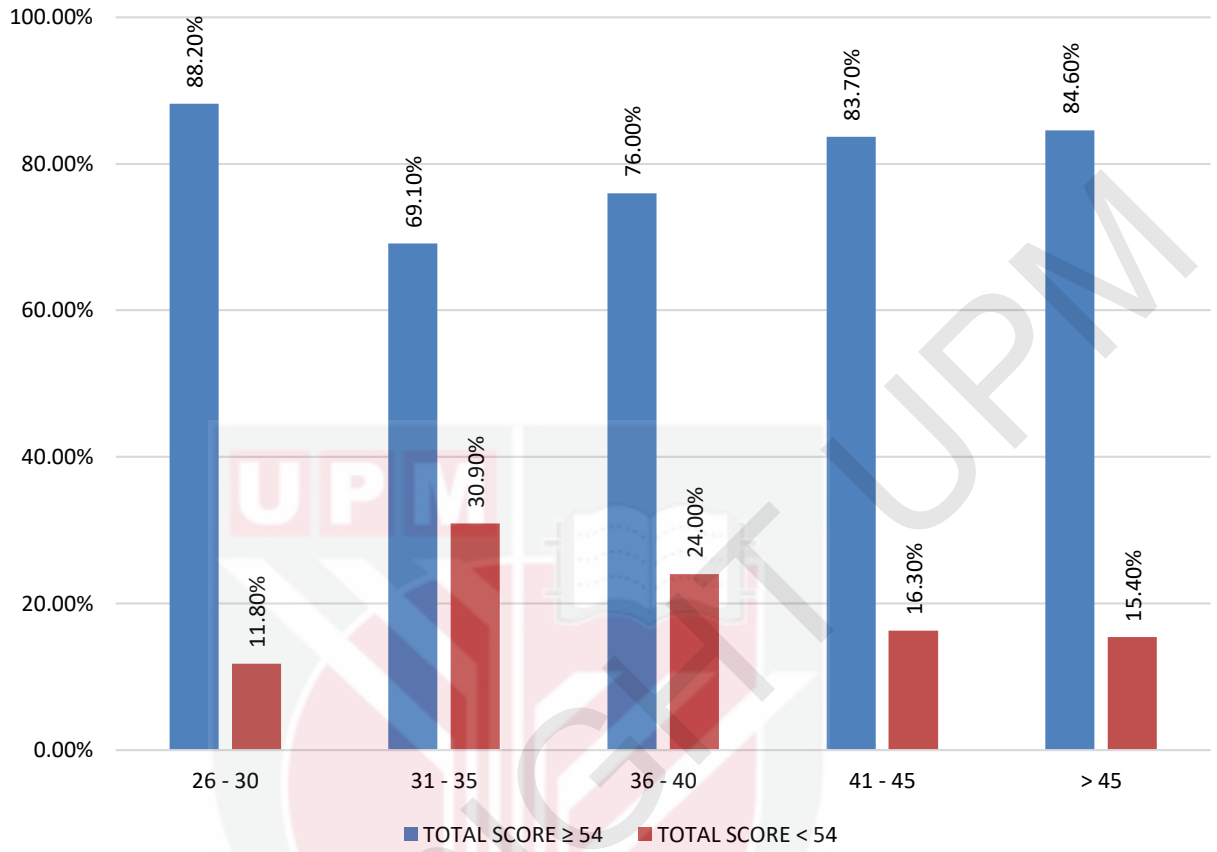


Diagram 4.11.13: Association Age and Overall Female Sexual Dysfunction During Pregnancy

Based on Table 4.11.13 Chi Square test was performed to test the association between age group and overall Female Sexual Dysfunction during pregnancy among female staffs and noted no significant association P-value ( $P=0.140$ ). It is noted the extreme ages have the lowest FSD as compared to the other age groups.

#### 4.11.14. Association Ethnicity and Overall Female Sexual Dysfunction during Pregnancy

Table 4.11.14: Association between Ethnicity and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia.

Ethnicity	Frequency (n)	Percentage with overall FSD			P value
		TOTAL SCORE $\geq$ 54	TOTAL SCORE $<$ 54	Total	
MALAY	275	75.3%	24.7%	100.0%	0.960
CHINESE	62	74.2%	25.8%	100.0%	
INDIAN	32	78.1%	21.9%	100.0%	
OTHER	3	66.7%	33.3%	100.0%	

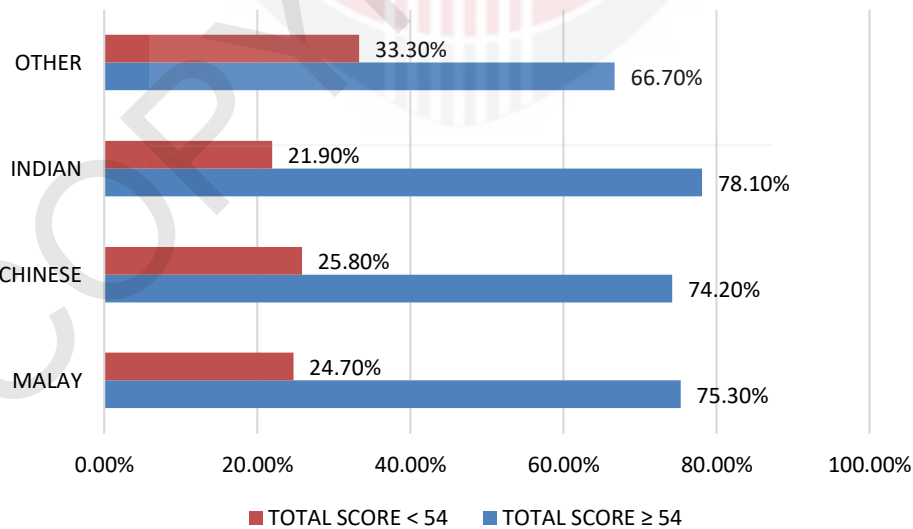


Diagram 4.11.14: Association between Ethnicity and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia

Based on Table 4.11.14 Chi Square test was performed to test the association between ethnicity and overall Female Sexual Dysfunction during pregnancy among female staffs with P value 0.960. It is noted all the ethnicities show similar percentages in FSD.

#### 4.11.15 Association Religion and Overall Female Sexual Dysfunction during Pregnancy

Table 4.11.15: Association between Religion and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia.

Religion	Frequency (n)	Percentage with overall FSD			P - value
		TOTAL SCORE $\geq$ 54	TOTAL SCORE < 54	Total	
MUSLIM	278	75.2%	24.8%	100.0%	0.999
BUDDHIST	36	75.0%	25.0%	100.0%	
CHRISTIAN	34	76.5%	23.5%	100.0%	
HINDU	24	75.0%	25.0%	100.0%	

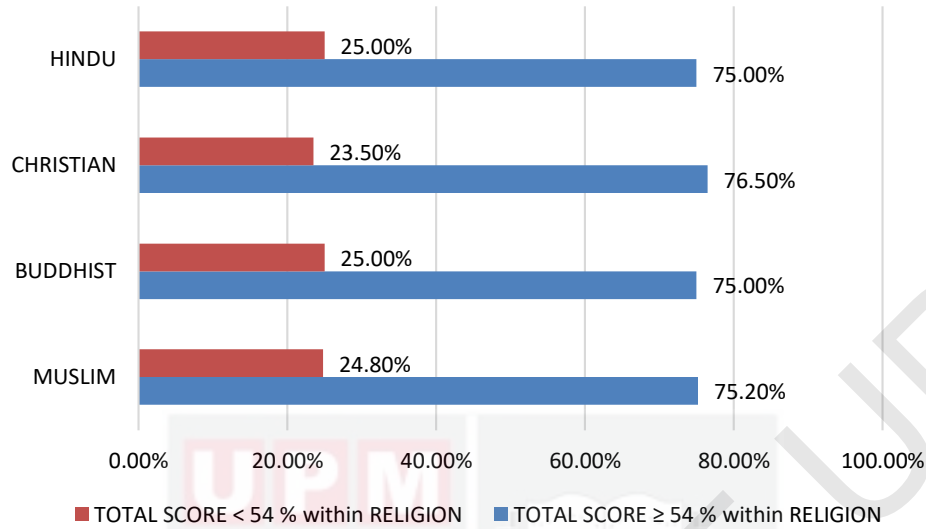


Diagram 4.11.15: Association between Religion and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia.

Based on Table 4.11.15, Chi Square test was performed to test the association between religion and overall Female Sexual Dysfunction during pregnancy among UPM female staffs with P value, 0.999. The pattern also shows the same as ethnicity.

#### 4.11.16 Association Educational Level & Overall Female Sexual Dysfunction (FSD) during Pregnancy

Table 4.11.16: Association between educational level and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia.

Educational level	Frequency (n)	Percentage with overall FSD(%)			P-value
		TOTAL SCORE $\geq$ 54	TOTAL SCORE $<$ 54	Total	
SECONDARY	45	77.8%	22.2%	100.0%	0.677
TERTIARY	327	74.9%	25.1%	100.0%	

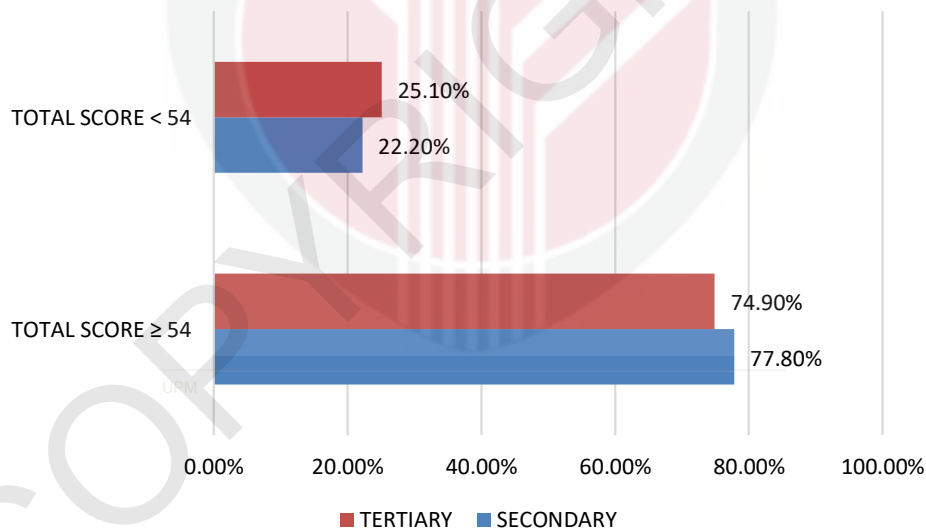


Diagram 4.11.16: Association between educational level and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia

Based on Table 4.11.16, there is not much difference between the percentage of FSD between the two groups of education level with no significant difference.

#### 4.11.17 Association of Parity and Overall Female Sexual Dysfunction during Pregnancy.

Table 4.11.17: Association of parity and overall female sexual dysfunction during pregnancy

Parity	Frequency (n)	Percentage with overall FSD			P value
		TOTAL SCORE $\geq 54$	TOTAL SCORE $< 54$	Total	
1	47	76.6%	23.4%	100.0%	0.724
2	88	73.9%	26.1%	100.0%	
3	93	72.0%	28.0%	100.0%	
4	78	79.5%	20.5%	100.0%	
5	51	78.4%	21.6%	100.0%	
6	13	61.5%	38.5%	100.0%	
7	2	100.0%	0.0%	100.0%	

Based on Table 4.11.17, Chi Square test was performed to test the association between number of parity and overall Female Sexual Dysfunction during pregnancy among female staffs. The parity of six had the highest percentage (38.5%) of overall Female Sexual Dysfunction while parity of seven had the least (0.0%). Unfortunately, there is no significant association P-value (P=0.724).



Diagram 4.11.17: Association of parity and overall female sexual dysfunction during pregnancy

#### 4.11.18 Association of Miscarriage and Overall Female Sexual Dysfunction

Table 4.:11.18 Association of number of miscarriages with overall female sexual dysfunction

Miscarriage	Frequency (n)	Percentage with Overall FSD			P-value
		TOTAL SCORE ≥ 54	TOTAL SCORE <54	Total	
0	310	73.9%	26.1%	100.0%	0.368
1	41	78.0%	22.0%	100.0%	
2	20	90.0%	10.0%	100.0%	
3	1	100.0%	0.0%	100.0%	

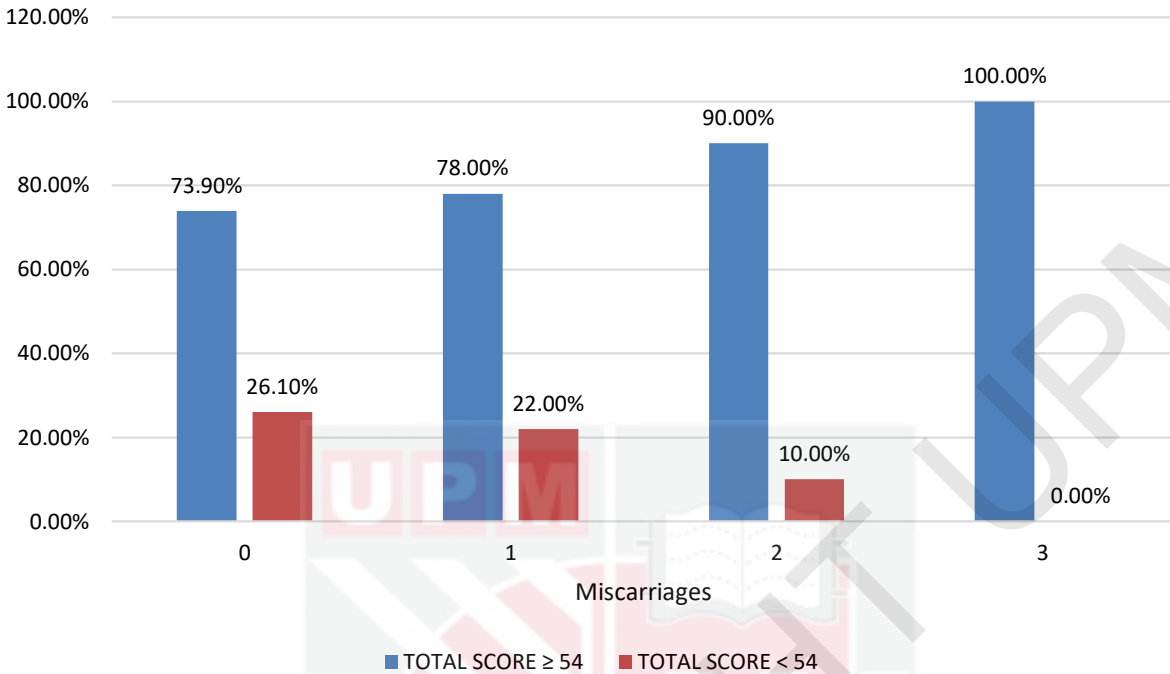


Table 4.:11.18 Association of number of miscarriages with overall female sexual dysfunction

Based on Table 4.10.1 Chi Square test was performed, and the P-value obtained was 0.368. This shows that the not significant ( $P > 0.05$ ). On the hand, it is interesting to note that despite increasing number of miscarriages, the percentage of FSD gets lesser except for 3 miscarriages as it only has one respondent.

#### 4.12 Association between Level of Knowledge and Attitude on Sexual Intercourse during Pregnancy with Overall Female Sexual Dysfunction (FSD) during Pregnancy

##### 4.12.1 Association between Knowledge on SI during pregnancy and Overall FSD

Table 4.12.1: Association between knowledge and Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia

Knowledge	Frequency (n)	Percentage with Overall FSD			P-value
		TOTAL SCORE $\geq$ 54	TOTAL SCORE < 54	Total	
Good Knowledge	179	72.7%	27.9%	100.0%	0.021
Moderate Knowledge	42	66.7%	33.3%	100.0%	
Poor Knowledge	151	81.5%	18.5%	100.0%	

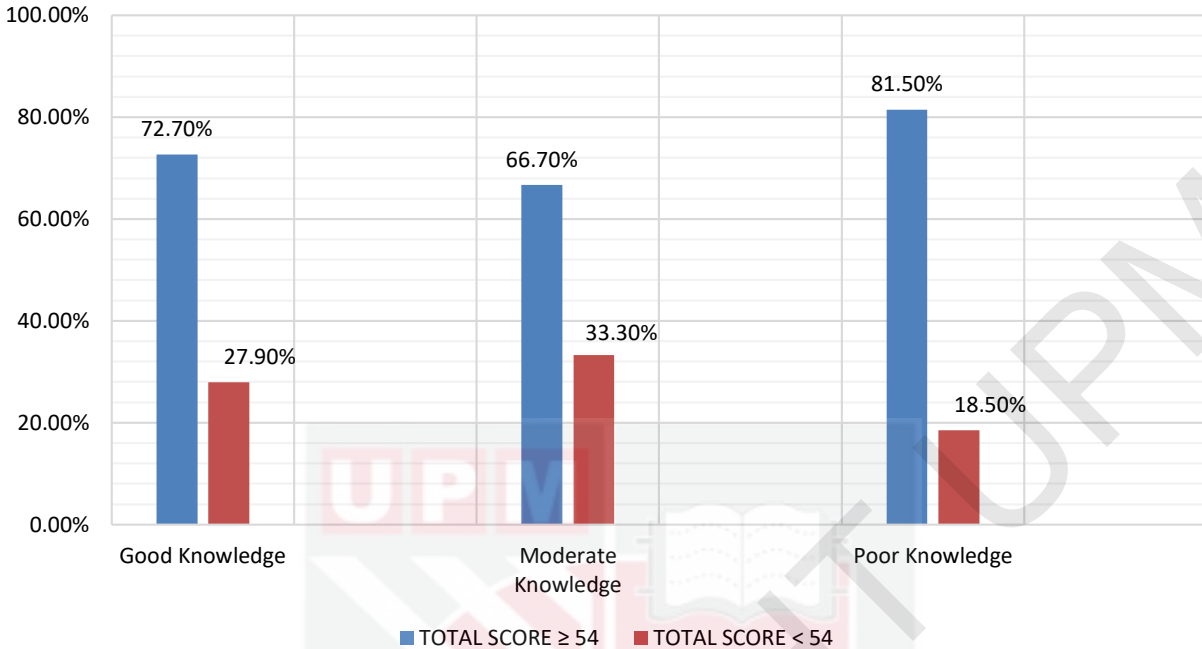


Diagram 4.12.1: Association between knowledge and Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia

Based on Table 4.12.1 Chi Square test was performed to test the association between knowledge and overall Female Sexual Dysfunction during pregnancy among female staffs. Overall, all three groups have more than half of them maintain their sexual function during pregnancy regardless of their knowledge about sexual intercourse in pregnancy. Interestingly, the respondents with poor knowledge had the least percentage (18.5%) of sexual dysfunction, almost half of those with sexual dysfunction in moderate group and a difference about 6% from the good knowledge group. However, the P value is significant.

#### 4.12.2 Association between Attitude towards SI during pregnancy and Overall FSD

Table 4.12.2: Association between Attitude and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia

Attitude	Frequency (n)	Percentage with Overall FSD			P- value
		TOTAL SCORE ≥ 54	TOTAL SCORE < 54	Total	
Positive Attitude	329	75.4%	24.6%	100.0%	0.494
Negative Attitude	43	70.5%	29.5%	100.0%	

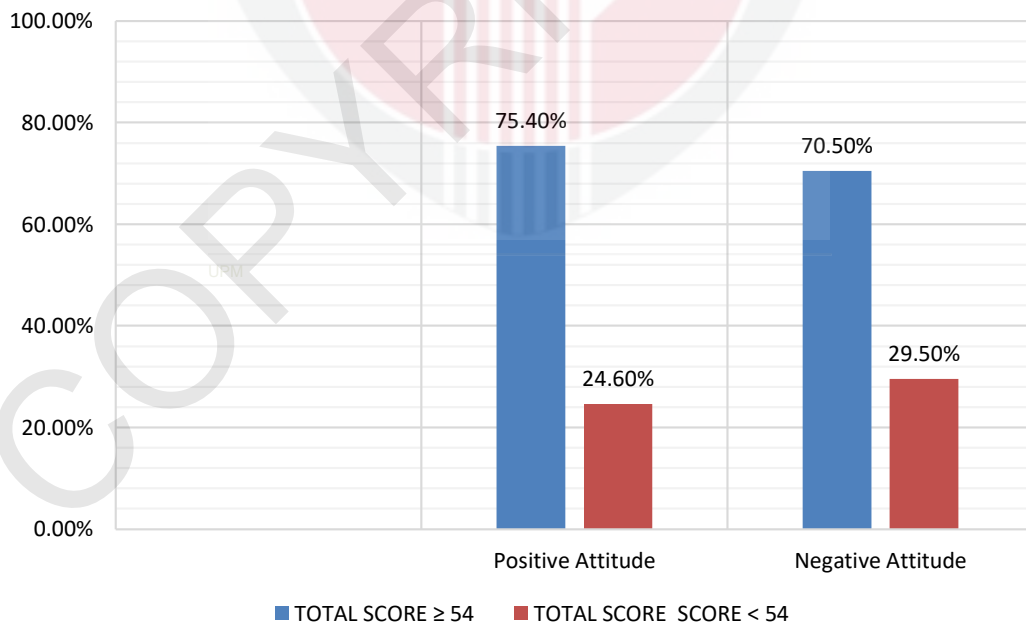


Diagram 4.12.2: Association between Attitude and Overall Female Sexual Dysfunction during pregnancy among female staffs in Universiti Putra Malaysia

Based on Table 4.12.2 Chi Square test was performed to test the association between attitude and overall Female Sexual Dysfunction during pregnancy among female staffs. There is an increase of about 5 % sexual dysfunction in women with negative attitude but the P value noted to be 0.494.



## CHAPTER 5

### DISCUSSION

#### 5.1 Study Design

The study design that we chose to conduct our research is cross sectional study design. This study design is at type of observational study design to analyze a subset of a population at a specific point in time. The study only exists for a specific time and there is no any follow up required. This study design also does not state a clear temporality sequence or cause and effect relationship. We carried out our research based on this study design to determine the knowledge, attitude and practice of sexual intercourse during pregnancy among female staffs of UPM. We also did a few associations of the independent variable (age, parity, ethnicity, religion, education level, knowledge and attitude) towards the dependent variable (overall FSD during pregnancy) among the respondents. The respondents of this study were female staffs of UPM. A total of 429 complete responds were received and a total of 372 met both our inclusion and exclusion criteria. The questionnaires sent to the respondents were done via email and a kind reminder email and call was done to enable us to meet our sample size. The self-administered questionnaire comprises of 4 parts, namely, sociodemographic, knowledge, attitude and practice. The data from the response received was then analysed using SPSS.

## 5.2 Issues Faced During Research

One of the major issues that we faced during the entire course of this research is in the topic itself being controversial and discreet especially among the Malaysian population. Due to this, we could not obtain the needed responses after the first time sending out the questionnaire via emails. We then understood the nature of this issue and decided to send out a kind reminder email and call up the respondents to assure them that all the information obtained from them would be kept anonymous and confidential. We also faced some issues in terms of being able to have a face-to-face interview with the respondents due to the Movement Control Order (MCO) that was being implemented by the government. Another issue that we faced was the fact that many of the responses we received had their last pregnancy more than 5 years ago and this fell into our exclusion criteria. Therefore, we had to increase the number of questionnaires sent to UPM female staffs via email by targeting various different faculties.

### 5.3 Frequency of Sexual Intercourse During Pregnancy by Each Trimester

Table 4.7: Frequency of Sexual Intercourse During Pregnancy (n=372)

Frequency	Frequency (n)	Percentage
<b>First Trimester</b>		
Never	11	3.0
Almost never	26	7.0
A few times (less than half the time)	115	30.9
Sometimes (about half the time)	163	43.8
Most times (more than half the time)	45	12.1
Almost always or always	12	3.2
<b>Second Trimester</b>		
Never	23	6.2
Almost never	82	22.0
A few times (less than half the time)	110	29.6
Sometimes (about half the time)	115	30.9
Most times (more than half the time)	32	8.6
Almost always or always	10	2.7
<b>Third Trimester</b>		

Never	76	20.4
Almost never	95	25.5
A few times (less than half the time)	67	18.0
Sometimes (about half the time)	105	28.2
Most times (more than half the time)	16	4.3
Almost always or always	13	3.5

From the table above, we can see that in all three trimesters, majority fall in the ‘sometimes’ category. However, as the trimester progresses, it is noted the number of respondents increases in the lower end categories of ‘never’, ‘almost never’, and ‘a few times’. This shows as the gestation age increases, less practised sexual intercourse.

This can also be explained from the 5 domains of lubrication, satisfaction, arousal, desire and orgasm which decreases as the trimesters progresses while pain increases towards the last trimester. Based on a study conducted in Spain by Francisco et al (2020), there is a 19% reduction in sexual desire in female during the 1st trimester, 23% in 2nd trimester and decreased 31% in 3rd trimester. The intensity of the orgasm experienced by women when carrying out sexual intercourse during pregnancy also decreases as the trimesters increase as stated in Gokyildiz et al., Turkey (2015). Despite the increase in gestation and size of the abdomen, sexual intercourse still can be done without causing pain and discomfort. Certain sexual positions like spooning can be done to lessen the weight or pressure exerted on the women. Furthermore, physiological changes whereby the Skene glands (paraurethral gland) does not produce much lubrication as the trimester

progresses, causing less lubrication and also pain. However, this can be overcome by additional lubrication gel that can be applied.

#### 5.4 Prevalence of Female Sexual Dysfunction by Each Trimester

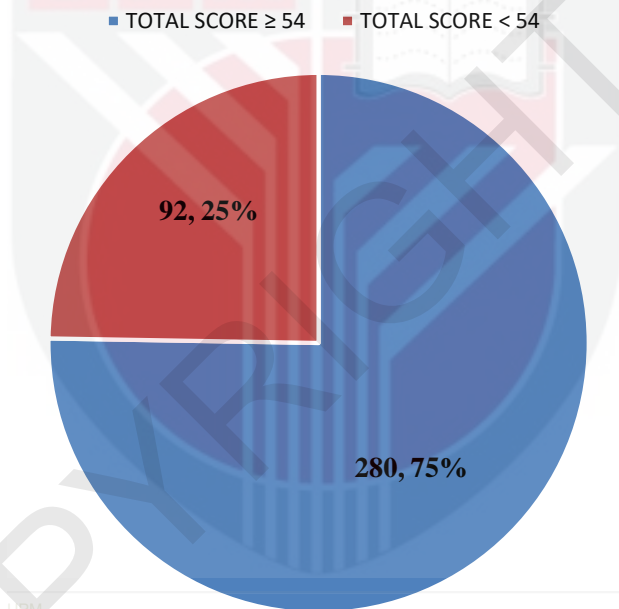
Table 4.8 Female Sexual Dysfunction for Every Trimester (n=372)

<b>Trimester</b>	<b>Frequency (n)</b>	<b>Percentage(%)</b>
<b>First Trimester</b>		
TOTAL SCORE > 26.55	146	39.2
TOTAL SCORE < 26.55 (FSD)	226	60.8
<b>Second Trimester</b>		
TOTAL SCORE > 26.55	70	18.8
TOTAL SCORE < 26.55 (FSD)	302	81.2
<b>Third Trimester</b>		
TOTAL SCORE > 26.55	70	18.8
TOTAL SCORE < 26.55 (FSD)	302	81.2

Table 4.10: Overall Female Sexual Dysfunction during Pregnancy

Overall FSD	Frequency (n)	Percentage (%)
TOTAL SCORE $\geq$ 54	280	75.3
TOTAL SCORE $<$ 54	92	24.7

Diagram 4.10: Overall Female Sexual Dysfunction during Pregnancy



From the table above, we can see that there is an increasing trend in the number of FSD among respondents as the trimester progresses. It was noted that 24.7% of our respondents were in a state of FSD during pregnancy while the rest 75.3% maintained their sexual function.

## 5.5 Factors Associated with Level of Knowledge on Sexual Intercourse during Pregnancy

### 5.5.1 Socio-demographic Characteristics

It was noted that 48.1 % of our respondents recorded good knowledge while an equally high proportion recorded poor knowledge as well (40.6%). The age group (>40) and group 26-30 had the highest percentage of poor knowledge, showing both extremes of age have poor knowledge in sexual intercourse in pregnancy with a significant P value <0.001. Increased knowledge of danger signs in pregnancy among older mothers may be related to their own prior experiences of pregnancy and labour, which serve as an important source of information, particularly to those who have had experience of obstetric complications during previous pregnancies (Duysburgh et al, 2013) [77]. This can be attributed to the early age of reproductive life and also those more than 40 years old may not be well exposed to this topic.

The study found the Indian race has the highest percentage of good knowledge, 71.9% with significant association P <0.001. Chinese noted not far behind with 67.7% but the Malays noted only 41.5%. These have to be assessed with other confounding factors such as age, education level, parity and cultural beliefs. Hindu also noted to have the highest percentage of good knowledge with significant P value, corresponding with the Indian race being the highest too. Direct comparison cannot be made due to lack of previous study. The high percentage of Indian and Hindu in knowledge could be due to the small number of respondents in the category as compared to others.

Interestingly, it is noted despite the increase in education level, the percentage of poor knowledge increased in tertiary level compared to secondary level with significant P value (p= <0.001). This shows the level of education corresponds inversely with the level of knowledge on

sexual intercourse in pregnancy. This study is contradicted with the study done See et al. [75] in Antenatal Clinic, Hospital Universiti Sains Malaysia, among 178 pregnant women which found that 69.2% of their respondents had good knowledge came from tertiary level. Although women with higher education may have less difficulty processing and understanding the information received during antenatal visits but this study shows the affects the knowledge on sexual intercourse in pregnancy does not come from level of education but rather other sociodemographic factors.

### **5.5.2 Obstetric History Characteristics**

This study found that a higher proportion of respondents with good knowledge on sexual intercourse during pregnancy had parity of four (55.1%) but there is no significant association of number of parity and knowledge on sexual intercourse during pregnancy ( $P= 0.057$ ). The percentage of poor knowledge is also about the same for all 3 groups. This finding is consistent with a study by Mellon et al. [72] among 163 pregnant women in outpatient obstetrics clinic at Harbor-UCLA Medical Center that found no significant association ( $p=0.760$ ) between parity and knowledge. These findings proposed that the number of parity does not improve or worsen the level of knowledge on sexual intercourse in pregnancy, suggesting the respondents do not change their perception on this topic throughout their parity.

It is noted the level of knowledge worsens with an increasing number of miscarriages with P value is  $< 0.001$ . Kientore et al reported the pattern of changes in sexual intercourse during pregnancy is affected by misunderstandings and misconceptions regarding consequences of sexual intercourse during pregnancy including miscarriages (19.9%), preterm delivery (8.3%), infection (6.3%), bleeding (3.2%) and pain to the fetus (2.4%) [10]. The misconceptions about sexual

intercourse increases with the number of miscarriages. This could explain respondents becoming more cautious with the number of miscarriages and assume the negative impression about sexual intercourse during pregnancy.

## **5.6 Factors Associated with Level of Attitude on Sexual Intercourse during Pregnancy**

### **5.6.1 Socio-demographic Characteristics**

It was noted that 88.4% of our respondents recorded having a positive attitude towards sexual intercourse during pregnancy while the remaining 11.6% recorded to have a negative attitude towards sexual intercourse during pregnancy. This study found that a higher proportion of respondents with positive attitudes on sexual intercourse during pregnancy were in the age group of 26 to 30 (100.0%) but there was no significant association of age group and attitude on sexual intercourse during pregnancy ( $P= 0.207$ ).

There is lack of literature regarding the association of age and level of attitude in pregnancy. The 'other' ethnicity shows the highest proportion of respondents with a positive attitude on sexual intercourse during pregnancy (100.0%) but there is no significant association and could be due to the small number of respondents in that category.

Buddhist noted to have the highest proportion with positive attitude on sexual intercourse during pregnancy but the other religion also notes more than 70% of positive attitude,  $P = 0.031$ . It is interesting to note that despite Hindu shows highest in knowledge level but their attitude is the lowest compared to the other religions. This could be due to cultural practices and beliefs that may contribute to different depth of attitudes on sexual intercourse during pregnancy (Adamczyk and Hayes, 2012) [76].

Even though the P value is not significant, 0.691, both education level of secondary and tertiary level show almost similar percentage of positive attitude. This also shows the education level does not affect the attitude on sexual intercourse in pregnancy but rather other sociodemographic factors.

### **5.5.2 Obstetric History Characteristics**

Generally, there are good percentage of more than 80% with positive attitude for all parity groups. There is no significant difference among the parity groups with P value 0.120. This can imply the increasing parity does not change the attitude of the respondents as no awareness being introduced after every parity, thus the same attitude continues throughout the parity.

It is noted the decreasing percentage of negative attitude as the number of miscarriages increases but P value 0.368. This differs than the association with knowledge, thus the attitude improves but the knowledge decreases with increasing number of miscarriages. There is lack of study that investigated level of attitude during pregnancy comparing to number of miscarriages.

## 5.7 Factors Associated with Level of Practice on Sexual Intercourse during Pregnancy

### 5.6.1 Socio-demographic Characteristics

The highest proportion of respondents with overall Female Sexual Dysfunction during pregnancy are in age group 31 to 35 (30.9%) and the extreme ages, >40 years old and 26-30 years old have the lowest FSD as compared to the other age groups. However, there is no significant association ( $P=0.140$ ) noted. This finding is consistent with a study by Daud et al. [68] among 100 pregnant women in Klang Valley, Malaysia which show no significant association between age group and sexual dysfunction ( $p=0.410$ ). The cross-sectional study by Senobari et al. [71] among 206 Iranian pregnant women also found that age shows no significant association on age and sexual function ( $p=0.071$ ). These findings proposed that age group is most probably not influential on the practice on sexual intercourse during pregnancy, where the level practice on sexual intercourse during pregnancy based on the individual rather than one's age.

Highest proportion of respondents with overall Female Sexual Dysfunction during pregnancy shown in 'other' ethnicity (33.3%) but there is no significant association ( $P=0.960$ ). This finding is consistent with a study by Ribeiro et al. [74] among 233 pregnant women in Brazil also found that ethnicity shows no significant association between ethnicity and sexual dysfunction ( $p=0.691$ ) which consist of multi-ethnicity populations. These findings proposed that ethnicity is most probably not influential on the practice on sexual intercourse during pregnancy.

There is no significant association between religion and education level with overall Female Sexual Dysfunction during pregnancy. This finding is consistent with a study by Ribeiro et al. [74] among 233 pregnant women in Brazil also found that religion shows no significant association between religion and sexual dysfunction ( $p=0.259$ ). A study by Aksoy Derya et al. [73] also noted

among 472 pregnant women in Australia, educational level shows no significant association between educational level and sexual dysfunction ( $p=0.083$ ).

Even though the P value is not significant, 0.691, both education level of secondary and tertiary level show almost similar percentage of positive attitude. This also shows the education level does not affect the attitude on sexual intercourse in pregnancy but rather other sociodemographic factors.

### **5.6.2 Obstetric History Characteristics**

There is no significant association between parity and FSD during pregnancy. This finding is consistent with a study by Daud et al. [68] among 100 pregnant women in Klang Valley, Malaysia which show no significant association between parity and sexual dysfunction ( $p=0.663$ ). The cross-sectional study by Senobari et al. [71] among 206 Iranian pregnant women also found that number of parity shows no significant association on parity and sexual function ( $p=0.122$ ).

On the other hand, it is interesting to note that despite increasing number of miscarriages, the percentage of FSD gets lesser except for three miscarriages as it only has one respondent. However, the P value is not significant,  $P=0.368$ . There is no established data that can significantly associate sexual intercourse in pregnancy with miscarriage. Andrew et al. [62] in his review in the British Journal of General Practice 2011, looked at previous studies until 2009 and concluded there was no paper yet to convince that the miscarriage rate in those practiced sexual intercourse in pregnancy was solely due to the sexual intercourse.

## **5.8 Association between Level of Knowledge and Attitude on Sexual Intercourse during Pregnancy with Overall Female Sexual Dysfunction (FSD) during Pregnancy Among UPM's Female Staffs**

### **5.8.1 Association Knowledge with Level of Practice on Sexual Intercourse during Pregnancy**

It was noted that 48.1 % of respondents recorded good knowledge and sexual function during pregnancy. This study found that a higher proportion of respondents with sexual function during pregnancy were in poor knowledge but there was a significant association of knowledge and practice as P value recorded is 0.021. A study done in the Public Health Center in Tehran, Iran by Heidari et al. [78] among 128 pregnant women found that there is significant association with effect of sex education with sexual function of pregnant women ( $p < 0.001$ ) the increased in mean of before and after sex education from 22.72 to 27.78 as compared to control group with mean of 20.23 and 19.08 before and after sex education. This study shows increased knowledge had significant female function in pregnancy as they had better understanding in terms of the safety SI in pregnancy. It is important that couples be reassured by doctors that sexual intercourse will not normally cause complications. There is not enough strong evidence to establish the risks associated with SI in pregnancy (43).

### **5.8.2 Association Attitude with Level of Practice on Sexual Intercourse during Pregnancy**

It was noted that 88.4% of our respondents recorded positive attitude and sexual function during pregnancy towards sexual intercourse during pregnancy while the remaining 11.6% recorded to have a negative attitude towards sexual intercourse during pregnancy but FSD. P value recorded is 0.494. This shows the effect of practice on sexual intercourse in pregnancy does not come from level of attitude but based on the individual choice.

# CHAPTER 6

## CONCLUSION

### 6.1 Summary

Knowledge on sexual intercourse during pregnancy is affected by age, ethnicity, religion, and also miscarriages but associated inversely with education level. There is no significant association between attitude and socio demographics factors except religion. There are also no significant factors associated with FSD. It is also noted majority still maintain their sexual function during pregnancy with only 25% have FSD during pregnancy. It was noted that 88.4% of our respondents recorded having a positive attitude towards sexual intercourse during pregnancy while the remaining 11.6% recorded to have a negative attitude towards sexual intercourse during pregnancy.

### 6.2 Limitation of Study

The study design cross sectional study was being performed to conduct our research on the topic 'Knowledge, Attitude and Practice of Sexual Intercourse During Pregnancy' and a few limitations were being observed due to the application of this study design. The first is that we could not study the changes in behaviour of our respondents over a period of time as a cross sectional study only exists or is being done at a particular specific time only. Moreover, this study cannot determine cause and effect relationship as it cannot register a temporality sequence. Hence,

the temporal sequence is quite difficult to be determined. Moreover, the study method chosen is very susceptible to other confounding factors such as responder bias, recall bias, interview bias and social acceptability bias. In our research we had to face with recall bias as the respondents might have a difficult time in recalling their last sexual experience during pregnancy. Furthermore, during our time of research, the Movement Control Order (MCO) was imposed and it restricted us from being able to conduct an interview session with our respondents face to face.

### **6.3 Strength of Study**

A few key strengths were noted when we used the study design cross sectional in order to conduct our research. The first strength is that we found that this study method is relatively quick, easy and cheap to be performed as it does not require any follow up. Furthermore, the data on all variables studied is only needed to be collected once. This study design does not require that big of a sample size. Moving on, the association of multiple factors towards our research objective could be made relatively easily. On top of that, this study method has the ability to be extended into a case control or cohort study which can produce a higher value of statistical evidence.

#### **6.4 Recommendation of Study**

To make sure that the respondents understand the words in the questionnaire, the researcher should be prepared for any assistance when the respondents encounter any kind of problem in understanding the questions. The best way is to explain the entire questionnaire as the respondents read the questions.

This study was done targeting the female staffs of UPM. The research could probably have targeted more females from various other backgrounds and not just from the background of education. This can help us in understanding the sexual activity of women during pregnancy from various backgrounds or various occupation fields. Hence, it may provide a more holistic data to be analyzed and would be able to generalise our findings to the entire population of Malaysia if women from various backgrounds (occupation fields) were chosen.

# APPENDIX

## APPENDIX 1: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT FORM



UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,  
SELANGOR, MALAYSIA

JAWATANKUASA ETIKA UNIVERSITI UNTUK  
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)

### PENERANGAN DAN PERSETUJUAN RESPONDEN

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher./ *Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik*

#### 1. STUDY TITLE/ TAJUK KAJIAN :

Knowledge, attitude, and practices on sexual intercourse during pregnancy among female staff of Universiti Putra Malaysia (UPM)

*/ Pengetahuan, sikap dan praktis terhadap hubungan seks semasa kehamilan dalam kalangan kakitangan wanita di Universiti Putra Malaysia (UPM)*

#### 2. INTRODUCTION/ PENGENALAN :

Sexual intercourse is one of sexual activity that can maintain the intimacy among couples. However, it has been observed that due to the beliefs of complication on sexual intercourse, physiological and physical changes during pregnancy, sexual function among pregnant women may be affected. Therefore, this study involves 500 respondents from UPM's female staff who are pregnant or who have undergone pregnancy. This study is done by medical undergraduates from 27<sup>th</sup> April 2020 till 28<sup>th</sup> September 2020. This study will determine whether sociodemographic factors (race, religion, ethnicity, educational level) and obstetric history affect the knowledge, attitudes and practices on sexual intercourse during pregnancy. This will help to promote better awareness of sexual behavior during pregnancy.

*/ Hubungan seksual merupakan salah satu cara mengekalkan keintiman antara pasangan. Walaubagaima pun, berdasarkan pemerhatian, disebabkan kefahaman terhadap komplikasi*

*melakukan seks intim semasa kehamilan, serta perubahan fisiologi dan fizikal semasa hamil menyebabkan tahap fungsi seksual dalam kalangan wanita terjejas. Kajian ini merupakan sebuah projek yang dijalankan oleh pelajar Bachelor Doktor Perubatan dan berlangsung daripada 27 April 2020 sehingga 28 September 2020. Kajian ini melibatkan seramai 500 responden daripada kalangan kakitangan wanita Universiti Putra Malaysia (UPM) yang sedang hamil atau telah melalui fasa kehamilan.*

*Oleh itu, kajian ini akan dijalankan untuk menentukan Pengetahuan, sikap dan praktis terhadap hubungan seks ketika mengandung di kalangan kakitangan wanita di Universiti Putra Malaysia (UPM). Seterusnya, kajian ini juga dilakukan bagi mengenalpasti keterkaitan faktor sosio-demografi (umur, etnik, tahap pendidikan, agama dan sejarah obstetrik) dengan pengetahuan, sikap, dan praktis terhadap hubungan seksual semasa kehamilan. Ini akan membantu menggalakkan kesedaran tentang tingkah laku seksual yang lebih baik semasa mengandung.*

#### **WHAT WILL YOU HAVE TO DO? APAKAH YANG PERLU ANDA LAKUKAN?**

Respondents are asked to fill up the questionnaire that has been prepared. ALL respondents have to fill up and answer every question in all section 1, 2, 3, dan 4. Please also note that participation is voluntary, and that participant may withdraw anytime without penalty or loss of benefit. Respondents may feel a little bit uncomfortable when answering a few questions that can be considered somewhat personal regarding knowledge, attitudes, and practices of sexual intercourse during pregnancy. **Respondents will not be paid for your participation in this study.**

*Responden dikehendaki untuk mengisi borang soal selidik yang disediakan. Setiap responden perlu mengisi dan menjawab soalan dalam bahagian 1, 2, 3, dan 4. Sila juga ambil perhatian bahawa penyertaan adalah secara sukarela, dan peserta boleh menarik diri bila-bila masa tanpa penalti atau kehilangan manfaat. Peserta juga mungkin akan berasa sedikit ketidakselesaan apabila menjawab beberapa soalan yang dianggap peribadi soalan berkaitan pengetahuan, sikap, dan praktis terhadap hubungan seksual semasa kehamilan. **Peserta tidak akan dibayar untuk penyertaan dalam kajian ini.***

#### **3. WHO SHOULD NOT PARTICIPATE IN THE STUDY?/ SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?**

The female staff of Universiti Putra Malaysia (UPM) who have never been pregnant before, or had the last pregnancy more than 5 years ago.

*/ Kakitangan staf wanita Universiti Putra Malaysia yang tidak pernah mengandung, atau kali terakhir mengandung adalah lebih 5 tahun yang lalu.*

#### **4. WHAT WILL BE THE BENEFITS OF THE STUDY/ FAEDAH MENYERTAI KAJIAN INI? :**

**(a) TO YOU AS THE SUBJECT?/ KEPADA ANDA SEBAGAI PESERTA**

Participation of respondents will help the researchers to ascertain the knowledge, attitude and practice on sexual intercourse during pregnancy. This in return can trigger the awareness among respondents. They will then be able to understand and correctly on the issues regarding sexual intercourse in pregnancy.

*/Penyertaan responden akan membantu pihak pengkaji dalam menentukan pengetahuan, sikap dan amalan hubungan seksual semasa mengandung. Hal ini boleh mencetuskan kesedaran di kalangan responden. Mereka kemudiannya akan dapat memahami dan dengan betul mengenai isu yang berkaitan dengan hubungan seksual dalam kehamilan.*

**(b) TO THE INVESTIGATOR?/ KEPADA PENYELIDIK**

The investigator can determine the sociodemographic factors (race, religion, ethnicity, educational level) and obstetric history association to the knowledge, attitudes and practices on sexual intercourse during pregnancy.

*/Keputusan yang diperolehi daripada maklum balas responden membolehkan pengkaji menganalisa menganalisa ciri-ciri sosio-demografi (umur, etnik, tahap pendidikan, agama dan sejarah obstetrik) yang berkait rapat dengan pengetahuan, sikap, dan praktis terhadap hubungan seksual semasa kehamilan*

#### **5. WHAT ARE THE POSSIBLE RISKS?/ ADAKAH IA BERISIKO?**

Since this is a survey study, there are no risks associated with this study. */Memandangkan ini adalah kajian melalui maklum balas, ia tidak mempunyai sebarang risiko dalam nmenjawab soal selidik ini.*

#### **6. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL? /ADAKAH MAKLUMAT DAN IDENTITI KEKAL RAHSIA?**

All forms of information and identities of respondents that is mentioned in the questionnaire will be kept confidential./ *Segala bentuk maklumat dan identiti responden yang dinyatakan dalam borang soal selidik tidak akan didedahkan kepada mana-mana pihak.*

**7. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH? /SIAPA YANG PERLU DIHUBUNGI SEKIRANYA SAYA MEMPUNYAI SEBARANG SOALAN SEMASA MENGIKUTI PENYELIDIKAN INI?**

Supervisor:

Dr. Lindy Bak Li Mei ( [kmscb@gmail.com](mailto:kmscb@gmail.com) )

Co-supervisor:

Prof. Mohd Nazri bon yazid ( [mmnazri@yahoo.com](mailto:mmnazri@yahoo.com) )

Thinnesh A/L Arumugam ( 014-633 0624 )

Nurhani binti Masjuki ( 019-450 5627 )

Nur Fatini Najmina binti Masod ( 014-860 4787 )

Please initial here if you have read and understood the contents of this page \_\_\_\_\_

/ Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini

\_\_\_\_\_

## 8. CONSENT /PERSETUJUAN

I ..... Identity Card No. ....  
address.....

.....hereby voluntarily agree to take part  
in the research stated above \*(clinical /drug trial/video recording/ focus group/interview-based/  
questionnaire-based).

/ Saya ..... No. Kad Pengenalan .....

Beralamat .....

..... dengan ini bersetuju  
untuk mengambil bahagian secara sukarela dalam penyelidikan yang tersebut di atas \*(kajian  
klinikal/ percubaan ubat-ubatan/rakaman video/kumpulan sasaran/temuduga/soal selidik).

I have been informed about the nature of the research in terms of methodology, possible  
adverse effects and complications (as written in the Respondent's Information Sheet). I understand  
that I have the right to withdraw from this research at any time without giving any reason  
whatsoever. I also understand that this study is confidential and all information provided with  
regard to my identity will remain private and confidential. / Saya telah diberi penjelasan secara  
menyeluruh mengenai penyelidikan ini dari segi metodologi, risiko dan komplikasi (seperti tertulis  
pada Helaian Penerangan Responden). Saya memahami bahawa saya berhak menarik diri dari  
penyelidikan ini pada bila-bila masa tanpa memberi sebarang alasan. Saya juga memahami  
bahawa sebarang maklumat yang berkaitan identiti saya akan dirahsiakan.

I\* wish / do not wish to know the results related to my participation in the research  
I agree/do not agree that the images/photos/video recordings/voice recordings related to me be  
used in any form of publication or presentation (if applicable)./

*Saya\*berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan saya.  
Saya \*setuju / tidak bersetuju untuk imej/ gambar rakaman video /rakaman suara digunakan  
dalam apa jua bentuk penerbitan atau pembentangan.(sekiranya berkaitan)*

\* delete where necessary /\*potong yang tidak berkenaan

Signature / Tandatangan;

.....

(Respondent/ Responden)

Date/ Tarikh: .....

Name/ Nama: .....

I.C No./ No. K/P: .....

Signature / Tandatangan;

.....

(Witness/ Saksi )

Date/ Tarikh: .....

Name/ Nama: .....

I.C No./ No. K/P: .....

I confirm that I have explained to the respondent the nature and purpose of the above-mentioned  
research.

*/ Saya mengesahkan bahawa saya telah menerangkan kepada responden ini sifat dan tujuan  
penyelidikan yang tersebut di atas.*

Signature / Tandatangan;

.....

(Researcher/ Penyelidik )

Date/ Tarikh:

.....

## APPENDIX 2: BUDGET PLANNING

<b>ITEM</b>	<b>COST (RM)</b>
Printing	20.00
Photostatting	20.00
Binding	5.00
Total	45.00

### APPENDIX 3: GRANTT CHART

Activity	Apr	May	June	July	Aug	Sept	Oct
Proposal Preparation							
Submission of Proposal							
Preparation of Proposal Presentation							
Proposal Presentation							
Preparation of Ethical Approval/letters							
Data collection and Analysis							
Submission of Data Analysis							
Preparation of Data Analysis Presentation							
Data Analysis and Presentation							
Report Writing and Poster Preparation							
Submission of Final Reports and Scientific Article							
Preparation of Final Presentation and Poster Competition							
Final Presentation							
Correction of Final Report and Scientific Article							
Submission of Logbook and Final Reports							

## APPENDIX 5: FEMALE SEXUAL FUNCTION INDEX SCORING

Question	Response Options
1. Over the past 4 weeks, how <b>often</b> did you feel sexual desire or interest?	5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
2. Over the past 4 weeks, how would you rate your <b>level</b> (degree) of sexual desire or interest?	5 = Very high 4 = High 3 = Moderate 2 = Low 1 = Very low or none at all
3. Over the past 4 weeks, how <b>often</b> did you feel sexually aroused ("turned on") during sexual activity or intercourse?	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never
4. Over the past 4 weeks, how would you rate your <b>level</b> of sexual arousal ("turn on") during sexual activity or intercourse?	0 = No sexual activity 5 = Very high 4 = High 3 = Moderate 2 = Low 1 = Very low or none at all
5. Over the past 4 weeks, how <b>confident</b> were you about becoming sexually aroused during sexual activity or intercourse?	0 = No sexual activity 5 = Very high confidence 4 = High confidence 3 = Moderate confidence 2 = Low confidence 1 = Very low or no confidence
6. Over the past 4 weeks, how <b>often</b> have you been satisfied with your arousal (excitement) during sexual activity or intercourse?	0 = No sexual activity 5 = Almost always or always 4 = Most times (more than half the time) 3 = Sometimes (about half the time) 2 = A few times (less than half the time) 1 = Almost never or never

7. Over the past 4 weeks, how **often** did you become lubricated ("wet") during sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Almost always or always
- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

8. Over the past 4 weeks, how **difficult** was it to become lubricated ("wet") during sexual activity or intercourse?

- 0 = No sexual activity
- 1 = Extremely difficult or impossible
- 2 = Very difficult
- 3 = Difficult
- 4 = Slightly difficult
- 5 = Not difficult

9. Over the past 4 weeks, how often did you **maintain** your lubrication ("wetness") until completion of sexual activity or intercourse?

- 0 = No sexual activity
- 5 = Almost always or always
- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

10. Over the past 4 weeks, how **difficult** was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?

- 0 = No sexual activity
- 1 = Extremely difficult or impossible
- 2 = Very difficult
- 3 = Difficult
- 4 = Slightly difficult
- 5 = Not difficult

11. Over the past 4 weeks, when you had sexual stimulation or intercourse, how **often** did you reach orgasm (climax)?

- 0 = No sexual activity
- 5 = Almost always or always
- 4 = Most times (more than half the time)
- 3 = Sometimes (about half the time)
- 2 = A few times (less than half the time)
- 1 = Almost never or never

12. Over the past 4 weeks, when you had sexual stimulation or intercourse, how **difficult** was it for you to reach orgasm (climax)?

- 0 = No sexual activity
- 1 = Extremely difficult or impossible
- 2 = Very difficult
- 3 = Difficult
- 4 = Slightly difficult
- 5 = Not difficult

13. Over the past 4 weeks, how **satisfied** were you with your ability to reach orgasm (climax) during sexual activity or intercourse?

0 = No sexual activity  
5 = Very satisfied  
4 = Moderately satisfied  
3 = About equally satisfied and dissatisfied  
2 = Moderately dissatisfied  
1 = Very dissatisfied

14. Over the past 4 weeks, how **satisfied** have you been with the amount of emotional closeness during sexual activity between you and your partner?

0 = No sexual activity  
5 = Very satisfied  
4 = Moderately satisfied  
3 = About equally satisfied and dissatisfied  
2 = Moderately dissatisfied  
1 = Very dissatisfied

15. Over the past 4 weeks, how **satisfied** have you been with your sexual relationship with your partner?

5 = Very satisfied  
4 = Moderately satisfied  
3 = About equally satisfied and dissatisfied  
2 = Moderately dissatisfied  
1 = Very dissatisfied

16. Over the past 4 weeks, how **satisfied** have you been with your overall sexual life?

5 = Very satisfied  
4 = Moderately satisfied  
3 = About equally satisfied and dissatisfied  
2 = Moderately dissatisfied  
1 = Very dissatisfied

17. Over the past 4 weeks, how **often** did you experience discomfort or pain during vaginal penetration?

0 = Did not attempt intercourse  
1 = Almost always or always  
2 = Most times (more than half the time)  
3 = Sometimes (about half the time)  
4 = A few times (less than half the time)  
5 = Almost never or never

18. Over the past 4 weeks, how **often** did you experience discomfort or pain following vaginal penetration?

0 = Did not attempt intercourse  
1 = Almost always or always  
2 = Most times (more than half the time)  
3 = Sometimes (about half the time)  
4 = A few times (less than half the time)  
5 = Almost never or never

19. Over the past 4 weeks, how would you rate your **level** (degree) of discomfort or pain during or following vaginal penetration?

0 = Did not attempt intercourse  
1 = Very high  
2 = High  
3 = Moderate  
4 = Low  
5 = Very low or none at all

### FSFI DOMAIN SCORES AND FULL SCALE SCORE

The individual domain scores and full scale (overall) score of the FSFI can be derived from the computational formula outlined in the table below. For individual domain scores, add the scores of the individual items that comprise the domain and multiply the sum by the domain factor (see below). Add the six domain scores to obtain the full scale score. It should be noted that within the individual domains, a domain score of zero indicates that the subject reported having no sexual activity during the past month. Subject scores can be entered in the right-hand column.

Domain	Questions	Score Range	Factor	Minimum Score	Maximum Score	Score
Desire	1, 2	1 – 5	0.6	1.2	6.0	
Arousal	3, 4, 5, 6	0 – 5	0.3	0	6.0	
Lubrication	7, 8, 9, 10	0 – 5	0.3	0	6.0	
Orgasm	11, 12, 13	0 – 5	0.4	0	6.0	
Satisfaction	14, 15, 16	0 (or 1) – 5	0.4	0.8	6.0	
Pain	17, 18, 19	0 – 5	0.4	0	6.0	
Full Scale Score Range				2.0	36.0	

## APPENDIX 6: QUESTIONNAIRE

### QUESTIONNAIRE OF KNOWLEDGE, ATTITUDES AND PRACTICES ON SEXUAL INTERCOURSE DURING PREGNANCY

#### 1.0 Sociodemographic & Obstetric history

Please fill up/ tick the details accordingly. / *Sila isikan/ tandakan butiran-butiran berikut.*

1.1	Maternal age during current pregnancy or last pregnancy <i>Umur ibu semasa kandungan terakhir atau sekarang jikalau mengandung sekarang</i>	<input type="checkbox"/> : 26-30 <input type="checkbox"/> 31-35 <input type="checkbox"/> 36-40 <input type="checkbox"/> 41-45 <input type="checkbox"/> >45
1.2	Ethnicity/ Etnik	<input type="checkbox"/> Malay / <i>Melayu</i> <input type="checkbox"/> Chinese/ <i>Cina</i> <input type="checkbox"/> Indian/ <i>India</i> <input type="checkbox"/> Others/ <i>lain-lain</i> (specify/ <i>nyatakan</i> ) _____
1.3	Education Level / Tahap Pendidikan	<input type="checkbox"/> Primary/ <i>primer</i> <input type="checkbox"/> Secondary/ <i>sekunder</i> <input type="checkbox"/> Tertiary/ <i>tertier</i> <input type="checkbox"/> Others/ <i>lain-lain</i> (specify/ <i>nyatakan</i> ) _____
1.4	Religion/ Agama	<input type="checkbox"/> Islam <input type="checkbox"/> Kristian <input type="checkbox"/> Buddha <input type="checkbox"/> Others: Others/ <i>lain-lain</i> (specify/ <i>nyatakan</i> ) _____

Obstetric History

1.5	<p>Gravida</p> <p>(number of times a woman is or has been pregnant/ <i>mengandung kali keberapa</i>)</p> <p><b>*ignore the rest of the question if nil</b> <b>*berhenti di sini jikalau tidak pernah mengandung</b></p>	:
1.6	<p>Parity and year of last pregnancy</p> <p>(number of pregnancies including live births and still births (<math>\geq</math> 24 weeks pregnancy or birth weight 500g or more and the year delivered the last pregnancy)</p> <p><i>Bilangan kandungan termasuk yang hidup selepas dilahirkan dan kandungan yang meninggal semasa dalam kandungan lebih daripada 24minggu dan tahun bersalin terakhir</i></p>	<p>Parity:</p> <p>Year /<i>tahun</i>:</p>
1.7	<p>Miscarriages/Ectopic/Molar pregnancy</p> <p>(keguguran/ kandungan luar rahim/ kandungan anggur)</p>	:
1.8	<p>Gestational age if currently pregnant (weeks/ minggu)</p> <p>(age of a fetus that starts on the first day of the mother's last menstrual period or based on a revised date given/</p> <p><i>Umur kandungan bermula daripada hari pertama selepas ketidakhadiran darah haid atau tarikh yang diberi oleh dokter)</i></p> <p><b>*ignore this question if not pregnant currently</b> <b>*tidak perlu jawab soalan ini jika tidak mengandung sekarang</b></p>	:
1.9	<p>Antenatal problem during current pregnancy or last pregnancy</p> <p><i>Masalah antenatal semasa kandungan terakhir atau sekarang jikalau mengandung sekarang</i></p>	<p><input type="checkbox"/> Placenta previa/uri berada di bawah</p> <p><input type="checkbox"/> Antepartum hemorrhage/ pendarahan faraj semasa hamil</p> <p><input type="checkbox"/> Threatened preterm labour/ ancaman kelahiran pramatang</p> <p><input type="checkbox"/> Intrauterine death/ Kematian bayi dalam kandungan</p> <p><input type="checkbox"/> Others/ <i>lain-lain</i> (specify/ nyatakan)</p> <p>_____</p>

2.0 Knowledge/Pengetahuan

Please read each question carefully and tick (✓) in the box provided based on your views in the following statement / *Sila baca setiap soalan dengan teliti dan tandakan (✓) pada kotak yang disediakan berdasarkan pandangan anda pada pernyataan berikut.*

2.1	<p>Is sex during pregnancy safe for mother?</p> <p><i>Adakah hubungan seks semasa hamil selamat kepada ibu?</i></p>	True / Ya	False / Tidak
2.2	<p>Do you think that sexual intercourse would cause problems as below:</p> <p><i>Adakah anda merasakan hubungan seks semasa hamil akan menyebabkan masalah seperti di bawah:</i></p> <p>2.2.1 Husband's penis could hurt the baby's head?</p> <p><i>Zakar suami boleh mencederakan kepala janin?</i></p> <p>2.2.2 Climax or orgasm during pregnancy lead to premature birth or contraction?</p> <p><i>Klimaks atau syahwat semasa hamil akan menyebabkan kelahiran bayi pramatang atau kontraksi?</i></p> <p>2.2.3 Infection to the fetus?</p> <p><i>Menyebabkan jangkitan kuman kepada bayi yang dikandung?</i></p> <p>2.2.4 Excessive bleeding?</p> <p><i>Pendarahan yang berlebihan?</i></p> <p>2.2.5 Water bag breaking?</p> <p><i>Pecah air ketumban?</i></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
2.3	<p>Is it normal for my sexual desires to increase or decrease during pregnancy?</p> <p><i>Adakah normal apabila nafsu seks saya adakala meningkat atau menurun semasa hamil?</i></p>	True / Ya	False / Tidak
2.4	<p>Can sex during pregnancy be continued in a non-stressful position (spooning and from behind/doggy style).</p> <p><i>Adakah hubungan seks semasa hamil dapat diteruskan dengan posisi yang tidak memberi tekanan pada kandungan (dari sisi atau dari belakang)</i></p>	True / Ya	False / Tidak

2.5	Is it true that it is more difficult to reach orgasm, and if you do, it may be less satisfying?  <i>Adakah benar semasa mengandung adalah lebih sukar untuk mencapai klimaks dan jika anda melakukannya, ia mungkin kurang memuaskan.</i>	True / Ya	False / Tidak
2.6	If a couple has sex near to their birth date, it can help to ease birth process.  <i>Sekiranya pasangan melakukan hubungan seks berhampiran tarikh bersalin, ia boleh membantu memudahkan proses kelahiran.</i>	True / Ya	False / Tidak
2.7	Sexual intercourse during pregnancy can strengthen the couple relationship.  <i>Hubungan seks semasa hamil dapat mengeratkan hubungan suatu pasangan.</i>	True / Ya	False / Tidak
2.8	Sexual intercourse can be enjoyed as usual throughout the entire pregnancy.  <i>Hubungan seks boleh dinikmati seperti biasa sepanjang tempoh kehamilan</i>	True / Ya	False / Tidak

Sources of information /sumber maklumat:

Please tick where do you get the information on sexual intercourse during pregnancy (you may tick more than one)  
/Sila tandakan sumber di mana anda memperoleh maklumat tentang hubungan seks semasa kehamilan. (anda boleh menanda lebih daripada satu pilihan)

- Doctors /doctor
- Nurse or any health personnel /Jururawat atau mana-mana kakitangan kesihatan
- Friends /Kawan-kawan
- Spouse / Pasangan
- Books, magazines or newspaper / Buku-buku, majalah atau suratkhabar
- Internet / Internet
- None / Tiada
- Others /Lain-lain: please specify /Sila nyatakan \_\_\_\_\_

### 3.0 Attitude/ Sikap

Instruction/ Arahan:

Please read each questions and response options thoroughly before choosing your answer/ *Sila baca dengan teliti setiap soalan dan pilihan respon sebelum memilih jawapan.*

- 1: Strongly disagree/ *Sangat tidak setuju*
- 2: Disagree/ *Tidak setuju*
- 3: I don't know/ *Saya tidak tahu*
- 4: Agree/ *Setuju*
- 5: Strongly agree /*Sangat setuju*

No.	Questions	Response Options				
3.1	Reluctant or <b>not comfortable</b> to have sexual intercourse during pregnancy. <i>Tidak berasa selesa atau tidak rela melakukan hubungan seksual semasa sedang mengandung.</i>	1	2	3	4	5
3.2	Guilt after having sexual intercourse during pregnancy. <i>Rasa bersalah setelah melakukan hubungan seksual semasa anda hamil.</i>	1	2	3	4	5
3.3	Feel irritated and uncomfortable in having sexual desires when you are pregnant. <i>Berasa terganggu dan tidak selesa jikalau ada keinginan melakukan hubungan seksual semasa hamil.</i>	1	2	3	4	5
3.4	Fear that sexual intercourse during pregnancy may harm your baby. <i>Takut apabila melakukan persetubuhan semasa hamil yang ia akan mengancam kandungan anda.</i>	1	2	3	4	5
3.5	Fear that sexual intercourse during pregnancy can endanger maternal health. <i>Berasa bimbang seks semasa mengandung boleh mengancam kesihatan ibu.</i>	1	2	3	4	5
3.6	Feel frustrated and stressful to have sexual intercourse during pregnancy. <i>Berasa amat tertekan jikalau anda melakukan persetubuhan semasa mengandung.</i>	1	2	3	4	5
3.7	Feels own body not attractive enough to attract partner to have sexual intercourse . <i>Rasa badan tidak cukup menarik semasa hamil untuk menarik perhatian suami untuk melakukan persetubuhan.</i>	1	2	3	4	5

3.8	Sexual intercourse during pregnancy oppose your beliefs/culture. <i>Perhubungan seks semasa hamil merupakan satu percanggahan terhadap budaya atau kepercayaan agama anda.</i>	1	2	3	4	5
3.9	Afraid or embarrassed to voice your sexual needs to your partner during pregnancy. <i>Berasa takut untuk mengemukakan keinginan anda untuk persetubuhan kepada pasangan anda.</i>	1	2	3	4	5
3.10	Afraid or embarrassed to voice your sexual needs or concerns to your doctor during the antenatal visits. <i>Berasa takut atau malu untuk mengemukakan soalan berkenaan persetubuhan semasa mengandung kepada doctor menjalankan lawatan susulan antenatal.</i>	1	2	3	4	5



4.0 Practices/Amalan

Instruction/ Arahan:

Please read each questions and response options thoroughly before choosing your answer/ *Sila baca dengan teliti setiap soalan dan pilihan respon sebelum memilih jawapan.*

No.	Questions	1 <sup>st</sup> trimester (0 - 12 <sup>th</sup> week)					2 <sup>nd</sup> trimester (13 <sup>th</sup> -27 <sup>th</sup> week)					3 <sup>rd</sup> trimester (28 <sup>th</sup> - 40 <sup>th</sup> week)							
4.1	<p>How many times you had sexual intercourse in a 1 month when you were last pregnant/ the past 1 month if you are pregnant (on average)?</p> <p><i>Sebulan yang lalu ketika anda sedang mengandung (sekiranya anda mengandung), berapa kali anda melakukan penetrasi ketika melakukan hubungan seksual (secara purata)?</i></p> <p><b>5</b> = Almost always or always / <i>hampir setiap hari atau selalu</i>  <b>4</b> = Most times (more than 2 times a week)/ <i>lebih dari 2 kali dalam seminggu</i>  <b>3</b> = Sometimes (1-2 times a week) / <i>1-2 kali dalam seminggu</i>  <b>2</b> = A few times (once a week) / <i>sekali seminggu</i>  <b>1</b> = Almost never /<i>hampir tidak pernah</i>  <b>0</b> = Never/ <i>tidak pernah</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
4.2	<p>In a month, how often did you feel sexual desire or interest?</p> <p><i>Dalam sebulan, bagaimanakah kekerapananda merasakan keinginan terhadap aktiviti seksual?</i></p> <p><b>5</b> = Almost always or always / <i>hampir setiap hari atau selalu</i>  <b>4</b> = Most times (more than 2 times a week)/ <i>lebih dari 2 kali dalam seminggu</i>  <b>3</b> = Sometimes (1-2 times a week) / <i>1-2 kali dalam seminggu</i>  <b>2</b> = A few times (once a week) / <i>sekali seminggu</i>  <b>1</b> = Almost never /<i>hampir tidak pernah</i>  <b>0</b> = Never/ <i>tidak pernah</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

4.3	<p>How would you rate your level (degree) of sexual desire or interest?  <i>Bagaimanakah anda menilai tahap keinginan anda terhadap sex?</i></p> <p><b>5</b> = Very high /<i>Sangat tinggi</i>  <b>4</b> = High /<i>Tinggi</i>  <b>3</b> = Moderate /<i>Sederhana</i>  <b>2</b> = Low /<i>Rendah</i>  <b>1</b> = Very low or none at all /<i>Sangat rendah</i>  <b>0</b> = Never/ tidak pernah</p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
4.4	<p>In a month, how often did you feel sexually aroused ("turned on") during sexual activity or intercourse?  <i>Dalam sebulan, berapa kekerapan anda merasakan teransang ketika perhubungan seks atau penetrasi?</i></p> <p><b>5</b> = Almost always or always/  <i>hampir setiap kali perhubungan seks</i>  <b>4</b> = Most times/  <i>lebih dari separuh dari jumlah keseluruhan melakukan seks</i>  <b>3</b> = Sometimes (more than half of the total number of times sexual intercourse)/  <i>Separuh dari jumlah keseluruhan melakukan seks</i>  <b>2</b> = A few times (less than total number of times sexual intercourse)/  <i>Kurang dari separuh daripada jumlah keseluruhan melakukan seks</i>  <b>1</b> = Almost never or never/  <i>hampir tidak pernah atau tiada langsung</i>  <b>0</b> = No sex. Activity /  <i>Tiada hubungan seks langsung</i></p> <p><b>(IF THERE IS NO INTERCOURSE AT ALL, THE FOLLOWING QUESTIONS PLEASE MARK 0 /</b>  <b>JIKALAU TIADA LANGSUNG PERSETUBUHAN SEMASA MENGANDUNG SILA ISIKAN 0 UNTUK SOALAN SOALAN SETERUSNYA)</b></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

<p>4.5</p>	<p>How would you rate your level of sexual arousal ("turn on") during sexual activity or intercourse?  <i>Bagaimanakah tahap keinginan terhadap aktiviti seksual semasa melakukan hubungan intim?</i></p> <p><b>5</b> = Very high /<i>Sangat tinggi</i></p> <p><b>4</b> = High /<i>Tinggi</i></p> <p><b>3</b> = Moderate /<i>Sederhana</i></p> <p><b>2</b> = Low /<i>Rendah</i></p> <p><b>1</b> = Very low or none at all /  <i>Sangat rendah atau tiada langsung</i></p> <p><b>0</b> = No sex. Activity /  <i>Tiada hubungan seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
<p>4.6</p>	<p>How confident were you about becoming sexually aroused during sexual activity or intercourse?  <i>Bagaimanakah keyakinan anda ketika anda merasa terangsang dalam melakukan hubungan seks atau penetrasi?</i></p> <p><b>5</b> = Very high confidence /  <i>Sangat berkeyakinan tinggi</i></p> <p><b>4</b> = High confidence /<i>Berkeyakinan tinggi</i></p> <p><b>3</b> = Moderate confidence /  <i>Berkeyakinan sederhana</i></p> <p><b>2</b> = Low confidence /<i>Berkeyakinan rendah</i></p> <p><b>1</b> = Very low or no confidence /  <i>Sangat berkeyakinan rendah atau tidak Yakin</i></p> <p><b>0</b> = No sexual activity / <i>Tiada aktiviti seks</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

<p>4.7</p>	<p>In a month, how often have you been satisfied during sexual activity or intercourse?  <i>Dalam sebulan, bagaimanakah kekerapan anda merasakan kepuasan ketika melakukan aktiviti seks atau penetrasi?</i></p> <p><b>5</b> = Almost always or always/  <i>hampir setiap kali perhubungan seks</i>  <b>4</b> = Most times/  <i>lebih dari separuh dari jumlah keseluruhan melakukan seks</i>  <b>3</b> = Sometimes (more than half of the total number of times sexual intercourse)/  <i>Separuh dari jumlah keseluruhan melakukan seks</i>  <b>2</b> = A few times (less than total number of times sexual intercourse)/  <i>Kurang dari separuh daripada jumlah keseluruhan melakukan seks</i>  <b>1</b> = Almost never or never/  <i>hampir tidak pernah atau tiada langsung</i>  <b>0</b> = No sex. Activity /  <i>Tiada hubungan seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
<p>4.8</p>	<p>In a month, how often did you become lubricated ("wet") during sexual activity or intercourse?  <i>Dalam sebulan, berapa kerap anda merasakan lubrikasi Ketika menjalani hubungan seksual atau penetrasi?</i></p> <p><b>5</b> = Almost always or always/  <i>hampir setiap kali perhubungan seks</i>  <b>4</b> = Most times/  <i>lebih dari separuh dari jumlah keseluruhan melakukan seks</i>  <b>3</b> = Sometimes (more than half of the total number of times sexual intercourse)/  <i>Separuh dari jumlah keseluruhan melakukan seks</i>  <b>2</b> = A few times (less than total number of times sexual intercourse)/  <i>Kurang dari separuh daripada jumlah keseluruhan melakukan seks</i>  <b>1</b> = Almost never or never/  <i>hampir tidak pernah atau tiada langsung</i>  <b>0</b> = No sex. Activity /  <i>Tiada hubungan seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

4.9	<p>How difficult was it to become lubricated ("wet") during sexual activity or intercourse?</p> <p><i>Bagaimanakah kesusahan untuk anda mengalami lubrikasi semasa berhubung intim atau penetrasi?</i></p> <p><b>0</b> = No sexual activity /<i>Tiada aktiviti seks</i></p> <p><b>1</b> = Extremely difficult or impossible /<i>Teramat susah atau mustahil</i></p> <p><b>2</b> = Very difficult /<i>Sangat susah</i></p> <p><b>3</b> = Difficult /<i>Susah</i></p> <p><b>4</b> = Slightly difficult /<i>Sedikit susah</i></p> <p><b>5</b> = Not difficult /<i>Tidak susah</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
4.10	<p>In a month, how often did you maintain your lubrication ("wetness") until completion of sexual activity or intercourse?</p> <p><i>Dalam sebulan, seberapa kerapkah anda dapat mengekalkan lubrikasi sehingga selesai melakukan aktiviti seks atau penetrasi</i></p> <p><b>5</b> = Almost always or always /<i>hampir setiap kali perhubungan seks</i></p> <p><b>4</b> = Most times /<i>lebih dari separuh dari jumlah keseluruhan melakukan seks</i></p> <p><b>3</b> = Sometimes (more than half of the total number of times sexual intercourse) /<i>Separuh dari jumlah keseluruhan melakukan seks</i></p> <p><b>2</b> = A few times (less than total number of times sexual intercourse) /<i>Kurang dari separuh daripada jumlah keseluruhan melakukan seks</i></p> <p><b>1</b> = Almost never or never /<i>hampir tidak pernah atau tiada langsung</i></p> <p><b>0</b> = No sex. Activity /<i>Tiada hubungan seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

<p>4.11</p>	<p>In a month, how difficult was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?</p> <p><i>Dalam sebulan, bagaimanakah susahnya untuk anda mengekalkan lubrikasi sehingga selesai melakukan aktiviti seks atau penetrasi?</i></p> <p><b>0</b> = No sexual activity /<i>Tiada aktiviti seks</i>  <b>1</b> = Extremely difficult or impossible /<i>Teramat susah atau mustahil</i>  <b>2</b> = Very difficult /<i>Sangat susah</i>  <b>3</b> = Difficult /<i>Susah</i>  <b>4</b> = Slightly difficult /<i>Sedikit susah</i>  <b>5</b> = Not difficult /<i>Tidak susah</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
<p>4.12</p>	<p>In a month, when you had sexual stimulation or intercourse, how often did you reach orgasm (climax)?</p> <p><i>Dalam sebulan, ketika melakukan stimulasi seks atau penetrasi, berapa susahnya anda untuk mencapai syahwat?</i></p> <p><b>5</b> = Almost always or always /<i>hampir setiap kali perhubungan seks</i></p> <p><b>4</b> = Most times /<i>lebih dari separuh dari jumlah keseluruhan melakukan seks</i></p> <p><b>3</b> = Sometimes (more than half of the total number of times sexual intercourse) /<i>Separuh dari jumlah keseluruhan melakukan seks</i></p> <p><b>2</b> = A few times (less than total number of times sexual intercourse) /<i>Kurang dari separuh daripada jumlah keseluruhan melakukan seks</i></p> <p><b>1</b> = Almost never or never /<i>hampir tidak pernah atau tiada langsung</i></p> <p><b>0</b> = No sex. Activity /<i>Tiada hubungan seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

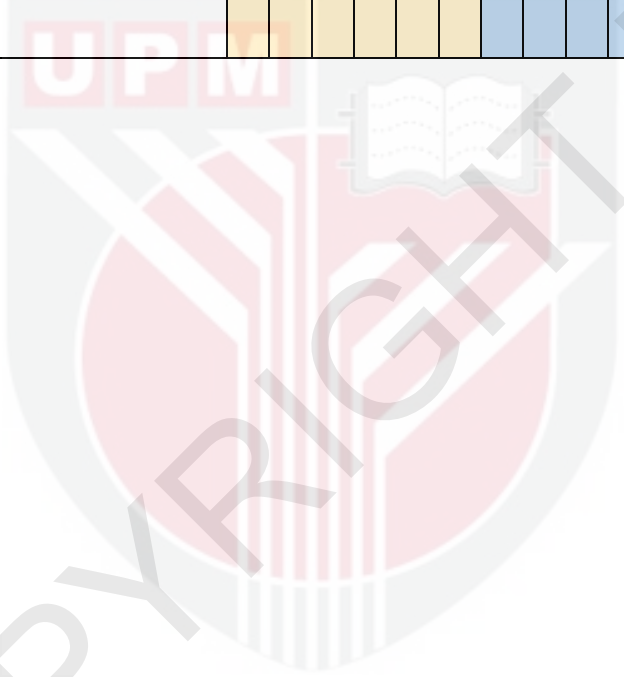
4.13	<p>In a month, when you had sexual stimulation or intercourse, how difficult was it for you to reach orgasm (climax)?  <i>Dalam sebulan, ketika melakukan rangsangan terhadap seks atau penetrasi, bagaimanakah susahnya untuk anda mencapai syahwat?</i></p> <p><b>0</b> = No sexual activity /<i>Tiada aktiviti seks</i>  <b>1</b> = Extremely difficult or impossible /<i>Teramat susah atau mustahil</i>  <b>2</b> = Very difficult /<i>Sangat susah</i>  <b>3</b> = Difficult /<i>Susah</i>  <b>4</b> = Slightly difficult /<i>Sedikit susah</i>  <b>5</b> = Not difficult /<i>Tidak susah</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
4.14	<p>In a month, how satisfied were you with your ability to reach orgasm (climax) during sexual activity or intercourse?  <i>Dalam sebulan, bagaimanakah kepuasan anda dengan kebolehan anda mencapai syahwat ketika berhubungan seks atau melakukan penetrasi?</i></p> <p><b>5</b> = Very satisfied /<i>Sangat puas</i>  <b>4</b> = Moderately satisfied /<i>Agak puas</i>  <b>3</b> = About equally satisfied and dissatisfied /<i>Lebih kurang</i>  <b>2</b> = Moderately dissatisfied /<i>Agak tidak puas</i>  <b>1</b> = Very dissatisfied /<i>Sangat tidak puas</i>  <b>0</b> = No sexual activity /<i>Tiada aktiviti sekslangsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5



4.15	<p>How satisfied have you been with the amount of emotional closeness during sexual activity between you and your partner?  <i>Bagaimanakah kepuasan anda terhadap keintiman emosi semasa melakukan aktiviti seksual antara anda dan pasangan?</i></p> <p><b>5</b> = Very satisfied /<i>Sangat puas</i>  <b>4</b> = Moderately satisfied /<i>Agak puas</i>  <b>3</b> = About equally satisfied and dissatisfied /  <i>Lebih kurang</i>  <b>2</b> = Moderately dissatisfied /<i>Agak tidak puas</i>  <b>1</b> = Very dissatisfied /<i>Sangat tidak puas</i>  <b>0</b> = No sexual activity  <i>Tiada aktiviti seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
4.16	<p>In a month, how satisfied have you been with your sexual relationship with your partner?  <i>4 minggu lalu, bagaimanakah kepuasan anda terhadap hubungan seksual bersama pasangan anda?</i></p> <p><b>5</b> = Very satisfied /<i>Sangat puas</i>  <b>4</b> = Moderately satisfied /<i>Agak puas</i>  <b>3</b> = About equally satisfied and dissatisfied /  <i>Lebih kurang</i>  <b>2</b> = Moderately dissatisfied /<i>Agak tidak puas</i>  <b>1</b> = Very dissatisfied /<i>Sangat tidak puas</i>  <b>0</b> = No sexual activity  <i>Tiada aktiviti seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
4.17	<p>In a month, how satisfied have you been with your overall sexual life?  <i>Dalam sebulan, bagaimanakah kepuasan anda terhadap keseluruhan kehidupan aktiviti seksual anda?</i></p> <p><b>5</b> = Very satisfied /<i>Sangat puas</i>  <b>4</b> = Moderately satisfied /<i>Agak puas</i>  <b>3</b> = About equally satisfied and dissatisfied /  <i>Lebih kurang</i>  <b>2</b> = Moderately dissatisfied /  <i>Agak tidak puas</i>  <b>1</b> = Very dissatisfied /  <i>Sangat tidak puas</i>  <b>0</b> = No sexual activity /  <i>Tiada aktiviti seks langsung</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

<p>4.18</p>	<p>How often did you experience discomfort or pain during vaginal penetration?  <i>Seberapa kerapkah anda merasakan ketidakselesaan atau sakit ketika melakukan penetrasi melalui vagina?</i></p> <p><b>5</b> = Almost always or always /  <i>hampir selalu atau selalu</i>  <b>4</b> = Most times (more than half the time) /  <i>lebih separuh daripada tempoh 4 minggu</i>  <b>3</b> = Sometimes (about half the time) /  <i>separuh daripda tempoh 4 minggu</i>  <b>2</b> = A few times (less than half the time) /  <i>kurang separuh daripada tempoh 4 minggu</i>  <b>1</b> = Almost never or never/  <i>hampir tidak pernah atau tidak pernah</i>  <b>0</b> = No intercourse attempt/  <i>Tiada penetrasi</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
<p>4.19</p>	<p>In a month, how often did you experience discomfort or pain following vaginal penetration?  <i>Dalam sebulan, berapa kerapkah anda merasakan ketidakselesaan atau sakit selepas melakukan penetrasi melalui vagina?</i></p> <p><b>5</b> = Almost always or always /  <i>hampir selalu atau selalu</i>  <b>4</b> = Most times (more than half the time) /  <i>lebih separuh daripada tempoh 4 minggu</i>  <b>3</b> = Sometimes (about half the time) /  <i>separuh daripda tempoh 4 minggu</i>  <b>2</b> = A few times (less than half the time) /  <i>kurang separuh daripada tempoh 4 minggu</i>  <b>1</b> = Almost never or never/  <i>hampir tidak pernah atau tidak pernah</i>  <b>0</b> = No intercourse attempt/  <i>Tiada penetrasi</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5

4.20	<p>How would you rate your level (degree) of discomfort or pain during or following vaginal penetration?  <i>Bagaimanakah tahap ketidakselesaan atau sakit yang dirasai ketika atau setelah melakukan penetrasi melalui vagina?</i></p> <p><b>5</b> = Very high /<i>Sangat tinggi</i>  <b>4</b> = High /<i>Tinggi</i>  <b>3</b> = Moderate /<i>Sederhana</i>  <b>2</b> = Low /<i>Rendah</i>  <b>1</b> = Very low or none at all /  <i>Sangat rendah atau tiada langsung</i>  <b>0</b> = No intercourse attempt/ <i>Tiada penetrasi</i></p>	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5
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## **APPENDIX 7: BIODATA OF STUDENTS**

The author, Thinnesh A/L Arumugam was born in Melaka on the 1st of August 1999. He completed his pre-university programme in Foundation Studies for Agricultural Sciences, UPM and pursued for Degree in Medicine at UPM. He is expected to graduate at 2023.

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