

Research Article

Knowledge, Attitude and Associated Factors on Family Planning Practices among Antenatal Mothers Attending a Teaching Hospital in Sri Lanka

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Abstract

Introduction: Understanding the antenatal mothers' knowledge and attitude towards family planning (FP) helps to enhance their family well-being. This study aimed to evaluate the knowledge, attitude and factors associated with family planning practices (FPP) among antenatal mothers attending a state hospital in Sri Lanka. **Methods:** A descriptive cross-sectional study was carried out with the participation of 500 antenatal mothers attending clinic services at the Teaching Hospital, Mahamodara, Sri Lanka. A pre-tested, self-administered questionnaire was used for data collection. Data were analyzed using the SPSS version 25. Descriptive statistics and chi-square tests were employed in data analysis. **Results:** The majority of antenatal mothers were Sinhalese (92.6%) and Buddhists (91.2%). The majority was in the age group of 20-30 years (57.8%) and lived in rural areas (85.0%). Among the study participants, 41.2% were primiparous. The mean scores obtained for knowledge and attitude on FPP were 19.54 (± 5.43) and 26.20 (± 4.18), respectively. Among the participants, 41.0% had moderate and 27.4% had high level of knowledge on FPP. Ethnicity, religion, and parity ($p < 0.001$) were associated with the level of knowledge. Sinhalese, Buddhist women with high parity, had a higher level of knowledge ($p < 0.001$). Only 58.4% had a positive attitude on FPP. Ethnicity ($p = 0.04$), religion ($p = 0.03$) and educational status ($p = 0.02$) were associated with attitude on FPP. Antenatal mothers who were, Sinhalese, Buddhist and educated up to G.C.E. (A/L) had positive attitudes on FPP ($p < 0.05$). **Conclusions:** A high proportion of antenatal mothers had moderate to high level of knowledge and positive attitude on FPP, which were significantly associated with ethnicity, religion, education and parity.

Keywords: Antenatal mothers, Associated factors, Attitude, Family planning practices, Knowledge

Introduction

Family planning (FP) is an important requirement for the development of any country [1]. It is defined as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitude and responsible decisions by individuals and couples, in order to promote the health and welfare of family groups and thus contribute effectively to the social development of the country" [2]. Furthermore, it is a voluntary method of birth control that can be customized to individual needs in various ways [3].

Accurate FP reduces the number of unintended and unwanted pregnancies [4], and it is a master plan in promoting maternal and child health [5]. Therefore, FP services have the potential to

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improve the quality of people's life [6]. It allows individuals and couples to decide and ascertain the desired number of children and the spacing of their pregnancies [7]. Poor FP can adversely influence health, economic, nutrition, and social aspects of families. Furthermore, it has significant health effects on both mother and children, such as unsafe abortions, obstructed labours, and infections, leading to maternal and child morbidities and mortalities [2].

Around the world, diverse family planning practices (FPP) are used. Globally, 62% of married women aged 15 to 49 use some kind of a FP method. Among them, 56% use a modern FP method. The above rates are higher among women living in high-income countries compared to women living in low-income countries [8]. The motives behind these variations encompass poor access, lack of availability, and increased demand for modern techniques of contraception. In Sri Lanka, the percentage of eligible families using any contraceptive method is 67.3% [9]. The above value indicates the acceptance of FPP introduced to Sri Lanka in the early 1950s [10]. However still, there are unmet needs of FPP within the Sri Lankan context [9].

The high awareness but low utilization of FPP is also a serious challenge to overcome [11,12]. Some studies revealed that most women of reproductive age know little or have incorrect information about FPP. Even though they know some names of contraceptives, they do not know where they can get them or how to use them. Some women have a negative attitude about FPP, whereas some have heard false and misleading information [13,14]. A study had found that the knowledge and desirable attitudes towards contraceptives and condoms are relatively low among undergraduates in state universities of the Western Province, Sri Lanka [15].

Worldwide, knowledge and attitude on FPP among

women of reproductive ages have been discussed adequately. However, pregnant women's knowledge and attitude towards FPP have not been discussed adequately. Practicing FP after the birth of a child is important since it helps the mother to recover from the pregnancy and delivery while giving proper care and attention to the baby [16]. Usage of safe and effective FP methods after childbirth depends on the knowledge and attitude of the antenatal mothers. Understanding the women's current knowledge and attitude towards FP may help to initiate postpartum FP education and improve their knowledge and positive attitudes. Moreover, FP might also ensure the right of women to have a child as they wish and reduce unwanted pregnancies and abortions. Therefore, this study was carried out to evaluate the knowledge, attitude and factors associated with FPP among antenatal mothers attending clinics at the Teaching Hospital, Mahamodara, Sri Lanka.

Methods

Study design

A hospital-based descriptive cross-sectional study was carried out at antenatal clinics of the Teaching Hospital, Mahamodara, Sri Lanka, with the participation of antenatal mothers who sought maternity services from September to November 2019. A convenience sampling method was used to select the participants. Antenatal women who participated in the clinics on Mondays, Wednesdays and Fridays during the study period were taken as the study sample.

Study instrument/data collection

Data were collected from 500 antenatal mothers. Even though the calculated sample was 290, investigators were able to collect data from 500 antenatal women during the data collection period. A pre-tested, self-administered questionnaire in Sinhala language with three sections was used to collect data. Section one included socio-demographic and obstetric characteristics such as age, marital status, residence, ethnicity, religion,

educational status, monthly income level, and parity. Section two consisted of 20 questions on knowledge on FPP, which were rated on a three-point scale as true, false and uncertain. Section three consisted of statements to assess attitude regarding FPP using a five-point Likert scale.

The questionnaire was developed based on existing literature, and content validity was ensured by subject experts. Face validity of the questionnaire was ensured by pre-testing the instrument, which was done by interviewing ten antenatal women who attended antenatal clinics in the Medical Officer of Health Office, Hikkaduwa, Sri Lanka. After data collection, a token was given to each participant asking them to bring it in subsequent visits to avoid administering the questionnaire to the same participants more than once. The antenatal mothers who were acutely unwell, had psychiatric illnesses, and did not consent to participate were excluded from the study.

Data analysis

Descriptive statistics, including frequencies, percentages, mean and standard deviation (SD) were used to describe data. The Chi-square test of independence was used to evaluate the factors associated with the level of knowledge and type of attitude. Data were analysed with SPSS version 25, and a p value <0.05 was considered significant. The total knowledge score was calculated and divided into three groups as low (<18), moderate (18-22) and high (>22). The total attitude score was calculated and divided into two groups as positive (≥ 26) and negative (<26). The investigators established these scoring and categorizations as an in-house scoring system since this questionnaire was developed by the investigators for this specific study.

Ethical consideration

Ethical clearance for the study was obtained from the Ethics Review Committee, Faculty of Allied

Health Sciences, University of Ruhuna, Sri Lanka (Ref: 30.05.2019:2.28). Before administering the questionnaire, written informed consent was obtained from each participant after informing them about the purpose of the study.

Results

The majority of the antenatal mothers were Sinhalese (92.6%) and Buddhist (91.2%). Most of the study participants were married (99.6%), in the age group of 20-30 years (57.8%) and living in a rural area (85.0%). Among the study participants, 48.2% had studied up to General Certificate of Education, Ordinary/Level (G.C.E.(O/L)) and 43.8% had a monthly income between LKR 20 000 and 50 000. About 41.2% were primi mothers, and only half of the study participants (50.4%) had used a contraceptive method/s before their current pregnancy (Table 1).

Knowledge on family planning practices

The responses given for the statements regarding the knowledge of FPPs are summarized in Table 2. Most pregnant women had a correct idea regarding the purpose of FP (89.6%), categories of FP methods (77.6%), the role of temporary FP methods (77.4%), usage of male condoms (92.4%), advantages of using condoms (83.2%), and usage of emergency contraceptive pills (61.6%). Nearly half of the antenatal mothers had known the correct meaning of FP (53.8%) and common side effects of oral contraceptives (54.6%). Most of the pregnant women had a false or uncertain idea regarding; safe period (77.2%), usage of an intrauterine device (81.6%), the use of depo-provera injection (75.0%), and the role of permanent FP methods (68.4%). The mean (\pm SD) score obtained for knowledge on FPP was 19.54 (\pm 5.43). Relatively, a high proportion (40.6%) of participants had a moderate level (score 18-22) of knowledge on FPP, while 27.4% had a high level of knowledge (score >22) on FPP. Among them, 32.0% had a low level of knowledge (score <18) on FPP.

Table 1: Socio-demographic and obstetric characteristics of the antenatal mothers (n=500)

| Variables | Subcategories | Frequency | Percentage (%) |
|--|-------------------------|-----------|----------------|
| Age (years) | < 20 | 48 | 9.6 |
| | 20 - 30 | 289 | 57.8 |
| | 31 - 40 | 156 | 31.2 |
| | >40 | 7 | 1.4 |
| Marital status | Married | 498 | 99.6 |
| | Unmarried | 2 | 0.4 |
| Residence | Rural | 425 | 85.0 |
| | Urban | 75 | 15.0 |
| Ethnicity | Sinhala | 463 | 92.6 |
| | Muslim | 31 | 6.2 |
| | Tamil | 6 | 1.2 |
| Religion | Buddhist | 456 | 91.2 |
| | Islam | 31 | 6.2 |
| | Hindu | 6 | 1.2 |
| | Catholic | 7 | 1.4 |
| Educational status | Grade 1 to 5 | 16 | 3.2 |
| | 6 to Grade 10 | 54 | 10.8 |
| | Up to G.C.E (O/L) | 241 | 48.2 |
| | Up to G.C.E (A/L) | 162 | 32.4 |
| | Up to Diploma or Degree | 27 | 5.4 |
| Monthly income (LKR) | ≤10 000 | 60 | 12.0 |
| | 10 001–20 000 | 179 | 35.8 |
| | 20 001–50 000 | 219 | 43.8 |
| | >50 000 | 42 | 8.4 |
| Parity | First | 206 | 41.2 |
| | Second | 174 | 34.8 |
| | Third or more | 120 | 24.0 |
| Usage of contraceptives before the current pregnancy | Yes | 252 | 50.4 |
| | No | 248 | 49.6 |

GCE (O/L)- General Certificate of Education (Ordinary Level), GCE (A/L)- General Certificate of Education (Advanced Level)

Table 2: Knowledge on family planning practices among antenatal mothers (n=500)

| Knowledge statements | True | | False/Uncertain | |
|--|------|------|-----------------|------|
| | (n) | (%) | (n) | (%) |
| FP means all the measures to prevent pregnancy | 269 | 53.8 | 231 | 46.2 |
| Birth control and birth spacing is the purpose of FP | 448 | 89.6 | 52 | 10.4 |
| FP methods are mainly divided into temporary and permanent methods | 388 | 77.6 | 112 | 22.4 |
| A safe period means 12 –14 days after menses | 114 | 22.8 | 386 | 77.2 |
| Temporary FP has a chance to conceive | 387 | 77.4 | 113 | 22.6 |
| Nausea and vomiting are common side effects of oral contraceptives | 273 | 54.6 | 227 | 45.4 |
| Oral contraceptives are taken orally by either male/female to prevent pregnancy | 228 | 45.6 | 272 | 54.4 |
| The intrauterine device is inserted into the skin to prevent conception | 92 | 18.4 | 408 | 81.6 |
| There is no need for check-ups after inserting the intrauterine device for women | 268 | 53.6 | 232 | 46.4 |
| The intrauterine device is a female contraceptive made of plastic with a copper cover | 130 | 26.0 | 370 | 74.0 |
| Frequent urination is a complication of intrauterine device | 126 | 25.2 | 374 | 74.8 |
| The intrauterine device is contraindicated for a woman that has never given birth | 78 | 15.6 | 422 | 84.4 |
| A condom is an extremely thin rubber sheath used by men as a contraceptive | 462 | 92.4 | 38 | 7.6 |
| The use of a condom prevents sexually transmitted diseases | 416 | 83.2 | 84 | 16.8 |
| Depo-provera injections should be given every six months to prevent pregnancy | 125 | 25.0 | 375 | 75.0 |
| Depo-provera injection does not protect against sexually transmitted infections | 195 | 39.0 | 305 | 61.0 |
| The emergency contraceptive pill should be taken as soon as possible after unprotected sex | 308 | 61.6 | 192 | 38.4 |
| Permanent FP methods have a chance to conceive | 158 | 31.6 | 342 | 68.4 |
| Tubectomy and vasectomy are permanent methods of FP | 361 | 72.2 | 139 | 27.8 |
| Vasectomy is a permanent female FP method | 58 | 11.6 | 442 | 88.4 |

FP- Family Planning

Attitude on family planning practices

Table 3 explains the responses to questions raised to evaluate the attitude of mothers on FPP. The majority of participants (62.2%) agreed/strongly agreed that all couples should follow FP methods. Among the participants, 57.6% agreed that both the wife and husband should participate in FP methods. About 58.2% of the participants agreed that FP methods could be easily followed. Many participants (85.4%) agreed/strongly agreed that effectiveness is a priority consideration of choosing a contraceptive method. Most participants (87.8%) agreed/strongly agreed that all couples should gather knowledge on contraceptive methods. A half of the participants (50.0%) agreed that women could perform their daily activities as usual after tubectomy.

Only a small fraction of the participants (8.8%) strongly agreed that couples should undergo the permanent method of FP after the third child. Over three-fourths (79.6%) of participants agreed or strongly agreed that contraceptives are more desirable than abortions. Nearly half of the participants (52.0%) agreed and/or strongly agreed that emergency contraception methods could not be substituted for regular contraception. Among the participants, only 1.2% strongly disagreed that contraceptive methods can completely prevent conception.

The mean (\pm SD) attitude score for FPP was 26.20 (\pm 4.18). The majority (58.4%) had a positive attitude (score \geq 26), while 41.6% had a negative attitude (score $<$ 26) on FPP.

Table 3: Attitudes regarding family planning practices among antenatal mothers (n=500)

| Attitude statements | SA n (%) | A n (%) | U n (%) | D n (%) | SD n (%) |
|--|----------------|---------------|---------------|---------------|----------------|
| I believe that all couples should follow FP methods | 65 (13.0) | 246 (49.2) | 51 (10.2) | 128 (25.6) | 10 (2.0) |
| I feel that the wife and husband both should participate in FP methods | 80 (16.0) | 288 (57.6) | 49 (9.8) | 80 (16.0) | 3 (0.6) |
| I believe that FP methods can be easily followed | 60 (12.0) | 291 (58.2) | 104 (20.8) | 44 (8.8) | 1 (0.2) |
| I believe that effectiveness is a priority consideration of choosing contraceptive methods | 127 (25.4) | 300 (60.0) | 61 (12.2) | 10 (2.0) | 2 (0.4) |
| I believe that all couples are required to have knowledge on contraceptive methods | 155 (31.0) | 284 (56.8) | 42 (8.4) | 16 (3.2) | 3 (0.6) |
| I feel that women can perform their daily activities as usual after a tubectomy | 52 (10.4) | 250 (50.0) | 157 (31.4) | 39 (7.8) | 2 (0.4) |
| I feel that couples should undergo a permanent method of FP after the third child | 44 (8.8) | 189 (37.8) | 135 (27.0) | 111 (22.2) | 21 (4.2) |
| I feel that using contraceptives is more desirable than abortion | 180 (36.0) | 218 (43.6) | 71 (14.2) | 22 (4.4) | 9 (1.8) |
| I believe that emergency contraception cannot substitute for regular contraception | 47 (9.4) | 213 (42.6) | 171 (34.2) | 64 (12.8) | 5 (1.0) |
| I believe that contraceptive methods can completely prevent conception | 34 (6.8) | 168 (33.6) | 145 (29.0) | 147 (29.4) | 6 (1.2) |

FP- Family Planning, SA- Strongly Agree, A- Agree, U- Uncertain, DA- Disagree, SD- Strongly Disagree

Association of sociodemographic and obstetric factors with the level of knowledge and type of attitude on family planning practices

The level of knowledge on FPP was associated with ethnicity (p<0.001), religion (p<0.001), and parity (p<0.001) (Table 4).

When considering the factors associated with attitudes on FPP, ethnicity (p=0.04), religion (p=0.03), and educational status (p=0.02) were observed. About 59.6% of Sinhala women, 59.9% of Buddhist women and 65.4% of women who studied up to G.C.E. (A/L) had a positive attitude (score ≥26) on FPP (Table 5).

Table 4: Association between socio-demographic and obstetric factors and the level of knowledge on family planning practices in antenatal mothers (n=500)

| Variables | Subcategories | Level of knowledge | | | | | | p value |
|-----------|---------------|--------------------|------|----------|------|-----|------|---------|
| | | High | | Moderate | | Low | | |
| | | n | (%) | n | (%) | n | (%) | |
| Ethnicity | Sinhala | 134 | 28.9 | 191 | 41.3 | 138 | 29.8 | <0.001 |
| | Non-Sinhala | 3 | 8.1 | 12 | 32.4 | 22 | 59.5 | |
| Religion | Buddhist | 132 | 28.9 | 187 | 41.0 | 137 | 30.0 | <0.001 |
| | Non-Buddhist | 5 | 11.4 | 16 | 36.4 | 23 | 52.3 | |
| Parity | First | 33 | 16.0 | 83 | 40.3 | 90 | 43.7 | <0.001 |
| | Second | 54 | 31.0 | 74 | 42.5 | 46 | 26.4 | |
| | Third or more | 50 | 41.7 | 46 | 38.3 | 24 | 20.0 | |

FPP- Family Planning Practices, FP- Family Planning

p value was derived from the Chi-square test of independence, p<0.05 was considered as significant.

Table 5: Association between socio-demographic factors and the type of attitude on FPP in antenatal mothers (n=500)

| Variables | Subcategories | Attitude | | | | p value |
|--------------------|-------------------------|----------|------|----------|------|---------|
| | | Positive | | Negative | | |
| | | n | (%) | n | (%) | |
| Ethnicity | Sinhala | 276 | 59.6 | 187 | 40.4 | 0.04 |
| | Non-Sinhala | 16 | 43.2 | 21 | 56.8 | |
| Religion | Buddhist | 273 | 59.9 | 183 | 40.1 | 0.03 |
| | Non-Buddhist | 19 | 43.2 | 25 | 56.8 | |
| Educational status | Below grade 10 | 31 | 44.3 | 39 | 55.7 | 0.02 |
| | Up to G.C.E. (O/L) | 138 | 57.3 | 103 | 42.7 | |
| | Up to G.C.E. (A/L) | 106 | 65.4 | 56 | 34.6 | |
| | Up to Diploma or Degree | 17 | 63.0 | 10 | 37.0 | |

FPP- Family Planning Practices, FP- Family Planning, GCE O/L- General Certificate of Education Ordinary Level, GCE A/L- General Certificate of Education Advanced Level

p value was derived from the Chi-square test of independence, p<0.05 was considered as significant

Discussion

Consistent with the current study findings, a previous local study conducted among married women in the estate sector community found that the majority had an excellent to good knowledge level on FPP but, one-third of the participants had an unsatisfactory level of knowledge [5]. Studies from the Asian region also reported that antenatal mothers have a moderate to high level of knowledge on FP methods [16-19]. In contrast to the current study, a few studies reported that knowledge of FPP was particularly low in India [20] and Pakistan [21].

When considering women's attitude towards FPP, a study conducted in Bangalore had reported no significant associations between level of attitude and demographic variables such as age, religion, type of family, educational status, and occupation [22]. Concordant findings of positive attitudes towards FPP have been shown in studies done in some other countries such as Fiji, India, and Pakistan [18,19,23]. However, a study conducted in Malawi had reported a negative attitude towards FPP in most study samples, discordant with the current findings [24]. The discrepancies reported among different studies would be related to their different socio-demographic characteristics, knowledge, and experience.

The community of the estate sector may be of a poor socio-economic status that affected the FPP. However, in Sri Lanka, the Public Health Midwives (PHMs) carry out a vast service on FP to encourage a space between multiple childbirth and enhance the maternal and child health services [9,25]. Similarly, other countries of the Asian region who also reported a high knowledge level on FP may have this kind of grass-root level, well established community services to enhance women's knowledge on FPP.

The women with high parity have a higher level of knowledge which may be due to their real-life

experiences gained throughout. The positive attitude among participants may be related to past experiences, peer and family influences, and PHM's influence in choosing the method.

It is recommended to conduct awareness programmes regarding FPP combined with the antenatal clinic sessions to enhance knowledge and inculcate positive attitudes towards FPP. Continuous contacts with the PHM would also develop and maintain positive attitudes towards FPP as it is a reliable source of information. Furthermore, the current study suggests a national study in the same background incorporating women from different regions with different socio-economic backgrounds to identify the national trend on FPP in the country.

Strengths and limitations of the study

This study was carried out in the largest maternity-care institution in Southern Sri Lanka [26], where women come from different social and economic backgrounds for obtaining antenatal services. Therefore, this sample represents most of the characteristics of women living in other parts of the country. At the same time, the current study limits its generalizability because the sample represented more Sinhala and Buddhist women, and it was carried out at a single maternity care institution. Furthermore, there may be many factors associated with knowledge and attitude rather than only socio-demographic and obstetric factors, which might also be a limitation of this study. Apart from that, we used a questionnaire generated in-house using the existing literature and an in-house scoring system to categorise the level of knowledge and attitudes. The above factors might also limit the generalizability of findings.

Conclusions

The majority of antenatal mothers who attended the antenatal clinics of the Teaching Hospital Mahamodara, Sri Lanka had a moderate to high

level of knowledge on FPP. Ethnicity, religion and parity were associated with the level of knowledge on FPP. Ethnicity, religion and educational status were associated with the attitude on FPP. To maintain the appropriate FPP of the target group, the health workers need to be trained to inculcate positive attitudes, leading to increased knowledge of FPP among them.

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