

Prevalence of unplanned pregnancies and their family planning preferences among antenatal clinic attendees in Thimbirigasyaya Divisional Secretariat Division

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Abstract

Introduction: Pregnancies can be either planned or unplanned. Unplanned pregnancies are a major public health issue globally causing poor maternal and foetal outcomes. Addressing this problem would improve the well-being of antenatal mothers and their children. Family planning is an important step to minimise the burden of unplanned pregnancies.

Objective: To determine the prevalence of unplanned pregnancies and their family planning preferences in the Thimbirigasyaya Divisional Secretariat Division.

Methods: A cross-sectional study was conducted in three randomly selected antenatal clinics (Borella, Kirula and Wellawatte) which covered District 3, District 4 and District 5 Medical Officer of Health (MOH) areas of Thimbirigasyaya Divisional Secretariat Division of the Colombo Municipal Council. A total of 425 antenatal mothers who attended these antenatal clinics, fulfilling the inclusion and exclusion criteria were included in the study using a consecutive sampling method. Data collection was done by the principal investigator using interviewer-administered questionnaires. Data on prevalence and family planning preferences following current pregnancy were obtained and analysed. The prevalence of unplanned pregnancies was calculated based on responses given to questions on the timing and decision-making of the current pregnancy. Family planning practices and preferences were calculated as percentages.

Results: The total sample size of 425 included a ten percent nonresponse rate. The age distribution was between 15 to 44 years. The age group of 22 to 34 years included 83.2% of the total study population. There were 37.2% Sinhalese, 33.9% Moors and 28.9% Tamils in the study sample. The prevalence of unplanned pregnancies was 32.7%.

Thirty-three percent of antenatal mothers had used some form of contraceptive method in the past and most of them had used condoms and depot-medroxyprogesterone acetate (DMPA), closely followed by combine oral contraceptive pills, implants and intrauterine devices. Side effects were the major reason for not using a method in the past among non-users. Around 60% have decided to use a contraceptive method following the current pregnancy and the majority have decided to use their chosen method for two to five years.

Conclusions: According to the study, one-third of the pregnancies at antenatal clinics in the Thimbirigasyaya Divisional Secretariat Division were unplanned pregnancies. One-third of the mothers had used a contraceptive method in the past and the main reason was to space their pregnancies. More than half of the participants were planning to use a contraceptive method following the current pregnancy and many had chosen depot-medroxyprogesterone acetate (DMPA). Among future users, half had preferred to use their chosen method for two to five years, while among non-users, side effects were considered the main reason for not planning to use a contraceptive method in the future.

Recommendations: According to the study, one-third of the pregnancies at antenatal clinics in the Thimbirigasyaya Divisional Secretariat Division were unplanned pregnancies. The use of contraceptive methods should be encouraged among eligible couples. More studies on unplanned pregnancies in similar and other settings are needed in the future.

Key words: unplanned pregnancies, family planning preferences, antenatal clinic attendees

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Introduction

Pregnancies can be broadly divided into planned/wanted pregnancies and unplanned pregnancies. Unplanned pregnancy is a major public health issue the world over. There are two types of unplanned pregnancies, unwanted pregnancies (occurred when no more children were desired) and mistimed pregnancies (occurred before the desired time). In unplanned pregnancies, conception has occurred not at the desired time and was expected later or was never expected or wanted. The definition of pregnancy intent is typically subjective. Understanding the concept of unplanned pregnancies helps to identify the fertility of populations and the unmet need for contraception. The common cause of unplanned pregnancies has been identified as not using contraception or due to not using a contraceptive method consistently or correctly or both¹.

Unplanned pregnancies have been caused due to a variety of factors, including the failure of contraceptive methods and contraception techniques. Due to the high unmet need for contraception, there is a reduction in the use of a contraceptive method or technique, while the failure of the contraceptive method includes technical issues on the part of the couple and failure of the method itself².

Unplanned pregnancies have been a major cause of induced abortions the world over and have been linked to poor maternal and child health outcomes. It is linked to an increased risk of abortion-related death and morbidity, especially in countries where abortion is illegal³.

Unplanned pregnancies continue to be a critical global issue, particularly among certain ethnic and racial groups as well as among low-income women. These unplanned pregnancies can negatively impact women physically, emotionally, and financially. Effective, equitable and easier access to effective contraception methods, especially to long-acting reversible contraception, would certainly help to address this issue of public health concern⁴.

Between 2015 to 2019, there had been 121 million unplanned pregnancies annually the world over (80% confidence interval of 112.8-131.5) which corresponds to a global rate of 64 unplanned pregnancies per 1000 women aged 15-49 years. Out of this amount, 61% of the unplanned pregnancies ended in abortions, which accounts for an abortion rate of 39 abortions per 1000 women aged 15-49 years⁵.

According to the latest estimates by the World Health Organisation, almost half the pregnancies between 2015 to 2019 in low and low middle-income countries had been unplanned. Women living in the poorest regions are almost three times likely to have unplanned pregnancies than women from wealthier regions⁶.

In Sri Lanka, approximately 360,000 women become pregnant annually, of which one in three (33.3%) are estimated to have an unplanned pregnancy. Demographic and Health Survey (DHS) of 2016 reports that 35% of married women in Sri Lanka do not use any form of contraception⁷.

The prevalence of unplanned pregnancies may be related to the choice and use of contraceptive methods, women's expectations, knowledge, and behaviours⁸. Pregnancy planning and family planning go together as the former requires personal willingness and preparedness for pregnancy, while the latter includes a sufficient distance between pregnancy and the prevention of unintended pregnancies, which could lead to illegal abortions and complications⁹.

Medical advice to prevent unplanned pregnancies is effective family planning. Family planning saves lives, but there are myths and assumptions about different approaches, such as contraceptives, and the medical goal of family planning is sometimes misunderstood. When there is a need and understanding for the use of contraceptives, and if they are made available, accessible, used correctly and consistently, unplanned pregnancy is preventable¹⁰.

Access to family planning and the use of modern methods of contraception is a human right. Individuals have the right to choose their preferred method of contraception and decide freely whether and when to have children and their family size. Unplanned pregnancies and illegal abortions can be avoided by equitable access to modern contraception¹¹.

Despite advancements in reproductive technology, due to lack of understanding and limited access to effective contraception, higher rates of contraceptive failure can occur which can result in most unintended pregnancies¹². The danger of the above-mentioned is lower if the knowledge of family planning and technical skills on the use of family planning methods is sufficient among the vulnerable population^{13,14}.

Family planning is an important area to address when talking about unplanned pregnancies. It is an approach

to give the right to the couple to decide on their desired number of children to have, the adequate timing of pregnancies and the right to choose a method of their choice (cafeteria approach) for family planning from modern contraceptive methods. In this study, family planning methods used in the past, the reason for using the method, future family planning preferences and choices and the reason for not using a family planning method in the past and future were analysed among antenatal mothers. The selection of a community setting rather than a hospital setting for the study seems more suitable since grass-root level health care workers follow up most of the antenatal mothers in Sri Lanka at community-based clinics.

The burden of unplanned pregnancy on the country's health care system is immense and there is only limited information available on prevalence and preferences for family planning concerning current and past pregnancies. Confidential, accurate and timely data should be provided to the relevant stakeholders to develop systematic preventive strategies in the future.

Methods

A cross-sectional study was performed using interviewer-administered questionnaires in three randomly selected antenatal clinics (Borella, Kirula and Wellawatte) in the Thimbrigasyaya Divisional Secretariat Division of the Colombo Municipal Council between April 2020 and January 2021. A total of 425 antenatal mothers, including a non-response rate of ten percent, who fulfilled the inclusion and exclusion criteria were included in the study. All antenatal mothers in their first, second or third trimester attending the antenatal clinics at Borella, Kirula and Wellawatte of District 3, District 4 and District 5 Medical Officer of Health areas of Thimbrigasyaya Divisional Secretariat Division were included. An antenatal mother who had difficulties in hearing the questions asked or difficulties in speaking in response to the questions asked by the interviewer and antenatal mothers residing in that area for less than six months duration were excluded. The formula used for sample size calculation was taken from Lwanga and Lemeshow, 1991¹⁵. Sample size (N) was calculated using 95% confidence interval ($Z = 1.96$). Since there are not any recently published data or recently conducted studies within the last five years on the prevalence of Unplanned Pregnancies in Sri Lanka, and to get the maximum number of samples, the prevalence (p) was calculated as 50%. Precision (d) required at either side of proportion and the non-

response rate were calculated as 5% and 10% respectively.

A consecutive sampling method was used, as it was the best possible way to collect the desired sample size within the stipulated time. Pre-testing of the questionnaire was done at the antenatal clinic in Slave Island which belongs to the Colombo Divisional Secretariat Division of the Colombo Municipal Council (District 2b Medical Officer of Health area).

The principal investigator himself was involved in data collection and more information on current pregnancy and related factors were looked into in the pregnancy records of each mother. Information sheets were given to all antenatal mothers attending the clinic following which, the principal investigator, gave a brief introduction on the purpose of the study and the outline of the questionnaire. Subsequently, consent forms were given to mothers willing to participate in the study who fulfilled the inclusion and exclusion criteria. All participants were given adequate time and opportunity to ask questions regarding the study and clear their queries before the data collection began. Sensitive questions were presented towards the end of the questionnaire by the principal investigator.

Tables were used to describe the planning status of the current pregnancy and family planning practices and preferences using numbers and percentages. Permission for data collection was obtained from the Chief Medical Officer of Health (CMOH) of Colombo Municipal Council (CMC) and Medical Officers of Health (MOHs) of the respective antenatal clinics. During the data collection process in the respective antenatal clinics, all the required precautions were taken in compliance with the COVID-19 Circulars and Guidelines issued by the Ministry of Health, Sri Lanka.

Results

The 425 antenatal mothers who took part in this study belonged to an age range of 15 to 44 years, with around 83% (n=354) falling between the ages of 22 to 34 years. Majority of the antenatal mothers included in the study were Sinhalese (n=158, 37.2%), closely followed by Moors (n=144, 33.9%) and Tamils (n=123, 28.9%). There were 146 Buddhists (34.4%), 144 Muslims (33.9%) and 89 Hindus (20.9%) in the study population. Christians and Catholics accounted for a small number (n=46, 10.8%). Most of the antenatal mothers were married (n=408, 96%) with 16 unmarried mothers (3.8%).

The prevalence of unplanned pregnancies in this study population was calculated to be 139 antenatal mothers (32.7%) out of 425 (95% confidence interval: 27.95 - 37.45). The group of unplanned pregnancies included mothers who responded by saying that they never wanted to be pregnant and who wanted to be pregnant later.

Looking at family planning practices, 33% of the antenatal mothers had used some form or method of contraception in the past and the majority of them (80%) had used it for spacing of pregnancy to widen the interpregnancy interval. Of the 33% of antenatal mothers who had used a method in the past, half had chosen either barrier methods like condoms (22.5%) or DMPA (Depot-medroxyprogesterone acetate) (28.3%) as their preferred method of contraception. Combined oral contraceptive pills, implants and intrauterine devices were preferred equally among past contraceptive users (around 15% each).

Advice received from health care workers and clinics was the main reason to choose a method of contraception in the past among 63% of the antenatal mothers. Around one-third had considered the side effects before choosing their method of choice.

Among the two-thirds of antenatal mothers (67%) who had not used a contraceptive method in the past, more than half of them said that they were not willing to use a method, while 35.5% were expecting to get pregnant. Among the antenatal mothers who were not willing to use a method in the past, side effects of contraceptive methods were considered the major reason (43.1%), while 33.9% was due to their spouses not being happy about it.

Looking at future contraceptive practices and

preferences following the current pregnancy, 58.6% of the antenatal mothers were planning to use a contraception method following the current pregnancy while 41.4% were not planning to do so.

Among the mothers who were planning to use a method, the majority (28.5%) had decided to use DMPA (Depot-medroxyprogesterone acetate) as their method of choice, followed by barrier methods such as condoms among 23.7% of antenatal mothers. Implants (18.9%), intrauterine devices (12%) and combined oral contraceptive pills (10.4%) were the other modern methods of contraception that were preferred for future use.

Regarding the time to start using the contraception following the current pregnancy, the numbers were almost equally distributed among the three categories: immediately after delivery, within six weeks of delivery and after six weeks of delivery. Advice received from health care workers was the major reason or factor in deciding the type of contraception method to be used in the future (61%). Side effects were considered by 32.1% of antenatal mothers when selecting a contraception method for the future.

Among future users, half of the antenatal mothers were planning to use their chosen method of contraception for two to five years. Around 37.4% had decided to use the chosen method of contraception for more than five years. Among antenatal mothers who were not planning to use a contraception method following the current pregnancy (41.4%), side effects of contraception methods were considered as the main reason by the majority (48.3%). Satisfaction of the partner was considered by 23.3%, while 10.8% mentioned discomfort as a reason for not using a method in the future.

Table 1. Distribution of mothers according to timing of current pregnancy

Timing	Number (n=425)	Percentage
The right time	255	60.0%
Wanted to be pregnant later	98	23.1%
Never wanted to be pregnant	41	9.6%
Wanted to be pregnant earlier	31	7.3%

Distribution of antenatal mothers according to the decision on current pregnancy

Decision by	Number (n=425)	Percentage
Antenatal mother decided	105	24.7%
Her husband decided	85	20.0%
Mother and husband decided	134	31.5%
Not decided by either	101	23.8%

Table 2. Distribution of mothers according to use of contraception in the past

Use of contraception in the past	Number (n=425)	Percentage
Yes	138	32.5%
Never used a method	287	67.5%

Table 3. Distribution of mothers according to the reason for using contraception in the past

Reason for choosing a method	Number (n=138)	Percentage
Spacing of pregnancy	110	79.7%
Completed family	15	10.9%
Not wanting children	13	9.4%

Distribution of mothers according to the type of contraception used in the past

Reason for choosing a method	Number (n=138)	Percentage
DMPA	39	28.3%
Barrier methods, condoms	31	22.5%
Oral Contraceptive Pills	23	16.6%
Implants	22	15.9%
Intra Uterine Device	18	13.0%
Traditional and natural methods	4	2.9%
Others	1	0.8%

Distribution of mothers according to the type of contraception used in the past

Reason for choosing a method	Number (n=138)	Percentage
Advised by health worker	87	63.0%
Fewer side effects	41	29.7%
Cheap and easily available	8	5.8%
Others	2	1.5%

Table 4. Distribution of mothers according to the reason for not using a method in the past

Reason for never using a method	Number (n=287)	Percentage
Not willing	165	57.6%
Expecting a pregnancy	102	35.5%
Not aware	20	6.9%

Table 5. Distribution of mothers according to the reason for not willing to use a method in the past

Reason	Number (n=165)	Percentage
Side effects	71	43.1%
Husband not happy about it	56	33.9%
Discomfort	23	13.9%
Expensive, not easily available	5	3.0%
Others	10	6.1%

Table 6. Distribution of mothers according to contraception use in the future

Contraception use	Number (n=425)	Percentage
Yes	249	58.6%
No	176	41.4%

Distribution of mothers according to preferred contraceptive method to use in the future

Method	Number (n=249)	Percentage
DMPA	71	28.5%
Barrier methods: Condom	59	23.7%
Implants	47	18.9%
Intrauterine Contraceptive Device	30	12.0%
Oral Contraceptive Pills	26	10.4%
Traditional and natural methods	12	4.9%
Others (includes bilateral LRT)	4	1.6%

Distribution of mothers according to the timing of starting to use the method in the future

Time of starting to use	Number (n=249)	Percentage
Immediately after delivery	76	30.5%
Within 6 weeks of delivery	90	36.2%
After 6 weeks of delivery	83	33.3%

Distribution of mothers according to the expected duration of use of the method

Expected duration of use	Number (n=249)	Percentage
Less than 2 years	29	11.6%
2 to 5 years	127	51.0%
More than 5 years	93	37.4%

Table 7. Distribution of mothers according to the reason for not using a method in the future

Reason for not using a method	Number (n=176)	Percentage
Side effects	85	48.3%
Husband not happy about it	41	23.3%
Discomfort	19	10.8%
Expensive and not easily available	4	2.3%
Discomfort and side effects	3	1.7%
Side effects and husband not happy about it	2	1.1%
Others	22	12.5%

Discussion

When it comes to the question of the planning status of the current pregnancy, questions concerning the timing of the current pregnancy and the decision to have the pregnancy were asked from the study participants. Regarding the timing of the current pregnancy literature from previous studies show that; never wanting a pregnancy and wanting to have it later were considered as unplanned pregnancies, while right time and wanting a pregnancy earlier were considered as planned pregnancies¹⁶. In some other studies, decision-making on current pregnancy by either one or both partners was considered to decide on the planning status of the pregnancy¹⁷. According to this study, 98 antenatal mothers (23.1%) wanted to be pregnant later while 41 of them (9.6%) never wanted to be pregnant. Considering this data, it was concluded that the prevalence of unplanned pregnancies in the Thimbirigasyaya Divisional Secretariat Division of the Colombo Municipal Council was 32.7% (139 out 425 study participants).

According to the World Health Organisation (WHO) in 2020, the prevalence of modern contraceptive methods has increased by 2.1% to its current percentage of 57.1% among married women of reproductive age⁶. In this study, approximately 50% of the antenatal mothers (n=70) had chosen either barrier methods like condoms or hormonal methods like DMPA (Depot-medroxyprogesterone acetate) as their preferred method of contraception in the past. Either combined oral contraceptive pills, implants or intrauterine devices were used among 45% of the remaining study population. Only four antenatal mothers (3%) had used traditional and natural methods in the past.

Demographic and Health Surveys conducted in 52 countries between 2005 and 2014 disclosed the common reasons given by married women for not using a contraceptive method to prevent pregnancy. Among them 26% of the women expressed concerns about contraceptive side effects and health risks, 24% reported having sexual intercourse infrequently or not at all, 23% said they or others close to them reject contraception and 20% were breast-feeding and have not resumed menstruation since giving birth¹⁸. In this study, out of the remaining 287 antenatal mothers in the study population who had not used a contraceptive method in the past, 165 of them (57.6%) said that they were not willing to use a method, while 102 antenatal mothers (35.5%) were expecting to get

pregnant. A very small percentage of seven percent (n=20) said that they were not aware of family planning or contraceptive methods. Antenatal mothers who were not using a contraceptive method in the past and expecting a pregnancy predominantly comprised of primiparous and those without a child due to bad obstetric history. Side effects of contraceptive methods were considered the major reason for not being willing to use a method in the past among the 165 antenatal mothers. There were 71 participants (43.1%) who sighted side effects, while 56 antenatal mothers (33.9%) were not willing, as their spouses were not happy about it.

A community-based cross-sectional study using multistage sampling done in Ethiopia revealed that 59.1% (95% confidence interval: 56.8%-62.2%) of the postnatal mothers in the study had started using a modern contraceptive method within 12 months of delivery and 71.5% of them preferred injectables as a contraceptive method. Postpartum modern contraceptive use was significantly associated with maternal education level (95% confidence interval: 0.03-0.71), discussing family planning methods with a partner (95% confidence interval: 0.40-0.90), ever heard about modern family planning methods (95% confidence interval: 0.01-0.43) and contacting health care professionals (95% confidence interval: 1.19-2.88)¹⁹. Similar findings are seen in this study regarding future contraceptive practices and preferences following the current pregnancy, where 58.6% of the antenatal mothers were planning to use a contraception method following the current pregnancy while 41.4% were not planning to do so. Among the 58.6% of mothers who were planning to use a method, the majority (28.5%) had decided to use DMPA (Depot-medroxyprogesterone acetate) as their method of choice, closely followed by barrier methods such as condoms (23.7%) and hormonal methods such as implants (18.9%). Regarding the time to start using the contraceptive method following the current pregnancy, around 36.2% preferred to use the method within six weeks of delivery.

Advice received from health care workers was the major reason or factor in deciding the type of contraceptive method to be used in the future (61%). Side effects were considered by 32.1% of antenatal mothers when selecting a contraceptive method for the future. There were 51% of antenatal mothers who

chose to use a contraceptive method following the current pregnancy for two to five years. Around 37.4% had decided to use the chosen method of contraception for more than five years.

Among antenatal mothers who were not planning to use a contraceptive method following the current pregnancy (41.4%), side effects of contraceptive methods were considered as the main reason by the majority (48.3%). Satisfaction of the partner was considered by 23.3%, while 10.8% mentioned discomfort as a reason for not using a method in the future.

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