

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

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Abstract

Background: According to UN population estimates, India has surpassed China as the world's most populated nation, marking the biggest upheaval in global demography since records have been kept. Providing universal family planning services is an important strategy to reduce maternal morbidity and to control population growth. Even though the country has multiple programs addressing family planning issues, they are missing out on working women. Thus, this study aims to estimate the prevalence of unmet needs of family planning and determinants for improper access to family planning methods among women working in a selected Garment industry in Urban Bengaluru. **Methodology:** A community based cross-sectional study was conducted in a selected garment factory for a period of two months. Women workers in Reproductive age group (18-49 years) and who gave voluntary consent to participate in the study were taken up. Total sample of 454 women were included. The data was collected using a semi-structured and validated questionnaire. Collected data was entered in Microsoft Excel and was analysed using SPSS version 16. **Results:** Among 454 participants, 42.3% (n=192) of them had used contraceptive method. Out of 192 women, most of them (72.9%, n=140) had chosen tubectomy as the contraceptive measure. Among 407 women, 14.3% (n=58), 13.3% (n=42), and 20.9% (n=9) of them had not planned for their 1st pregnancy, 2nd pregnancy, and 3rd pregnancy respectively. **Conclusion:** Less than half of them had used any form of contraceptive method. Among that half, nearly three-fourths had chosen tubectomy.

Keywords: Family Planning; unplanned pregnancy; working women; contraception garment industry

Introduction

According to WHO Family planning is defined as "A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family

group and thus contribute effectively to the social development of a country". Another Committee of WHO defines Family planning as: "Family planning refers to practices that help individuals or couples to attain certain objectives: (a) to avoid unwanted births; (b) to bring about wanted births; (c) to regulate the intervals between pregnancies; (d) to control

the time at which birth occurs in relation to the ages of the parent; and (e) to determine the number of children in the family (WHO, 2020)

An estimated 150 million married women in the developing world wants to delay or stop child-bearing and are not using contraception (Chafó & Doyore, 2014). Currently, the world population is growing by over 80 million every year; such a change is unprecedented. According to the United Nations projection, by 2025 the world population will be over 8 billion people, of which 6.8 billion will live in developing countries (UNFPA, 1969; TOI, 2017). According to UN population estimates, India has surpassed China as the world's most populated nation with a population of around 1.4 billion, marking the biggest upheaval in global demography since records have been kept (Ellis-Petersen, 2023).

Although India was the first nation to adopt the National Family Planning programme in 1952, the target was on health of the women and population control was neglected. By 1980s, there was an alarming population growth which necessitated the adoption of population control strategies in India (National Health Mission, 2023). Providing universal family planning services is an important strategy to reduce maternal morbidity and to control population growth. Ten percent of all pregnancies are mistimed, and 11% of all pregnancies are unwanted in India (Bongaarts & Bruce, 1995) In India, female sterilization is the most commonly preferred method of contraception accounting for 76 % of all methods, but the usage of temporary methods of contraception remains low, which is mostly due to social stigma and cultural misbeliefs (Pathak et al, 1998; Nag, 1984; Basu, 1984) lack of knowledge (Chaudhury, 2001; Athavale & Athavale, 2003) and concern about side effects (Pathak et al, 1998; Chaudhury, 2001; Athavale & Athavale, 2003; Vishnu Prasad, 2016; Lule et

al, 2007). Family planning does not mean just limiting a family size, it also means helping infertile couples to have babies (Aniruddha, 2023). Infertility is currently affecting 1 in 6 couples in India, with a prevalence of 10 to 14%. This rate is higher in urban areas. It is a major cause for concern for the government as well as for individual couples. The social and interpersonal relationships would be impacted. The results of infertility will impact a person's and a country's various facets of life (Kalidasan et al., 2020).

Worldwide, when contraception is used properly and effectively to avoid unwanted pregnancy it can reduce maternal deaths to 25–35 % (Vishnu Prasad, 2016; Lule et al., 2007). Family planning and population strategies help the country achieve developmental goals. Even though the country has multiple programs addressing family planning issue, we are missing out on working women. Why choose garment Industry? There are about 70,000 garments manufacturing units in the country providing employment to more than 3 million people (Awashthi & Singh, 2003). Garment workers make up a major part of the total labour force in the country, which contributes a significant part of the country's foreign income. In the labour unit of garment industries, most of the workers are females of reproductive age group. Most of them belong to low socio-economic status and are not that (Bongaarts & Bruce 1995). Because the female garment workers are unaware of family planning options, they become pregnant unintentionally and repeatedly, which raises the risk of spontaneous abortion, low birth weight, preterm delivery, and other complications. Thus, this study aims at assessing the practices, knowledge and decision making about family planning and factors associated with unplanned pregnancy among women working in a selected Garment industry in Urban Bengaluru.

Methodology

A community based cross-sectional study was conducted in a selected garment factory for a period of two months. Women workers in reproductive age group (18-49 years) and who gave voluntary consent to participate in the study were taken up. Women who had undergone hysterectomy were excluded from the study. Among 1,400 women, 454 women satisfied the inclusion and exclusion criteria. Purposive sampling method was used. Data collection was started after obtaining the ethical clearance from the Institute.

The data was collected using a semi-structured and a validated questionnaire, which had three sections. First section about socio-demographic variables, second section about the usage of contraceptive methods and reasons for not using any, and the 3rd section had questions regarding the knowledge about contraceptive methods, who should use contraceptive methods, where did they hear about it, who took the decision for who had used contraception and the contraceptive method preferred by them. The data was collected using interview method.

Collected data was entered in Microsoft Excel and was analysed using SPSS version 16. Quantitative data, such as age was expressed in mean and standard deviation. Qualitative data were expressed in percentages. Tables and bar graph have been used to represent the data. Chi-square/ Fisher's exact test was used to find the association between the usage of contraceptive method and socio-demographic variables. A p-value of <0.05 was considered as statistically significant.

Results

Mean age of the study participants of the study was 36 ± 7.3 . Among 454 participants, 52.6% (n=239) had finished their high school, 75.3% (342) belong to upper middle class according to modified Kuppaswamy scale, 97.1% (n=441) of them were Hindus and 87.4% (n= 397) of them were married (Table 1). Most of them (46.9%, n=213) were married at the age less than 15 years and between 15-18 years and 57.7% of them (n=262) had at least 2 children (Table 1).

Table 1. Socio-Demographic Variables of the Study Participants (n=454)

Variables	Number	Percentage
Education Category		
Illiterate	46	10.1
Primary school	12	2.6
Middle school	88	19.4
high school	239	52.6
PUC/Diploma	57	12.6
Graduate	12	2.6
Socio-economic status		
Upper Middle Class	342	75.3
Lower Middle Class	102	22.5
Upper Lower Class	10	2.2
Religion		
Hindu	441	97.1
Muslim	13	2.9

Marital Status	Single	28	6.2
	Married	397	87.4
	Widowed	24	5.3
	Separated	5	1.1
Age at marriage	<15 years	213	46.9
	15- 18 years	213	46.9
	19- 23 years	27	5.9
	24- 30 years	1	0.3
	>30 years	0	0
Number of children	0	47	10.3
	1	103	22.7
	2	262	57.7
	3	42	9.3

Among 454 participants, 42.3% (n=192) of them had used contraceptive method (Table 2). Out of 192 women, most of them (72.9%, n=140) had chosen tubectomy as the contraceptive measure (Table 2). Among 407 women, 14.3% (n=58), 13.3% (n=42), and 20.9 (n=9) of them had not planned for their 1st pregnancy, 2nd pregnancy, and 3rd pregnancy

respectively (Table 2). Participants who had not used any contraceptive method (n=262), 59.9% (n=157) of them reasoned that they had no knowledge about contraceptive method (Table 2). Currently, 149 women were using one or the other form of contraception. Among 149, 140 of them had underwent permanent sterilization method (Table 2).

Table 2. Information Regarding the Usage of Contraceptive Methods among Women Working in Garment Factory

Variables	Number	Percentage
Did you use any contraceptive method to delay or to prevent getting pregnant? (n=454)	Yes	192
	No	262
Type of contraceptive used by women (n=192)		
Barrier methods	7	3.7
IUCD	35	18.2
Oral contraceptive pills	9	4.7
Natural methods	1	0.5
Tubectomy	140	72.9
Planned 1 st pregnancy (n=407)		
Yes	349	85.7
No	58	14.3
Planned 2 nd pregnancy (n=315)		
Yes	273	86.7
No	42	13.3

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

Planned 3 rd pregnancy (n=43)		
Yes	34	79.1
No	9	20.9
Reasons for not using family planning methods (n=262)		
No facilities available	3	1.1
No staff	7	2.7
Not accessible	1	0.4
No knowledge	157	59.9
Afraid of complication	49	18.7
Inconvenient to use	1	0.4
Wants to have a child	30	11.5
Uncomfortable	5	1.9
Expensive	1	0.4
Against religion	1	0.4
In-laws' objection	2	0.7
Others	5	1.9
Current method used to prevent further pregnancy (n= 149)		
Natural methods	1	0.7
Condoms	2	1.3
IUD	4	2.7
Oral contraceptives	2	1.3
Tubectomy	140	94.0

Among 454 participants, 65.4% (n=297) had heard of a method to delay or prevent pregnancy, 63% (n=286) thought that only females had to use contraceptive method, and 37.7% (n=112) had heard about it from a health worker (Table 3). Then 67.1% (n=100)

opined that both her and her partner decided to use the contraceptive method (Table 3). Furthermore, 83.3% (n=378) opined that getting sterilized (tubectomy) as the preferred method (Table 3).

Table 3. Information Regarding Knowledge, Decision-Making of Women Regarding Contraception and Contraceptive Method Preferred by Women (n=454)

Variables	Number	Percentage
Have you heard of any method used to delay or prevent pregnancy?		
Yes	297	65.4
No	157	34.6
Who has to use contraceptive method?		
Male	40	8.8
Female	286	63.0
No preference	34	7.5
Both	67	14.8
Do not know	27	5.9

How or where did you get to know about it? (n=297)		
Doctor	79	26.6
Health worker	112	37.7
Media	8	2.7
Family	71	24.0
Friends	27	9.0
Who took the decision to adopt a contraceptive measure? (n=149)		
Self	16	10.7
Husband	18	12.2
Both self and partner	100	67.1
Relatives and friends	6	4.0
Doctor or HW	9	6.0
Contraceptive Method preferred		
Pills	3	0.7
Injectables	2	0.4
IUCD	15	3.3
Implants	2	0.4
Condoms	12	2.6
Female sterilization	378	83.3
Male sterilization	0	0
Natural methods	42	9.3

Association between usage of any contraceptive method and socio-demographic variables was assessed using Chi-square/ Fisher's exact test. It was noted that education, socio-economic status, and

religion did not have any association with usage of contraceptive methods (Table 4). Whereas marital status, age at marriage and number of children were associated with the usage of contraceptive method (Table 4).

Table 4. Association between Usage of Any Contraceptive Method and Socio-Demographic Variables (n=454)

Variables	Usage of any contraceptive method		p-value
	Yes	No	
Education Category			
Illiterate	21 (45.7)	25 (54.3)	0.454
Primary school	8 (66.7)	4 (33.3)	
Middle school	32 (36.4)	56 (63.6)	
high school	101 (42.3)	138 (57.7)	
PUC/Diploma	24 (42.1)	33 (57.9)	
Graduate	6 (50)	6 (50)	
Socio-economic status			
Upper Middle Class	144 (42.1)	198 (57.9)	0.189
Lower Middle Class	41 (40.2)	61 (59.8)	
Upper Lower Class	7 (70)	3 (30)	
Religion			
Hindu	185 (42)	255 (58)	0.768
Muslim	6 (46.2)	7 (53.8)	

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

Marital Status	Single	5 (17.9)	23 (82.1)	0.015*
	Married	178 (44.8)	219 (55.2)	
	Widowed	8 (33.3)	16 (66.7)	
	Separated	1 (20)	4 (80)	
Age at marriage	<15 years	81 (38)	132 (62)	0.044**
	15- 18 years	103 (48.4)	110 (51.6)	
	19- 23 years	8 (29.6)	15 (70.4)	
	24- 30 years	0	1 (100)	
	>30 years	0	0	
Number of children	0	1 (2.7)	36 (97.3)	<0.05**
	1	32 (31.1)	71 (68.9)	
	2	139 (51.5)	131 (49.5)	
	3	17 (44.7)	21 (55.3)	
	4	2 (66.7)	1 (33.3)	
	5	0	1 (100)	

*p-value was significant

#Fischer's exact value was taken

Association between socio-demographic characteristics and unplanned pregnancy was done using Chi-square/ Fisher's exact/ Yate's chi-square. Among 58 women who had 1st unplanned pregnancy, it was noted that there was statistically significant association of unplanned pregnancy with age at marriage and whether contraceptive was used or not (Table 5). Among 42 women who had 2nd unplanned pregnancy, it was

noted that there was statistically significant association of unplanned pregnancy with whether contraceptive was used or not and reasons for not using any contraceptive method (Table 5). Among 9 women who had 3rd unplanned pregnancy, it was noted that there was statistically significant association of unplanned pregnancy with whether contraceptive was used or not (Table 5).

Table 5. Socio-Demographic Characteristics and Their Association with Women Who Had Unplanned Pregnancy

1 st unplanned pregnancy (n=58)		2 nd unplanned pregnancy (n=42)		3 rd unplanned pregnancy (n=09)	
Mean age	35.3 ± 7.3	Mean age	35.98 ± 6.76	Mean age	37.33 ± 6.72
Education (p-value: 0.528)	N (%)	Education (p-value: 0.528 [^])		Education (p-value: 0.79 [^])	
Illiterate	03 (5.2)	Illiterate	2	Illiterate	1
Primary school	03 (5.2)	Primary school	2	Primary school	0
Middle school	10 (17.2)	Middle school	9	Middle school	1
High school	35 (60.4)	High school	24	High school	7
PUC/Diploma	06 (10.3)	PUC/Diploma	4	PUC/Diploma	0
Graduate	01 (1.7)	Graduate	1	Graduate	0

SES (<i>p</i> -value: 0.751)		SES (<i>p</i> -value: <0.05)		SES (<i>p</i> -value: 0.970 [^])	
Upper Middle Class	45 (77.6)	Upper Middle Class	33	Upper Middle Class	05
Lower Middle Class	12 (20.7)	Lower Middle Class		Lower Middle Class	04
Upper Lower Class	01 (1.7)	Upper Lower Class	09	Upper Lower Class	00
			00		
Religion (<i>p</i> -value: 0.677 [#])		Religion (<i>p</i> -value: 1.000)		Religion (<i>p</i> -value: 0.621 [#])	
Hindu	56	Hindu	41	Hindu	09
Muslim	02	Muslim	01	Muslim	00
Marital Status (<i>p</i> -value: 0.973 [#])		Marital Status (<i>p</i> -value: 0.697 [^])		Marital Status (<i>p</i> -value: 0.787 [^])	
Married	56	Married	42	Married	09
Single	00	Single	00	Single	00
Widowed	02	Widowed	00	Widowed	00
Age at marriage (<i>p</i> -value: 0.046 [*])		Age at marriage (<i>p</i> -value: 0.048 [*])		Age at marriage (<i>p</i> -value: 0.081 [#])	
<15 years	36	<15 years	24	<15 years	08
15- 18 years	22	15- 18 years	18	15- 18 years	01
Usage of contraceptive (<i>p</i> -value: <0.05 [*])		Usage of contraceptive (<i>p</i> -value: <0.05 [*])		Usage of contraceptive (<i>p</i> -value: 0.05 ^{**})	
Yes	05	Yes	07	Yes	01
No	53	No	35	No	08
Reason for not using contraceptives (<i>p</i> -value: 0.43 [^])		Reason for not using contraceptives (<i>p</i> -value: 0.004 ^{**^})		Reason for not using contraceptives (<i>p</i> -value: 0.481 [^])	
No facilities available	01	No facilities available	02	No knowledge	06
No knowledge	38	No knowledge	28	Afraid of complication	02
Afraid of complication	09	Afraid of complication	07	Against religion	01
Uncomfortable	03	Uncomfortable	03		
Against religion	01	Against religion	02		
Others	01				

**p*-value was statistically significant

[#]Fisher's Exact value was taken

[^]Yate's chi-square correction was taken

Total women with unplanned pregnancy not using any contraception are 96. Among 454 women, 96 women (21.1%) ended up with unplanned pregnancy who were not on any form of contraception. Among 96 women, 43 women (44.8%) wanted to limit or increase

the space between each pregnancy. Among 454 women, 5 women were suffering from primary infertility. Among 130 women who had not used any form of spacing method, around 51% of them had no knowledge about spacing methods (Figure 1).

Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

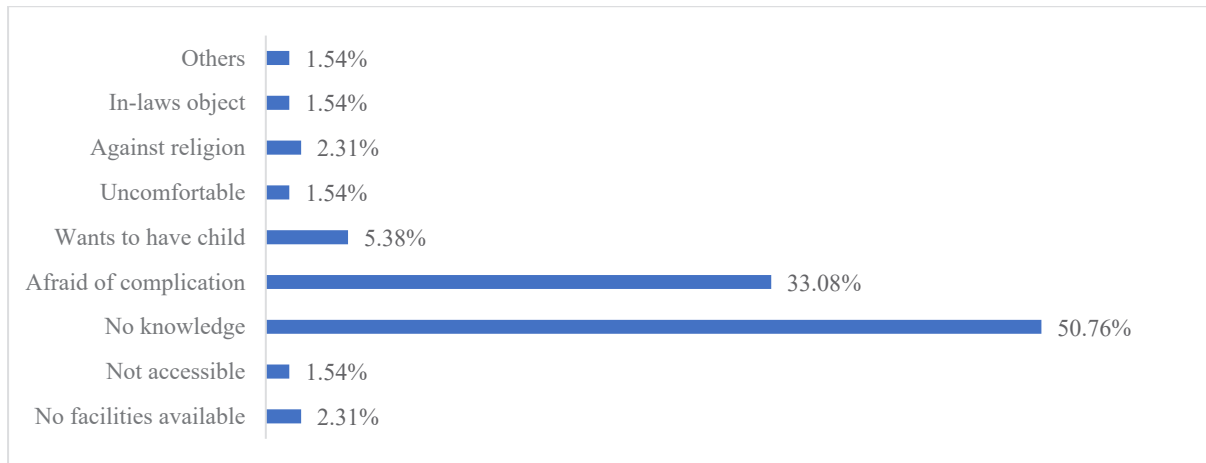


Figure 1. Reasons of Women who Did Not Use any Spacing Method (n=130)

Discussion

The right to life and liberty, freedom of expression, the ability to work and receive an education, as well as other rights, are advanced when everyone has access to the contraceptive methods they desire. This also has major health and other benefits. When births are separated by less than two years, the infant mortality rate is 45% higher than when births are separated by 2-3 years, and 60% higher than when births are separated by four or more years (Guttmacher Institute, 2023; <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>). Use of contraception reduces pregnancy-related health risks for women, especially for adolescent girls. It provides a number of possible non-health benefits, including increased educational opportunities, female emancipation, and country-wide sustainable population growth and economic development (<https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>).

Most of the participants had finished their high school, belonged to upper middle class, Hindus and were married. Among those who were married most of them belonged to less than 18 years age group and had at least 2 children. More than half of the interviewed women were not using any form

of contraception. The most common reason for not using any family planning method was no knowledge and afraid of complication and this same as the study conducted by Bongaarts & Bruce (1995). Among those were using contraceptives, most preferred method used was tubectomy followed by IUCDs and this is similar to a report written by United Nations (2019).

Most of them had heard about a method to delay or prevent pregnancy, and majority of them had heard it from the health worker and predominant of them thought only females had to use contraception. Both the study participant and her partner took the decision together to adopt a contraceptive measure. According to the knowledge questionnaire, most of them preferred female sterilization followed by natural methods and IUCD and this is similar to a study done Sherpa, S.Z., et.al. (2013).

According to a study done by Sharma, V., et.al. (2012) parity, religion, education, and socio-economic status were associated with the usage of contraceptive method, whereas in the current study, we have noted that marital status, age at marriage, and number of children were associated with the usage of contraceptive method.

A study done in Salvador (Coelho et al., 2012) showed that there was an association

between age, marital status, occupation, family income, and unplanned pregnancy, and a study done in 6 South Asian countries (Sedgh et al., 2007) showed that there was an association between age, education, religion, number of children, intention of contraceptive use and unintended pregnancy status. Whereas, in our study, it was noted that association between age at marriage, usage of contraceptive, and 1st unplanned pregnancy; and association between socio-economic status, age at marriage, usage of contraceptive, reasons for not using contraceptives, and 2nd unplanned pregnancy; and association between usage of contraceptive and 3rd unplanned pregnancy. It was noted in our study that more than half of them who were not using any spacing method had no knowledge about the spacing method and this is contradicted by a study done by Sarder (2021).

Strength of our study is that we have focussed on working women who are usually left out during a community survey. Limitation of the study is sample size calculation.

Conclusion and recommendations

Less than half of them had used any form of contraceptive method. Among that half nearly three-fourths had chosen tubectomy. Nearly one in five women ended up with unplanned pregnancy. We recommend to do an extensive research and health education to the working women regarding various and newer family planning methods.

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Family Planning Practices, Knowledge, Decision Making, and Factors Associated with Unplanned Pregnancies among Women Working in A Selected Garment Industry in Urban Bengaluru, India

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