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Family Planning Methods Utilization in Women of Reproductive Age Group: Evidence from Regionally Representative Data from Karachi, Pakistan

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Abstract

Background: To assess the status of knowledge and practices about family planning utilization and its influencing factors among women of reproductive age group in Karachi, Pakistan. The study design was analytical cross-sectional study. The Place and Duration of Study was Combined Military Hospital, Malir Cantt from January to March 2021.

Methods: Data was collected from 426 participants visiting outpatient department of a tertiary care hospital, using structured questionnaire. Nonprobability, convenient sampling technique was used to select study participants. Data was analyzed in Statistical Package of Social Sciences, version 23.

Results: Family planning knowledge and practicing contraceptive methods utilization among women of reproductive age group was 73.94% and 55.16% respectively. Effectiveness of contraceptive methods was acknowledged by 57.27%. Family planning utilization practices were statistically associated with educational status, marriage duration, number of children, knowledge, availability, suitability and effectiveness of FP methods and husband support. Family planning centers and hospitals were the most common (41%) sources of information and desire to conceive was found to be the leading cause (54.2%) to attain family planning services.

Conclusion: Overall the study revealed satisfactory knowledge about family planning with relatively low practices or utilization of contraceptive methods. Researches using qualitative approach are recommended to gain deep insight of women's internal feeling regarding family planning. Besides, reasons for non-utilization of family planning services need to be explored further.

Keywords: Contraceptive, family planning, methods, practices, reproductive aged women, utilization

Introduction

Family planning (FP) is an approach that is voluntarily adopted for child birth spacing on the basis of awareness, knowledge, attitude of an individuals to take responsible decisions (1). FP is a domain of sexual and reproductive health that deals with women and men be able to choose safe, effective, affordable and acceptable methods of fertility regulation through appropriate health services that provide couples the chance to have a healthy

child (2). FP is as an effective primary prevention strategy to reduce the morbidity and mortality of mothers and infants (3). It also aids to avoid undesired pregnancies abortions, prevents sexually transmitted diseases, hence, promoting social and economic development and security (4).

The unmet need of FP is an important public health issue in developing countries because of its high prevalence (5). Despite significant implications of FP services for economic enhancement, the need still exists especially in the developing part of world, where 225 million women are deprived of modern FP techniques (5,6). The prevalence of married women of reproductive age who do not utilize FP services for birth spacing or control were considerably high in developing countries (6,7).

Pakistan is among the top ten countries of the world with a population growth of 2 percent (7). The health ministry of Pakistan has undertaken many programs to ensure the unrestrained population growth by improving the availability of family planning services in the country and reduce maternal mortality.[8] However, government efforts do not appear much effective to clear the perception of people regarding fear of family planning techniques side effects (5).

Different influencing factors such as fear of side effects and complications, family support, knowledge, availability and accessibility of FP services has been recognized in literature that are associated with underutilization of family planning methods and techniques (1,5,8). FP methods underutilization is perceived to be higher in women who belong to young age group, illiterate and less knowledge of FP services (6,8). However, good knowledge of FP including contraceptive methods does not ensure its utilization (1). The situation of low utilization of FP services and contraceptive methods despite high awareness becomes a serious challenge for the public health and the economic growth of the developing countries (9).

Research conducted by Jawad FA et al. in Karachi, Sindh mentioned effective FP techniques, availability and cost-effectiveness of contraceptives found highly significant among FP methods users (10). Consequently, this study is an attempt to determine the prevalence and practices of FP methods and services, knowledge and attitude towards FP services utilization and identify the influencing factors that affect contraceptive use in married women of reproductive age group of Karachi, Pakistan.

Methodology

A descriptive and analytical cross-sectional study was conducted in a tertiary care hospital; Karachi, from 1st January to 31st March 2021. The hospital provides maternity care services such as FP consultation, Pre and postnatal consultations, childbirth, Expanded Program of Immunization (EPI) and malnutrition management etc. to the closely populated area of Karachi East, residence to a population of vast differences in socio-economic group, occupational background, ethnicity and linguistic group. A total of 500 participants were enrolled for the survey while few of the forms were excluded because of improper and/or incomplete information leaving behind a sample size of 426. Non probability convenient (purposive) sampling was used to select the sampled reproductive aged women (19 years or more).

Sample size was calculated using open Epi.com online sample size calculator by keeping 95% confidence level, absolute precision of ± 3% and the anticipated frequency of the outcome (FP methods utilization) at 53.3% [11] and the sample size came out to be 414. However, the sample size was increased to reinforce the outcome as per availability of time and resources.

Department of Family Medicine and Gynecology and Obstetrics assigned a staff member, specially trained for the date collection procedure, to collect and compile data. Patients attended OPD were asked for study participation after completion of their checkup. Those who consented to participate and answered the complete questionnaire were included in the study. To assess the practices of FP among participants, a self-constructed questionnaire was designed after reviewing extensive relevant literature (3,5,10,11) A small-scale pilot study on 30 participants was conducted to evaluate the validity of questionnaire and feasibility of the study before start the actual data collection process. Data from participants were also collected about a small section of sociodemographic information mainly related to age, religion, educational status, occupation and family income. Jobless females and housewives were taken as equivalent.

Data collection process was started after receiving the Ethical Review Committee Letter (File No.37/2020/Trg/ERC) of the same hospital, Karachi. The purpose of the research was verbally explained to the enrolled participants and their attendants before signing the official informed consent. Anonymity was maintained during the entire process of research with all information kept confidential.

The data was entered and analyzed using Microsoft Excel (MS-XL) for proportions and frequency analysis by Statistical Package of Social Sciences (SPSS), Version 23. Chi squared (X^2) test was used to determine association between variables. P-value <0.05 was considered statistically significant to find associations.

Results

Observed socio-demographic profile and reproductive history of 426 participants has been given in Table I; amongst whom almost half were between the age of 26 to 32 years (49.3%). Majority of the participants (90.6%) were housewives' and had monthly household income of 30 thousand PKR or more (74.9%). About 34.3% of the participants were illiterate, 38% were completed primary education, 20% and 8% had education up to the level of secondary school and higher qualification respectively. Regarding their family and obstetrics history, most of them had marriage duration more than 6 to 15 years (64.6%), 55% had 1-3 children while 70.7% had no history of abortion/miscarriages.

Table 1. Socio-demographic characteristics & reproductive history of the study respondents (n=426)

Variables		Freq. (n)	Percentage (%)
Socio-demographic Characteristics			
Age	19-25	72	16.9
	26-32	210	49.3
	33-39	123	28.9
	40 +	21	4.9
Educational Status	Illiterate	146	34.3
	Primary (Grade 1-8)	161	37.8
	Secondary (Grade 9-12)	85	20.0
	Higher/Professional Education	34	8.0
Occupation	Housewife/Jobless	336	90.6
	Employed (Private/Government)	22	5.2
	Self Employed	12	2.8
	Other (Laborer, Farmer etc.)	06	1.4
Household Monthly Earnings (PKR)	10000 or less	25	5.9
	10001 – 20000	13	3.1
	20001 – 30000	69	16.2
	30001 or more	319	74.9
Reproductive/Obstetric History			
Marriage Duration (Years)	1 – 5	64	15.0
	6 – 15	275	64.6
	16 – 25	70	16.4
	25 or more	17	3.99
No. of Children	None	19	4.5
	1 – 3	237	55.0
	4 – 6	157	36.9
	7 or more	13	3.1
No. of Abortion/Miscarriage	None	301	70.7
	1 – 2	111	26.1
	3 – 6	14	3.28

Table 2. Knowledge & Practices of Family Planning in Study Respondents (n=426)

Variables			Frequency (n)	Percentage (%)
Knowledge of Family Planning		Yes	315	73.94
		No	111	26.05
Use of Family Planning Methods		Yes	235	55.16
		No	191	44.83
Suitable Contraceptive Methods *(In terms of convenience)*		Barrier Methods	137	32.15
		Intrauterine Devices	48	11.26
		Hormonal Methods	75	17.60
Contraceptives Methods Effectiveness *(In terms of birth control/spacing)*		Yes	244	57.27
		No	182	42.72
Family Support *(To plan family & contraceptive usage)*	Husband	Yes	249	58.45
		No	177	41.54
	Mother-In-Law	Yes	66	15.49
		No	360	84.50
Availability of Services *(Family Planning)*	Female Consultation	Yes	191	44.83
		No	235	55.16
	Accessibility	Yes	262	61.50
		No	164	38.49
Recommended to Others *(In terms of contraceptives usage)*		Yes	230	53.99
		No	196	46.0

The knowledge and practices regarding different aspects of FP are as described in Table 2. The majority of participants (73.94%) had knowledge related to Family planning and contraceptive methods. The percentage of utilization of FP/contraceptives methods among participants was 55.16% who acknowledge their effectiveness (57%) as well as willing to recommend others (54%). 32% of them found barrier methods such as condom, diaphragm, cervical caps etc. as most suitable method in terms of

convenience. 58.45% women had spousal support to plan family and use of contraceptives along with the accessibility (61.50%) and availability of FP services and female consultation (44.83%).

Table 3. Chi Square Analysis on Family Planning Practices and Selected Characteristics of Respondents (n=426)

Variable			Family Planning Practices n (%)		Chi Square Statistics		
			Yes	No	X^2	df	P-Value
Age	19-25		40 (17.0)	32 (16.8)	.589	3	.899
	26-32		113 (48.1)	97 (50.8)			
	33-39		69 (29.4)	54 (28.3)			
	40 +		13 (5.5)	8 (4.2)			
Educational Status	Illiterate		62 (26.4)	84 (44.0)	14.502	3	.002*
	Primary (Grade 1-8)		100(42.6)	61 (31.9)			
	Secondary (Grade 9-12)		52 (22.1)	33 (17.3)			
	Higher Education		21 (8.9)	13 (6.8)			
Marriage Duration (Years)	1 – 5		23 (9.8)	41 (21.6)	16.533	3	.001*
	6 – 15		165 (70)	110 (57)			
	16 – 25		42 (17.9)	28 (14.7)			
	25 or more		5 (2.1)	11 (5.8)			
No. of Children	None		3 (1.3)	16 (8.4)	23.661	3	.000**
	1 – 3		127 (54)	110 (57)			
	4 – 6		102 (43)	55 (28.8)			
	7 or more		3 (1.3)	10 (5.2)			
FP Knowledge	Yes		229 (97)	86 (45.0)	150.402	2	.000**
	No		6 (2.55)	105 (54)			
Suitable FP Method	Barrier Methods		118 (50)	19 (9.9)	309.620	3	.000**
	Intrauterine Devices		44 (18.9)	7 (3.66)			
	Hormonal Methods		73 (31.0)	165 86.3)			
FP Methods Effectiveness	Yes		218 (92)	26 (13.7)	272.099	2	.000**
	No		17 (7.23)	165(86.3)			
Family Support	Husband	Yes	209 (89)	40 (21.1)	203.525	2	.000**
		No	26 (11)	151 (79)			
	Mother-In-Law	Yes	42 (17.9)	24 (12.6)	2.362	2	.307
		No	193 (82)	167 (87)			
Availability of FP Services	Female Consultation	Yes	162 (68)	29 (15.2)	139.9	2	.000**
		No	73 (31)	162 (84)			
	Accessibility	Yes	220 (93)	42 (22.1)	231.323	2	.000**
		No	15 (6.38)	149 (78)			
Recommendation FP Services to Others	Yes		202 (85)	28 (14.6)	224.861	2	.000**
	No		33 (14)	163 (85)			
No. of Abortion/Miscarriage	None		172 (73)	129 (67)	4.661	2	.097
	1 – 2		59 (25.1)	52 (27.2)			
	3 – 6		4 (1.7)	10 (5.2)			

**, ** Significant, p< 0.05*

Participants who had good knowledge of family planning were more likely to practice than those who have no knowledge (p-value <0.001) and women who practices FP were more likely to acknowledged family planning methods effectiveness (p-value of < 0.001). It was also noticed that family planning practices were also associated with spousal support (p-value < 0.001) and availability of family planning services in terms of

female consultancy and accessibility as compared to those who were deprived of these services (p-value < 0.001). Chi Square analysis showed highly significant association between number of children and educational status scores. Use of FP methods, availability of FP services in terms of female consultation and effectiveness of FP methods were also significantly associated with educational status scores.

Educational Status (p-value < 0.002), duration of marriage (p-value < 0.001) was found significantly associated and number of children (p-value < 0.001), suitability of contraceptive methods (p-value < 0.001) and recommendation to plan family and FP methods to other women were seen highly significant towards family planning practices.

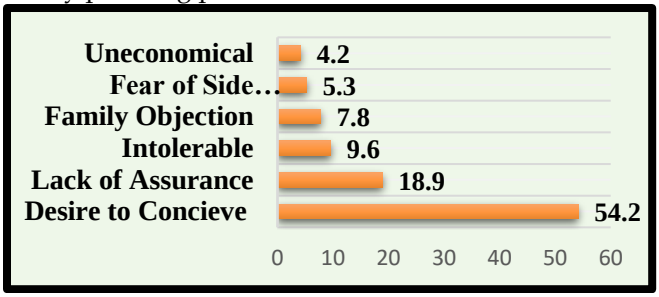

Figure 1. Factors Influencing Utilization of Family Planning Services/Methods

Factors that influenced all participants to avoid use of family planning practices and contraceptive methods were desire to have more children (54.2%) being the leading cause followed by lack of assurance (18.9%), while intolerance of contraceptive side effects (9.6%), objection from family (7.8%), fear of adverse effects/complications (5.3%) and unaffordability due to economic issues (4.2%) were the other factors mentioned by participants.

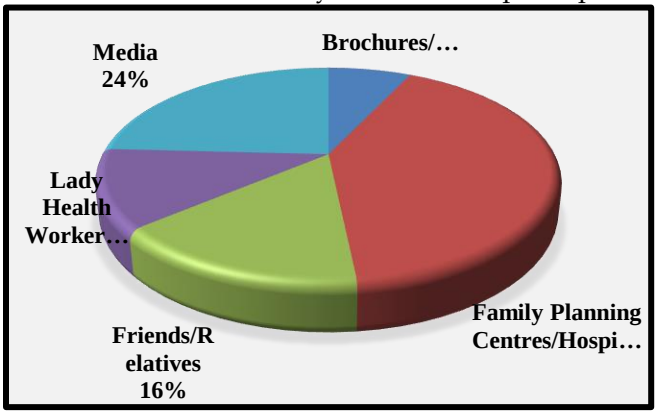

Figure 2. Source of Information for Family Planning Methods

Figure 2 illustrates that the highest percentage (41%) of women's source of information regarding family planning were family planning centers and hospitals, 16% got information from friends and relatives, followed by media (24%) and home visits of lady health visitors (12%). The least source of information reported was brochures and pamphlets (7%).

Discussion

Family planning knowledge and the utilization of contraceptive methods are the core indicators that can apprise the status and effectiveness of family planning programs. In Pakistan, vast efforts have been taken at primary health care level in terms of availability and accessibility of family planning program at national level, but the efforts are not enough due to lack of proper knowledge, unfavorable attitude and insufficient practices of contraceptive usage. In the current study, sociodemographic factors, number of children, educational status and duration of marriage was significantly associated with family planning practices scores. This study also showed that knowledge, suitability, effectiveness, availability of family planning methods and spousal support was significantly associated with family planning practices. Almost half (49.3%) of the enrolled women were in the age group of 26-32 years which is very closed to the Iraq study (12). However, due to methodological issues, variations in findings have been found in researches in relation with the different age groups (13,14). Most of the participants (72.1%) of this study either received no formal education or educated up to primary level. Though, educational status differentiated as per study settings (urban or rural) and literacy rate was seen high in researches conducted in urban areas (15). However, despite conducted in urban city this study shows low level educational status among participants.

Generally, it has been perceived that educational status of women influences awareness and information about family planning methods and availability (12). The current study found regardless of their low educational status; majority of the study participants had some knowledge about family planning methods whereas half of them utilized the family planning practices. This might be due to the fact that those with low level of education had realized that family planning services would be useful to control finances, and acquire confidence in marital

relationship including discussion of family size and usage of contraceptives. Our study finding was comparatively lower in prevalence than the studies conducted in, Rohtak District, (16) and Kashmir, Pakistan [17] which might be because the current study only involved women who were legally and religiously married. However, the present study showed high prevalence than the studies conducted in Northwest Ethiopia, (1) Mosul; Iraq, (12) Karachi (10) and Kashmir, Pakistan (17).

This study showed a significant association between family planning practices and effectiveness of services. Use of contraceptive methods were by 55.16% of women while and those who recognized its effectiveness were 57.22%. This finding is almost in line with the research conducted in Ethiopia and Cambodia (1,10). Conversely, findings of this research were higher than a Jordan (18) study and lower than India study (16). However, contraceptive usage in the current study is near to the global use of contraceptive methods (60%), though it was 53% in developing countries (12).

Principally, it should be depending on the sources and the health programs that provide accurate and proper information and guidance regarding suitability of variable family planning methods. The most prevalent contraceptive methods worldwide were traditional/barrier methods followed by hormonal pills (12). The participants of this study rated barrier methods as the most common contraceptive used by 50% followed by hormonal methods 31% and only 19% used intrauterine devices. Similarly, the prevalence of using traditional barrier methods in this study is comparable to a study in Cameroon and Iraq (19,20). On the other hand, researchers found oral contraceptives, the most recognized and barrier methods as least adopted contraceptive method in use (16,21).

It has also revealed that duration of marriage and number of children are associated with family planning practices. Those study participants who were married for <6 years and had at least one child, used family planning practices better than those who were married for >6 years and had no child. This is might be because of those who have longer marriage duration and have children may have better understanding of family planning services related to women and child health and had found economically useful.

Even though the advantage of contraceptives use were acknowledged by majority of participants, influencing factors such as; desire to have more children, lack of assurance, intolerance, objection from family, fear of side effects and economical constraints were mentioned as reasons for nonuse. These factors were similar to other studies (10,22). The most common determinant of family planning services usage was desire to conceive for having more children. This finding is in line with the research conducted by Endriyas et.al (11,22). Fear of side effects and post use complication has been recognized as a significant determinant that influence the nonuse of contraceptive methods (11,12.22). However, current study found a smaller number of participants who mentioned fear of side effect as a determinant. Economical barrier was reported least which may be because monthly household income of majority of the women was 30 thousand or more.

The main source of information was the family planning centers and hospitals followed by media and friends and relatives. Researchers mentioned variety of sources such as internet, media, social circle, friends and relatives and health centers, since media revealed the main source in women's decision making to use family planning methods for contraception (23,24). On the whole, current study found a positive and favorable attitude towards family planning which is consistent with researches conducted by Qurereishi et.al & Dhaher et.al (13, 25). The positive attitude of the participants in this study may relate to conducting in urban setting with suitable availability and accessibility of family planning services, even with low educational status.

Limitations of the Study

Since the data collection was done using structured questionnaire filled by interviewer, results might have been affected by social desirability bias, as the participants may didn't want to reveal their true feelings because of the sensitivity of the topic. Women may not feel comfortable and hesitate to answer personal questions and some of the participants would be unable to understand questions due to lack of education level, that makes knowledge and practices over or underestimated. Also, the study was single centered with short time duration, the results cannot be generalized.

Conclusion

The knowledge level towards family planning was satisfactory and the family planning utilization was comparatively low in comparison of knowledge. Participant women's educational status, marriage duration, number of children, knowledge, husband support, availability, suitability and effectiveness of FP methods were associated with family planning practices and utilization. It is recommended to cultivate well planned strategies to promote family planning activities at all levels of eligible women. Besides, in order to achieved triangulation, thorough investigation must take place using qualitative methods to gain deep insight of women's feeling about family planning.

Conflict of Interest

None, declared.

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