International Journal of Research in Medical Sciences
Mubarik M et al. Int J Res Med Sci. 2016 Jun;4(6):2229-2239
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20161792

Research Article

Knowledge, attitude and utilization of sub-dermal birth control implants among married rural women of Pakistan

Mehwish Mubarik[1], Nazia Jameel[1], Rehana Khalil[2]*

[1]Department of Community Medicine, Baqai Medical University, Karachi, Pakistan
[2]Department of Family and Community Medicine, Unaizah College of Medicine, Qassim University, Saudi Arabia

Received: 08 April 2016
Revised: 09 April 2016
Accepted: 09 May 2016

***Correspondence:**
Dr. Rehana Khalil,
E-mail: rehana.noman@ucm.edu.sa

ABSTRACT

Background: Pakistan has very high growth rate and only uptake of optimal birth spacing is a way to win this battle. One of modern contraceptive methods is long term hormonal birth control implant. The study was intended to explore the knowledge, attitude and practices of Sub-dermal Birth Control implants among married women in a rural area of Pakistan.
Methods: This descriptive cross sectional study was conducted at reproductive health services center at Panoaqil, Sindh, Pakistan. A sample of 120 married women of age 18-45 years, who attended RHS center were included in the study. Data was collected through a standardized questionnaire and analyzed using IBM SPSS version 22 and Microsoft excel.
Results: The mean age of sample was 29.48±5.05 years, almost half (44.2%) were illiterate, and 39% were educated up to primary. Three forth (73%) were housewives and 91.7% were poor. Majority (80%) had heard about one method but only one forth (26%) have used one while Implant was used by only 21.9% women. About two third (68%) didn't know about Implant while 14.2% had good knowledge about Implant. Overall attitude was positive as 85% continued the method but 14.29% quitted due to side effects. Among never users; half (46%) would go for Implant if they would be provided with the insertion services.
Conclusions: The current study concludes that knowledge about sub-dermal Implant among women of reproductive age reaching the optimum level. The attitude of women was found positive. The factors which affect the knowledge and the attitude of women are age, parity, family type, level of education, employments status, SE status, previous use of family planning nad source of information.

Key words: Sub-dermal, Birth control, Implants, Married rural women

INTRODUCTION

The International Conference on Population and Development (ICPD) defined voluntary family planning services as a fundamental human right as well as a couple's right.[1,2] Pakistan is having very high Total Fertility Rate (TFR) and subsequently highest maternal (MMR) and infant mortality rate (IMR). Many of developing nations are fighting the battle against burden of increasing population among which, one is Pakistan. Pakistan is the sixth most populous country in the world, fourth in Asia and 2nd Muslim nation with a population 177 million.[3]With a growth rate of 1.8%, the population of Pakistan will be 310 million by the year 2050.[4] Looking at the economy and economic growth of the country a horrible scene is generated in which most of the population is crippling for mere basic human facilities i.e. food, clothing, housing, health and education.[4] Only

uptake of optimal birth spacing methods through family planning is a way to win this battle. Gaps in reproductive health/family planning and sexual health care account for nearly one-fifth of the worldwide burden of illness and premature death, and one-third of the illness and death among women of reproductive age.[2,5]

Pakistan started family planning programme in 1951but according to PDHS 2006-07, the unmet need of family planning in Pakistan is 25% while there is no change in CPR which remained around 30% since many years.[6-9] Lack of knowledge about contraceptive methods or sources of supply is thought to be one of its reasons.[10] Other very important factor is the place of redidence which leads to non-supportive attitudes towards family planning among the people due to the low level of education, desire for male children and misinterpretation of religion.

A study conducted in Ethiopia found that current modern contraceptive use among married women in the urban was 87.5% and 72.8% in rural.[11] Evidence from a hospital based study on pregnant women in Karachi Pakistan, showed 43% contraception practiced while this rate was quite low in studies conducted in rural areas wherein the CPR rates were only 28% in district Khairpur, 29% in district Jamshoro and Tando Allahyar.[12-14] Free choice and promotion of a wide range of effective contraceptives, including responsible counselling, will improve the quality of reproductive health/family planning services.[15] There is a wide range of contraceptives. Some are traditional others are modern. Among modern, longterm and safe contraceptives the sub-dermal birth control Implant is one. Norplant was the first implantable contraceptive for women and is currently the most widely used. First tested in 1966, clinical studies have involved more than 55,000 women, and norplant is registered in at least 60 countries.[16]

The use of Implant is increasing worldwide and African region. Between 2005 and 2009, international agency procurement of implants for sub-Saharan Africa increased 15-fold. Today, over 30 countries in that region are beneficiaries of the approximately 1.5 million units that arrive per year. In a local study by NRIFC Karachi, it was found that Implantable contraceptive i.e; Implanon Rod (Implant) was well tolerated by the clients of family planning clinics.[17] There is no study available which can give us an idea about knowledge and practice of Sub-dermal Birth Control implants among women in rural areas of Pakistan, which is home to two-thirds of the about 180 million people in the nation.

The current study was designed to explore the knowledge regarding implants and evaluate the practices of these implants in married women in a rural area of Pakistan. The area chosen for the current study was Panoaqil which is a taluka of Sukkur District in the Sindh province of Pakistan. PanoAkil is basically a rural agricultural area, PanoAkil's estimated population is 245,187 in an area of 3,193 Square Kilometers (1,233 Sq Miles). It comprises of Muslim and Hindu community while some Christian families also live there. The educational facilities beyond intermediate are not available here. Our study has explained the reasons for non-utilization of Implants for family planning purpose.

Non-users of Implants were evaluated to determine the reasons for avoiding of this very effective and long term family planning method despite of need of family planning. The generated evidence can be used for improvement of family planning service delivery in these under privileged rural areas of Pakistan which in turn will control rapid population growth by changing attitudes and practices of women of reproductive age group which ultimately can only be achieved by having enough knowledge about modern, safe and effective contraceptive methods. Further, the study can help in decision making by planners of population welfare program regarding increase in uptake of Implants and strengthening family planning services in Pakistan.

METHODS

A quantitative approach using a descriptive survey design was chosen for the study. The participants were recruited using a convenience sampling technique during six months from August 2015 to February 2016. For those women who could not read or write, the data collectors provided assistance.

WHO sample size calculation software was used to calculate the required sample size. A minimum sample size (n) of 120 was required while taking 3% (b) bound on error of estimation, 95% confidence level (1a), and assuming 2.9% prevalence (P) of knowledge of women regarding injectable contraceptives at 2.9% in Pakistan.[8] Therefore, a total of 120 women were recruited for the study. All married females of age between 18 to 45 years of age, living in District PanoAqil, attending the Reproductive Health Services-A Center (RHS-A) and willing to participate in the study were eligible for the study.

The data collection through pre-structured, pre-tested questionnaire was started after getting permission from the Ethical review committee of Baqai Medical University and the Population Welfare Department of Sindh. The women attending the RHS-A) at Taluka Hospital, Panoaqil were provided with the informed choice regarding different contraceptive methods-modern and conventional methods. Those who chose the Implant method were asked to participate in the study by providing the written consent.

Data was collected through a structured questionnaire developed through literature review. The data were entered and analyzed using, Microsoft Excel and IBM SPSS VERSION 20.0 software for Windows. Descriptive statistics like mean with standard deviation were

calculated for numerical variables like ages, duration of using one or other method of contraception, number of contraceptive methods the respondent were aware of and has used. The frequency and percentages for categorical variables like education, occupation, monthly income, residence and knowledge of different methods of contraception, knowledge about the Implant and prevalence of the Implant use were expressed.

Association between different demographic and other variable and the knowledge and attitude towards the Implant among study participants was evaluated. The correlates were evaluated through stratified analysis (contingency tables) and tested through Chi-square taking a p value ≤ 0.05 as statistically significant.

Ethical considerations

Informed verbal and written consent was obtained and all of the participants were informed about the nature of the study and use of the data prior to the interview. The participation of the women was voluntary in the data collection process. Participants were also ensured of confidentiality.

RESULTS

A total of 120 married women of child bearing age (18-45 years) fulfilled the inclusion criteria and consented for the study after assurance of confidentiality of data.

Table 1: Descriptive statics of respondents.

Age category	Frequency	Percent
15-25 Years	11	9.2
26- 35 Years	96	80
36-45 Years	13	10.8
Total	120	100
Educational Status	**Frequency**	**Percent**
Illiterate	53	44.2
Primary	47	39.2
Matric	16	13.3
Graduate	4	3.3
Total	120	100
Family Type	**Frequency**	**Percent**
Nuclear family	89	74.2
Single family	31	25.8
Total	120	100
Monthly Income	**Frequency**	**Percent**
<10,000	33	27.5
11000-15000	54	45.0
16000-20000	21	17.5
21000-25000	12	10.0
Total	120	100
Employed	**32**	**26.7**
Daily wages	15	12.5
Contract type job	12	10
Regular permanent job	5	4.2
Housewife	**88**	**73.3**
Total	120	100

The mean±SD age of our respondents was 29.48±5.05 years with a youngest respondent of age 19 years and eldest of 42 years. The mean ± SD duration of marriage was 10.24±4.56 years. Mean ± SD parity was 5.11±2.03 children. When age was categorized it was found that majority of respondents (80%) belonged to mid of their reproductive age which is age group of 26-35 Years. About 9% were between 15-25 years while about 11% were of 35-45 years (Table 1). Being from a rural area, almost half of the study respondents (44.2%) were illiterate, while 39.2% were educated till primary only. Only 3.3% were graduate. Three quarters of respondents (73.3%) were housewives. Remaining 26.7% were working included daily wages workers, having a contract

job or a regular permanent job (Table 1). Majority (87.5%) of respondents belonged to rural areas and 72.5% belonged to lower socio-economic class with monthly income up to fifteen thousand rupees only.

Table 2: Extend of knowledge about sub-dermal birth control implant.

Questions		Frequency	Percentage (%)
You can plan pregnancies if use Implant	Yes	38	27.5
	No	82	68.3
How many years the Implant can save from pregnancy	Don't Know	82	68.3
	One year	11	9.2
	Two years	6	5.0
	Three years	21	17.5
Does the Implant have some side effects	Don't Know	82	68.3
	Yes	24	20
	No	14	11.7
If; Yes then what could be done for them	Don't Know	82	68.3
	Quit the method	12	10.0
	Consult the service provide	17	14.2
	Do nothing	9	7.5

Table: 3: Categories showing overall knowledge about Implant.

Level of Knowledge	Frequency	Percent
No Knowledge	82	68.3
Average Knowledge	21	17.5
Good Knowledge	17	14.2
Total	120	100

About 80% of respondents heard about at least one method of contraception but only 26% have used one. Among regular users of a contraceptive method, 21.9% women used implants. Two thirds of women (68%) did not even know sub-dermal birth control implant as a method of contraception. (Figure: 1).

Table: 4: Attitude towards Implant After Experience (n=7).

Side Effects		Frequency	Percent
Had any side effects with use of Implant	Yes	6	85.71
	No	1	14.29
What did you do for side effects of Implant	Quit Method	1	14.29
	Consult the service provider	5	71.42
	Did nothing	1	14.29
Which side effects appear with use of Implant	Irregular Bleeding	5	71.42
	Headache	6	85.71
	Acne	4	57
	Pain at implant site	2	28.57
	Allergy at site of Implant	1	14.29
	Weight gain	4	57

Table 3, reveals 14.2% respondents had good knowledge about birth control implants, 17.5% had average knowledge while 68.3% had no knowledge about Implants as a choice of contraception. The data organized in Table 4, discloses that experience of respondents (n=7) who were using Implants was very good. They consulted the service providers for side effects and most of them (85%) continued the method but 14.29% chosen to quit.

Table 5: Categories showing overall attitude towards Implant.

Attitude	Frequency	Percent
Positive attitude	55	45.8
Neutral attitude	29	24.2
Negative attitude	36	30
Total	120	100

Nearly half of all women (46%) stated, they would have preferred Implants if they were offered with insertion services. Among 56% who were not willing to use of Implant, 15% preferred other methods, because wound in arm was unacceptable for 7%, the method was considered unfeasible by 19% while 13% said that the husband/ family would not allow them to use this method. (Figure 3).

Table: 6: Stratified analysis showing relationship between Variables & level of knowledge about Implant.

Variable		Statistic	Level of knowledge			Total
			Good	Average	Nil	
Age of respondent (years)	15-25	n	1	1	9	11
		%	9.1%	9.1%	81.8%	100%
	26-35	n	15	15	66	96
		%	15.6%	15.6%	68.8%	100%
	36-45	n	1	5	7	13
		%	7.7%	38.5%	53.8%	100%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100%
Educational status	Illiterate	n	3	9	33	45
		%	6.67%	20%	73.33%	100%
	Primary	n	5	7	31	43
		%	11.6%	16.3%	72.1%	100%
	Matriculation	n	6	4	18	28
		%	21.4%	14.3%	64.3%	100%
	Graduate	n	3	1	0	4
		%	75%%	25%	00%	100%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100%
Employment status	House wife	n	11	14	63	88
		%	12.5%	15.9%	71.6%	100%
	Employed	n	6	7	19	32
		%	18.8%	21.9%	59.4%	100%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100%
Socio-economic status	Middle	n	5	8	20	33
		%	15.15%	24.24%	60.61%	100%
	Lower	n	7	17	63	87
		%	8.05%	19.54%	72.41%	100%
	Total	n	12	25	83	120
		%	10%	20.83%	69.17%	100%
Residence	Rural	n	2	1	12	15
		%	13.3%	6.7%	80%	100%
	Urban	n	15	20	70	105
		%	14.3%	19%	66.7%	100%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100%
Family type	Nuclear family	n	13	16	71	100
		%	13%	16%	71%	100%
	Single family	n	4	5	11	20
		%	20%	25%	55%	100%
	Total	n	17	21	82	120

		%	14.2%	17.5%	68.3%	100%
Parity	**1-2**	N	0	1	6	7
		%	0.0%	14.3%	85.7%	100.0%
	3-4	n	9	7	41	57
		%	15.8%	12.3%	71.9%	100.0%
	5-8	n	7	12	28	47
		%	14.9%	25.5%	59.6%	100.0%
	>9	n	1	1	7	9
		%	11.1%	11.1%	77.8%	100.0%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100.0%
Ever used a contraceptive	**Yes**	n	10	5	17	32
		%	31.2%	15.6%	53.1%	100%
	No	n	7	16	65	88
		%	8%	18.2%	73.9%	100%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100%
Currently using Any FP method	**Yes**	n	3	2	6	11
		%	27.3%	18.2%	54.5%	100%
	No	n	14	19	76	109
		%	12.8%	17.4%	69.7%	100%
	Total	n	17	21	82	120
		%	14.2%	17.5%	68.3%	100%

The current study also evaluated the relationship between different demographic and other variable and the knowledge and attitude towards the Implant among study participants. The correlates were evaluated through stratified analysis (contingency tables) and tested through Chi-square taking a p value ≤0.05 as significant.

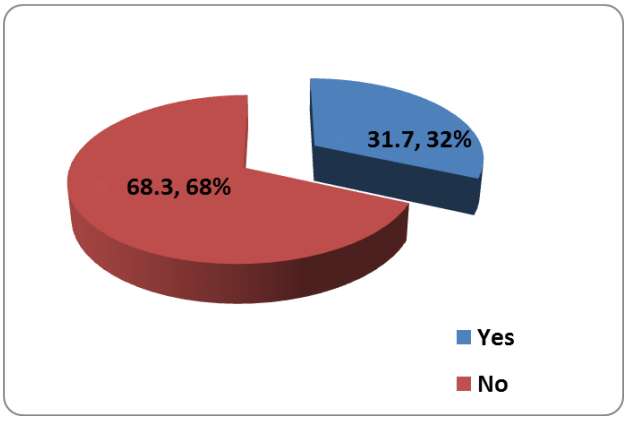

Figure1: Knowledge of birth control implant as a method of contraception.

It was significantly (P value = 0.036) found through stratified analysis that with the increase in level of education from illiterate to graduation there is an absolute increase in the percentage of good knowledge about Implant. Simultaneously; the positive attitude towards the Implant also increased and negative attitude decreased in proportion with an increase in level of education. This finding was also nearly significant (P value = 0.058) (Table 6 and 7 respectively).

Women having some employment outside home had more knowledge about Implant as compared to the housewives while the positivity of attitude was almost identical in both groups- except the neutral & negative attitudes which were more prevalent among housewives than employed women. These findings were not significant (P values=0.411 AND 0.720 respectively in Table 6 and 7).

About 15.15% of middle SE status respondents had good knowledge about Implant as compared to only 8.05% among lower SE status respondents. (P value = 0.428; see Table 6). The positive and neutral attitudes for Implant were more common among middle SE compared to lower SE status respondents. (P value = 0.345; Table 7).

It was non-significantly found that respondents from urban areas were more likely to have good and average knowledge and positive attitude towards the Implant than the rural respondents. (P values = 0.472 and 0.889; in tables: 6 and 7 respectively).

It was interesting to note that women living in single family setup had more prevalence of good knowledge about Implant but contrary to that they were less in positive attitude toward Implant as compared to the women who were living in nuclear family setup. Both these findings were not significant. (P values = 0.373 and 0.262 respectively in Tables 6 and 7).

When history of using a contraceptive method previously was associated with knowledge and attitude toward the Implant, highly significant (P value = 0.005) results came through. Accordingly; the previous user women had high prevalence of good knowledge as well as significantly (P value = 0.038) higher number of women with positive attitude towards the Implant. (Tables: 6 and 7 respectively). Likewise those who were continuously using one or other contraceptive method were more likely to have good knowledge and more positive attitude towards use of Implant. (P values=0.045 and 0.020 in Tables: 6 and 7 respectively).

Table 7: Stratified analysis showing relationship between variable and attitude towards the implant.

Variable		Statistic	Attitude towards the Implant			Attitude towards the implant
			Positive	Neutral	Negative	
Age of Respondent (years)	15-25	n	5	4	2	11
		%	45.5%	36.4%	18.2%	100%
	26-35	n	46	21	29	96
		%	47.9%	21.9%	30.2%	100%
	36-45	n	4	4	5	13
		%	30.8%	30.8%	38.5%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%
Educational status	Illiterate	n	19	12	14	45
		%	42.2%	26.7%	31.1%	100%
	Primary	n	20	12	11	43
		%	46.5%	27.9%	25.6%	100%
	Matriculation	n	13	4	11	28
		%	46.4%	14.3%	39.3%	100%
	Graduate	n	3	1	0	4
		%	75%	25%	0%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%
Employment status	House wife	n	40	20	28	88
		%	45.5%	22.7%	31.8%	100%
	Employed	n	15	9	8	32
		%	46.9%	28.1%	25%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%
Socio-economic status	Middle	n	18	12	3	33
		%	54.55%	36.36%	9.09%	100%
	Lower	n	50	25	12	87
		%	57.47%	28.74%	13.79%	100%
	Total	n	68	37	15	120
		%	56.67%	30.83%	12.50%	100%
Residence	Rural	n	6	4	5	15
		%	40%	26.7%	33.3%	100%
	Urban	n	49	25	31	105
		%	46.7%	23.8%	29.5%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%
Family type	Nuclear family	n	49	22	29	100
		%	49%	22%	29%	100%
	Single family	n	6	7	7	20
		%	30%	35%	35%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%

Parity	1-2	N	3	2	2	7
		%	42.9%	28.6%	28.6%	100%
	3-4	n	30	13	14	57
		%	52.6%	22.8%	24.6%	100%
	5-8	n	20	10	17	47
		%	42.6%	21.3%	36.2%	100%
	>9	n	2	4	3	9
		%	22.2%	44.4%	33.3%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%
Ever used a contraceptive	Yes	n	18	8	6	32
		%	56.2%	25%	18.8%	100%
	No	n	37	21	30	88
		%	42%	23.86%	34.09%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%
Currently using Any FP method	Yes	n	7	2	2	11
		%	63.6%	18.2%	18.2%	100%
	No	n	48	27	34	109
		%	44%	24.8%	31.2%	100%
	Total	n	55	29	36	120
		%	45.8%	24.2%	30%	100%

When source of knowledge/ getting contraceptive methods was stratified and evaluated then it was found that RHS-A center has very positive effect on the knowledge as well as attitudes of respondents regarding Implant. Accordingly; it was noted that the respondents attended by RHS-A center has more frequency of good knowledge (P value = 0.560) and positive and neutral attitudes (P value = 0.742) for the Implant as compared to the respondents attended by LHV or a family planning clinic. In fact both the last sources are not eligible to provide services of Implant insertion.

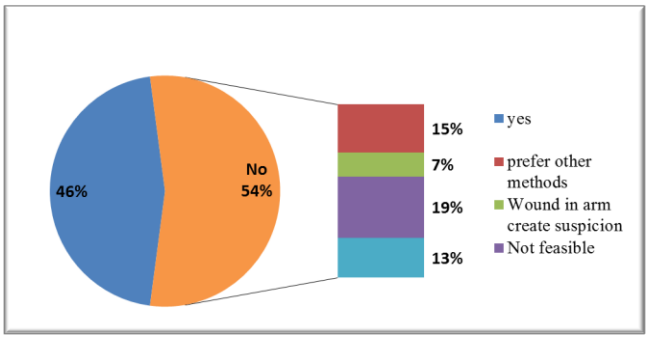

Figure 2: Attitude towards implant use: in case of provided choice and service

Finally; the study also evaluated the effect of age of respondents as well as the number of children they had no knowledge and attitudes for Implant. Accordingly it was found that both extremes of age of respondents (younger and elder), both extremes of parity (either 1-2 or >9 children) were found to have lower proportion of good knowledge and less positive attitudes among them for using Implant. All these finding were not significant. (P values of age categories were = 0.256 and 0.613; while P values for parity were = 0.530 and 0.572). (See tables: 6 and 7).

DISCUSSION

The World Health Organization defines that the family planning allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births.[2,5,11] It is achieved by use of contraceptive methods through voluntary informed choice of the couples. This information when provided to the eligible couples increases their knowledge about the available contraceptive methods and the one which suits them best. This knowledge followed by the practice of the contraception builds and modifies their long term attitudes towards the family planning.[12,16,18-20]

Therefore the knowledge about one or all contraceptive methods is of key importance. Keeping in mind the lack of exact statistics in local perspective, the current study was conducted to assess the level of knowledge about subdermal contraceptive Implants and attitude among females of district Panoaqil. Further the factors which affect the utilization, level of knowledge and attitudes were evaluated. The majority of participants in this study belonged to rural areas. Most of the women either were not having any formal education or had education up to primary level only. This reflects the actual education status of women in rural areas of Pakistan. This was further shown from the observation that three fourths of

women were housewives many of which worked in lands with their farmer husbands. Living in nuclear family was also prevalent which is quite common in rural areas of Pakistan due to limited sources of incomes of rural areas. Our study results are in aggrement with other studies that majority of participants were from lower socio-economic status (monthly income up to 15,000/-).[7,9,18,19]

Regarding demographic variables of the study participants it was found that mean±SD age of our respondents was 29.48±5.05 years with a youngest respondent of age 19 years and eldest of 42 years. Further the majority of respondents were of age group 26-35 Years. About 9% were between 15-25 years while about 11% were of 35-45 years. In a recent study in Malaysia, thorough evaluation of women's perception, acceptance, and views on Implants was conducted. The study found that mean age of users was 34.7±5.3 years, the youngest being 21 years and the eldest 48 years. Other studies from local as well from western pool have found that women in the 3rd and 4th decade of life make major part of contraceptive users all over the world. The reason is that most of them at this age have at least one to two children and women then want birth spacing. [8,13,18,21-23]

Our study results reveal that knowledge of the participants about at least one method was 80% but only 26% of all women had used it. Only seven of these 26% women (i.e; only 21%) had used Implant. This probably makes implant the least used method for contraception. Similar results were documented by an eastern country; i.e; Malaysia, where it was reported that Implant was used by very little proportion of women. But those who used it were satisfied.[23] The similar study reported that 72.1% of women were satisfied with Implant and for them it was a long term cost-effective method of contraception. Contrary to this another study conducted by Wong RC, et al making comparison of women using two different forms of long-term reversible contraception showed that there was more dissatisfaction amongst the Implant (60.9%) than the IUD users (17.2%). [18,16,21-23]

The current study observed that Reproductive Health Service (RHS-A) centre was most common source for getting knowledge about contraceptives followed by a family planning clinic and the lady health visitor. These three play a key role in acceptance or discontinuation of a method of family planning. As it was found in a study by Wong RC, et al that about 33.3% women chose Implant because it was recommended to them by a Doctor.[24] It was followed by recommendation by media and friends etc. Those Implant choosers who had good experience with Implant were 13.6%. This rate was quite higher in our study. Almost 85% of the women had continued the Implant.

Even many of them had developed side effects but they were effectively treated and counseled by the service providers at RHS thereafter and reassured to continue the Implant. Thus we can say that the attitude of all participants and especially of those who had used it was positive. Further about 46% women who never used an Implant were also of thought of using it if they were provided with the services. On the other hand 15% women who had negative attitude for the Implant preferred other methods, 7% women had fear of wound in arm, 19% thought the Implant is not practical for them while 13% refused due to fear of their husbands/ family.

We evaluated the relationship between different demographic variables and the level of knowledge/ attitude for birth control Implant among women. It was significantly noted that level of education, history of using a contraceptive method previously and current use of one or other contraceptive method were associated with good level of knowledge as well as more positive attitude towards implant. While the age, parity, visiting the RHS-A center, living in nuclear family setup, middle SE status and working status were found non-significant for knowledge and attitude for Implant.

Other studies, like a study from India, by Sherpa SZ et al found that knowledge about all contraceptives significantly (p value < 0.043) increased with increasing level of education.[25] The study further reported that Implant was last method of choice for contraception among local women. The reason for that was lack of knowledge and awareness about it. The similar study also noted that family monthly income (p value <0.039) and duration of marriage in years (p value <0.035) were also significantly affecting factors over knowledge about contraceptives.

In a study from Malaysia[71] the attitude of women using an Implant was evaluated by asking them about continuation and reasons for discontinuation of Implant. It was found that higher parity, higher education, employed women, and those with higher monthly income (middle socio-economic status) were associated with more discontinuation of Implant.

The current study had some limitations. Firstly, it was a questionnaire based study in which there were only closed ended questions. The women who had quit the Implanon use or switched to other method after quitting were not thoroughly interviewed. Secondly; the sample size, area and duration of study were short which was due to limited financial and time availability.Despite of these limitations the study reveals favourable attitude of women towards subdermal birth control implants and emphasises on the effective family planning campaigns to increase the CPR rate.

CONCLUSION

The current study along with its limitations and strengths concludes that knowledge about sub-dermal Implant among women of reproductive age reaching the optimum level and is increasing continuously. The attitude of women is also more towards the positivity, especially the

women who have used it. Further the women are counseled and treated properly in case of any side effects increases their level of satisfaction. The factors which affect the knowledge and the attitude of women are age, parity, family type, level of education, employments status, SE status, previous use of family planning & source of information. There was huge proportion of women who had neutral attitude towards the use of Implant. If these women are given thoroughly informed choice with effective counseling they can pick up this method of contraception.

Recommendations

- There was huge proportion of women who had neutral attitude towards the use of Implant. These are extremely important potential consumers of Implant. If these women are given thoroughly informed choice with effective counselling and aggressive efforts they can pick up this method of contraception as their attitudes toward implant is not negative. It can make a great breakthrough.
- As less educated, housewives and poor population does not come to the family planning service centres or visits less often, despite of having some knowledge and a will for contraception, therefore; public campaign of Family planning should be undertaken at least twice a year at Union Council level.
- Non-Government organization (NGOs) based family planning programs can provide information to both general practitioners (GPs) and patients (male/females) take advantage to correct the folklore about contraceptives.
- By giving information/knowledge to and Involvement of male partner can help in adaptation of long acting contraceptive implants.
- Lady Health Visitors can be trained in insertion of Implants and on each successful insertion there should be some incentives for both the LHV and the Client.

Limitation of study

The participation in the study was voluntary so the data gathered for this study may not be generalized.

ACKNOWLEDGEMENTS

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Fertility and Contraceptive Use. UNICEF Statistics (http://unstats.un.org/ unsd/ demographic/ products/ Worldswomen/ Gender%20statistics%20sources.
2. UNFPA State of World Population 2004: Reproductive Health and Family Planning (www.unfpa.org/swp/2004/english/ ch6/index.)
3. PRB. 2011 World population data sheet. Population Reference Bureau: Washington, DC. 2011.
4. Popov AA, Visser AP, Ketting E. Contraceptive knowledge, attitudes, and practice in Russia during the 1980s. Stud Fam Plann. 1993;24(4):227-35.
5. Sueyoshi S, Al-Khozahe HO, Ohtsuka R. Effects of reproduction norms on contraception practice among Muslim women in Amman, Jordan. European Journal of Contraception & Reproductive Health Care. 2006;11:138–45.
6. Hagen AC, Fikree FF, Sherali AA. Fertility and family planning trend in Karachi, Pakistan. Int Fam Plann Perspectives. 1999;25:38-43.
7. National Institute of Population Studies, Pakistan, and IRD/ Macro International. 1992.
8. Zeba A, Sathar. Fertility in Pakistan: past, present and future:workshop on prospects for fertility decline in high fertility countries. Population Division, Department of economic and social affairs, United Nations secretariat New York.
9. National Institute of Population Studies. Pakistan Demographic and Health Survey-2012-13. NIPS, Islamabad. 2013.
10. Fikree FF, Saleem S, Sami N. A quality of care issue:appropriate use and efficacy knowledge of five contraceptive methods:views of men and women living in low socio-economic settlements of Karachi, Pakistan. J Pak Med Assoc. 2005;55:363-68.
11. Khan A. Adolescents and Reproductive Health in Pakistan:a literature review. Research Report No. 11. Islamabad: UNFPA and the Population Council. 2000.
12. Pakistan Demographic and Health Survey (PDHS) 2006-07. National Institute of Population Studies, Pakistan. 2009.
13. Bogale B, Wondafrash M, Tilahun T, Girma E. Married women's decision making power on modern contraceptive use in urban and rural southern Ethiopia. BMC Public Health. 2011;11:342.
14. Naqvi S, Hashim N, Zareen N, Fatima H. Knowledge, attitude and practice of parous women regarding contraception. J Coll Physicians Surg Pak. Feb 2011;21(2):103-5.
15. Atighetchi D. The position of Islamic tradition on contraception. Medicine and Law, 1994, 13(7–8):717–725.
16. Sivin I. Contraception with Norplant implants. Hum Reprod. 1994;9:1818–26.
17. Danwar PB. A clinical trial of Implanon Rod (Implant). NRIFC Karachi. 2007.
18. Robey B, Ross J, Bhushan I. Meeting unmet need:new strategies. Population Reports, Series J,

Number 43. Baltimore, Maryland USA: Johns Hopkins School of Public Health, Population Information Program. 1996.
19. Kazi K. A study of knowledge, attitude and practice (KAP) of family planning among the women of rural Karachi. Department of Social Work, University of Karachi. 2006.
20. Aisien AO, Enosolease ME. Safety, efficacy and acceptability of implanon a single rod implantable contraceptive (etonogestrel) in University of Benin Teaching Hospital. Niger J Clin Pract. Sep 2010;13(3):331-5.
21. Cherry S. Implanon. The new alternative. Aust Fam Physician. 2002;31:897e900.
22. Affandi B, Korvers T, Geurts TBP, Coelingh-Bennink HJT. A pilot efficacy study with a single rod contraceptive implant (Implanon) in 200 Indonesian women treated for 4 years. Contraception. 1999;59:167–74.
23. Mastor A, Khaing LS, Omar SZ. Users perspectives on implanon in Malaysia, a multicultural Asian country. Open Access J Contraception. Feb 2011;2:79-84.
24. Wong RC, Bell RJ, Thunuguntla K, McNamee K, Vollenhoven B. Implanon users are less likely to be satisfied with their contraception after 6 months than IUD users. Contraception. 2009 Nov;80(5):452-6.
25. Sherpa SZ, Sheilini M, Nayak A. Knowledge, Attitude, Practice and Preferences of Contraceptive Methods in Udupi District, Karnataka. J. Family Reprod Health. 2013;7(3):115-20.

Cite this article as: Mubarik M, Jameel N, Khalil R. Knowledge, attitude and utilization of sub-dermal birth control implants among married rural women of Pakistan. Int J Res Med Sci 2016;4:2229-39.