

Health Effects of Modern Temporary Female Hormonal Contraceptives among the Women in the Pokhara Sub-Metropolitan City of Western Nepal

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ABSTRACT

Introduction: Prior studies in Nepal which observed the contraceptive behaviour of women have shown that most of the women who wanted to have either birth space or who limited their births primarily, do not use contraceptives because of health concerns, particularly from hormonal methods.

Objective: To study the use of modern female temporary hormonal contraceptives and their health effects.

Materials and Methods: This study was conducted in the institutionalized family planning centre of the government and non government organizations of Pokhara, Nepal. The data which were collected were the health effects of modern temporary female hormonal contraceptives and the socio-economic and demographic characteristics from the interviews of 120 respondents.

Result: Depo clients were found to be more in number than others. The contraceptive acceptor age was highest among

the 20 -34 year old females. The marriage and first child birth age was highest among 15-19 year old females and most of the temporary family planning contraceptive acceptors adopted the method after their first child birth. A majority of them had one boy and one girl as children. Though illiterate women were a majority, fifty percent knew all the four methods of female temporary contraceptives. Economically, most of the families annually earned Rs. 50001-100000, which was 43.3 percent. The side effects of the female temporary hormonal contraceptives were prevalent, but the warning effects were not indicated in this study. The warning effects such as lower abdominal or pelvic pain, severe headache, eye problems, vision loss or blurring, chest pain, cough, shortness of breath and severe leg pain (calf/thigh) due to bone damage were not found.

Conclusion: This study revealed that during long term use, nearly hundred percent of the women didn't feel any bad warning health effects due to use of hormonal contraceptives.

Key Words: Family planning, Contraceptive, Health effects

INTRODUCTION

Family planning is the key to the reduction of maternal mortality, not only in terms of the prevention of unwanted pregnancies and unsafe abortions, but also through its effect on the composition of childbearing (i.e., age and parity of the pregnant women, and the time between the pregnancies) [1]. The main aims of Nepal's family planning program are to assist individuals and couples to space their children, to prevent unintended pregnancies, and to improve their overall reproductive health. Several studies have revealed that misinformation about the methods and services existed on a variety of levels in Nepal. Both the acceptors and providers reported misconceptions about the methods in the community. These misconceptions included fears that some methods may cause severe health problems such as cancer. These could deter some couples from seeking family planning methods even though the methods were available and high quality services were provided. Another misconception was that the service providers believed that women did not go for follow up visits because the facility was too far or that women lacked the time. But few acceptors themselves listed these reasons; the acceptors mostly said that they didn't think that the visit was necessary. A few urban studies in Kathmandu have shown that most of the women wanted to use a method, but not being able to find a suitable method which was comfortable and free of bad health effects was the main obstacle.

If the women's understanding of the importance of the follow-up visits was improved, the side effects or other problems could be addressed during these visits, which could, in turn, result in a greater probability of the continuation of these methods [2-7].

OBJECTIVES OF THE STUDY

To study the use of modern female temporary hormonal contraceptives and their health effects. However, the specific objectives were as follows:

- i) To analyze the uses of the contraceptives (depo, pills and norplant) among married women
- ii) To identify the socioeconomic and the demographic status of the married women who used contraceptives and
- iii) To assess the health effects (side and warning effects) of female modern temporary hormonal contraception on women's health

MATERIALS AND METHODS

Research Site and Population

Kaski, among the 75 districts of Nepal, lies in the western development region, almost in the centre of the western region. It is a hilly district and the Pokhara sub-metropolis is a valley which is situated at the south of the district. It is also the headquarters

of the Kaski District, the Gandaki Zone and the Western Region. The governmental institutionalized family planning and MCH clinic (Marry stops) which was under the district public health office and the Family Planning Association of Nepal, Kaski Branch Office, Kaski, was the study place. Women who visited the clinic and were taking hormonal contraceptives at present, since more than one year regularly, was the population which was targeted. The researcher collected data of a qualitative and quantitative nature. Structured and semi- structured questionnaires were developed. For the data collection, women who were using temporary hormonal contraception were taken as the population. Prior approval for the study was obtained from the institutional research ethical committee.

Nature and Sources of the Data

The primary data were collected from questionnaires. The researcher himself collected the data. One hundred and twenty samples were considered as the sample size. The researcher visited the site, filled the questionnaires and continued it until 120 samples were obtained. For the secondary data, the daily records which were registered in the clinic were used.

Data Collection Technique

A check list was prepared to collect the qualitative and quantitative data from married women of 15 to 49 years of age, who were using hormonal contraceptives. Women who visited the clinic to employ contraceptive methods and for the continuation of the same, were interviewed from the survey site and this process was continued until the sample size reached 120 samples. A client exit interview method with purposive sampling was used.

Sample Size Calculation

The sample size was calculated by using the formula $N = \frac{Z^2 PQ}{D^2}$. Where N= sample size, The national rate of family planning methods, P=44 % (Annual report), Q= 1-P, D= allowable error= 22% and Z= 1.96. The total sample size which was needed for this study was 119 [8].

Data Management and Analysis

The data was analyzed by using Excel 2003, R 2.8.0, Statistical Package for the Social Sciences (SPSS) for Windows version 16.0 (SPSS Inc; Chicago, IL, USA) and the EPI Info 3.5.1 windows version. The Chi-square test was used to examine the association between the different variables. A p-value of < 0.05 (two-tailed) was considered to establish the statistical significance.

Conceptual Framework

All the contraceptives, besides their contraceptive action, whatever the type of the method, whether permanent or temporary, hormonal or non hormonal, have mild to sometimes severe unwanted effects. Those unwanted effects were divided into two categories. The side effects and the warning effects were collectively named as the health effects as per the protocol of reproductive health which was published by the Government of Nepal.

RESULT

The population of females who used modern temporary female hormonal contractives, of all ages, either married or unmarried and who visited the static clinic of family planning were interviewed. Age was one of the most important demographic characteristics which played an important role in the marriage status, the sexual activity

and the adaptation of the contraceptive method. The population of the study was divided on the basis of caste and ethnicity, as more than fifty percent of the population was Janajatis, followed by Brahmins, schedule castes and lastly Terians.

[Table/Fig-1] depicts that out of the 120 women, a majority of them got married between the ages of 15-19, which was 71.7 percent of the population. The below 14 years girls also were found to get married, who formed 2.5 percent of the population. Around 26 percent of the girls preferred to get married after the age of 20 years. As most of the marriages occurred in the age group of 15-19 years, the first child was born in the same age group. Most of the women gave birth in the next year of marriage. This means that early age pregnancy was also prevalent. Among the 15-19 years age group, 55 percent of the girls gave birth to their first child in the same period or in the next year of their marriages.

[Table/Fig-2] depicts, that housewives and those in and labour formed the highest percentage of the population who used contraceptives (32.5 and 30.8 percent respectively). Business women mostly held shop, who formed 17.5 percent of the population. Among them, two and a half percent were students. A Hindu woman who was doing business, who had secondary education, started with oral contraceptives immediately after marriage and gave child birth after four years of her marriage. The distribution of the respondents on the basis of religion demonstrated that 76 percent were Hindus, followed by 22 percent Buddhists and nearly 2 percent. The women were categorized into 6 groups based on their income. The lowest annual income of the Nepal government is Rs.55200 annually. The first category had an income of less than Rs.55200, in which there were 8.3 percentage respondents fall. A majority of the respondents (43.3 percentage) had an income of Rs. 55201 to 100000. It meant that the poorest women were taking hormonal contraceptives from those organization may be, as they were free of cost. Most of the respondents (39.2 percent) used temporary female hormonal contraceptives after the birth of their first child. More than 31 percent used hormonal contraceptives after their third child. Women who had two children used the contraceptives more (31.7 percent) and it was remarkable that women who had one child also followed close behind (30 percent).

Overall, 90 percent of the pregnancies resulted in live births. In the survey areas, all the women had live births. Illiterate women formed 35 percent and literate women formed 65 percent of the population. Among the literate ones, most were primary education holders (59 percent). Those with intermediate education and above were only 6 percent among the literate women. A majority of the women answered the questions on and understood family planning; that it

Age Groups	Number of Participants (%)	Number of respondents age at marriage (%)	Number of respondents age at first birth (%)
10-14	0 (0)	3 (2.5)	0 (0)
15-19	7 (5.8)	86 (71.7)	66 (55%)
20-24	29 (24.2)	28 (23.3)	48 (40)
25-29	29 (24.2)	3 (2.5)	6 (5)
30-34	24 (20.0)	-	-
35-39	19 (15.8)	-	-
40-44	10 (8.3)	-	-
45-49	2 (1.7)	-	-
Total	120 (100.0)	120 (100.0)	120 (100.0)

[Table/Fig-1]: The Percentage Distribution of the Respondents by age group, age at marriage and age at first birth

Variable (Total Respondents)	Number	Percentage
Literacy Status (120)		
Illiterate	42	35.0
Literate	78	65.0
Education level (78)		
Primary	46	59.0
Secondary	27	35.0
Intermediate	5	6.0
Religion (120)		
Hindu	91	75.8
Buddhist	26	21.7
Christian	2	1.7
Muslim	1	0.8
Caste and ethnicity (120)		
Gurung /Magar /Newar/Tamang / Thakali/Sherpa/Rai (Janajatis)	61	50.8
Brahmin/Chhetri	43	35.8
Schedule caste(Dalit)	13	10.8
Terain	3	2.6
Occupation (120)		
Housewife	39	32.5
Labor	37	30.8
Business	21	17.5
Agriculture	11	9.2
Service	9	7.5
Student	3	2.5
Income in rupees (120)		
Less than Rs.55200	10	8.3
Rs. 55201 - 100000	52	43.3
Rs. 100001- 200000	50	41.8
Rs. 200001- 300000	6	5.0
Rs. 300001- 400000	1	0.8
Rs. 400001 and over	1	0.8
Knowledge of family planning (120)		
Less child	85	70.8
Manage family size according to economic status	21	17.5
Spacing	11	9.2
Not know	3	2.5
Contraceptive Methods (120)		
Depo	91	76
Pill	23	19
Norplant	6	5
Reasons for discontinuing Depo Health Effects (11)		
Lower abdominal pain/pelvic pain, Heavy vaginal bleeding, method failure	10	91
Amenorrhea	1	9
Reasons for discontinuing Pill Health Effects (15)		
Uneasy due to daily use	10	66
Mild Headache, Dizziness, Weakness	3	20
Method failed	1	7
Chest pain, Cough, Shortness of Breath	1	7

[Table/Fig-2]: Socio-demographic analysis

was about giving birth to less number of children. A few answered that they did not know about it. Those who managed their family size according to their economic status formed a remarkable percentage of the population (17.5%). Depo was the first method which was used by 76 percent of the women and the pill was used initially by 19 percent of the women only. Among eleven women who had used Depo before, 91 percent said that they experienced severe pain and heavy vaginal bleeding. One of them or nine percent among them also complained of amenorrhoea. One client also reported about the failure of Depo, in which case pregnancy occurred. Most of the clients said that they felt uneasy in using it daily. The side effects of Depo were reported only by a minimum number of women (twenty percent). Similarly, its warning effects were reported by only 7 percent women. Here, most of the pill users discontinued it because of the difficulty using it daily and due to side effects (20 percent).

[Table/Fig-3] shows that thirty seven percent women who took Depo, seventy nine percent who took pills and ninety three percent of the Norplant users said that they did not know any bad health effects of those methods. Twenty nine percent of Depo users said that they had heard that lower abdominal pain or pelvic pain and heavy vaginal bleeding occurred as its side effects. Some of the respondents had a misconception that the pills acted on the stomach and not on the uterus. Failure of the method was also reported, which was supported by the literature, as 1.6 percent in the case of Depo. Some of the women also answered questions about paralysis and sterilization, which were not proved by the literature and was also not the scope of this study.

[Table/Fig-4] depicts that forty one percent Depo users answered that they had no bad health effects at all within 3 months of its use. But fifty seven percent said that they had side effects like mild and moderate bleeding, nausea, vomiting, weight gain, mild backache and amenorrhoea. In case of the warning effects in Depo, only severe bleeding/ severe weight loss was observed in two percent of the women. Fifty percent of the pill users didn't report any side effects and another fifty percent said that they had mild side effects. No warning effects were reported by the pill users. The Norplant users also didn't report any kind of warning effects. Eighty three percent said that they knew about its side effects and 17 percent didn't know about its side effects. In a three month period of use of those methods, a majority of the respondents had no side effects and some had side effects. In case of Depo, only 2 percent suffered from the warning effects (severe vaginal bleeding and severe weight loss).

[Table/Fig-5] shows that fifty three percent said that they had side effects and forty six percent said they didn't have any health effects after one year's use of Depo. One percent claimed that they experienced warning effects even after one year's use of Depo. Fifty eight percent of the pill users reported side effects and forty two percent said that they had no health effects. No warning effects were reported by the pill users. In case of the Norplant users, 37.5 percent had side effects, whereas 62.5 percent had no side effects after one year of use.

[Table/Fig-6] depicts that among the Depo users, 40 percent didn't report any bad health effects, whereas 59 percent reported side effects and only 1 percent reported warning effects. The maximum number of side effects was found among up to one year users (18 percent women), followed by those who used it for 1-2 years of duration who had a high percentage of side effects (18 and 12

Know/heard bad health effects	Modern female temporary hormonal contraceptives					
	Depo		Pill		Norplant	
	Number	Percent	Number	Percent	Number	Percent
Not know	44	37.0	95	79.2	111	93.0
Warning effects: Lower abdominal pain /pelvic pain Heavy vaginal bleeding	35	29.0	3	2.5	5	4.0
Side effects: Amenorrhea Weakness, Dizziness, Mild Headache, Late period, Weight loss or gain, Abnormal spotting or bleeding	38	31.6	17	14.2	4	3.0
Paralysis, Sterilized	1	0.8	3	2.5	–	–
Method failure	2	1.6	–	–	–	–
Collection of tablets in the uterus/ stomach	–	–	2	1.6	–	–
Total	120	100.0	120	100.0	120	100.0

[Table/Fig-3]: Percent Distribution of the Information About Health Effects of Modern Temporary Female Hormonal Contraceptives Depo, Pills and Norplant

Health effects	Modern female temporary hormonal contraceptives					
	Depo users		Pills users		Norplant users	
	Number	Percent	Number	Percent	Number	Percent
Side Effects: Mild/Moderate bleeding, Nausea/ Vomiting, Weight gain/ weight gain/ Mild backache, Amenorrhea	57	57	6	50	5	83
No Effect	41	41	6	50	3	17
Warning Effects Severe vaginal bleeding, Severe weight loss	2	2	–	–	–	–
Total	100	100	12	100	8	100

[Table/Fig-4]: Percentage Distribution of Bad Health Effects Within Three Months of Use of Depo, Pills and Norplant

Health effects	Modern female temporary hormonal contraceptives					
	Depo users		Pill users		Norplant users	
	Number	Percent	Number	Percent	Number	Percent
Side Effects: Mild/Moderate bleeding, Nausea/ Vomiting, Weight gain/ weight loss, Mild backache, Amenorrhea	53	53.0	7	58.0	3	37.5
No Effect	46	46.0	5	42.0	5	62.5
Warning Effects: Lower abdomen pain/pelvic pain	1	1.0	–	–	–	–
Total	100	100.0	12	100.0	8	100.0

[Table/Fig-5]: Bad Health Effects Immediate After One Year of Use Present Method Depo, Pill and Norplant

percent), respectively. Among the Depo users who used it for 10 years and more, only 5 percent had side effects. Those who used it for 3 years and above had no warning effects.

[Table/Fig-7] describes the summary of the health effects of all the three female hormonal contraceptives (Depo, pill, Norplant) which were studied in this research. Among the 120 women who were interviewed, 46.67 percent said that they had no bad health effects, which meant that they had no warning and side effects, 52.50 percent women said that they had side effects, and only 0.83 percent of the women said that they were suffering from lower abdominal pain or pelvic pain, which was the warning effect. The women who are using these hormonal contraceptives at present are not experiencing any warning effects. Even the ones who have been using them from a long time to ten years also have no complaints. One of the women said that the pill had failed and that conception had resulted, but that no defects were observed in the child's health. The child is now twenty months of age and no abnormal signs or symptoms have been observed in its health as yet.

DISCUSSION

Every year, an estimated 210 million women have life-threatening complications of pregnancy which often lead to serious disability and a further half a million women die during pregnancy, childbirth, and the puerperium (more than 99% of these deaths occur in the developing countries) [9]. Three million babies die in their first week of life and about 3-3 million infants are stillborn every year [10,11]. More than 120 million couples have an unmet need for contraception and 80 million women each year have unwanted or unintended pregnancies, 45 million of which are terminated [12,13]. Of these 45 million abortions, 19 million are unsafe, 40% of them are done on women who are aged below 25 years, and about 68,000 women die every year from the complications of unsafe abortions [14].

Most of the studies on the family planning method acceptors and providers in Nepal have revealed that the overall quality of the services which were provided was acceptable and that the clients were likely to be satisfied with the services that they received at the health facilities centres. Although many dimensions of the quality

Duration of present methods depo using	No health effect		Side effect		Warning effect (Lower abdominal pain/pelvic pain)	
	Number	Percent	Number	Percent	Number	Percent
	Up to one year	18	18	18	18	1
1-2 yrs.	7	7	13	13	-	
2-3 yrs.	6	6	5	5	-	
3-4 yrs.	1	1	6	6	-	
4-5 yrs.	2	2	4	4	-	
5-10 yrs.	4	4	8	8	-	
10+ yrs.	2	2	5	5	-	
Total	40	40	59	59	1	1

[Table/Fig-6]: Percentage Distribution of Duration of the Depo Used and Health Effects

Health effects	Modern female temporary hormonal contraceptives	
	Depo, pill and Norplant	
	Number	Percent
Side Effects Mild/Moderate bleeding, Nausea/Vomiting, Weight gain/weight loss, Mild backache, Amenorrhoea	63	52.50
No Effect	56	46.67
Warning Effects Lower abdomen pain / pelvic pain	1	0.83
Total	120	100.00

[Table/Fig-7]: Percentage Distribution of Effects of all Female Hormonal Contraceptives

were adequate, there were some areas that could be improved. A substantial minority of acceptors, especially those who adopted the pill or Depo-Provera, were not informed about the alternative methods or the possible side effects. In addition, according to the reports of the acceptors, the service providers did not strictly adhere to the established clinical protocols for screening clients. All of the recommended screening and medical history questions were asked to only a small proportion of the acceptors [2-4,6,7]. Other studies in Nepal revealed that a large proportion of acceptors of all the four methods experienced side effects and that these side effects were strongly related to the women's perception of the quality of the service delivery and the discontinuation of the methods. Especially, the acceptors of Depo-Provera were likely to report that they had experienced side effects. Changes which were related to menstruation and heavy bleeding were the most frequently reported side effects among the acceptors of Norplant and Depo-Provera. Abdominal or pelvic pain was the most common side effect which was reported by the IUCD users, but a large proportion of women also said that they experienced menstrual or bleeding changes. Headache and dizziness or vertigo were the most commonly experienced side effects among the pill acceptors [2-4,6,7]. But in our study, the respondents who used Depo previously discontinued it because of its warning effects. 91 percent discontinued it due to lower abdominal pain, heavy vaginal bleeding and method failure. Later, most of them used pills. One of them or nine percent among them also complained of amenorrhoea. One client also reported the failure of Depo and pregnancy occurred in that case. Similarly, women who used pills previously and later discontinued reported that they did so due to

the uneasiness of the need to use the pill daily (66%) and due to method failure (7 percent). The warning effects were found only in 7 percent of the women as chest pain, cough and shortness of breath. Thirty seven percent women who took Depo, seventy nine percent who took pills and ninety three percent Norplant users said they did not know about any bad health effects of those methods. Twenty nine percent of the women among the Depo users said that they had heard that lower abdominal pain or pelvic pain and heavy vaginal bleeding could occur due to its use. The rumour of the collection of the tablets in the stomach or uterus was also spread among the women. Forty one percent Depo users answered that they had no bad health effects at all within 3 months of its use. But fifty seven percent said that they had side effects such as moderate bleeding, nausea, vomiting, weight gain and mild backache. In case of the warning effects of Depo only severe vaginal bleeding and severe weight loss were observed, which was two percent. Within three months of using Depo, severe bleeding occurred only in one woman and severe weight loss occurred in another woman. No warning effects were reported by the pill users. The respondents answered that they had no effects by 46 and 42 percent in Depo and pills respectively after one year and after whatever long period it was used. Fifty three percent women who used Depo and 56 percent who used pills only had side effects. Among the total women, fifty six percent claimed they have no health effects at present, 63 percent said they had side effects and 0.83 percent women (one women) is suffering from lower abdominal pain at present.

CONCLUSION

Couples of the fertile age group are in search of family planning contraceptives these days. This need increases as the rate of literacy goes up. Males have only one temporary method of contraception. They have no other options, but women have choices among the modern temporary contraceptive methods. In Nepal, four female modern contraceptive methods are in practice and they are included in the regular health services. They are provided free of cost in government organizations. It has already been mentioned that these methods are not free of health effects. They provide protection against conception and at the same time, they also produce some kind of other unwanted health effects, which are categorized as the side effects and the warning effects. Many women have used these contraceptives in Nepal. Among them, most of the women (more than 50 percent) have been using Depo. The remaining 50 percent are using other methods. So, this study was mainly concentrated on Depo and its other effects besides its contraceptive effects. Hence, this study intended to find out the side effects (minor effects or temporary effects) and the warning effects (bad health effects or long term effects) in the women who used Depo and other hormonal contraceptives. In the observations, it was attempted to find out about the knowledge of the respondents with regards to family planning and the effects that they faced after using those contraceptive methods. So, it was concluded by this research that in the long term use of hormonal contraceptives, nearly hundred percent of the women didn't have any bad warning health effects.

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