# CONTRACEPTION IN EASTERN NEPAL: A STUDY OF KNOWLEDGE AND USE

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## ABSTRACT

**OBJECTIVES:** To discover the knowledge and use of contraception amongst women in eastern Nepal and to identify reasons for patterns of use.

**METHOD:** A cross-sectional study, using a structured survey, was completed by women admitted to the post-natal ward of Koshi Zonal Hospital in eastern Nepal. The subjects were asked questions about their knowledge and use of contraception as well as reasons for their contraceptive choices.

**RESULTS:** The subjects showed a large discrepancy between knowledge (79%) and use (21%) of contraception. Knowledge was greater in higher socio-economic groups but use was not significantly different. Knowledge and use increased with age to a maximum use of 50% at age greater than 30 years. The main source of contraceptive knowledge was from formal school education. Injectable progesterone was the most common contraceptive used and this was said to be because of its convenience. The main reasons for non-use of contraception were subjects wanting another child and fear of side-effects. All contraceptives were purchased from private shops due to discomfort at attending recognisable contraceptive providers..

**CONCLUSIONS:** The levels of contraceptive awareness and use were lower than in other published Nepalese studies. This difference is associated with low educational levels in the study population. There is also an ongoing desire for larger families. There is a need for more contraceptive education that does not rely on schooling. The lack of use of government contraceptive services should also be addressed.

**KEYWORDS:** Contraception knowledge

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## INTRODUCTION

Nepal is experiencing the rapid growth in population that is common in many developing nations. The current natural growth rate of Nepal is 2.2% p.a. and population is likely to double in the next 25-35 years.[1] This growth will place great socio-economic stress on the population and fertility control is, therefore, of great importance.[2] Understanding the use of and attitudes towards contraception is vital in addressing this issue.

There are many factors that limit fertility control including a lack of knowledge of contraceptive methods, poor supply, cost and poor accessibility. Other factors, such as age at marriage, literacy, economic status, religion, caste and economic status also impact on fertility rates. In many countries, including Nepal, many of these factors are gender based. For example, 49% of women never attended school as compared to only 23% of men. Only 50% of women participate in household decision-making.[3]

The current study was done to identify local patterns of knowledge and use of contraception. It also aimed to identify demographic and attitudinal factors that influenced these patterns. It is hoped that this information will enable contraceptive programs to be better targeted and more effective.

## METHODS

This cross-sectional study was conducted in the Obstetrics and Gynaecology Department of Koshi Zonal Hospital, Biratnagar. Ethical approval was obtained from BPKIHS Ethics Committee. The study population was all women admitted to the postnatal ward over a 4-month period. All women in the ward during the researcher's rostered hours were approached for inclusion. Information about the study was explained to the subjects and verbal consent was obtained. No women declined participation in the study.

The survey instrument was a structured interview that was developed by the researchers. It was piloted using a small sample of women in the postnatal ward and modified accordingly. The survey asked subjects about their knowledge of contraceptive methods and where that knowledge had come from. It also asked about contraceptive use and the reasons for decisions about this use.

All interviews in the study were conducted by one researcher. Several languages were required for this purpose and the researcher was competent in all of these.

Demographic data were gathered and socioeconomic status was classified using Kuppuswamy's socioeconomic status scale 2007.[4] 'Rural' was defined as living in a Village Development Committee (VDC) area and 'urban' as living in a municipality.

The data were analysed using SPSS-10 software. Chi-square test was done for significance of results.

## RESULTS

398 women were included in this study during a 4 month period. The demographic characteristics of the sample are shown in Table1.

**Table 1: Socio-demographic characteristics of the study population**

| Characteristics | Number (%) | Characteristics | Number (%) |
|---|---|---|---|
| **Age group (yrs)** | | **Socio economic status** | |
| 16-20 | 131(32.9) | Upper lower | 301(75.6) |
| 21-25 | 190(47.7) | Lower Middle | 74(18.6) |
| 26-30 | 61(15.3) | Upper Middle | 23(5.8) |
| =31 | 16(4.0) | | |
| **Occupation** | | **Education** | |
| Housewife | 319(80.2) | No schooling | 139(34.9) |
| Farmer | 29(7.3) | Primary | 64(16.1) |
| Labourer | 15(3.8) | Lower Secondary | 53(13.3) |
| Service | 14(3.5) | Secondary | 91(22.9) |
| Student | 11(2.8) | Intermediate | 34(8.5) |
| Others | 10(2.5) | Graduate and above | 17(4.3) |
| **Duration of marriage(yrs)** | | **No of children (before this birth)** | |
| 1-2 | 185(46.5) | 0 | 246(61.8) |
| 3-4 | 74(18.6) | 1 | 110(27.6) |
| 5-6 | 50(12.6) | 2 | 26(6.5) |
| 7-8 | 37(9.3) | 3 | 11(2.8) |
| 9-10 | 30(7.5) | 4 | 5(1.2) |
| >10 | 22(5.5) | | |
| | | **Residence** | |
| | | Rural | 166(41.7) |
| | | Urban | 232(58.3) |

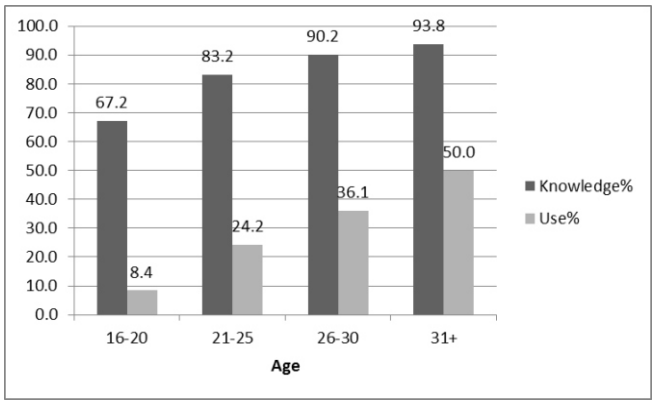
Overall, 79% of subjects had some knowledge about contraception. However, only 21% of the sample had ever used contraception.

These data have been further analysed according to demographic characteristics. In particular, age, education,

marriage and parity, and socio-economic status have been studied for significant relationships.

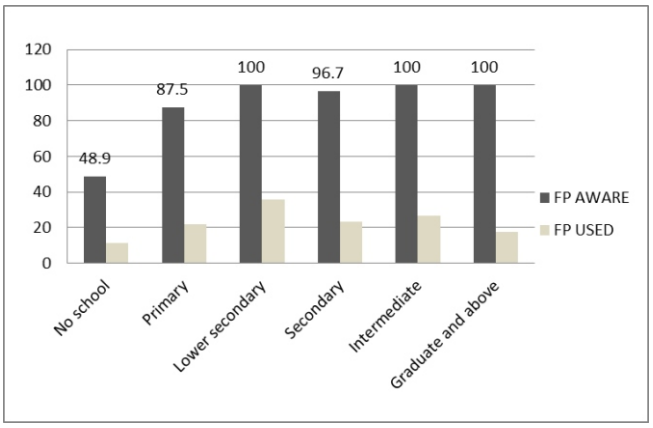
The level of contraceptive knowledge and use increased with age. (Fig. 1) This is a predictable finding given that older women are more likely to have completed their family. Despite this, only 50% of women older than 30 years of age had ever used contraception.

**Figure 1: Contraceptive knowledge and use according to age group**



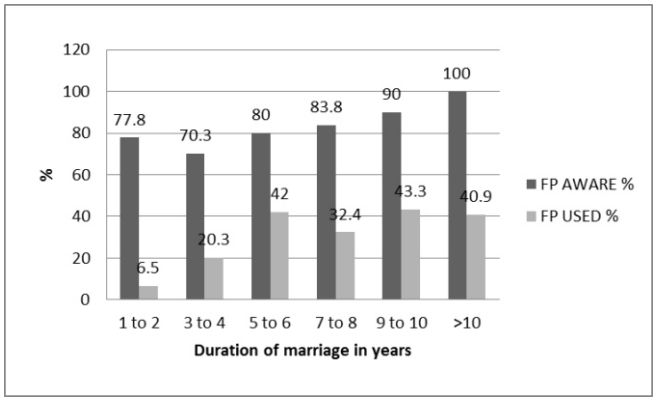

Knowledge increased sharply with education but only until lower secondary level was completed. (Fig. 2) After this it remained steady. Contraceptive use also increased but peaked at lower secondary level and fell to half this rate in the graduate category.

**Figure 2: Knowledge and use according to education**



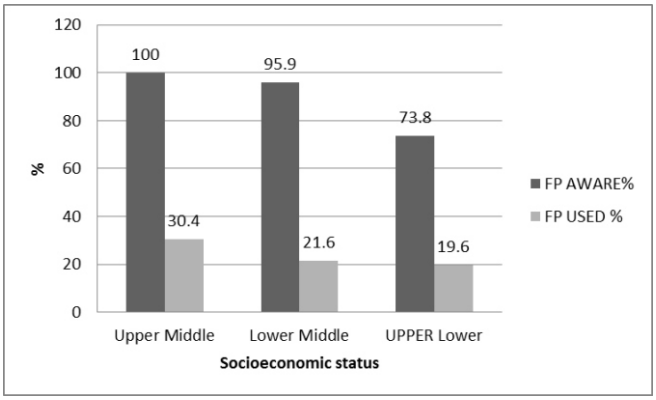

Knowledge was highest in those who had been married longest. (Fig. 3) Contraceptive use also increased until 4 years of marriage. After this time it remained fairly constant at a level of only around 40%.

**Figure 3: Knowledge and use according to duration of marriage**




With regard to parity, there was a steady increase in knowledge with the birth of each child, reaching 100% after 4 children. There was a big increase in contraceptive use after the birth of the first child from 6.9% to 41.8%. After this it remained fairly constant at around 40% usage. There was an apparent fall in use after 4 children but this did not reach significance due to the small number of women in this category. It is also inconsistent with the results for age and duration of marriage.

**Figure 4: Knowledge and use according to socio-economic status**

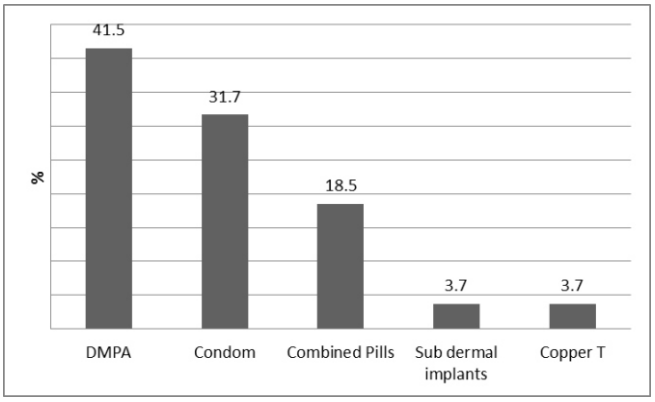



Knowledge was highest among women of higher socio-economic status ($p<0.001$). (Fig. 4) However, the apparent higher rate of use in the upper middle group was not statistically significant.

The most common source of contraceptive information was school (33.9%). Television (25.9%) and health workers (23.6%) were the other common sources reported. Only 11.3% of subjects had gained knowledge from a relative and even fewer nominated a doctor as their source (7.3%).

Overwhelmingly the most common reason for not using contraception was because another child was wanted (53.4%) or, less often, specifically a son (7.7%). Fear of side effects was the main reason for a minority of women (17.5%). The husband being opposed was cited in frequently (6.4%). A small number of women did not use because their husband had gone away (8.1%).

**Figure 5: Type of contraceptive used**




DMPA was the most popular contraceptive, followed by condoms. (Fig. 5) The only other common option chosen was the combined pill. Of DMPA users, 88% said that they chose it because it was convenient. 50% of condom users stated that they chose them because they were safe and 39% found them convenient. 11% said the method was easily reversible. Among combined pill users, 38% found it convenient and 38% said it was their husband's choice. The remainder used it because they did not experience bleeding problems during use.

This study found that 100% of the people surveyed bought their contraceptives from a private shop because they felt uncomfortable attending recognisable organisations who provide contraceptive advice. .

## DISCUSSION

The level of awareness of contraception in the present study is lower than in similar published studies from Asia, although they show great variability. A study in North Bengal found that 40.2% of subjects knew of at least one contraceptive method[5] and a Nigerian study found 54.3%.[6] In Bangladesh the figures were 55% for rural women and 61% for urban women.[7] Previous Nepalese studies have found levels over 90% and a study in an urban area of Bharatpur reported that 100% of subjects knew of at least one method.[3,8] Other studies in Asia and the Middle East have found levels between 91 and 97%.[9-13] It is likely the present result is related to the large percentage of women who have not received schooling or not progressed beyond primary level. 75.6% of subjects were in Kuppuswamy's upper lower socio-economic group. The effect of this educational and economic disadvantage is magnified because school was identified as the main source of contraceptive information by the participants.

This study shows that there is a wide gap between knowledge (79%) and use (21%) of contraception. Previous studies have reported a similar finding. While over 40% of North Bengalis knew of a contraceptive method only 22.6% of subjects were using contraception[5]. The difference was much greater in a study in Pakistan that found that 97% of subjects knew of contraception but only 28% were using a method.[9] The usage rate was higher in a Chinese study at 68%.[14] The Nepalese study in Bharatpur reported a remarkably high rate of use of 95.3%.[8] Other Nepalese studies report much lower usage rates, such as 42.1[15] and 65%.[16] In the eastern region it has been recorded at 48.3%.[15] This difference may be due to particular cultural and social factors around Biratnagar where the present study was done. It is not fully explained by the lower levels of knowledge. There is a high proportion of traditional ethnic groups who typically want larger families. Studies in other Asian countries have shown contraceptive use from 18% to 29%[5,17,18], similar to the present study.

At first glance it is surprising that educational attainment did not affect contraceptive use beyond lower secondary level. However, this is likely to be because women with higher levels of education were delaying marriage for career reasons. In this conservative society it is uncommon for unmarried women to use contraceptives. Amongst the married, educated women it is natural that cultural expectations have a strong influence over the implementation of knowledge.

The sharp rise in use after the birth of the first child reflects the general practice of attempting to conceive as soon as possible after marriage. It is generally considered that, after the first child, there is less pressure to conceive again quickly. Despite this, there was no rise in use even after four children had been born. The expectation in this area is still for large families.This study showed that DMPA was the most preferred contraceptive and sub dermal implants and copper T were the least preferred. This is similar to other studies conducted in Nepal, with 45% of users favouring this method.[8,16,15,19] We have found great variation in contraceptive preferences in other countries. This is clearly influenced by local beliefs,

availability and training of health workers. Tubal ligations were the most frequent method in two Indian studies[5,20]. Intra Uterine Contraceptive Devices (IUCDs) were preferred in Egypt and China.[10,14] A Russian study found that condom use, withdrawal and the rhythm method were most common[21]. The reasons for our study's result are complex. Regarding IUCDs, for example, there may be a dearth of trained health workers and a limited supply of materials. IUCDs are available only at and above the district hospitals and less health personnel have relevant training. Women who want large families may not be informed about the reversibility of this method. Oral Contraceptive Pills (OCPs) are available free from government health posts but are not favoured. The reasons for this could also be explored further.

In Nepal DMPA is meant to be widely available, from the hospital to the sub-health post. Most health workers have had training in DMPA. It is a surprising finding in this study that 100% of women were obtaining their DMPA from private providers. It is not clear why women are not using free government services to obtain contraception. It may be that women are not aware that they get contraception free in government hospitals. There may be non- availability in government hospitals or there may be cultural factors such as shyness or fear. It is also possible that free supplies are lacking.

Consistent with the desire for large families, 'wanted a child' was the main reason for not using contraception in this study. Other studies have found similar reasons but there has often been more emphasis on wanting a specifically male child. In India it was found that 60% of non-users cited one of these reasons. A similar study in rural India found that 'family not complete' was the most common reason at 34.6%.[20] Fear of side-effects is also common with 50% of Indian non-users motivated by this in particular, irregular menses with OCP use and 'ill health' with tubal ligation.[22] A Nepalese study found this fear was shared by 26% of non-users. 'Weakness' was the most common side-effect feared. 'Husband opposes' was only chosen by 15% of Indian respondents and 'religious reason' by 2.5%.[22] It is not clear why this featured less in the present study. Fear of side effects was also noted but was somewhat less than in other reported studies. A fear of 'weakness' from contraceptive use was dominant. More qualitative methods would be required to identify the various dominant attitudes in different cultural settings.

The main source of contraceptive information in this study was school. In most other studies, women have been reported as gaining knowledge from mass media, television and radio being the most commonly cited sources. In other studies in Nepal and Pakistan subjects also mentioned relatives and neighbours as common sources[8,9]. Our findings may reflect limited access to media for many of the women in this study. Doctors were an uncommon source and this suggests that they could play a much greater role in prevention and education than they currently do.

There were several potential limitations to this study. There are several languages used in this area. One researcher was used who was proficient in these languages but there is potential for misunderstanding. The researcher was male and this was a potential barrier to participation.

## CONCLUSION

This study has found a low rate of contraceptive usage. There are several issues raised by this study that can inform future efforts to raise this rate.

The low educational level identified in this study is a product of the population's poor socio-economic status. This cannot and will not be changed easily. There should be more contraceptive education provided outside the school system to reach many of these women who are excluded from school.
It seems that increased knowledge by itself will not lead to greater levels of contraceptive use. This is a complex economic and cultural problem that may only be solved by improved economic circumstances. Contraception is clearly a multi-sectoral issue.

The reasons for the lack of use of free government contraceptive services should be explored. It is important to identify if this is a weakness in the provision of staff, training and supply or if there are other factors at play.

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## REFERENCES

1. *Park K. Preventive and Social Medicine.19th edition. Jabalpur. Banarsidas Bhanot. 2007.*

2. *Rauniyar DS,Spotlight of Nepal, Population Today,1997,June PMid:12320945*

3. *National Demographic Health Survey 2006. Ministry of Health and Population, Government of Nepal.*

4. *Kuppuswamy B. Manual of socio-economic scale (urban). New Delhi. Manayasan, 32, Netashi Subhash Marg, 1981.*

5. *Saha SK,Bag T, De Aloke,Basak S,Chhetri A, Banerjee. Contraceptive practice of the tribal women in the tea garden areas of North Bengal. J Indian Medical Association 2007 105(8):440. PMid:18236906*

6. *Sylvia Osayi Osemwenkha. Gender issues in contraceptive use among educated women in Edo State, Nigeria. African Health Science2004;4;40-9 PMid:15126191 PMCid:PMC2141659*

7. *Uddin MM, Kabir M, Choudhary SR, Ahmed T, Bhuyan MR.Rural Urban differential in contraceptive use status in Bangladesh. Rural Demography,1985,12 (1-2);1-20. PMid: 12280829*

8. *Study of knowledge, attitude and practice of family planning in an urban area of Bharatpur. Journal of Institute of Medicine. 2006;28:2.*

9. *Khawaja NP,Tayyeb R, MallikN. Awareness and practices of contraception among Pakistani women attending a tertiary care hospital. J Obstertics and Gynaecology 2004 24(5); 564-567. PMid: 15369942 http://dx.doi.org /10.1080/ 01443610410001722662http://dx.doi.org/10.1080/01443610410001722662*

10. *Khalifa AM, Helmy Haa, EI-Khorazaty MN, Way AA. The results of the Egyptian contraceptive prevalence survey in rural Egypt, 1980. Dirasat Sukkaniyaa/Population Studies 1982 Oct-Dec,9 (63): 37-46,(111-8).*

11. *Amin R, Mariam AG, Faruqee R. Trends and differentials in knowledge, ever use, current use and future intended use of contraceptives in rural Bangladesh: evidence from three surveys. Pakistan developmental Review 1987 Summer; 26(2) : 201-14. PMid:12315187*

12. *Planned Parenthood Federation of Korea (PPFK). Yonsei University Center for Population and Family Planning. Benchmark survey report on community based distribution of contraceptive in Korea.1976:51-64.*

13. *Renjhen P, Gupta SD, Barura A et al. A study of knowledge, attitude and practice of family planning among the women of reproductive age group in Sikkim. Journal of Obstertics Gynecology India 2008: 58; 63-67.*

14. *Qiu S, A survey of china's birth control among women of childbearing age. China Population News letter, 1983 Dec; 1(2) : 8-12,17. PMid:12312960*

15. *Annual Report, His Majesty's Government of Nepal,Ministry of Health,Department of Health Services, Kathmandu,Nepal 2007/2008.*

16. *Awareness and practice of family planning methods in women*

17. *Bibi S,Memon A,Memon Z, Bibi M, Contraceptive knowledge practices in the two districts of Sindh, Pakistan; A hospital based study. J Pakistan Medical Association 2008 58 (5);254-8. PMid: 18655402*

18. *Sharma V, Sharma A. Family planning practices among tribal of Rajasthan,India. J Res Edu Indian Med 1991; 10 (4); 5-9. PMid: 12346802*

19. *Sharma A, Study of Contraceptive use in a urban population of western Nepal. Journal of Nepalgunj Medical College, 2003; 3 (2) : 46-48.*

20. *Chandhick N.Dhillon BS,Kambo I,Saxena NC. Contraceptive knowledge, practice and utilization of services in the rural areas of India. Indian J Medical Science 2005 57(7); 303-10.*

21. *Popov AA, Visser AP,Ketting E. Contraceptive knowledge, attitudes and practices in Russia during the 1980s. Study Family Planning 1993 24(4);227-35.*

22. *Kumar S, Priyadarshani A, Kant S, Anand K, Yadav BK. Attitude of women towards family planning methods and its use - A study from a slum of Delhi. Kathmandu University Medical Journal 2005;3(3):3,259-62.*