Birth Spacing in Deurali VDC of Kaski district of Nepal

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ABSTRACT

Birth spacing is the interval that the couples maintain between two successive children. World Health Organization (WHO) and other international organizations recommend that individuals and couples should wait for at least 3-5 years between births in order to reduce the risk of adverse maternal and child health outcomes. Having children too close together has long been associated with increased risk of various adverse health outcomes, including mortality, for infants, children and mothers. But in developing countries women are giving birth to children in short gap which is causing infant, child and maternal mortality. The main objective of the study is to assess the determinants of birth spacing. A cross sectional study was carried out in Deurali VDC of Kaski. The study population comprised of married women of reproductive age having at least one child. The data was collected by using semi structured interview schedules and collected data were entered in Epi-data and analyzed using SPSS. The total sample was 262, among them most of the 130 (49.6%) respondents were >30 years old while 13 (5%) of respondents were <20 years old. The minimum age was 15 and maximum age was 45 years. The mean ± SD of age of the respondents was 31.65±7.144 years. Majority 231 (88.2%) of respondents were Hindu and 123 (48%) were of upper caste. Majority of 151 (57.6%) respondents lived in joint family and 158 (60.3%) of respondents were house wives. Educational status of respondents shows that 79 (30.2%) had primary education. Only 69 (26.3%) of respondents were found using temporary family planning methods 91 (34.7%) and unwanted pregnancy. Depo-Provera and implant were found common among family planning users. The main reason for inadequate birth spacing was hope for male child 184 (70.2%), however, 212 (20.9%) respondents also said that adequate birth spacing is determined to maintain health of the mother and child.

Key words*:* Birth spacing, determinants, family planning, married women of reproductive age

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INTRODUCTION

Birth spacing is a one of the important factors that affects maternal, infant and child health. It is the length of time between two successive live births. The median birth interval in Nepal is 36.2 months in 2011, which was increased from 31.8 months in 2001.[1]

Family planning has received attention in demography and public health research because of its implication on fertility as well as benefits for both mother and child by keeping longer birth interval. The World Health Organization (WHO) and other international organizations recommended that the individual and couple should wait for at least 2-3 years between two pregnancies to reduce infant and child mortality and improve maternal health.[2]

The birth spacing has been considerably affected the mortality, birth size and weight, and nutritional status of children, and the risk of pregnancy complication for mothers. Giving the birth shorter than 36 months differences have been shown to increase the risk of mortality, and pregnancy morbidity. Similarly, spacing of more than five years also increased risk of pregnancy complications to mothers and neonates. The actual space between 36 and 59 months shows lower risk. Both short and long spacing practices are associated with increased risk of adverse perinatal and neonatal outcomes.[3]

The birth spacing is affected by many factors, such as social and cultural norms, reproductive histories

and behavior of individual women, utilization of the reproductive child health services. Likewise, the death of a child in infancy or early childhood has been found to be associated with short birth intervals. Residence, education and occupation of the mothers were also associated with birth spacing. In some settings, maternal education is associated with short spacing. A study from Korea reported that better educated women had shorter second birth intervals than those of less educated. However, in 38 of 51 countries Demographic Health Survey (DHS) data shows that women with no education were more likely to have shorter birth interval than educated women.[4]

Family planning and contraceptive use are the principle ways for a woman to delay the next birth. The demand for contraception for spacing births includes current use of contraception by married women who want another birth in two or more years and women with an unmet need for spacing. The overall surveys revealed that, about 25.5 percent of currently married women have a demand for contraception for birth spacing. The demand for contraception for spacing has increased at an annual average rate of 0.22 percent points (+2.2 per decade), while almost half of the demand is unsatisfied 46.3 percent, and the unsatisfied percentage has declined at rate of 12.1 percent points per decade.[5]

The knowledge of contraception is universal in Nepal, one in two currently married women is using a method of contraception, among which most of women use modern method (43 percent). However the unmet need for family planning services among currently married women is 27 percent, with 10 percent having unmet need for spacing and 17 percent having an unmet need for limiting.[6] The study main aims is to assess the determinants of birth spacing.

METHODS

A cross sectional descriptive study was conducted in Deurali VDC of Kaski District of Nepal. The proportion to population size and stratified random sampling technique was used to select respondents. The total samples size was 262. Women who were married of reproductive age having one child with their consent were participated in the study.

Data was collected after getting approval from concerned authority. Anonymity and confidentiality of the respondents were maintained throughout the study. The data was primarily collected after obtaining informed consent. Validity of the instruments was maintained by incorporating expert's opinion, avoiding direct leading and duplicating question and through extensive literature review. Pretesting was performed in 10% of the total sample size in another similar setting which was excluded from the study and minor modifications on tool were made as well.

Reliability of the instrument was 0.82 that indicates tool reliability. The collected data were coded and entered in EpiData 3.1 software. The entered data was exported to SPSS for analysis.

RESULTS

Table 1: Socio-Demographic Information of Respondents (n=262)

Variables	Frequency (f)	Percentage (%)
Age		
<20 years	13	5.0
20-30 years	119	45.4
>30 years	130	49.6
Religion		
Hindu	231	88.2
Buddhist	22	8.4
Muslim	1	0.4
Christian	8	3.2
Ethnicity		
Dalit	49	18.7
Disadvantaged Janajati	1	0.4
Disadvantaged non Dalit Terai caste	3	1.2
Religious minorities	1	0.4
Relatively advantaged Janjati	83	31.7
Upper caste group	125	47.6
Types of family		
Nuclear	109	41.6
Joint	151	57.6
Extended	2	0.8

Majority 119 (45.4%) of the respondents were between 20 to 30 years. The minimum age was 15 years and maximum age was 45 years. The mean age was 31.65± 7.14 years. Majority 231 (88.2%) of respondents were hindu and 123 (48%) of respondents were upper caste group. Most of 151 (57.6%) of respondents belonged to joint family.

Table 2: Socio- Economic Status of Respondents (n=262)

Variables	Frequency (f)	Percentage (%)
Educational status of respondents		
Illiterate	24	9.2
Informal schooling	44	16.8
Primary	79	30.2
Secondary	73	27.8
Higher secondary	27	10.3
Bachelor and above	15	5.7
Occupation of respondents		
House wife	158	60.3
Farmer	47	17.9
Business	35	13.4
Services	19	7.3
Daily wedges	3	1.1
Family income (NRs/Month)		
<50000	15	5.7
50000-20000	138	52.7
20000-40000	68	26
≥40000	41	15.6
Primary source of information on birth spacing practice n = 256		
Mass media	148	57.8
Health worker	99	38.7
Social services	7	2.7
Family/friends	2	0.8

The 79 (30.2%) of respondents had primary education and 158 (60.3%) of respondents were house wife. With regards to family monthly income (Rs/month) 138 (52.7%) of respondents had income ranged between Rs 5000 to 20,000. Almost all 256 (97.7%) of respondents had information regarding birth spacing, among those 148 (57.8%) had got information from mass media.

Table 3: Respondents based on knowledge on birth spacing (n=262)

Variables	Frequency (f)	Percentage (%)
Meaning of birth spacing		
Correct answer	164	62.6
Incorrect answer	98	37.4
Appropriate spacing time		
1-2 years	8	3.3
2-3 years	78	29.7
3-5 years	99	37.7
>5 years	77	29.3

The most of the respondents 164 (62.6%) gave correct meaning of birth spacing practice and 99 (37.7%) of respondents were know about appropriate spacing time.

Table 4: Respondents practice of family planning (n=262)

Variables	Responses	
	Frequency (f)	Percentage (%)
Current use of family planning device		
Yes	69	26.3
No	193	73.7
Use of temporary family planning device (n=69)		
Condom	2	2.9
Pill	12	17.4
IUCD	3	4.3
Depo-provera	27	39.2
Implants	25	36.2
Discomfort due to contraceptives (n=69)		
Yes	33	47.8
No	36	52.2
Discomfort of using contraceptive device* (n=33)		
Anorexia	1	3
Weakness	3	9.1
Headache	1	3
Irregular bleeding	25	75.8
Weight gain	3	9.1
Reason for not using contraceptive* (n=193)		
Fear of harm	26	13.5
Feeling unnecessary	40	20.7
Husband aboard	45	23.3
Permanent FP	82	42.5
Place to obtain family planning device*		
Hospital	261	99.6
Pharmacy	260	99.2
Health post	262	100
Family planning clinic	260	99.2
PHC	260	99.2

Multiple responses*

The majority 193 (73.7%) of the respondents were not using family planning devices. Among the users 69 (26.3%) the highest 27 (39.1%) of respondents used depo- provera while least 2 (2.9%) used condom. Among the user, 36 (52.2%) of respondents does not have any discomfort while using family planning devices, those who have discomforts had irregular bleeding. The main reason for not using contraceptive because 82 (42.5%) had permanent family planning. Most of the respondents obtain spacing methods from health post.

Table 5: Determinants of birth spacing related factors (n=262)

Variables	Responses	
	Frequency (f)	Percentage (%)
Factors influencing inadequate spacing practice*		
Unwanted pregnancy	91	34.7
Unmet need of FP	21	8
Family/husband pressure	38	14.5
Hope for male child	184	70.2
Motivating factors for good spacing*		
Helps to maintain health of mother and child	212	80.9
Helps to reduce population growth	31	11.8
Sufficient time for rearing	134	51.1
Enough knowledge on FP	33	12.6
Decision regarding use of contraceptives		
Respondents only	35	13.4
Respondent's husband only	199	76.0
Both couple	28	10.6
Duration of exclusive breast feeding		
2 months	12	4.6
3 months	22	8.4
5 months	139	53.0
6 months	89	34.0
Distance to reach health facility by foot		
30 minutes	207	79.0
60 minutes	43	16.4
90 minutes	10	3.8
120 minutes	2	0.8
Outcome of first pregnancy		
Live	234	89.3
Still birth	7	2.7
Abortion	21	8.0
Under 5 mortalities		
Yes	35	13.4
No	227	86.6

Multiple responses*

The major factors that influences for inadequate birth spacing was hope for male child 184 (70.2%). The main reason for keeping adequate birth spacing mentioned by 212 (80.9%) respondents was that it helps to maintain health of mother and child. Decision regarding use of contraceptive devices was mainly made by respondent husband i.e.199 (76%).

Regarding breastfeeding, 139 (53.1%) of respondents breastfeed for 5 months, health facility was nearby walking distance within 30 minutes to reach among majority 207 (79%) respondents. Majority 234 (89.3%) of respondents had live birth and 35 (13.4%) of respondents had under 5 mortalities.

DISCUSSION

Birth spacing is a real concern in both developed and developing countries. In this study, 13 (%) of respondents were 20 years below, 119 (45.4%) of respondents were between 20-30 years and 130(49.6%) of respondents were above 30 years. the minimum age was 15 years and maximum age was 45 years. The finding contradicts with the study conducted in Saudi Arabia study shows that minimum age was 18 years and maximum of 49 years.[7] Majority 231(88.2%) of respondents were from Hindu religion; 123(48%) of respondents were of upper caste group; 151(57.6%) respondents belonged to joint family; 158 (60.3%) of respondents were house wife, the findings which were consistent with the study from Pokhara valley.[8]

Seventy nine (30.2%) of respondents were found with primary education the findings consistent with the study of Saudi women 34.7% had primary school education.[7] Majority (97.7%) of respondents had information on birth spacing which was obtained from mass media in 57.8%. The finding of the study was consistent with another study which was conducted in Reproductive and Child Health (RCH) and Maternity Units of Achimota Hospital of the Greater Accra Region of Ghana. The study result revealed that a greater proportion of women (98%) had heard about birth spacing.[9]The present study showed that family planning use was 26.3% which was less than study conducted on Surendranagar India and higher than by NDHS 2011 and Terengganu Malaysia. [1,10]

In the present study, 164 (62.9%) of respondents gave correct answer related to meaning of birth spacing practice and 99 (37.7%) of respondents knew about appropriate spacing time while similar findings was found in the study. Sixty percent of the study participants were knowledgeable about optimum birth spacing.[11] The results showed that almost all, 806 (99.4%) of the respondents, reported the presence of health advantages of practicing optimal birth interval and 807 (99.5%)

reported the presence of negative consequences of practicing short birth interval.[11]

In present study, most of the respondents do not agree family planning harms the health; the study of rural southern region of Jordan and Ethiopia also found that about 95% and 99.4% of the women respectively agreed that using family planning had positive advantages for health.[12,13]

Among the family planning users in the present study, majority 25 (75.8%) had irregular bleeding the findings was more consistent with the study from kenya.[14]

With regard to decision on contraceptive use, majority 199 (76%) decision was made by respondent's husband and in 28 (10.6%) decision was taken by both couple which is similar with the study on Gender roles and practice of decision making on reproductive behavior of the couple of Syangja district, Nepal. The study from Syangja result revealed that decision making on the use of contraceptives and plan for pregnancy was mostly mutual (62.1% and 74.8% respectively).[15]

CONCLUSION

The determinants of birth spacing primarily depend on the different factors related to the family planning. There is still unmet need of family planning for which Government of Nepal is making effort to strengthen family planning services all over the country with special focus on disadvantaged group. Women are aware of meaning of birth spacing though they did not know about appropriate spacing, thus, required attention on family planning education. The most common family planning methods used by respondents were Depo-Provera followed by Implants. Irregular bleeding was the common side effect among user of contraceptive. The main reason for inadequate spacing was hope for male child which is cultural and social influences in Nepalese Community.

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