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Original Research Article

Study of knowledge, attitude, and practice regarding birth spacing and methods available for spacing in rural Haryana, India

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ABSTRACT

Background: Birth spacing is defined as the time interval between two births. India has average birth spacing of 22 months, i.e. little less than two years, despite wide knowledge of contraception. Objective of present study was to investigate the knowledge, attitude, and practice regarding birth spacing and methods available for spacing in rural Haryana amongst sexually active married females of reproductive age.
Methods: Cross sectional study of 500 sexually active, married females of reproductive age with at least one live issue and not meeting any exclusion criteria was carried at SGT medical college, Gurgaon during 3 months from August 2017.
Results: Awareness of need for birth spacing was very high (82.6%) in females interviewed, with 70% of females being aware of birth spacing benefits as well as keen to opt for birth spacing but even higher count of females (92.6%) reporting requiring husband's consent for birth spacing. Only 40% females were practising birth spacing with 14.6% of females reporting in-law's opposition as reason for not practising birth spacing.
Conclusions: Education is a major factor improving awareness of need as well as benefits of child spacing, with all college studied females being aware of both. Education also leads to improvement in keenness for practising child spacing as well as having lesser opposition to practise of child birthing. Females with only girl child/children were less keen to practise child spacing. Rural geographies still have health personnel as significant source imparting awareness of child spacing.

Keywords: Attitude, Birth spacing, Contraception, Family planning, Knowledge, Practice

INTRODUCTION

Birth spacing is defined as the time interval between two births. India has average birth spacing of 22 months, i.e. little less than two years, despite wide knowledge of contraception.[1,2] It is an important lever by which improved maternal-child health and further reduction in the indices such as Maternal Mortality Ratio (MMR, female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management, excluding accidental or incidental causes) can be assured. Short birth spacing or inter-pregnancy intervals (IPIs, time interval between a live birth and the beginning of the next pregnancy) are associated with negative maternal health outcomes as well as negative perinatal, neonatal, infant health outcomes.[3] The concept of optimal birth spacing of 24 months is mentioned in a report published by WHO in 2005. Other studies focusing on related aspect, such as Conde-Agudelo et al, have also found shorter than 18 months of inter-pregnancy intervals linked with significant maternal-child health concerns.[3,4] As per a study among post-partum patients, by Patel et al,

level of awareness of contraception was 63.2%, while it was 100% as per study by Nayak et al, but the acceptance of contraception still remain quite low in other studies (only 15% in above study by Patel et al).[5-7] Thus, while knowledge of birth spacing has reached a substantial level, conversion of this knowledge into a change of attitude and thence to practice of birth spacing appears lagged. This lag would lead to slowing of improvement in maternal health indices.

Amongst Indian states, Haryana is one of the wealthiest with ~ INR 1.3 lac per capita income in the year 2013-14.[8,9] Despite this, Haryana has quite slightly lower than average birth spacing across India and a high MMR of 127 per 100,000 live births.[1,8,9] Although MMR is substantially lower than national average, yet it is much higher than similarly well-off states with high development indices such as Maharashtra and Tamilnadu.

A study by Kanojia et al, in urban population of Mumbai, reported that Education was the main variable in the decisions regarding the family size, spacing interval, contraceptive awareness, its use immediately after marriage and during the postpartum period. Spacing methods were popular among the educated and terminal ones among the uneducated.[7] Average birth spacing interval still remains quite low in India with a substantial number of births occur with lower than 24 month inter-pregnancy intervals, a study by Chandna et al, found.[2]

Our study focused on the women of rural Haryana to provide insights for health care setups in Haryana or similar low socio-economical geographies. This study strove to bridge the gap of not having birth descriptive spacing data for rural Haryana.

METHODS

The present study was a prospective cross sectional study. 500 Sexually active married women of reproductive age, and consenting to participate in study, were interviewed for this study. The study was conducted in the department of obstetrics and gynaecology, SGT medical college and hospital during 3 month period from August 2017 to October 2017. 500 women who fulfilled the inclusion criteria were interviewed for the study.

Eligibility criteria were

- Women of reproductive age group
- Women who have atleast one live issue.

Exclusion criteria

- Unmarried women
- Not sexually active
- Age >45 years
- PCOD
- Infertility
- DUB

Patients who fulfilled the inclusion criteria were explained about the procedure and written informed consent was taken.

Detailed information about recruited females was collected by standardised questionnaire, which included demographic details such as age, education, income. Following specific areas of knowledge, attitude and practice related to birth spacing and methods used for spacing was noted:

- Knowledge of need for birth spacing
- Knowledge of contraception as means of birth spacing
- Knowledge of benefits related to birth spacing
- Source of knowledge related to contraception, birth spacing
- Application of birth spacing for planning their family
- Reasons for not spacing
- Methods deployed for spacing.

RESULTS

A total number of 500 females participated in the study. Interviewed female's characteristics in terms of age, gravida, spousal age, income, education and child's sex were recorded.

Table 1: Study group characteristics.

Study group characteristics, (n=500)	No.	
Age (female)		
<18 years	4	0.8%
between 18 to 25	109	21.8%
more than 25	387	77.4%
Female age at marriage		
≤18 years	259	51.8%
between 19 to 25	203	40.6%
more than 25	38	7.6%
Education (female)		
No schooling	40	8.0%
Literate but less than College	387	77.4%
College educated	73	14.6%
Education (spouse)		
No schooling	32	6.4%
Literate but less than College	235	47.0%
College educated	233	46.6%
Family income (Thousand/Month)		
Less than 10 thousand	25	5.0%
between 11 to 25 thousand	282	56.4%
more than 25 thousand	193	38.6%
Gravida		
Non-Pregnant	20	4.0%
Primi	109	21.8%
Multi	371	74.2%
Sex of child (s)		
Only female (s)	101	25.0%
Only male (s)	144	35.6%
Both gender (s)	159	39.4%

Majority of females had been literate (92%) as well as married to literate person (93.4%), as well as being in age group of ≥20 years (97%). Majority of the interviewed females had been married at ≤18 years (51.8%), with substantially less number (32%) literate females marrying at age of ≤18 years.

Knowledge

Most of the 500 females who participated in the study knew of means of birth spacing (86.4%) although lesser number actually knew of need for birth spacing (82.6%). The knowledge of means of birth spacing came from health personnel (from primary health clinics/Asha workers/hospitals etc.) which contributed to 21.5% (of aware females) highlighting the continued importance and impact of community health initiatives in rural settings.

Table 2: Knowledge about birth spacing.

Knowledge of need for birth spacing, (n=500)	No.	%
Yes	413	82.6%
No	87	17.4%
Benefits of child spacing		
No Idea	131	26.2%
New born's rearing	154	30.8%
Mother's health	68	13.6%
Mother's and child's health	92	18.4%
Mother's work responsibilities	19	3.8%
Next child's health	36	7.2%
Where did you first learn about birth spacing		
Health workers	93	18.6%
Family/friends	183	32.6%
Magazine	59	11.8%
TV/radio	117	23.4%
No Idea of birth spacing	68	13.6%
Means of birth spacing (many knew multiple means)		
Copper T	276	55.2%
Pills	247	49.4%
Condoms	107	21.4%
Tubectomy	15	3.0%
Withdrawal	147	29.4%
No Idea	68	13.6%

A significant percentage of interviewed females did not know specific benefits of birth spacing (26.2%) while a small percentage linked it to taking care of domestic/work responsibilities post child birth (3.8%). Remainder of interviewed females were able to link child spacing to health reasons, including newborn's rearing and mother's health.

Literate females were mostly aware of benefits of child spacing (86%), with all college educated females being aware as well as able to link benefits of child spacing to mother and child's health (100%). Female education thus is most significant factor for improvement of child spacing awareness.

Most of females who knew need of child spacing also knew of means of child spacing (97%) with majority of aware females knowing multiple means of child spacing (90%). Copper T and OCP were most commonly known means of child spacing, while withdrawal was also known as means of child spacing (29.4%). Some less educated females (schooling less than 5th standard) mentioned tubectomy as means of child spacing, perhaps highlighting lack of awareness of permanent nature of procedure.

Attitude

70.6% of females who participated in the study wanted/strongly wanted to practice birth spacing, with only 7.4% not wanting to practice child spacing. Most of well-educated females (schooling more than 8th standard) wanted to strongly practice child spacing (95%). Substantial number of females (70.6%) considered 2 years as minimum gap for child spacing, with 20% considering lesser than 2 years also as adequate gap, though education again emerged as an important factor with 85% of well-educated females (schooling more than 8th standard) wanting atleast 2 years of gap for child spacing. Fewer females with only girl child (s) wanted to practice birth spacing (30%), even despite being well-educated (schooling more than 8th standard) they were less likely to prefer child spacing (55%).

Table 3: Attitude regarding birth spacing.

Attitude regarding birth spacing, (n=500)	Number	%
Want to practice birth spacing		
Strongly agree	245	49.0%
Agree	108	21.6%
No Idea	110	22.0%
Don't agree	37	7.4%
Think minimum 2 years of birth spacing is essential		
Strongly agree	328	65.6%
Agree	25	5.0%
No idea	47	9.4%
Don't agree	100	20.0%
Need husband's willingness for spacing		
Strongly agree	320	64.0%
Agree	143	28.6%
No idea	26	5.2%
Don't agree	11	2.2%

Practice

Despite high level of knowledge awareness and inclination for birth spacing, only 40% of females were practising child spacing. Condom was most widely used birth spacing method, followed by OCP and Copper T. Majority of respondents did not provide reasons for not

practising birth spacing however it may be linked to husbands and In-law's opposition, which was highest disclosed cause (14.6%) of not practising birth spacing. Well-educated females (schooling more than 8th standard) were more likely to be practising child spacing (65%) as well as less likely to have husband's or in-law's opposition to child spacing (4%). Fewer females with only girl child(s) were practicing birth spacing (25%).

Table 4: Practice of birth spacing.

Practice of birth spacing, (n=500)	Number	%
Already practice birth spacing		
Yes	200	40.0%
No	300	60.0%
Birth spacing used		
Condom	81	16.2%
Pills	71	14.2%
CuT	48	9.6%
Not practising birth spacing	300	60.0%
Why not practising birth spacing		
Want a child	44	8.8%
Husband	55	11.0%
In-Laws' pressure	18	3.6%
No Idea of birth spacing means	68	13.6%
No response/don't want to disclose	314	62.8%

DISCUSSION

Recent study by Nayak et al, reported 100% awareness of at least one contraceptive method however significant non-usage of contraception (around 11% of subjects had never used contraception). Partner opposition had been cited as major reason for non-usage of contraception.[6] Our study also found high awareness, though at 86.4% a bit lower than urban India, of the means of child spacing. Partner opposition was also the single major factor for not practising birth spacing despite knowledge.

Awareness of birth spacing came from 32.6% from family/friends and only 23.4% gained this knowledge from TV/Radio whereas in Srivastava et al's study a much higher percentage (70%) had gained knowledge from family/friends and 39% from TV/radio, highlighting variation in way females gain this knowledge in northern rural India.[11]

Srivastva et al's study reported Copper-T (IUCD) as most commonly known (61%) temporary means of contraception followed by OCP (60%) and condoms (50%). This study reported lack of awareness amongst 17% of respondents, while our study in rural Haryana found lack of awareness of birth spacing means in 13.8%. Our study also found Copper-T as most commonly known means of birth spacing with awareness amongst 55.2% of respondents, followed by OCP (49.4%) and Condoms (21.4%).

Another consideration in spacing is sex of the prior births, if all of them are females. A study in Nigeria by Fayehun et al, about birth spacing, in a predominantly patrilineal society of Nigeria, reported that the effect of sex of prior births on the birth interval is slightly significant among the patrilineal tribes, who tend to desire to have a male child sooner if preceding births were female.[12] Our study also found that significantly lesser percentage of similar respondents wanted to practise birth spacing, in rural Haryana a society quite similarly patrilineal.

CONCLUSION

Present study found that education of females is a major improving factor leading to increased awareness of need as well as benefits of child spacing, with all college studied females being aware of both. Education also leads to improvement in keenness for practising child spacing as well as leading to lesser partner/in-law's opposition to practise of child birthing. Our study also found that females with only girl child(s) were less keen to practise child spacing as compared to those with only boy(s) or those with both girl(s) and boy(s). We also found that in rural geographies health personnel still serve as a significant source imparting awareness of child spacing.

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