

improve perinatal outcomes and health in general of mother and children [8].

In community mothers and children constitute a priority group. They are vulnerable or special-risk group. In India women of the child bearing age (15 to 44 years) constitutes 19 % and under 15 years of age about 40 % of total population. By virtue of their numbers, mothers and children are major consumers of health services.

Repeated pregnancies exert a great influence on infant mortality. They cause malnutrition and anemia in the mother, again predispose to low birth weight babies, which results in higher infant mortality [5]. In India a baby is born every 1.25 seconds. Couple protection rate is still only 41%. About 70 to 80% of the pregnancies in India are unplanned and 25% are unwanted. Every year 11 million abortions take place and half of these are unsafe and associated with a high morbidity and mortality rate. Around 20,000 women are dying annually due to abortion related complications [9]. Appropriate birth spacing lowers the risk of:

- Maternal mortality
- Fetal death (miscarriage or stillbirth), neonatal mortality
- Infant mortality
- Anaemia in the mother during subsequent pregnancies
- Postpartum inflammation of the endometrium lining the uterus
- Premature rupture of the amniotic membranes surrounding the fetus
- Premature birth
- Intrauterine growth retardation and a low birth-weight baby
- Malnutrition of newborns and infants due to insufficient breastmilk.⁹

a) The Benefits of Birth Spacing

A woman who waits until her child is at least two years old before becoming pregnant again is making the healthiest plan for her and her baby. Planning enough time between pregnancies could increase the health benefits for the mother, the baby and older siblings.

b) Benefits to the Mother

- Her body has enough time to recover from pregnancy and childbirth.
- She has more time to regain health and energy.

c) Benefits to the new baby

- The baby has an increased chance of being born on time, and not too early.
- The baby has a higher chance of weighing enough at birth.
- Babies born on time and at healthy weights have a better chance of growing well and avoiding sickness. Babies who are born underweight face a higher risk of disabilities.

d) Benefits to Older Siblings

1. Planning enough time between pregnancies allows the mother to breastfeed for a longer period of time. Breast milk offers unique nutrition to a growing infant.

2. The mother and father have more time to prepare foods for the older child, as well as more time to provide the loving attention the older child needs and wants [10].

India recorded around 57,000 maternal deaths in 2010, in that 6 every hour and 1 every 10 minutes. The current MMR of India is 212 per lakh live birth, whereas the country's MDG in this respect is 109 per lakh by 2015[1]. A study was conducted on the effect of birth spacing on maternal health. The study was carried out on a representative sample of 324 married women having at least two children. The result of this study revealed that women practicing birth spacing were 33.3% of the studied sample. The mean age was 34.4 +/- 5.3 years and 31.3 +/- 5.7 years for improper and proper birth spacing respectively. Improper birth spacing women constituted 70.2% of low social class. Out of the total number of improper birth spaced women, 41.7% were overweight, 25.9% were hypertensive, 57.4% had varicose veins, and 18.1% had low limb oedema. It could be concluded that young women were practicing birth spacing more properly. Rural origin women were less practicing birth spacing. Medical, Gynecological disorders and Pregnancy wastage were more among improper birth spacing women. It is to be recommended that more efforts should be done among low social class, encouraging young women to practice pre-natal care, emphasizing on the practice of proper birth spacing and small family size [11].

A cross sectional study was conducted among 415 mothers to assess the pattern and determinants of birth interval. The variables were information on parity, use of contraceptive methods during the preceding birth intervals and breast feeding. The results revealed that 75% of LSCS mothers were between the age of 20-29 years, 59% of them were of second a to third parity and 27% were with 4th to 5th parity. In more than 81% of LSCS mothers the birth interval was less than 3 years and 2% of them used contraceptive when the birth interval was 12 months and lesser. Still births and neonatal deaths account for 3.2% and 6.9% respectively. Around 62% of mothers were taken for LSCS because of neonatal complications. Thus, the study concluded that the importance of birth spacing should be educated to mothers early to promote safe motherhood and better child survival [12].

A study was conducted on knowledge and attitude of spacing methods among 124 mothers. The result revealed that 59.68% of mothers had average knowledge whereas, 30.65% mothers had poor knowledge, and 8.06% of mothers had good knowledge of spacing methods. The attitude scores showed that 63.29% had positive attitude, 27.87% had neutral opinion whereas 8.83% were having a negative attitude towards spacing methods. Thus, the study concluded that they needed to be educated on the various techniques of spacing methods [13].

When births are spaced 2½ - 3 years apart there is less risk of infant and child death. There is also a lower risk of the baby being underweight. Infants and children under five years of age, births spaced at least 36 months apart are associated with the lowest mortality risk. Likewise, birth to conception intervals of less than six months, as well as abortion and

pregnancy intervals of less than 6 months, are associated with increased risk of pre-term births, low birth weight and small for gestational age are associated with increased risk of maternal morbidity and mortality[14].

A study was conducted to assess the knowledge and association between birth spacing and risk of adverse maternal outcomes. The study included a systematic review of 22 observational studies which examine the relationship between interpregnancy or birth interval and adverse maternal outcomes. The results revealed that short intervals were associated with increased risk of uterine rupture and uteroplacental bleeding disorders like placenta previa and placental abruption and also other adverse outcomes such as anemia and maternal death. Thus, the study concluded that short interpregnancy intervals led to adverse maternal outcomes [15].

A cross – sectional study was conducted to determine the patterns and factors associated with birth intervals among 500 multiparous mothers aged 20-34 years. The results were: 3.8% of women had a birth interval of < 2 years. The birth interval was 4 to 5 years in 41.7% and in 28% of multiparous women the interval > 6 years. About 22.4% of women were more than 34 years at the time of pregnancy and 0.8% of women were less than 20 years of age. Thus, the study concluded that regular attendance at family clinics could increase the knowledge and attitude of mothers regarding family planning and practices of contraception could result in a longer birth interval [16].

The currently estimated infant mortality rate in developed countries like Japan, Switzerland is 2.78 and 4.08 respectively per 1,000 live births whereas developing countries like India, Bangladesh it is 47.57 and 50.73 per 1,000 live births. The Information and External Relations Division of UNFPA, the United Nations Population Fund report 2011 shows maternal mortality rate in developing countries like India, Indonesia are 230 and 240 respectively per 1,00,000 live births on the other hand developed countries such as Australia and Ireland are 8 and 3[17].

2. Problem Statement

“To assess knowledge regarding health benefits to mothers and children in relation to birth spacing, among mothers in selected area.”

3. Objective of the Study

1. To assess knowledge regarding health benefits to mothers in relation to birth spacing, among mothers.
2. To assess knowledge regarding health benefits to children in relation to birth spacing, among mothers

4. Methodology

Research methodology involves the systematic procedure by the researcher which starts from the initial identification of programme to its final conclusion [18]

4.1 Research Approach

Descriptive survey approach was considered.

4.2 Research Design

Survey research design was adopted.

4.3 Research Setting

The study was conducted in a selected area, of Maharashtra. This area is 15 km away from my academic institution.

4.4 Population

In this study the population was all the mothers who were having two or more children, in Maharashtra.

4.5 Sample size

A sample size of 100 mothers was chosen for this study that fulfilled the inclusion criteria.

4.6 Sampling Technique

The investigator used non-probability convenient sampling technique for the selection of the sample.

4.7 Criteria For Sample Selection

Inclusive criteria

- Mothers aged between 20-45 years.
- Women who were having two or more children.

Exclusive Criteria

- Mothers who had habitual abortions.
- Mother who were ill during research study.

4.8 Ethical Consideration

1. The study was approved by the research committee and a formal permission was obtained from the head of the institution.
2. A formal permission was taken from the director of urban community centre.
3. Written informed consent of each of the sample was obtained before starting data collection.
4. The subjects were assured that confidentiality of information would be maintained.
5. The subjects were informed that their participation was voluntary, and they had the freedom to withdraw from the study.
6. No ethical issues confronted while conducting the study.

5. Major Findings of the Study

5.1 Demographic Variables

Majority of 42% sample belonged to age group of 33-39 years, 27% to the age of 26-32 years, 19% to the age group

of 40 years and above, and remaining 12% of the age of 18-25 years.

Majority 57% of sample with regard to their educational status were educated up to higher secondary, 23% were secondary, 14% were educated up to graduate and only 6% of them were educated up to primary.

Majority 53% of sample with regard to their occupation were housewives, 27% of them were labourer, 13% of them were doing business and remaining 7% were servicewomen.

Majority 61% of sample with regard to their monthly income were in the range of 5001 Rs and more, 27% had income between 3001-5000 Rs, 10% had income in the range of 2001-3000 Rs and only 2% of them had income 1000-2000 Rs.

Majority 80% of sample with regard to their number of children had two children, 17% of the sample had three children and only 3% of them had four children in their families.

Majority 36% of sample with regard to their birth spacing in between two children had 18-24 months, 27% of them had <18 months, 19% had more than 36 months and 18% had between 24-36 months of birth spacing.

Majority 65% of sample with regard to their method of birth spacing did not use any type of birth spacing, 16% of them used condoms, 12% of them used cu-T and 7% of them used oral pills as a type of birth spacing .

Majority 41% of sample with regard to their source of information in relation to birth spacing had information from doctors, 32% from nurses and 27% of them had information from mass media.

5.2 Assessment of existing knowledge regarding health benefits to mothers in relation to birth spacing.

Findings showed that 41% of samples had average level of knowledge score, 33% of sample had good level of knowledge score, 17% of the samples had excellent level of knowledge score and 9% of the samples had poor level of knowledge score. The minimum knowledge score regarding health benefits to mothers in relation to birth spacing was 0 and the maximum score was 10, the mean knowledge score was 5.39 ± 2.31 .

5.3 Assessment of existing knowledge regarding health benefits to children in relation to birth spacing.

Findings showed that 38% of sample had average level of knowledge score, 35% of sample had good level of knowledge score, 15% of the sample had excellent level of knowledge score and 12% of the sample had poor level of knowledge score. The minimum knowledge score regarding health benefits to children in relation to birth spacing was 1 and the maximum score was 8, the mean knowledge score was 4.59 ± 1.74 .

6. Discussion

The findings of the study were discussed with reference to the objectives stated in chapter I. The present study was undertaken as "To assess knowledge regarding health benefits to mothers and children in relation to birth spacing, among mothers in selected area." Objectives of the study were: 1) To assess knowledge regarding health benefits to mothers in relation to birth spacing among mothers. 2) To assess knowledge regarding health benefits to children in relation to birth spacing among mothers.

With regards to first objective of this study result showed that 41% of samples had average level of knowledge score, 33% of sample had good level of knowledge score, 17% of the sample had excellent level of knowledge score and 9% of the sample had poor level of knowledge score. The minimum knowledge score regarding health benefits to mothers in relation to birth spacing was 0 and the maximum score was 10, the mean knowledge score was 5.39 ± 2.31 . The above findings showed that the subjects having mean knowledge score was 53.9%. The study reported that the result regarding the knowledge level of the respondents related to health benefits to mother in relation to birth spacing was inadequate.

With regards to second objective of this study result showed that 38% of sample had average level of knowledge score, 35% of sample had good level of knowledge score, 15% of the sample had excellent level of knowledge score and 12% of the sample had poor level of knowledge score. The minimum score regarding health benefits to children in relation to birth spacing was 1 and the maximum score was 8, the mean knowledge score was 4.59 ± 1.74 . The above findings showed that the subjects having mean knowledge score were 45.9%. The study reported that the result regarding the knowledge level of the respondents related to health benefits to children in relation to birth spacing was inadequate.

With regard to demographic variables 36% of sample maintained 18-24 months birth spacing in between two children , 27% of them had <18 months, 19% had more than 36 months and 18% had between 24-36 months of birth spacing . The study reported that only 37% of subjects maintained adequate birth spacing in between two children. With regard to demographic variables 65% of sample did not use any type of birth spacing method, 16% of them used condoms, 12% of them used cu-T and 7% of them used oral pills as a type of birth spacing method. The study reported that only 35% of subjects used birth spacing method like condoms, cu-T and oral pills. So, at community level there is need to improve knowledge and practices regarding birth spacing method and adequate birth spacing.

7. Conclusion

The researcher concluded that the knowledge score of the respondents related to health benefits to mothers and children was 53.9% and 45.9% respectively in relation to birth

spacing. The sample had inadequate knowledge regarding health benefits to mothers and children in relation to birth spacing. So, there is need to improve knowledge regarding birth spacing, their method and practices regarding adequate birth spacing.

8. Nursing Implication

The findings of this study have implications for nursing practice, nursing education, nursing administration, nursing research and public health services.

Nursing Services

The crucial role of the community health nurse is to provide individual, family and community health services to improve the health status of the community. For that she should give an adequate attention to their knowledge, attitude and practices of the group. Make the community people aware about their health and health benefits through health education, role play, drama, or demonstration. Get the active community participation in awareness program which is easily available in the community and is very important, everlasting and effective one. Community health nursing personnel can be Plan 'health awareness and healthy practices program' for the newly married couple and mother to change their behaviors through knowledge to create positive attitude towards healthy practices. The national and other health program should be implemented with the help of local authority and active participation of adolescents boys and girls, newly married couples, mother; parents school children because they disseminate the health message to community. The community health nurse must be prioritizing preventive aspect always first, then promotive and lastly curative/ Rehabilitative aspects while providing comprehensive / Holistic health care to an individual or to the entire community.

Nursing Education

Community Health nursing students and health care personnel should be given an opportunity to update their knowledge while working in the field through internet, helpline and periodically teleconferences with the active participation of the beneficiaries.

This study will help the student nurses to understand the level of knowledge among community people and help them to educate the community people on preventive aspect of health problems. Inadequate birth spacing practices are responsible for many health problems to mother and children. Community health nurses and health worker should educate the people at the peripheral levels, by motivating and interacting them.

Nursing Administration

To ensure the better professional standard and nursing services, nursing administrators like district public health nurses, supervisors along with the other health services administrators, can plan to improve the health status of the community people through planning and implementation of effective health services.

Nurse administrators can arrange in-service education, workshops and group discussion meetings in the community and discuss the various policy protocols and other issues related with the birth spacing.

Nursing Research

Other researchers may utilize the suggestions and recommendations for conducting further study. The findings can be utilized for conducting further researches.

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