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A Pre-Experimental Study to Assess the Effectiveness of Mother and Neonate Skin to Skin Contact on Early Initiation of Breastfeeding Among Postnatal Mother: One Group Pre-Test Post-Test Design

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***Abstract*: According to the National Family Health Survey (NFHS-5) conducted in 2019-2021, about 41.6% of newborns in India were breastfeed with in the first hour of birth. Objectives: To assess the pretest score regarding mother and infant skin to skin contact on early initiation of breastfeeding at selected hospital of Bilaspur Chhattisgarh. To administer mother & neonates skin to skin contact on early initiation of breast feeding. To assess the effectiveness of mother and neonates skin to skin contact on early initiation of breastfeeding. To find out the association between pretest score with their socio demographic variables regarding neonates skin to skin contact on early initiation of breastfeeding. Hypothesis: H1: There will be significant difference in pre-test and post test score regarding effect of mother and infant skin to skin contact on early initiation of breastfeeding. H2: There will be significant association between pre test score of mother and infant skin to skin contact and early initiation of breastfeeding with selected socio-demographic variables. Result: The sample size was 100 were selected. Data collection was analyzed by an 'z' test. Effectiveness of mother & infant skin to skin contact on early initiation of breastfeeding among postnatal mother. compares mean effectiveness scores regarding mother and infant skin to skin contact on early initiation of breastfeeding. Mean difference was 4.67, mean percentage was 14.3 in pretest and 23.64 in post test, SD was 1.57 in pre test and 1.69 in post test, The Parametric paired Z test value was found to be 4.27 which was greater than 2. The calculated 'r' value is 0.8 which is also a very strong positive correlation.**

***Keywords*: Skin to skin contact, Early initiation of breast feeding.**

1. Introduction

Breast feeding is beneficial to the health of both mother and infant and fosters optimal growth for the baby in the first two years of life. Evidence based guidelines followed by the Baby Friendly Hospital Initiative (BFHI) includes Ten Steps (Baby Friendly, USA, 2015). Step Four recommends placing the newborn skin-to-skin on the mother's chest to foster the initiation of breastfeeding within the first hour after birth. The mother's body temperature helps regulate the baby's, especially in the first few hours after birth when newborns are vulnerable to temperature drops. Skin to skin contact can encourage breastfeeding by stimulating the baby's feeding instincts and helping the mother's milk to come in. Skin to skin contact promotes bonding between mother and baby through physical closeness and the release of hormones like oxytocin. Skin to skin contact can lead to increased weight gain in newborns. Skin to skin contact can reduce stress and anxiety in both the mother and the baby. Skin to skin contact can lead to longer breast-feeding durations and higher rates of exclusive breastfeeding. Skin to skin contact may reduce the need for hospitalization, especially for newborns with low birth weight or those at risk of developing complications. Skin to skin contact can increase a mother's confidence in her ability to care for her baby. Skin to skin contact may lead to a reduction in the incidence of neonatal hypoglycemia. The initiation of breastfeeding is a crucial process for both the mother and the newborn, Early breastfeeding provides colostrum, the first milk rich in antibodies and nutrients, Colostrum is produced during late pregnancy and is typically available in the first few days (2-5 days) afterbirth. offering essential protection against infections and diseases. Ideal Timing-The World Health Organization (WHO) recommends that breastfeeding should begin within the first hour after birth for optimal health benefits. Placing the baby on the mother's chest immediately after birth promotes bonding and encourages instinctive breastfeeding behavior. Skin-to-skin contact helps stabilize the baby's temperature, heart rate, and breathing. Colostrum is the first breast milk which occurs during pregnancy. It is a thick, yellowish fluid rich in nutrients and antibodies, crucial for the health and development of newborns. Colostrum contains high levels of proteins, carbohydrates, fats, and vitamins. It is especially rich in immunoglobulins (particularly IgA, IgG, and IgM), which help to boost the newborn's immune system and protect against infections. Contains various growth factors that aid in the development of the gastrointestinal tract and support

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overall growth. Newborns typically feed 8-12 times in 24 hours. Allowing the baby to feed as needed promotes milk production. If possible, avoid pacifiers and bottles in the early days to encourage breastfeeding and prevent nipple confusion. Signs of effective breastfeeding include audible swallowing, a mother feeling relaxed, and the baby appearing satisfied post-feeding. Regular check-ups to monitor the baby's growth and weight gain should be conducted.

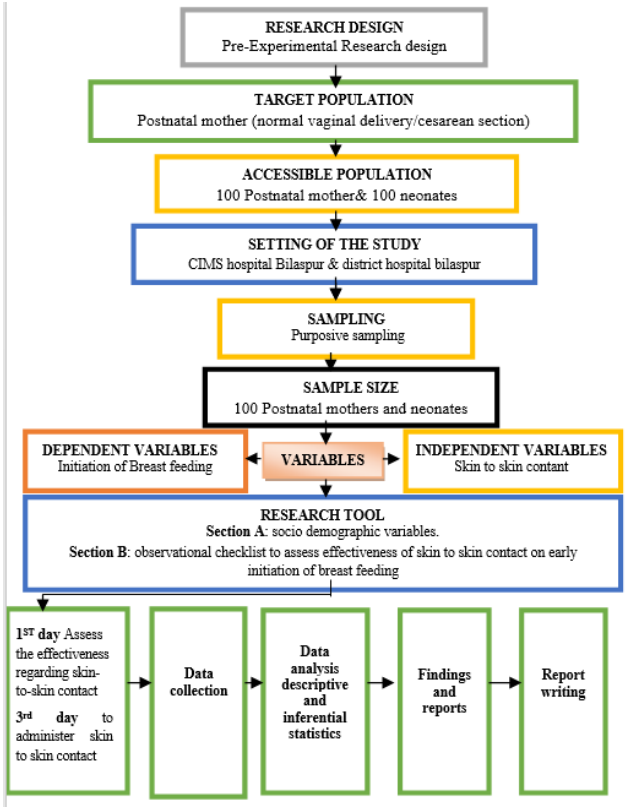

Fig. 1. Schematic representation of research design

2. Result and Discussion

A. Presentation of Data Analysis

The collected data are analyzed and presented in 4 sections.

- *Section A:* Frequency and percentage distribution of postnatal mother and neonate according to socio demographic variables.
- *Section B:* comparison of score between pre-test and post-test through mean score, mean %, and standard deviation.
- *Section C:* Z test for assessing significant difference between pre-test and post-test skill score section.
- Section D: Association of pre-test skill score of post-natal mother and neonate with the selected demographic variables.

3. Major Findings of the Study

The major findings of the study revealed that,

Section I: Distribution of socio-demographic variables using frequency and percentage with personal and obstetric data of the studies mothers.

- Distribution of respondents by showing column bar diagram according to age group: Reveals that 47 (47%) of mother belongs to age group of 20-25 year, 28 (28%) of mother belongs to age group of 26-30 year, 17 (17%) of mother belongs to age group of 31-35 year. 8 (8%) of mother belongs to age group of above 35 years.
- Distribution of mother according to education level: Reveals that 6 (6%) of mother educated in illiterate, 35 (35%) of mother educated in secondary education, 40 (40%) of mother educated in high educated. 9 (9%) of mother educated in higher education.
- Distribution of mother according to no. of gravida: Reveals that 41 (41%) were within the mother no. of gravida of 1st gravida, 28 (28%) were within the mother no. of gravida of 2nd gravida, 22 (22%) were within the mother no. of gravida of 3rd gravida, 9 (9%) were within the mother no. of gravida of more than 3 gravida.
- Distribution of mother according to no. of parity: Reveals that 41 (41%) were within the mother no. of parity of null parity, 28 (28%) were within the mother no. of parity of parity1, 22 (22%) were within the mother no. of parity of parity 2, 9 (9%) were within the mother no. of parity of 3 or more parity.
- Distribution of mother according to mode of delivery: Reveals that 47 (47%) were within the mother mode of delivery of normal vaginal delivery, 53 (53%) were within the mother mode of delivery of cesarean section.
- Distribution of mother according to any health problem: Reveals that 0 (0%) were within the mother any health problem of Yes, 100 (100%) were within the mother any health problem of No.
- Distribution of mother according to If yes then specify: Reveals that 0(0%) were within the mother if yes then specify of Yes, 100 (100%) were within the mother if yes then specify of No.

Socio Demographic with neonate data of the studies,

- Distribution of neonate according to their gender: Reveals that 59 (59%) were within the neonate gender of male, 41 (41%) were within the neonate gender of female.
- Distribution of neonate according to their Apgar score: Reveals that 48(48%)were within the Apgar score of 7, 36(36%)were within the Apgar score of 8, 54.
- Distribution of neonate according to their birth weight/Kg: Reveals that 77 (77%) were within the birth weight/Kg of 2-3 Kg, 23 (23%) were within the birth weight/Kg of more than 3 Kg.
- Distribution of neonate according to their height of the baby: Reveals that 44 (44%) were within the height of the baby of 45cm – 50cm, 56 (56%) were within the height of the baby of 51cm – 55cm.
- Distribution of neonate according to their head circumference: Reveals that 76 (76%) were within the

head circumference of 33cm – 35cm, 24 (24%) were within the head circumference of 30cm – 32cm.

- Distribution of neonate according to their chest circumference: Reveals that 23 (23%) were within the chest circumference of 30cm – 32cm, 77 (77%) were within the chest circumference of 33cm – 35cm. 16 (16%) were within the Apgar score of 9.
- Distribution of neonate according to their baby birth: Reveals that 6(6%) were within the baby birth of preterm, 77 (77%) were within the baby birth of term, 17 (17%) were within baby birth of post term.

The first objective was to Assess the pre test score regarding mother and infant skin to skin contact on early initiation of breastfeeding at selected hospital.

Analysis level of pre test score regarding mother and infant skin to skin contact on early initiation of breastfeeding. Depict that the effectiveness score of pre test and post test in mother and infant was 4 and 8 respectively out of 15 in minimum and11and15 respectively out of 15 in maximum, median was 12 and 18, mean was 7.15 & 11.82, Total mean percentage was 14.3 & 23.64, Standard deviation was 1.57 & 1.69.

The second objective was to assess administer mother & neonates skin to skin contact on early initiation of breastfeeding.

Depict that the Effectiveness of mother & neonate skin to skin contact on early initiation of breastfeeding. Out of 100 mother. 7% of mother in pre test and 0% of mother in post test were having not effective, 93% of mother in pre test and 23% of mother in post test were having partially effective, 0% of mother in pre test and 77% of mother in post test were having fully effective The third objective was to assess the effectiveness of mother and neonates skin to skin contact on early initiation of breastfeeding. Table 4.17 & figure 4.17 showing difference of Effectiveness of mother & infant skin to skin contact on early initiation of breastfeeding among postnatal mother. The table compares mean effectiveness scores regarding mother and infant skin to skin contact on early initiation of breastfeeding. Mean difference was 4.67, mean percentage was 14.3 in pre test and 23.64 in post test, SD was 1.57 in pre test and 1.69 in post test, The Parametric paired Z test value was found to be 4.27 which was greater than 2. So, then the null hypothesis is rejected at all levels of significance which prove that the mother and infant skin to skin contact on early initiation of breastfeeding post test more effective than pre test score.

The fourth objective was to Chi square analysis to find out the association between pre test score with their socio demographic variables regarding neonates skin to skin contact on early initiation of breastfeeding. Table No 4.18.: Above Table shows the association between pre test score of mother skin to skin contact and early initiation of breastfeeding with their selected socio demographic variables. such as Age, Education level, Number of gravida, Number of parity, Mode of delivery, Any health problem with this pregnancy, If yes then specify etc using a non-parametric $\chi 2$ test.

On applying the chi-square test demographic variable "Education level" was 96.65, "significantly associated between pre test score of mother skin to skin contact and early initiation of breastfeeding with their selected socio demographic variables. The z^2 value of "Education level. was greater than the table value (96.65,) at 2 degree of freedom for p=0.01.

Hence H2 i.e., there is a significant association between pre test score of mother skin to skin contact and early initiation of breastfeeding with their selected socio demographic variables. such as Education level is accepted.

The association between pre test score of neonate skin to skin contact and early initiation of breastfeeding with their selected socio demographic variables. such as Gender, Apgar score, Birth weight/ Kg, Height of the baby, Head circumference, Chest circumference, Baby birth etc. using a non-parametric $\chi 2$ test.

On applying the chi-square test demographic variable "Gender" was 40.87, "Apgar score" was 61.53, "Head circumference" was 20.08, "Chest circumference" was 26.67, "Baby birth" was 35.1. was significantly associated between pre test score of neonate skin to skin contact and early initiation of breastfeeding with their selected socio demographic variables. The z2 value of "Gender, Apgar score, Head circumference, Chest circumference, Baby birth". was greater than the table value (40.87, 61.53, 20.08, 26.67 and 35.1) at 2 degree of freedom for p=0.01.

Hence H2 i.e., there is a significant association between pre test score of neonate skin to skin contact and early initiation of breastfeeding with their selected socio demographic variables. such as Gender, Apgar score, Head circumference, Chest circumference, Baby birth etc. is accepted.

4. Conclusion

The present study revealed that the Mean difference was 4.67, mean percentage was 14.3 in pre test and 23.64 in post test, SD was 1.57 in pre test and 1.69 in post test, The Parametric paired Z test value was found to be 4.27 which was greater than 2. So, then the null hypothesis is rejected at all levels of significance which prove that the mother and infant skin to skin contact on early initiation of breastfeeding post test more effective than pre test score. So, H1 Hypothesis is accepted.

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