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"Knowledge on Breast Engorgement and Its Management among Postnatal Mothers Admitted in Selected Hospitals of Guwahati, Assam in a View to Develop an Information Booklet"

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Abstract: ***Background: Breast feeding is an unequal way of providing ideal food for the healthy growth and development of a baby.The main reason for considering the breast feeding as important is that, it is an essential time of bonding between mother and baby. However many mothers experience painful, sore nipples during breast feeding and stops nursing before they intended. Breast engorgement is the most common complication during the postnatal period.Breast engorgement typically occurs during the transition from producing colostrum to mature milk. It can also happen if nursing mothers miss several feedings or don't express enough milk.So, it is important to follow proper breast feeding techniques to prevent breast engorgement, the commonest problem in the early postnatal period.***

Title of the study: "A study to assess the Knowledge on Breast engorgement and its Management among Postnatal Mothers admitted in selected Hospitals of Guwahati, Assam in a view to develop and Information booklet."

Methodology: A descriptive design was adopted for the study. The sample consists of 136 postnatal mothers who were selected using convenience sampling technique from three conveniently selected hospitals namely, Pratiksha hospital, Satribari Christian hospital and Marwari Maternity hospital of Guwahati, Assam. Data were collected using a structured interview schedule to assess the knowledge on breast engorgement and its management.

Results: The findings of the study revealed that out of 136 postnatal mothersmajority i.e. 105 (77.2%) had moderate knowledge, 21 (15.4%) had adequate knowledge and 10 (7.4%) had inadequate knowledge with mean score 9.79 and SD 2.38.The overall statistical findingsshowssignificant association in regards to educational qualification and previous knowledgeon breastengorgement.Whereas, demographic variables such as age, religion, area of residence and occupational status of postnatal mothers were found non significant at 0.05 level ofsignificance.

Conclusion: The findings clearly suggest that the majority of the postnatal mothers had moderate knowledge redarding breast engorgement and its management. Therefore keeping in the mind the study findings, the researcher developed and distributed an information booklet to improve the knowledge on breast engorgement and its management.

Keyword: Knowledge, Postnatal mother, Breast engorgement, Information Booklet

I. INTRODUCTION

Breast feeding is an unequal way of providing ideal food for the healthy growth and development of a baby.It is also an integral part of the reproductive process with important implication for the health of the mothers. The main reason for considering the breast feeding as important is that it is an essential time of bonding between mother and baby. Breast feeding provides close physical contact and help mother and baby become acquainted. Breast milk is the primary source of nutrition for newborn before they are able to eat and digest other foods. It contains enough nutrition needed for growth and development of the baby. Breast feeding is a basic human activity, WHO and UNICEF recommends that babies should be initially breast feed within the first hour of their life and should continue breast feed at least six months of life. However many mothers experience painful, sore nipples during breast feeding and stops nursing before they intended one of the leading cause for this is breast engorgment.Breast engorgement is the most common complication during the post-natal period. It isthe disease condition occurring in the mammary glands by expanding veins and the pressure of new breast milk contained within them. The most common manifestation includes considerable pain and feeling of tenderness in the breast, generalized malaise, rise in temperature, and painful breastfeeding. Severe engorgement leads to mastitis and untreated engorgement puts pressure on the milk duct often causing the plugged nipple

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Breast engorgement usually happens when the breast switches off from colostrum to mature milk. It can also happen if lactating women misses several nursing and not enough milk is expressed from breasts. The benefits of breast feeding are they act as a ideal nutrition for babies, it is easily digestible, lowers the risk of allergiesmother, gains the right amount of weight, babies who are exclusively breast feed for the first six months of life without any formula feed have fewer ear infections, respiratory illnesses, diarrhoea. Some of the benefits of breast feeding for the mother are it burns extra calories, it helps in reducing pregnancy weight faster, lowers the risk of ovarian cancer and breast cancer, it also gives regular time to relax quietly with the new born which improves bonding .

According to the global breastfeeding scorecard 2018 globally, less than 50% of newborns start breastfeeding in the first hour of birth and 48% infants 0-5 months of age worldwide are exclusively breast feed. [3]The global incidence rate of breast engorgement is approximately 1 in 8,000 (2022). [4] The incidence rate of breast engorgement in India is 1:6500 (2022).

The National Family Health Survey conducted in 2015-2016 found that painful breasts are the most common reason mothers stop breastfeeding within the first two weeks after childbirth. One contributing factor to this pain is breast engorgement, which affects 72% to 85% of mothers and typically occurs three to six days after delivery. Engorgement can happen at any point during lactation when milk is not effectively transferred from the breast. Breastfeeding serves as one of the initial bonding experiences between mother and baby, with the British Medical Journal stating, "Breast is best." Although breastfeeding is a natural process, many postpartum mothers face challenges, as not all babies can latch due to issues such as prematurity, illness, or separation from their mothers, which can result in breast engorgement. For this, they need to be adequately educated and helped in preventing further breast feeding problems. As one of the most common issues impacting breastfeeding, engorgement is often cited as a primary reason for discontinuing breastfeeding in the first two weeks postpartum.

So, it is important to follow proper breast feeding techniques to prevent breast engorgement, the commonest problem in the early postnatal period. It is highly observed that primigravida mothers usually have many doubts and fears about proper breast feeding and they have huge concerns about the optimum care that has to be given to their newborn babies. For this, they need to be adequately educated and helped in preventing further breast feeding problems. The high incidence rate of breast engorgement is due to poor knowledge about breast engorgement. Therefore it is important to assess knowledge level of postnatal mothers regarding breast engorgement it can reduce the incidence and promote breast feeding. Early diagnosis and early treatment of the complication is very important in postpartum care.

A. Statement of the problem

A study to assess the Knowledge on Breast Engorgement and its Management among Postnatal mothers admitted in selected Hospitals of Guwahati, Assam in a view to develop an information booklet.

B. Objectives of the study

1) To assess the knowledge on Breast Engorgement and its management among postnatal mothers admitted in selected hospitals of Guwahati, Assam.

2) To find out the association between knowledge on breast engorgement and its management among postnatal mothers admitted in selected hospitals of Guwahati, Assam with selected demographic variables.

C. Hypothesis

The hypothesis is tested at 0.05 level of significance.

H_1 - There is significant association between knowledge on breast engorgement and its management among postnatal mothers admitted in selected hospitals of Guwahati, Assam with selected demographic variables.

II. RESEARCH METHODOLOGY

The research approach adopted for this study is quantitative survery research to assess the knowledge on breast engorgement and its management among postnatal mothers admitted in selected hospitals of Guwahati, Assam in a view to develop an information booklet.Non-experimental descriptive research design was used to assess knowledge on breast engorgement and its management among postnatal mothers admitted in selected hospitals of Guwahati, Assam in a view to develop an information booklet.The present study is conducted in 3 conveniently selected hospitals of Guwahati, Assam. The total number of hospitals of Guwahati, Assam is 36 in which No. of Government is 4 and No. of Private hospital is 32. Out of which for the present study, 3 hospitals are selected namely Pratiksha Hospital, Satribari Christian Hospital and Marwari Maternity Hospitalbecause the Maternal cases are more in mentioned hospitals. The sample size was 136. The sample size was calculated using Raosoft sample size calculator with 5% margin of error, 95% confidence level and response distribution of 50%.The researcher used selected Non-Probability consecutive sampling technique to select the samples in proportionate number.

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The data was collected from Postnatal wards of the mentioned hospital."In this study, the selected postnatal mothers were who are within 1 week of puerperium period and admitted in conveniently selected hospitals of Guwahati, Assam namely Pratiksha Hospital, Satribari Christian Hospital and Marwari Maternity Hospital. The total sample collected from Pratiksh Hospital was 66, Marwari Hospital was 53 and Satribari Christian Hospital was 17 respectively.A brief self introduction and the purpose of study explained prior to data collection .The data were collected after obtaining informed consent of the sample for their willingness to participate in the study anonymity and confidentiality were maintained..

III. RESULTS

1) Section I: Frequency and percentage distribution of postnatal mothers according to demographic variables

This section deals with analysis of demographic variables like Age, Area of residence, Religion, Educational status, Occupational status and previous knowledge regarding breast engorgement. Findings are presented in the table 2.1 to 2.6

TABLE 2.1

Frequency and percentage distribution of postnatal mothers according to age

n=136

Age (in years)	Frequency (f)	Percentage (%)
21-25	77	56.6
26-30	49	36
31-35	10	7.4
Total	136	100

Table 2.1 depicts that out of 136 postnatal mothers majority i.e 77(56.6%) were 21-25 years, 49 (36%) were of 26-30 years of age, and rest 10 (7.4 %) belong to age group of 31-35 years.

TABLE 2.2

Frequency and percentage distribution of postnatal mothers according to religion

n=136

Religion	Frequency	Percentage
Hindusim	109	80.1
Islam	19	14
Christianity	8	5.9
Others	0	0
Total	136	100

The data presented in the table 2.2 depicts that out of 136 postnatal mothers majority i.e. 109(80.1%) belongs to Hinduism, 19 (14%) were Islam and rest 8(5.9%) belongs to Christianity and none of them represents others**.**

TABLE 2.3

Frequency and percentage distribution of postnatal mothers according to area of residence

n=136

Area of residence	Frequency	Percentage
Rural	78	57.4
Urban	58	42.6
Total	136	100

The data presented in table 2.3 depicts that out of 136 postnatal mothers majority i.e. 78(57.4%) are from urban area and 58(42.6%) were from rural area.

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TABLE 2.4
Frequency and percentage distribution of postnatal mothers according to educational qualification
n=136

Educational qualification	Frequency	Percentage
Professional degree	10	7.4
Graduate	19	14
Intermediate/diploma	25	18.4
High school	34	25
Middle school	35	25.6
Primary school	11	8.1
No formal education	2	1.5
Total	136	100

The data presented in table 2.4 depicts that out of 136 postnatal mothers, majority i.e. 35 (25.6%) had completed middle school, followed by 34 (25%) had completed high school, 25 (18.4%) had completed intermediate/diploma, 19 (14%) were graduates, 10 (7.4%) were having professional degree, and 2 (1.5%) had no formal education.

TABLE 2.5
Frequency and percentage distribution of postnatal mothers according to occupation of the mother
n=136

Occupation of mother	Frequency	Percentage
Government employee	20	14.7
Private employee	15	11
Buisness	58	42.6
Daily wage worker	2	1.6
Homemaker	41	30.1
Total	136	100

The data presented in table 2.5 depicts that out of 136 postnatalmothers majority i.e 58 (42.6%) were running business, followed by 41(30.1%) were homemakers, 20 (14.7) were Government employees, 15(11%) were working in a private sector and 2(1.6%) were daily wage workers**.**

TABLE 2.6 (a)
Frequency and percentage distributionof postnatal mothers according to previous knowledge
n=136

Previous knowledge	Frequency	Percentage
Yes	40	29.4
No	96	70.6
Total	136	100

Data present in table 2.6(a) depicts that among 136 postnatal mothers. It shows that 96 (70.6%) does not have previous knowledge were as 40(29.4%) have knowledge regarding breast engorgement.

TABLE 2.6 (b) If yes,
n= 40

Source of information	Frequency	Percentage
Mass media	11	27.5
Health personnel	10	25
Friend and relatives	19	47.5
Total	40	100

Table 2.6 (b) depicts that majority of the postnatal mothers i.e. 19(47.5%) got information from family& relatives, followed by 11(27.5%) from mass media and remaining 10(25%) from health personnel.

2) Section II: Assessment of level of knowledge of postnatal mothers on breast engorgement and its management.

This section deals with frequency and percentage distribution of level of knowledge on breast engorgement its management among postnatal mothers categorized as inadequate knowledge, moderate knowledge and adequate knowledge by using mean and standard deviation.

The findings are presented from table 3.1

TABLE 3.1
Frequency and percentage distribution of level of knowledge on breast engorgement and its management among postnatal mothers
n=136

Level of knowledge	Frequency (f)	Percentage (%)	Mean	SD
Inadequate (≤6)	10	7.4		
Moderate (7-9)	105	77.2	9.79	2.38
Adequate (≥10)	21	15.4		
Total	136	100		

The data in the above table 3.1 depicts that out of 136 postnatal mothers majority i.e 105(77.2%) of participants had moderate knowledge, 21(15.4%) had adequate knowledge and 10(7.4%) of participants had inadequate knowledge with mean score 9.79 and SD =2.38

3) Section III: Association between the knowledge of postnatal mothers on breast engorgement and its management with selected demographic variables.

This section presents the findings on the association between the knowledge of postnatal mothers with selected demographic variables. Chi square test was computed to find the significant association between the knowledge of postnatal mothers with selected demographic variables.

The findings are presented from table 4.1 to 4.6

TABLE 4.1
Association between knowledge of postnatal mothers on breast engorgement and its management with age of the mother
n =136

Age (in years)	Knowledge			χ^2	df	pvalue	Tabulated value	Inference
	Inadequate	Moderate	Adequate					
21-25	3	60	14	6.794	4	0.134	9.49	NS
26-30	6	39	4					
31-35	1	6	3					
Total	10	105	21					

NS – Non Significant S- Significant

The data presented on the table 4.1 depicts that the chi-square value χ^2(6.794) with df 4 was found to be less then the tabulated value 9.49 with corresponding 'p' 0.134. Thus the findings indicate that the demographic variable age was statistically not significant at p<0.05 level of significance.

TABLE 4.2

Association between knowledge of postnatal mothers on breast engorgement and its management with religion

n=136

Religion	Knowledge			χ^2	df	p value	Tabulated value	Inference
	Inadequate	Moderate	Adequate					
Hindusim	10	82	17					
Islam	0	16	3	2.811	4	0.624	9.49	NS
Christianity	0	7	1					
Others	0	0	0					
Total	10	105	21					

NS –Non Significant S - Significant

The data presented in the table 4.2 depicts that the calculated chi-square value χ^2(2.811) with df 4 was found to be less then the tabulated value 9.49 with corresponding 'p' 0.624. Thus the findings indicate that there is no significant association between knowledge of postnatal mothers regarding breast engorgement and its management with religion at p<0.05 level of significance.

TABLE 4.3

Association between knowledge of postnatal mothers on breast engorgement and its management with area of residence

n=136

Area of Residence	Knowledge			χ^2	df	p value	Tabulated value	Inference
	Inadequate	Moderate	Adequate	0.031	2	0.985	5.99	NS
Rural	6	60	12					
Urban	4	45	9					
Total	10	105	21					

NS – Non SignificantS-Significant

The data presented on the table 4.3 depicts that the chi-square value χ^2 (0.031) with df 2 was found to be less then the tabulated value 5.99 with corresponding 'p' 0.985. Thus the findings indicate that the demographic variable such as area of residence was statistically not significant at p<0.05 level of significance.

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TABLE 4.4

Association between knowledge of postnatal mothers on breast engorgement and its management with educational qualification n=136

Educational qualification	Knowledge			χ^2	Df	p value	Tabulated value	Inference
	Inadequate	Moderate	Adequate					
Professional degree	0	4	6	24.34	1	0.018	21.03	*S
Graduate	1	14	4					
Intermediate Diploma	3	18	4					
High school	1	30	3					
Middle school	3	30	2					
Primary school	2	7	2					
No formal education	0	2	0					
Total	10	105	21					

NS – Non Significant*S - Significant

The data presented on the table 4.4 depicts that the chi-square value χ^2 (24.34) with df 12 was found to be more then the tabulated value 21.03 with corresponding 'p' 0.018. Thus the findings indicate that the demographic variable such as a educational qualification was statistically significant at $p<0.05$ level of significance.

TABLE 4.5

Association between knowledge of postnatal mothers on breast engorgement and its management with occupational status n=136

Occupational status	KNOWLEDGE			χ^2	df	p value	Tabulated value	Inference
	Inadequate	Moderate	Adeqauate					
Government employee	1	16	3	4.226	8	0.829	15.51	NS
Private employee	1	12	2					
Buisness	3	45	10					
Daily wage worker	0	1	1					
Homemaker	5	31	5					
Total	10	105	21					

NS – Non Significant S - Significant

The data presented in the table 4.5 depicts that the calculated chi-square value (4.226) $\chi^2$with df 8 was found to be less then the tabulated value 15.51 with corresponding 'p' 0.829. Thus the findings indicate that there is no significant association between knowledge of postnatal mothers regarding breast engorgement and its management with occupational status at p<0.05 level of significance.

TABLE 4.6 (a)

Association between knowledge of postnatal mothers on breast engorgement and its management with previous knowledge

n=136

Previous knowledge	Knowledge			χ^2	df	P value	Tabulated value	Inference
	Inadequate	Moderate	Adequate					
Yes	0	28	12	12.32	2	0.002	5.99	*S
No	10	77	9					
Total	10	105	21					

NS – Non Significant *S – Significant

The data presented in the table 4.6 (a) depicts that the calculated chi-square value χ^2 (12.32) with df 2 was found to be more then the tabulated value 5.99 with corresponding 'p' 0.002. Thus the findings indicate that there is significant association between knowledge of postnatal mothers regarding breast engorgement and its management with previous knowledge at p<0.05 level of significance.

The overall statistical findings of data presented in table 4.1 to 4.6(a) shows that significant association was found in regard to educational qualification (χ^2= 24.34, p value =0.018) and previous knowledge (χ^2= 12.32, p value = 0.002) with knowledge on breast engorgement and its management among postnatal mothers. And, demographic variables such as age, religion, area of residence and occupational status of postnatal mothers were not significanly associated at of 0.05 level ofsignificance.

Hence, the null hypothesis H_{01} is rejected and research hypothesis H_1 is accepted with selected demographic variables such as educational qualification and previous knowledge on breast engorgement and its management.

Findings related to level of knowledge on breast engorgment and its management

In the present study the existing knowlededge of the postnatal mothers in selected hospitals was assessed by structured interview schedule. The statistical findings revealed that the majority i.e. 105 (77.2%) had moderate knowledge, 21 (15.4%) had adequate knowledge and 10 (7.4%) of participants had inadequate knowledge with mean score 9.79 and SD 2.38.

Findings related to association between knowledge of postnatal mothers regarding breast engorgement and its management with selected demographic variables.

The overall statistical findings of data presented in table 4.1 to 4.6 (a) show that significant association was found in regard to educational qualification (χ^2= 24.34, p value =0.018) and previous knowledge (χ^2=12.32, p value = 0.002) with knowledge on breast engorgement and its management among postnatal mothers. And, demographic variables such as age, religion, area of residence and occupational status of postnatal mothers were not significantly asscociated at 0.05 level of significance.

Hence, the null hypothesis H_{01} is rejected and research hypothesis H_1 is accepted in terms of educational qualification and previous knowledge. Thus, H_{01} the null hyothesis is retained in tems of age, religion, area of residence and occupational status.

IV. CONCLUSION

Nursing personnel must have holistic knowledge regarding Breast engorgement and its management.The findings of the present study revealed that Breast engorgement being one of the major problem among the breast feeding mothers and a reason for giving up feeding in the first two weeks, nurses and midwives can be trained to include home remedial measures for breast engorgement in their discharge teaching.

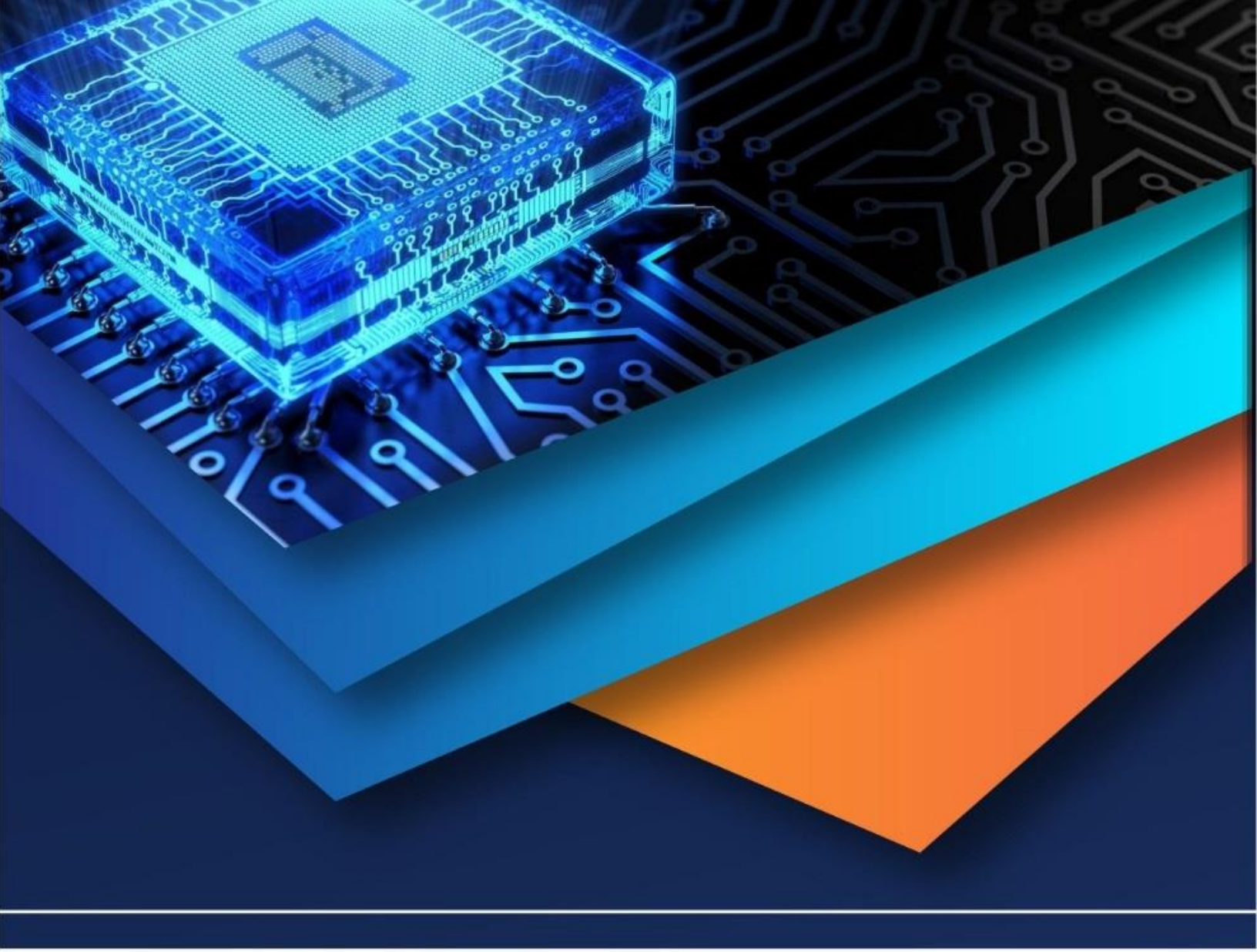
The findings of present study can be utilized by nurse researchers to contribute to the profession to accumulate new knowledge regarding breast engorgement and its management, and can take professional accountability to educate and motivate postnatal mothers towards health promoting practices. The present study would help nurses and other healthcare personnel to understand the level of knowledge of postnatal mothers regarding breast engorgement and its management. Based on this knowledge nurse researchers can undertake similar studies among postnatal mothers.

V. RECOMMENDATIONS

1) Asimilarstudymaybereplicatedindifferentsettingwithlargescale.
2) Acomparativestudycanbeconductedbetweenurbanandruralareasmothers.
3) A comparative study can be conducted between working and non - workingmothers.

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