# International Journal of Pediatric Nursing





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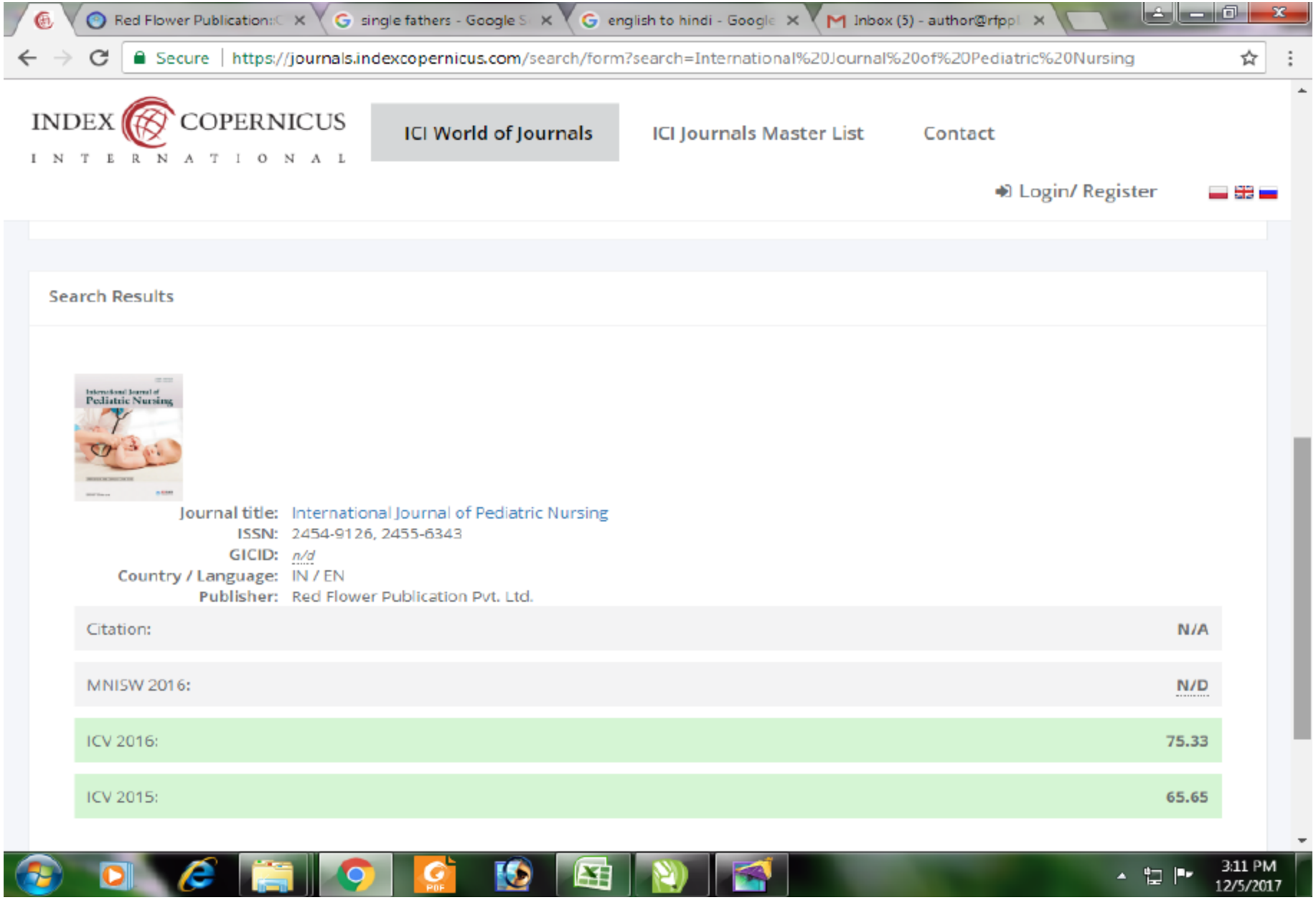
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# Effectiveness of Planned Teaching Programme in Knowledge Gain Regarding Anthropometric Measurement among B.Sc. Nursing 3rd Year Students

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**Abstract**

The study was conductedto assess the effectiveness of planned teaching programme in terms of knowledge gain regarding anthropometric measurement among B.Sc. Nursing 3rd Year Students at Columbia College of Nursing, Raipur (C.G.). An evaluative approach and a pre-experimental one group pre-test and post- test research design were adopted for the study. Data was collected using purposive sampling technique among 40 B.Sc. Nursing 3rd Year Students. Self-structured questionnaire were used to assess the effectiveness of structured teaching programme regarding anthropometric measurement in terms of knowledge gain. Analysis and interpretation were done according to the objectives of the study. The data was analyzed by calculating percentage, mean and mean percentage, standard deviation, T-test and bar diagram was used to depict the finding. Findings depict that mean post-test knowledge score is 82.8% and pre-test knowledge score is 23.1%. The dispersion in the pre-test score (SD=3.3) is more than post-test score (0.5). Hence the difference of pre-test and post-test in overall percent knowledge gain is 59.7%. Therefore, it is not benefitted of structured teaching programme. Hence the difference between pre-test and post-test knowledge score was statically tested by applying student's paired T-test and it is found to be statistically significant p≥0.9. The study shows that majority of the subjects were having good and excellent knowledge after structured teaching programme.

**Keywords:** Knowledge; Planned Teaching Programme; Anthropometric Measurement.

## Introduction

*Back ground of study:*

Anthropometry is derived from Greek word *anthros* means "*Human*" and *metron* means "*Measure*" refers to the measurement of the human individual [1]. An early tool of physical anthropology. It has been used for identification, physical variation, in paleoanthropology and in various attempts [2]. To correlate physical racial and psychological traits. Anthropometry involves the systematic measurement of the physical properties of the human body, primarily dimensional descriptor of body size and shape.Some common anthropometry measurements include [3];

1. Height or length.
2. Weight.
3. Mid-upper arm circumference (MUAC)
4. Demi-span or arm span.
5. Knee height.
6. Sitting height.
7. Skin fold thickness.
8. Head circumference.

Anthropometric measurement are useful in many fields for e.g.- Athletes understand that body size and composition are important factor in sports performance sports coaches can also use these measurement to monitor an athlete's body to ensure they stay in peak physical shape. Health care professionals on body measurement to evaluate a patient's overall health. For e.g. - body mass index or (BMI), is a measurement of a person's weight-to-weight ratio. Health care providers insure companies and government agencies use BMI to determine if a person is underweight, overweight or obese. A BMI of 30 or greater indicates obesity.

Because obesity is linked to chronic disease like heart disease. Diabetes and certain cancers, knowing this anthropometric measurement can be a lifesaver [4].

*Need of study:*

Studied the inorganic crystal strxucture database with the focus on growth rate, distribution of publication. Productivity of authors, and multiple authorship patterns. Tested the validity of a questionnaire to measure frequency of headaches related to the neck. A secondary goal was to test the reliability of field measurement of associated cervical spine anthropometric and muscle performance factor. The anthropometric and muscle performance measurement were reliable but slight improvement on relist suggest the needs for multiple measurement. Anthropometric evolution performed by trained health worker in inexpensive, non-invasive on the different components of body structure-especially muscular and fat component, and can assist in assessing the nutritional status of a population. Anthropometric measure are highly reliable for determining the nutritional status when compared with more sophisticated methodologies, dilution techniques measuring k-40 by whole body counting and electronic bio impedance [5].

*ProblemStatement:*

"A Study to Assess the Effectiveness of Planned Teaching Programme in Terms of Knowledge Gain Regarding Anthropometric Measurement among B.Sc. Nursing 3rd Year Students at Columbia College of Nursing, Raipur (C.G.)"

*Objectives of the Study:*

1. To assess pre-test knowledge regarding anthropometry measurement among B.Sc. nursing 3rd year student of Columbia college of nursing, Raipur (C.G.).
2. To assess post-test knowledge regarding anthropometry measurement among B.Sc. nursing 3rd year student of Columbia college of nursing, Raipur (C.G.).
3. To compare pre-test and post-test knowledge regarding anthropometry measurement among B.Sc. nursing 3rd year students of Columbia college of nursing, Raipur (C.G.).

**Materials and Methods**

*Research approach:* Evaluative approach was adopted for this study.

*Research design:* Pre-experimental one group pre-test and post-test research design was found to be most appropriate for this study.

*Research setting:* The present study was undertaken in Columbia College of Nursing, Raipur, (C.G.) due to the geographical proximity, feasibility of the study and availability of sample.

*Population:*

*Target population:* The target for the present study comprised of B.Sc. Nursing students of Columbia College of Nursing, Raipur, (C.G.)

*Sample:* In this study the sample consisted of B.Sc. Nursing 3rd year students of Columbia College of Nursing, Raipur, (C.G.)

*Sample size:* The sample size of the study is 40 B.Sc. Nursing 3rd year students who fulfill the exclusion and inclusion criteria.

*Sampling technique:* Purposive sampling technique

*Inclusion criteria:*

- Will belong to B.Sc. Nursing 3rd year students.
- Willing to participate in the study.
- Will be available at the time of data collection.
- Will understand Hindi and English.

*Exclusion criteria:*

- Who will not belong to medical profession.
- Who are not willing to participate.
- Who are not present at the time of study.

**Method of data collection**

*Development of tool:*

The tool was developed by using the following steps

- Reviewing the related literature
- Past knowledge experience of the investigator
- The opinion of the subject expert in nursing

*Description of tools:*

"The structured teaching programme technique of data collection comprised of two parts."

- *Part 1:* Consist of socio demographic variable.
- *Part 2:* Self-structured questionnaire prepared as 30 multiple choice questionfor assessment of knowledge.

*Criteria Measurement:*

Each correct response caries one (1) mark incorrect response carries zero (0) mark knowledge score is categorized.

Maximum Score-30

Minimum Score-1

*Reliability:*

"Reliability refers to the accuracy rate in measurement device."

In qualitative research the stability of a measuring instrument over time through Karl's parsons co-efficient formulas.Reliability computed by Karl's Pearson co-efficient correction is formula and it was collected by spearman's brown prophecy formula to the reliability of the tool (0.9) for the present study.

*Data collection procedure:*

A formal written permission is taken from principal of Columbia College of Nursing, Raipur (C.G.) to conduct main study, data collection from B.Sc. Nursing 3rd year student of Columbia college of Nursing, Raipur (C.G.) The actual data is collected on date-27/09/2017. The purpose of the study was explained in orderly through purposive sampling technique to 40 samples. Contributing to anthropometric measurement through the structural teaching programme on B.Sc. Nursing 3rd year student in Columbia college of Nursing, Raipur (C.G.)

## Results

The data collected were organized and presented under the following sections

**Table 1**: To Assess Pre Test And Post Test Score RegargdingAnthropometry measurement among B.Sc nursing 3rd year students

| S.N. | Item/Knowledge | Pre Test | | Post Test | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| 1 | The period of life had the greatest variation in humanh growth and maturation. | 23 | 57.5% | 27 | 82.5% |
| 2. | A common anthropometry measure for infant is- | 19 | 47.5% | 31 | 77.3% |
| 3. | The anthropometry measurement measure of head circumference estimate- | 08 | 36% | 36 | 90% |
| 4. | Which of the following is the most frequently used anthropometric measure to estimate body mass | 14 | 57.5% | 27 | 67.5% |
| 5. | The gold standard for measuring body composition is. | 12 | 30% | 36 | 90% |
| 6. | The following are the principles in the application of anthropometric data except. | 11 | 27.5% | 32 | 80% |
| 7. | Which of the following would not be included in anthropometric measurement? | 12 | 30% | 33 | 82.5% |
| 8. | Biological anthropology may test be defined as. | 13 | 32.5% | 33 | 82.5% |
| 9. | Anthropometry is the name for | 08 | 20% | 33 | 82.5% |
| 10. | Anthropometry is derived from which word ? | 09 | 22.5% | 35 | 87.5% |
| 11. | Anthropometry measurement used for | 11 | 32.5% | 32 | 80% |
| 12. | Anthropometry measurement include measurement ? | 08 | 20% | 37 | 92.5% |
| 13. | What is the age of infant? | 05 | 12.5% | 37 | 92.5% |
| 14. | What is normal weight of the infant. | 05 | 12.5% | 32 | 80% |
| 15. | What is the normal height of infant? | 05 | 12.5% | 35 | 87.5% |
| 16. | What is the normal mid upper arm circumference of the infant? | 03 | 7.5% | 33 | 82.5% |
| 17. | What is the normal head circumference of the infant? | 10 | 25% | 29 | 72.5% |
| 18. | Anthropometry is the most common technique used to assess the presence & degree of- | 13 | 40% | 31 | 77.3% |
| 19. | Scientific study of the measurement & proportions of the human body. | 07 | 17.5% | 36 | 90% |
| 20. | What is the article not used in anthropometric measurement. | 12 | 30% | 34 | 80% |
| 21. | Infantometer are used for measure? | 14 | 35% | 34 | 85% |
| 22. | Weight is one of the best criteria for assessment | 07 | 17.5% | 27 | 67.5% |
| 23. | Which among the following could benefit from anthropometric measurement? | 11 | 27.5% | 34 | 85% |
| 24. | This is the measurement of a person weight to height ratio | 11 | 27.5% | 34 | 85% |
| 25 | Nutrition assessment can be done using the method these refer to the following | 10 | 25% | 34 | 85% |
| 26. | What are the indicators in height. | 09 | 22.5% | 32 | 80% |
| 27. | Weighting machine used for ? | 06 | 15% | 33 | 82.5% |
| 28. | Which instrument used for the checking the skin fold thickness? | 04 | 10% | 34 | 85% |
| 29. | Which are the region to check the skin fold thickness. | 03 | 07.5% | 33 | 82.5% |
| 30. | Why we check skin fold thickness? | 01 | 2.5% | 36 | 90% |

*Section A* Findings related to socio-demographic characteristics of subject. It deals with demographic data including age, religion, education status, marital status, dietary pattern, occupation, family income, sources of knowledge and means of transportation.

Percentage analysis was carried for demographic variables and presented in the form of table and graph**.**

As per demographic variables depicts that in age the majority of subject i.e. 22 (55%) belong to 22-24 year, 10 (25%) belong to 20-22 year, 7 (17.5%) belong to 18-20 year and 1 (2.5%) belong to above 24 year.

In relation to education Qualification of subjectdepicts that the majority of subjects i.e. 36 (90%) 12$^{th}$ pass, 4 (10%) graduate and non of them in diploma and post graduate.

In relation to religion of the subject depicts that the majority of subjects i.e. 38 (95%) Hindu, 2 (5%) Christian and non of them were Muslim and sikh.

In relation to residual area depicts that majority of subjects i.e. 21 (52.5%) living in Rural area, 19 (47.5%) in Urban Area and non of them in slum area and hilly area.

In relation to occupation of father depicts that majority of subjects i.e. 14 (35%) were farmers, 10 (25%) government employee, 9 (22.5%) private employee, and 7 (17.5%) own business.

Distribution of subject according tofamily income depicts that 14 (35%) were having above 20,000 Rs. income per month, 11 (27.5%) were having 15,000-20,000 Rs., 8 (20%) were having 5000-10,000 Rs., and 7 (17.5%) were having 10,000-15,000 Rs.

Distribution of subject according to marital status depicts that 39 (97.5%) were Unmarried, 1 (2.5%) were Married and non of them Divorced and Widow.

In relation to dietary system of the subject depicts that 20 (50%) were Vegetarians, and 20 (50%) were Non-Vegetarians

Distribution of subjects according to source of information depicts that 20 (50%) were reading Books, 16 (40%) were having Internet, 2 (5%) were having Television and 2 (5%) were having news-paper.

**Table 2**: Analysis of overall knowledge score of pre-test and post-test

n= 40

| S.no | Knowledge Score Over All Levels of Knowledge | Pre-test | | Post-test | |
|---|---|---|---|---|---|
| | Over all Knowledge | Frequency | % | Frequency | % |
| 1 | Average | 36 | 05% | 00 | 0% |
| 2 | Good | 04 | 95% | 04 | 05% |
| 3 | Excellent | 00 | 00% | 36 | 95% |
| | Total | 40 | 100% | 40 | 100% |

Depicts that in over all knowledge of subjects i.e. 36 (95%) were having excellent knowledge, 04 (5%) were having good knowledge and non of them in average.

**Table 3**:-Analysis of Pre-test and Post-test means knowledge score

n=40

| Minimum/maximum score | | mean | Mean% | Gain knowledge |
|---|---|---|---|---|
| Pre Test | 0-30 | 9.5 | 23.1% | 59.7% Gain score |
| Post Test | 0-30 | 33.1 | 82.5% | |

Depicts that in minimum socre & maximum score of subjects i.e. 59.7% is a maximum score and 2.8% is minimum score.

**Table 4**: To Compare Pre-Test and Post-Test Score Regarding Anthropometric Measurement among 3$^{rd}$ Year Student

| Knowledge score | Mean | Standard deviation | Student independent T-test |
|---|---|---|---|
| Pre-test | 9.5 | 3.3 | 0.9 |
| Post-test | 33.1 | 0.5 | |

Significant at P≤0.05=2.021 T=0.9

Depicts that in pretest score (SD=3.3) is more than of post-test score (SD=0.5)

Distribution of subjects according to mother's occupation depicts that 2 (5%) were Professionals, 1 (2.5%) were Non-professionals, 2 (5%) were Workers, and 35 (87.5%) were House wife.

*Section B* Finding related to Pre-test and Post-test knowledge score by using frequency mean and mean percentage

*Section C* Finding related to compared pre-test and post-test knowledge score in group by using mean, standard deviation, test of significant i.e.t-test.

Hence the difference between pre-test and post-test knowledge score was statistically tested by applying student's paired t-test and it is found to be statistically significant at p≥0.9

Hence, table value is more than calculated value, so alternative hypothesis is accepted.

**Discussion**

The findings of the study were discussed under the following headings:

*Section A:* Distribution of the subjects according to socio-demographic variables.

*Section B:* Finding related to Pre-test and Post-test knowledge score by using frequency mean and mean percentage.

*Section C:* Finding related to pre-test and post-test knowledge score in group by using mean, standard deviation, test of significant i.e.t-test.

*Section A* Distribution of subjects according to socio-demographic variables.

- *Distribution of subject according to age*

As per demographic variables depicts that in age the majority of subject i.e. 22 (55%) belong to 22-24 year, 10 (25%) belong to 20-22 year, 7 (17.5%) belong to 18-20 year and 1 (2.5%) belong to above 24 year.

- *Distribution of subjects according to eductaional qualification*

In relation to educational Qualification of subject depicts that the majority of subjects i.e. 36(90%) 12th pass, 4(10%) graduate and non of them in diploma and post graduate.

- *Distribution of the subjects according to religion*

In relation to religion of the subject depicts that the majority of subjects i.e. 38(95%) Hindu, 2(5%) Christian and non of them were Muslim and sikh.

- *Distribution of the subject according to Residualarea*

In relation to residual area depicts that majority of subjects i.e. 21 (52.5%) living in Rural area, 19 (47.5%) in Urban Area and non of them in slum area and hilly area.

- *Distribution of the subject according to father's occupation*

In relation to occupation of father depicts that majority of subjects i.e. 14 (35%) were farmers, 10 (25%) government employee, 9 (22.5%) private employee, and 7 (17.5%) own business.

- *Distribution of the subject according to family monthly income*

Distribution of subject according to family income depicts that 14 (35%) were having above 20,000 Rs. income per month, 11 (27.5%) were having 15,000-20,000 Rs., 8 (20%) were having 5000-10,000 Rs., and 7 (17.5%) were having 10,000-15,000 Rs.

- *Distribution of the subject according to the marital status*

Distribution of subject according to marital status depicts that 39 (97.5%) were Unmarried, 1 (2.5%) were Married and non of them Divorced and Widow.

- *Distribution of the subject according to Dietary system*

In relation to dietary system of the subject depicts that 20 (50%) were Vegetarians, and 20 (50%) were Non-Vegetarians

- *Distribution of the subject according to source of information*

Distribution of subjects according to source of information depicts that 20 (50%) were reading Books, 16 (40%) were having Internet, 2 (5%) were having Television and 2 (5%)were having news-paper.

- *Distribution of the subject according to Mothers occupation*

Distribution of subjects according to mother's occupation depicts that 2 (5%) were Professionals, 1 (2.5%) were Non-professionals, 2 (5%) were

Workers, and 35 (87.5%) were House wife.

*Section B:* Finding related to pre-test and post-test knowledge score by using frequency mean and mean percentage of knowledge gain.

Depicts that in pre-test mean is (9.5) and mean percentge is (23.1%) and post-test mean is (33.1) and mean percentage (82.5%)**.** And increased level of knowledge by 59%

*Section C:* Finding related compared pre-test and post-test knowledge score in group by using mean, standard deviation, test of significant i.e. T-test.

Depicts that mean post-test knowledge score 82.8% is apparently higher than the mean test knowledge score 23.1%. The dispersion in pre-test score (SD=3.3) is more than that of post test score (SD=0.5).

Hence the difference between the pre-test and post-test knowledge score was statistically tested by applying student's paired T-test it is found to be statically significant p≥0.9.

Hence, if calculated value is less than table values, so alternated hypothesis is accepted.

*Limitations*

- The study was limited to sample size 40.
- The study was limited to B.Sc. Nursing 3rd year students of Columbia College of Nursing, Raipur.
- The study was limited to age group (22-24 year).
- The study was limited to one group.
- The self-structured knowledge questionnaire was developed as norm of standard tool and variable.

*Recommendation*

On the basis of finding of the study, the following recommendations are offered for further research:-

- The study can be replicated on a large sample theory by the finding that can be generalized for large section of the health care facilities to over a large population of health care team.
- A similar study can be carried out by using other teaching strategies i.e. Planned teaching programme.
- A similar study can be conducted in different setting and different target population such as doctor, nursing staff, nursing teachers and paramedical staff.

## Conclusion

The study shows that majority of the subjects were having good and excellent knowledge after structured teaching programme. The structured teaching programme facilitates them to update their knowledge regarding anthropometric measurement hence the structured teaching programme was an effective teaching strategy to improve the knowledge of B.Sc. Nursing 3rd year students regarding anthropometric measurement.

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*Original Article*

# To Assess the Effectiveness of Buteyko Breathing Technique on Respiratory Pattern among 3 to 12 Years Children with Respiratory Diseases

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**Abstract**

This study was carried out to reduce the episodes respiratory attacks and to manage respiratory emergencies by the use of non pharmacological interventions like Buteyko breathing technique among the children of 3 to 12 years of age group those who are suffering from different types of respiratory diseases, this study will also improve the level of understanding of children as well as of the family members to manage these condition initially at home so that the anxiety level of the parents will be reduced, along with reduction in mortality and morbidity rate of this age group children.

**Keywords:** Buteyko Breathing Technique; Improve Level of Understanding; Children 3-12 Years; Respiratory Diseases; Non Pharmacological Intervention.

## Introduction

Today's society is complex and ever changing. As children grow they must not only to cope with current demand but also to prepare for many unexpected events they will face in their tomorrows'. Changes brought by new techniques and technologies will continue to have an impact on society as whole.

The buteyko breathing technique was originally developed in the 1950s by physiologist Konstantin Pavlovich Buteyko in Russia. This method is based on the assumption that numerous medical conditions including asthma caused by chronically increased respiratory rate (hyperventilation). Normally, when the amount of $CO_2$ in our blood rises, we breathe. This replaces some of the $CO_2$ with $O_2$, and so lowers the $CO_2$ level back to normal. During an asthma attack, people panic and breathe too quickly. They actually over breathe because they are breathing so rapidly. This over breathing causes the amount of $CO_2$ in the blood to fall too low, which can subsequently lead to disturbances of the acid base balance in the blood and lower tissue oxygen level. The body reacts by causing the airways in the lungs to narrow and reduce the amount of air inhaled in each breath, which panics the patient into trying to breathe even harder. Buteyko breathing technique with will break this "negative feedback" cycle by teaching us to breathe more shallowly and to tolerate a higher concentration of $CO_2$ in our blood.

Childhood is the age span ranging from birth to adolescence. Many disorders affect the young buds either from birth or on the developmental period. One of them is respiratory disorder. The most common chronic disease among children and causes very high degree of morbidity and 25% of school absence in children under 12 years of age.

Buteyko uses a measurement to monitor the condition of asthma and other breathing problems cold the control pause (CP) defined as the amount of time that and individual can comfortably old breath after normal exhalation. According to Buteyko teachers, with Buteyko reduced – breathing practice, asthmatics are expected to find their CP gradually increases in parallel decreased asthma symptoms. By increasing the CP asthmatics can control the initial over breathing phase and they can prevent a "vicious circle of over breathing" from developing spiraling into an asthma attack. This means that asthma attack may be averted simply by breathing less.

This study was carried out to reduce the episodes respiratory attacks and to manage respiratory emergencies by the use of non pharmacological interventions like Buteyko breathing technique among the children of 3 to 12 years of age group those who are suffering from different types of respiratory diseases, this study will also improve the level of understanding of children as well as of the family members to manage these condition initially at home so that the anxiety level of the

parents will be reduced, along with reduction in mortality and morbidity rate of this age group children.

*Problem Statement*

**"**A Pre experimental study to assess the effectiveness of Buteyko breathing technique on respiratory pattern among 3 to 12 years children with respiratory diseases in selected pediatric units at Indore**".**

*Objectives*

- To assess the respiratory pattern of 3 to 12 years children with respiratory disease.
- To assess the effect of Buteyko breathing technique among 3 to 12 years children with respiratory disease.
- To find out the association between pre and post respiratory pattern with selected demographic variables.

*Review of Literarure*

*S. Afsharpaiman et al. (2013)* Respiratory difficulties and breathing disorders in achondroplasia are thought to underlie the increased risk for sudden infant that and neuropsychological deficits seen in this condition. These review evaluate literature regarding respiratory dysfunctions and their sequelae in patients with achondroplasia. Delimited number of prospective studies of respiratory disease in achondroplasia means that observational studies and case series provide a large proportion of the data regarding the spectrum of respiratory disease in achondroplasia and their treatment. Amongst clinical respiratory problems described, snoring is the commonest observed abnormality, but the reported incidence of obstructive sleep apnoea (OSA) shows white variance (10%-75%). Reported treatment of OSA includes adenotonsilectomy, the use of CPAP, and surgical improvement of the airway including mid phase advancement. Otolaryngologic manifestation is also common. Respiratory failure due to small thoracic volumes is reported, but uncommon. Mortality rate at all ages was 2.27 (CI:107-3.0) with age - specific mortality increase at all ages. Sudden death was most common in infants in children cardiovascular events are the main cause of mortality in adults despite earlier recognition and treatment of respiratory complication of achondroplsia, increased mortality rates and other complication remain high. Future and ongoing evaluation of the prevalence and impact of respiratory disorders, particularly OSA, In achondroplasia is recommended.

*Buteyko VK, et al. (2011)* A six year - clinical prior was conducted among 100000 clients with asthma who were being treated with drugs and showed that, approximately 92000 of the subjects do not take drugs today. Clinical trial demonstrated that most people who complete the Buteyko course no longer need their reliever medication and eventually give up steroids as well.

*Hypothesis*

*RH1:* There will be significant difference between mean pretest and mean posttest scores of breathing parameters among 3 to 12 years children.

*RH2:* There will be significant association between pre test and post test scores of respiratory pattern with selected demographic variable.

*RH0:* There will be a no significant difference between mean pretest and mean posttest scores of breathing parameters among 3 to 12 years children.

**Methodology**

Pre experimental one group pre-test post-test design used, An evaluatory observational approach was used in this study to find out the effectiveness of Buteyko breathing technique on the children suffering from respiratory diseases. An observational approach with one group pre-test post-test design was used in this study. The sample consisting of 100 children those who are admitted in paediatric units. They were chosen by non probability convenient sampling technique. The study was conducted at SAIMS hospital and CNBC hospital of Indore city. The data was collected prior and after that Buteyko breathing technique were administered to the children. The data was collected by the help of demographic variables and observational checklist.

*Demographic variables consists of*

1. Age
2. Gender
3. Educational status of child
4. Family income
5. Job status of father and mother
6. Any respiratory disease after birth
7. Present days of hospitalization of child
8. Educational status of father and mother
9. Order of child in family

*Analysis and Interpretation of Data*

**Table 1:** Comparison between pre-test and post-test breathing score.

| S. No. | Breathing Score | Pre-Test Score | | Post –Test Score | |
|---|---|---|---|---|---|
| | | Frequency | Percentage % | Frequency | Percentage % |
| 1 | Poor (41-50) | 59 | 59.0 | 0 | 0.0 |
| 2 | Average (31-40) | 41 | 41.0 | 1 | 1.0 |
| 3 | Good (25-30) | 0 | 0.00 | 99 | 99.0 |
| | Total | 100 | 100.0 | 100 | 100.0 |

Effectiveness of Buteyko breathing technique on respiratory pattern of children suffering from respiratory disease.

**Table 2:** Comparison between mean, SD, mean difference and t value of pre-test and post-test breathing score. (N=100)

| Breathing score | Mean (x) | S.D. (s) | Std. Error of mean | D.F. | t-value | Significance |
|---|---|---|---|---|---|---|
| Pre-test | 40.65 | 1.966 | 0.193 | 9 | 62.209 | P>0.05* Highly significant |
| Post-test | 28.64 | 0.882 | | | | |

10. Type of family
11. Family history of any respiratory disease

*Observational checklist contains*

Statements of respiratory parameter

1. Breathing type
2. Breathing sound
3. Breath depth
4. Breathing Rhythm
5. Heart rate

## Results

The data was analyzed by descriptive and inferential statistics in the conclusion it can be clearly scan that the "t" value was 62.209 and the p value was < 0.05, which clearly shows that Buteyko breathing exercises were very effective in improving the respiratory problems of these children. It is also seen that there is a significant difference between mean pre-test and post-test scores of breathing parameters among 3 to 12 years children at a p value of < 0.05 is being accepted.

The Association between the demographic variables and the pretest breathing score was seen using Person's chi-Square test. The chi-Square value is calculated and p value is checked against the degree of freedom from the p value is calculated. If p value < 0.05, we say that there is significant association between the demographic variable and the pretest breathing score, else if p value is > 0.05, we say that there is no association between the two. Thus, chi-Square only shows the association between the variable and the category, but does not shows the strength of this association which was found to be highly significant.

In this study hypothesis, H1 that, "There will be a significant difference between mean pretest and mean posttest scores of breathing parameter among 3 to 12 years children at a p-value of < 0.05" is being accepted.

*Discussion on association between of Demographic Variables*

The study shows that there is significant association between respiratory disease after birth, present days of hospitalization of the child, family history of any respiratory disease.

There was a significant $x^2=11.40$ $(p<0.05)$ association between the demographic variable with respiratory disease after birth.

There was a significant $x^2=6.04$ $(p<0.05)$ association between the demographic variable with present days of hospitalization of child.

There was a significant $x^2=6.27$ $(p<0.05)$ association between the demographic variable with family history of any respiratory disease.

In this study hypothesis, H2 that, "There will be a significant association between pretest scores of respiratory pattern and their selected demographic variable at a p value of **< 0.05"** is accepted partially.

*Interpretation and Conclusion*

Findings of the study showed that the Buteyko breathing technique was found to be an effective

method to promote the respiratory pattern of the children those who are suffering from respiratory diseases. It was well appreciated and accepted by the children and the family members.

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# Knowledge, Attitude and Experience of Mothers of Under-Five Children on Swine Flu, Selected Village Uttar Pradesh

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**Abstract**

*Background:* Influenza has been reported since the 16th century, WHO referred to this novel strain of influenza A (H1N1) as swine flu approximately 500 million people were affected by the H1N1 virus. The Aim of this study to understand the knowledge, attitude, and experience of under-five mothers regarding swine flu. *Objectives of the study:* To assess the knowledge and attitude of under-five mothers, level of knowledge of participants with selected demographic variables, and describe the lived experience under-five mothers, develop validate booklet regarding swine flu. Sample other of under-five children, purposive sampling technique, and nesting of the sample were done. 30 samples were required for quantitative research. Data saturation end with eight samples for qualitative research. *Data Analysis:* Descriptive and inferential for knowledge and attitude. Phenomenological Colaizzi (1978) were used for mother lived experience. Result 60% had poor knowledge, 36.7% had the moderate knowledge, and 3.3% had good knowledge, mean knowledge 11.10 and standard deviation was 3.28. In addition, attitude regarding swine flu 43.8% had a poor attitude, 37.5% had moderate attitude and 18.7% and Mean 17.25 & standard deviation 7.74., Religion, Number of children, and knowledge of the samples were significantly associated with the selected socio-demographic variables of the sample. Age, Educational level, Occupation Monthly income, and type of family were not significant associations with the selected sociodemographic variable of the sample. Mother's experience analyzed, concluded with 4 themes and 7 subthemes. *Conclusion:* The study concluded that mother of under-five children should be required additional health information regarding swine flu.

**Keywords:** Under-Five Mothers; Swine Flu; Live Experience; Attitude; Knowledge.

## Introduction

Influenza has been reported since the 16th century, Researchers in 2009 found a new influenza strain different from human influenza and WHO referred this novel strain of influenza A (H1N1) as swine flu Approximately 500 million people worldwide are estimated to be affected by H1N1 virus, killing 40-50 million worldwide and 10 - 20 million in India with a mortality rate of 10%. India ranks as 3rd most affected country for cases and deaths of swine flu globally. The Indian government has taken a series of preventive measures and followed the WHO guidelines which include the promotion of public knowledge about swine flu. There is an urgent need to assess the success of these efforts which help to ensure the preparedness of the public in facing subsequent outbreaks. Since very little is known regarding this in India and especially J&K, the present study was planned to explore the knowledge and practice level in rural area of Uttar Pradesh. Many people are not aware about the swine flu and what are the preventive measures. Recentlythe Indian government has been undertaken various steps and also educate people regarding the swine flu and its prevention. The influenza virus is common in pig populations and transmission of the virus from pigs to humans is not common and does not always lead to human flu, often resulting only in the production of antibodies in the blood.

If transmission does cause human flu, it is called zoonotic swine flu. People with regular exposure to pigs are at increased risk of swine flu infection [2,3].

Swine Flu or the Influenza A (H1N1) an acute respiratory disease of the pigs, is caused by one of the numerous swine influenza A strains and is highly contagious. The transmission of the virus is from person-to-person and is similar to the manner in which seasonal influenza spreads the typical incubation period found for influenza is 1 to 4 days, with an average of 2 to 3 days. The symptoms of this form of the virusinclude sore throat, chills severe headache, coughing, weakness and general discomfort like those of influenza. However, some individuals with swine flu have shown serious respiratory illness, including pneumonia or respiratory failure leading to death. Persons suffering from chronic medical conditions like heart disease, diabetes and pregnant women are at higher risk for complications from swine flu [3,4].

On June 11, 2009, the World Health Organization (WHO) raised its pandemic alert level to the highest one indicating that a pandemic of H1N1 flu was underway. Occurrence of swine flu has been reported from every part of the globe like mid-western United States, Canada, Mexico, South America, Kenya, China, Taiwan, Japan, and several parts of Eastern Asia including India Rajasthan and Gujarat are the worst affected regions in India. In the year 2014, 937 cases of swine flu were reported in India and out of which the death toll was 218 [6].

Health workers are vital role inpreventing transmission of H1NI virus, usually this virus was transmitted via blood, respiratory and oral secretions. In India had reported that the Maharashtra state still continues to place on top among other places that have many confirmed swine flu cases. Its last death made its toll climbed up to 197 deaths. The place also has approximately about 3600 people who were infected by the swine flu. Kerala conformed 27 cases, swineflu. New Delhi had 13 cases were of swine flu. Since children are at more risk being involved in groups and possessing less immunity need for educating the children about flu complications, hand hygiene, respiratory etiquette using proper educational materials to enhance compliance and to prevent the occurrence of Influenza [5].

Control of swine influenza by vaccination has become more difficult in recent decades, as the evolution of the virus has resulted in inconsistent responses to traditional vaccines. Standard commercial swine flu vaccines are effective in controlling the infection when the virus strains match enough to have significant cross-protection, and custom (autogenous) vaccines made from the specific viruses isolated are created and used in the more difficult cases. Present vaccination strategies for SIV control and prevention in swine farms typically include the use of one of several bivalent SIV vaccines commercially available in the United States. Of the 97 recent H3N2 isolates examined, only 41 isolates had strong serologic cross-reactions with antiserum to three commercial SIV vaccines. Since the protective ability of influenza vaccines depends primarily on the closeness of the match between the vaccine virus and the epidemic virus, the presence of nonreactive H3N2 SIV variants suggests current commercial vaccines might not effectively protect pigs from infection with a majority of H3N2 viruses. The United States Department of Agriculture researchers say while pig vaccination keeps pigs from getting sick, it does not block infection or shedding of the virus [1,6].

## Material and Method

*Problem statement*

A study to asses theknowledge, attitude and lived experience of mothers of under-five children regarding swine flu in selected villages Mohanlalganj-a mixed method. Objectives of study to assess the knowledge of under-five mothers regarding swine flu. Assess the attitude of under-five mothers regarding Swine flu. Determine the association between the knowledge with selected demographic variables. Describe the lived experience of mothers of under-five, and analysis the experience to drive the major theme and to develop and validate booklet for the mother of under-five children regarding the swine flu.

*Quantitative Research*

The aim of the study to determine the knowledge, attitude and lived experience mothers of under-five children regarding the swine flu. This study was carried out in Mau village Uttar Pradesh, the study has included mothers of under-five children and those children were history or suffered from swine flu, the purposive sampling technique was used to recruit the 30 respondents. The study was conducted from Augusts 2017 to December 2017, structured knowledge questionnaire was used for knowledge assessment, and tool was developed by the investigator and validated from experts in the field of medical and nursing,

Part 1: Demographic characteristics: This was designed to elicit the personal information and

source of information of participants, it consists of 9 items.

Part II: Structured knowledge questionnaires, it consists of 30 questions, participants were instructed to select the most appropriate answer for the question and place the tick mark against corresponding places. Thus altogether there are 30 items with a maximum possible score was 30. The scoring was done arbitrarily and classified like poor knowledge (1-10), moderate knowledge (11-20) and good knowledge (21-30), The Cronbach's Alpha was used to test the reliability of structural knowledge questionnaires (r=. 753).

Part III: For the attitude of the mother of under-five children was assessed by using 5 points rating scale, which included total 16 items, scoring was arbitrarily classified as poor attitude moderately attitude and good attitude.

Data were collected after obtaining the administration permission from Community Health Center Mohanlalganj and written consent was taken from the mother of under-five children, before taking written consent investigator was explaining the purpose of the study and anonymity of information.

*Qualitative Method*

The phenomenological research design was used to explore the experiences of mothers of under-five children regarding the swine flu. Colaizzi (1978) method of data analysis was appropriate for exploring the phenomenon of the lived experience. The phenomenologist believes that lived experience gives meaning to each person's perception of a particular phenomenon and is unique to the individual. The Target population of this study was under five mothers from Mau village Mohanlal ganj, the purposive sampling technique was used before sample requirement the researcher had checked the inclusion and exclusion criteria, inclusion criteria of the sample that mothers who can speak and write the Hindi, and those children had a history of swine flu. Mothers of under-five children were not excluded from the study based on race, religion, employment. Who fulfilled the study criteria had a fixed interview date as per participant convenient. Informed consent was obtained at the time of the interview, the sample was recruited until data saturation, the total of eight samples was required. The interview was conducted in participant home, and voice recorder, notebook, and pen were used to note the any facial or any action during an interview. The investigator individually conducts the interview and begins to the open-ended questions and in-depth data were collected. The validity of the data for searching the truths and understand the lived experiences of mothers of under-five children. Data collection were initiated after a written consent from the participants and obtained the approval from the Superintendent of Community Health Center Mohanlal ganj, the researcher has discussed the confidentiality and anonymity of the data. Each interview began with the open-ended question, "Tell me how you feel when you care for (the name of the child with swine flu), "Tell me what is your opinion regarding swine flu", "Tell me how you feel when your child suffered from swine flu", and "what has been the most difficult thing about being the mother of a child with swine flu?". The researcher encouraged the respondents to describe their experiences and share their stories to uncover common meanings. The researcher had to be permitted to participants to discuss whatever aspect of the mothering experience that they wished to discuss, interviewer given adequate time to discuss their experiences. The entire interview had recorded and the interviews lasted for 30-40 minutes. All participants were given the opportunity to contact the investigator by telephone in the weeks following the interview, and if there was additional information that they wished to share. None of the participants contacted the investigator to provide additional information.

## Result

*Quantitative Analysis*

The analysis of the data were processed by which quantitative information is reduced, organized, summarized, evaluated, interpreted and communicated in a meaningful way. The analysis and the interpretation of the data of this study are based on data which gathered by Structured knowledge questionnaire and attitude scale, and the total number of the participant was (N=30). The result was computed using both the descriptive and inferential statistics used by SPSS version 16. The researcher collected, organized and interpreted the data based on the objectives of the study. The analysis of data were organized and finalized, according to the plan for data analysis and presented in form of tables and figures.

*Qualitative Analysis*

The data were obtained by the semi-structured interview; voice recorder had used during the

Table 1 Show that characteristics of demographic variables of the 30 mothers of under-five children. The data revealed that a majority of the participant's age between the 26-30 years 16 (53.3%). Whereas 12 (40%) of under-five mothers were completed primary school, 26 (86%) were housewives (not working), the majority of the participants belongs to Hindu religion 18 (60%). and the majority of mothers of under-five had A single child 14 (46.7%), the family's monthly income range between Rs 5000-10000, 16 (53.3%). The majority of mothers of under-five children belong to the nuclear family 35 (58.3%), and 17 (56.7%) belonged to the joint family, most of the participant were staying in semi-pucca house, 22 (73.3%), and majority of the mothers of under-five children had inadequate knowledge regarding the swine flu.

Chi-square test used to find out the association between the knowledge with selected socio-demographic variables of the participants. The table 1 shows that statistical significant association of knowledge of mothers of under-five children regarding the swine flu Religion, ($\chi 2$ =17.228*), Number of children ($\chi 2$ = 16.46*), Type of house, ($\chi 2$ =17.413*) and previous knowledge ($\chi 2$ = 18.074*), similarly there was no significant difference in age, education, income and the type of family.

**Table 1:** Distribution of sample characteristics in frequency, percentages and Chi-square. N-30

| Demographic variable | Frequency | Percentages | Knowledge | | | df | $x^2$ |
|---|---|---|---|---|---|---|---|
| | | | Poor | Moderate | Good | | |
| *Age of mother* | | | | | | | |
| a. Less than 20 years | 01 | 3.3 | 1 | 0 | 0 | 6 | 6.790 NS |
| b. 21-25 years | 07 | 23.3 | 2 | 2 | 3 | | |
| c. 26- 30 years | 16 | 53.3 | 8 | 4 | 4 | | |
| d. More than 30 years | 06 | 20.0 | 0 | 3 | 3 | | |
| *Education Status of Mother* | | | | | | | |
| a. Primary | 12 | 40.0 | 3 | 4 | 5 | 6 | 6.855 NS |
| b. Secondary | 07 | 23.3 | 2 | 3 | 2 | | |
| c. Graduation | 8 | 26.7 | 4 | 2 | 2 | | |
| d. Post-graduation and above | 03 | 10.0 | 0 | 0 | 3 | | |
| *Occupational status of mother* | | | | | | | |
| a. Working | 04 | 13.3 | 2 | 2 | 0 | 2 | 1.678 NS |
| b. Not working | 26 | 86.7 | 9 | 9 | 8 | | |
| *Religion* | | | | | | | |
| a. Hindu | 18 | 60.0 | 10 | 6 | 2 | 4 | 17.228* |
| b. Muslim | 10 | 33.3 | 9 | 1 | 0 | | |
| c. Christian | 02 | 6.7 | 0 | 0 | 2 | | |
| *Number of children* | | | | | | | |
| a. No children | 12 | 40.0 | 10 | 1 | 1 | 4 | 16.46* |
| b. One child | 14 | 46.7 | 9 | 3 | 2 | | |
| c. More than two child | 04 | 13.3 | 0 | 0 | 4 | | |
| *Monthly income in Rupees* | | | | | | | |
| a. Rs:1000-5000 per month | 13 | 43.3 | 4 | 6 | 3 | 4 | 3.337 NS |
| b. Rs:5001-10000 per month | 16 | 53.3 | 8 | 4 | 4 | | |
| c. Above 10000 per month | 01 | 3.3 | 0 | 1 | 0 | | |
| *Type of family* | | | | | | | |
| a. Nuclear family | 8 | 26.7 | 4 | 2 | 2 | 2 | 3.337 NS |
| b. Joint family | 22 | 73.3 | 8 | 7 | 7 | | |
| *Type of House* | | | | | | | |
| a. Kaccha | 03 | 10.0 | 3 | 0 | 0 | 4 | 17.413* |
| b. Semi pucca | 22 | 73.3 | 10 | 8 | 4 | | |
| c. Pucca | 05 | 16.7 | 0 | 0 | 5 | | |
| *Previous Knowledge* | | | | | | | |
| a. Yes | 13 | 43.3 | 4 | 8 | 1 | 2 | 18.074* |
| b. No | 17 | 56.7 | 4 | 0 | 13 | | |

*level of significance *Knowledge N=30, Attitude N=16

**Table 2:** Frequency and percentage distribution regarding knowledge on swine flu N-30

| S.No | Knowledge | Frequency | Percentages |
|---|---|---|---|
| 1 | Poor Knowledge | 18 | 60 |
| 2 | Moderate Knowledge | 11 | 36.7 |
| 3 | Good knowledge | 1 | 3.3 |

*Knowledge N=30, Attitude N=16

Table 2 Show that 18 (60%) mothers of under-five children had poor knowledge, 11 (36.7%), mothers of under-five children had moderate knowledge. 1 (3.3%) mother of under-five children had good knowledge regarding the swine flu and its prevention. The nurses are very important health care indicator for rural health care system and nurses along with other health team members haveto be conducted the program related to the swine flu.

Figure 1 Shows that 7 (43.8%) mother of under-five children had a poor attitude, 6 (37.5%) mothers of under-five children had moderate attitude and 3 (18.8%) mother of under-five children had a good attitude towards the swine flu and its prevention. The majority of mothers of under-five children had poor knowledge so that nurses should be educated to the under-five-mothers and clarified their doubt and misconception regarding the swine flu.

Table 3 Depicts that mean 11.10, standard deviation of 3.28 and mean percentages 37 knowledge on swine flu among the mothers of under-five children. Whereas attitude of Mean 17.25, the standard deviation of 7.74 and mean percentages 35.90 on swine flu among the mothers of under-five children.

interview, later interviewer has a transcription from voice recorder and after that translated into English. The data were analyzed using Colaizzi's (1978) methodology. It helps the researcher in establishing themes and sub-themes.

The researcher reassured the verbatim transcription with the voice recorder and cross-checked by the other investigator for the accuracy of the data. The researcher read the verbatim several times, concluded the phages and sentence that pertaining to the study, and also the investigator reassures the meaning and compared with the Colaizzi method.

The researcher has formulated the mother's experiences and organized into the clusters of themes. The themes identified in this study were incorporated into an exhaustive description of the lived experiences of mothers of under-five children regarding the swine flu. The result is described the lived experience of mothers of under-five children regarding the swine flu. The experience of mothers of under-five children is expressed their feeling and formulated themes that to be elicited from interviews with the participants.

This phenomenological study was guided by the Colaizzi's method of data analysis and the common themes of the lived experience were identified using this approach. The participants' names are changed for the maintaining of the anonymity and confidentiality of participants and their families.

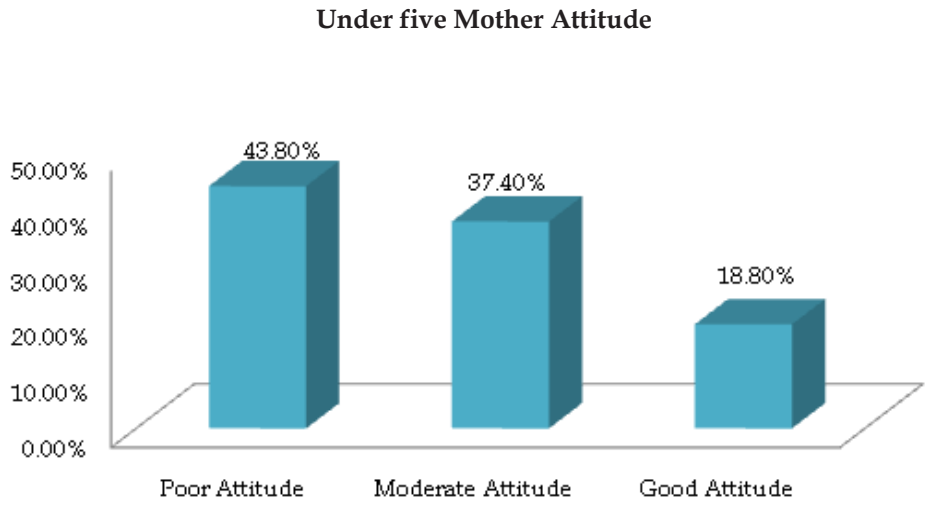


**Fig.1:** Under-five mother attitude on swine flu frequency distribution

**Table 3:** Describe sample Mean, standard deviation and Mean percentages of knowledge and attitude.

N-30

| S. No | Variable | Mean | Standard Deviation | Mean percentage |
|---|---|---|---|---|
| 1 | Knowledge score | 11.10 | 3.28 | 37.00 |
| 2 | Attitude score | 17.25 | 7.74 | 35.90 |

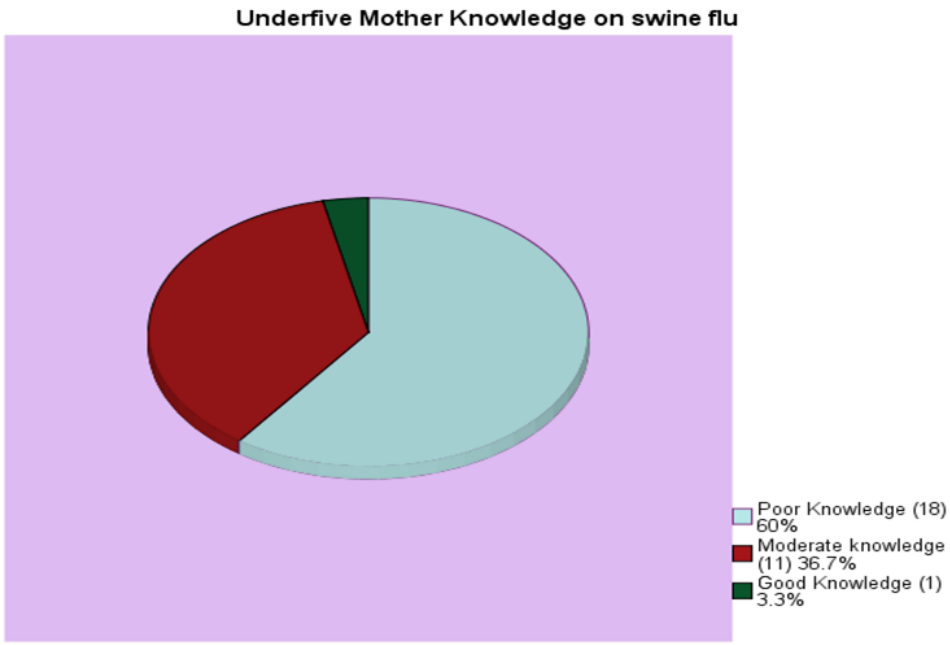


**Fig. 2:** under five mother's knowledge on swine flu frequency distribution

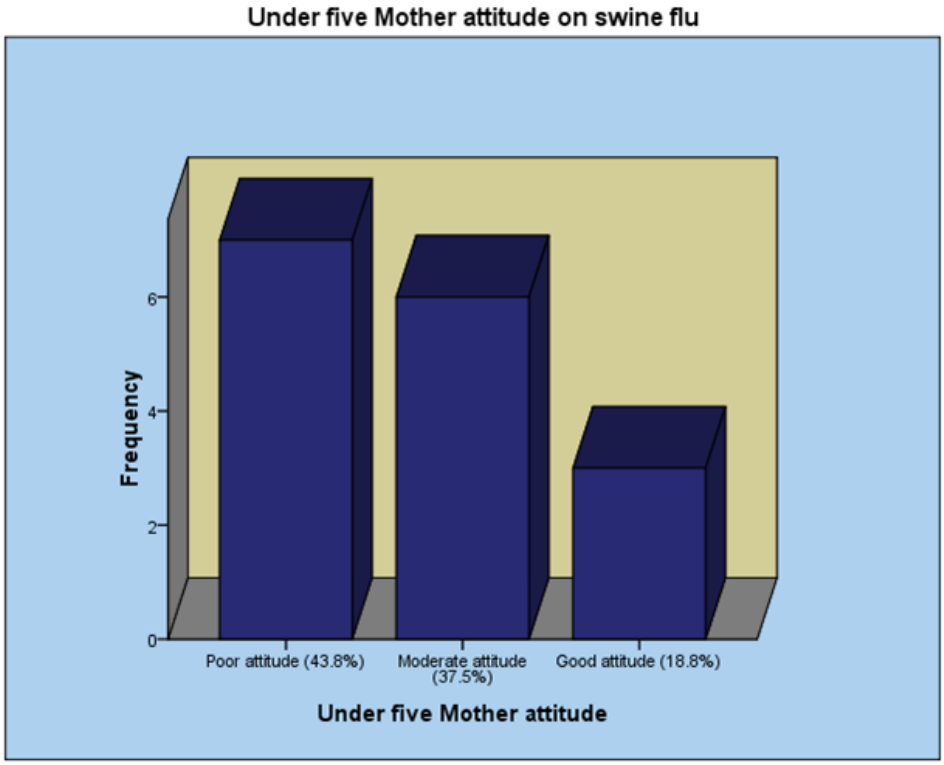


**Fig. 3:** Under five mother attitude on swine flu frequency distribution

The researcher was derived following the four major them and seven sub-themes.

*Themes Sub-themes*

1. Bonding between mother and child. 2. The mother explained the positive aspects of their parenting. 3. The child is suffered from swine flu eliciting responses. A. The timing of persistent signs and symptoms. B. The initial reactions of under-five mothers' blame and frustration C. Personal growth. D. Mothers have described the financial burden of the family. 4 Family life is disrupted, resulting in altered relationships among

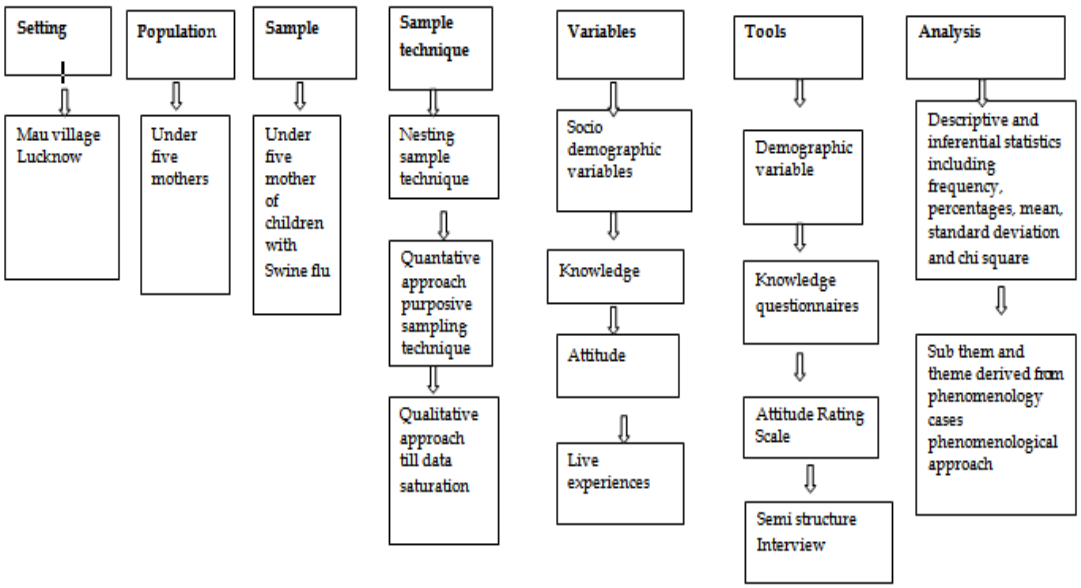


**Fig. 4:** Schematic diagram shows research methodology

family members A. Child sibling. B. Husband. C Other family members.

## Discussion

The present study indicated that the majority of the mothers of under-five children had inadequate knowledge and poor health attitude regarding personal hygiene, environmental hygiene, disease progress and management of the swine flu. The majority of study findings show that respiratory infection is major causes to the child mortality. Therefore, teamwork is very important in term of the health education and rural health program, and also provides an adequate resource in a cost-effective manner to the client or family. The best we heath team members can do is keeping ourselves informed them about the possible happening and step we can be taken and early detection, implemented the plan based on the availability of resources.

The nurses should understand the primary caregivers or mothers of under-five children feeling and attitude before to be initiated the nursing intervention. The swine flu is the serious health problem in children because of inadequate health facilities at rural areas especially high density populated state like Uttar Pradesh. Therefore, prevention is better than cure so that healthcare personnel are a key person to spread the health information to the rural population.

The supporting study was conducted in Jammu region, the study was conducted among the rural population. The purpose of the study was to assess the knowledge, attitude and practices (KAP) of rural population. 270 participants were administered a pre-designed and pre-tested questionnaire consisting of 26 questions evaluating KAP. Overall knowledge score was 62.9%. More than 90% had heard of swine flu, knew prevalent season and had knowledge of disease symptoms. However, knowledge about preventing vaccine was low (27.7%). Overall attitude score was 79.5%. Higher number of the participants expressed willingness to seek more knowledge about disease prevention, though half of them were not satisfied with health authority's efforts. The total practice rate was 60%. Preference for nutritious diet and willingness to use tissue/handkerchief was over 80%, but only 40% expressed willingness to use mask. The current study found good KAP regarding swine flu in the rural area. However, unwillingness to use mask, dissatisfaction with health agencies and lack of knowledge about population at risk is a matter of concern [8].

The supporting study finding shows that out of 200 participants. Majority of participants (higher secondary students) 97.75% have heard about of swine flu, and major clinical symptom like fever, coughing and sneezing, the main way to spread of infection, 97% students mentioned mask is more effective measures to control from swine flu. Less than half students had poor knowledge main regarding medication for swine flu, 79% said that TV is a major source of information, 53.2% students have been trying getknowledge. Above result was concluded that higher secondary students

($9^{th}$ and $10^{th}$) constant support in term health education and update health related information at classroom level [7].

## Conclusion

The conclusion of the study the majority of under-five children has been facing the various health issues like communicable diseases. The government of India has been initiated the various health programs related to mothers and child so that health care personnel should be educated the parents regarding the government schemes, policies and program are integrated with child and mother welfare. Therefore peripheral health care system is the backbone for implementation health-related policies. Understand the mother knowledge, myths, practice and attitude regarding disease pattern, and also educated them and removed misconceptions regarding swine flu, therefore health education is an integral part of the health care system.

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# Effectiveness of STP on Knowledge Regarding Risk Factors of Anorexia Nervosa and its Impact on Health Status Among the Adolescent Girls

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**Abstract**

The main purpose of this study was to identify the knowledge levels of adolescent girls regarding risk factors of anorexia nervosa and its impact on health status. Conducted study to assess the risk factors of anorexia and found Body size overestimation is a fundamental feature of anorexia nervosa. The extent or even existence of body size overestimation in anorexia nervosa is controversial. The most recent review found that only half the studies reported overestimation of body size in individuals diagnosed with anorexia nervosa. The remaining studies found no overestimation or in some instances underestimation. The discrepancy in these findings has been attributed to the wide variety of assessment techniques that are used, including many with questionable psychometric properties.

**Keywords:** Structured Teaching Programme; Research Hypothesis; Hypothesis; District; Uttar Pradesh.

## Introduction

Anorexia nervosa has the highest mortality of any psychiatric disorder. It is a serious eating disorder that results in unhealthy, often dangerous weight loss. While it is most common among adolescent women, anorexia can affect women and men of all ages and is characterized by a refusal to maintain a healthy body weight, an intense fear of gaining weight, and a distorted body image. It has a prevalence of about 0.3% in young women. It is more than twice as common in teenage girls, with an average age of onset of 15 years; 80-90% of patients with anorexia are female. Often referred to as BMI (Body Mass Index) is a tool that treatment providers often use to assess the appropriateness of body weight for an individual struggling with an eating disorder. Additionally, observations of eating patterns, exercise, and personality traits may give indications of an anorexic diagnosis. Those struggling with anorexia frequently fear gaining weight and have a distorted body image. They often believe they appear much heavier than they are. It may be difficult to notice signs and symptoms because what is considered a low body weight is different for each person, and some individuals may not appear extremely thin. Also, people with anorexia often disguise their thinness, eating habits or physical problems.

*Problem Statement*

A study to evaluate the effectiveness of structured teaching programme on knowledge regarding risk factors of anorexia nervosa and its impact on health status among the adolescent girls in selected private schools at Moradabad Dist, U.P.

*Objectives of this Study*

1. To assess the knowledge of adolescent girls regarding risk factors of anorexia nervosa and its impact on health status.

2. To evaluate the effectiveness of structured teaching programme on knowledge regarding risk factors of anorexia nervosa and its impact on health status among the adolescent girls.

3. To find out the association between knowledge score of pre test and post test with the selected demographic variables.

*Hypotheses:*

$RH_1$ - The structured teaching programme will be effective in changing the knowledge levels

regarding risk factors of anorexia nervosa and its impact on health status among the adolescent girls.

$RH_2$ - There will be a significant association between the knowledge scores with selected demographic variables.

## Material and Method

A quantitative research approach was used & the research design adopted for the present study was pre-experimental (one group pre-test – post-test) design. The target population for the study was adolescent girls studying in schools located at Moradabad district U.P, India. & the accessible population were adolescent girls in R.S.D academy school at Moradabad U.P, India. The sample size was 60. Sampling technique used for this study was non probability sampling technique adapting purposive sampling type. The planed teaching program was developed in English after extensive review of literature and expert opinion. The structured knowledge questionnaire was prepared to assess the knowledge regarding risk factors of anorexia nervosa and its impact on health status among adolescent girls. Data analysis was done by using both descriptive and inferential statistics on the basis of objectives and hypothesis of study and to compute data a master coding sheet was prepared. The study hypotheses ($H_1$& $H_2$) were tested by using paired 't' test & chi-square analysis respectively.

The data was analysed by using 6 demographic variables and structured knowledge questioner which contains 15

*Demographic variables.*

1. Age
2. Education status of adolescent girls
3. Parental educational status of mother and father
4. Type of family
5. Parent occupation
6. Family income per month

Structured knowledge questioner which contains 15

1. Anorexia nervosa is an eating disorder.
2. Loss of appetite is common anorexia nervosa.
3. Anorexia nervosa is a good indicator for bad health
4. Extreme weight loss is a sign of anorexia nervosa.
5. ''Being thin'' appearance is a sign of anorexia nervosa.
6. Refusal to eat is a sign of emotional and behaviour anorexia nervosa.
7. Depressed mood is a sign of behavioural anorexia nervosa
8. Emotional disturbance may lead to anorexia nervosa.
9. Modern western culture is a prime cause for secondary to anorexia nervosa.
10. Anorexia nervosa is a more common among adolescent girls and early adult women.
11. Media like TV and fashion magazine are influencing a girl to be thinner.
12. Death and anaemia can occur is anorexia nervosa.
13. Absence of menstruation is a complication of anorexia nervosa.
14. Anorexia nervosa may lead to high susceptible for fracture.
15. Anorexia nervosa can lead to increase the risk of gastrointestinal problem like constipation, nausea.

## Result

The knowledge levels among adolescent girls were moderate with 81.67%, inadequate with 11.67%, and it was adequate only in 6.67% before the implementation of structured teaching programme. The levels of knowledge were changed as that adequate with 96.67% and it was moderate with 3.33% after the implementation of structured teaching programme. The mean of knowledge levels in the pre-test was 7.8% and in post-test was 12.48% respectively.

## Conclusion

The study finding expressed that most of the adolescent girls had moderate knowledge and inadequate knowledge in pre-test. After giving structured teaching programme majority of adolescent girls gained knowledge & their levels may improved from inadequate to adequate levels. The research study supports that structured teaching programme on knowledge regarding risk factors of anorexia nervosa and its impact on health status helps the adolescent girls to improve their knowledge.

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# Animated Video Assisted Teaching on Self-Care Activities among Mildly Retarded mentally Challenged Children

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**Abstract**

*Background and objectives:* According to WHO estimation, 10% of global population has some form of disability [1]. This study examines the effectiveness of animated video assisted teaching on self-care activities among mildly retarded mentally challenged children. Objective of the study was to evaluate the effectiveness of animated video assisted teaching on self-care activities among mildly retarded mentally challenged children. *Methods:* The study was done by quantitative approach with pre-experimental one group pretest post test design on 30 mildly retarded mentally challenged children from VKM Special School Malappuram, Kerala. Pretest data was collected by using self-care ability assessment tool. Animated video assisted teaching provided for 15 days, post test done by re administering the same tool. *Results:* Study results revealed that in pre test assessment of cumulative scores on self-care activities, majority 53.3% (16) sample scored average, 46.7% scored poor and none of the sample scored good. In post test score, majority 93.3% sample scored average, 6.7% sample scored good, and none of the sample scored poor. There was significant difference between pretest and posttest scores since t = 14.04, with p value 0.000, which was significant at 0.05 level of significance. It depicts that animated video assisted teaching was effective to improve the self-care activities of children with mild mental retardation *Conclusion:* The study findings identified that there was significant difference in pre and post test scores, and it concluded that animated video assisted teaching on self-care activities were effective among mildly retarded mentally challenged children.

**Keywords:** Effectiveness; Animated Video Assisted Teaching; Self-Care Activities.

## Introduction

*"We worry about what a child will become tomorrow, yet we forget the fact that he is someone today"*

*-Stacia Taucher*

Mental retardation or intellectual disability is largely known for substantiallimitation in the normal functioning of a child. It includes malformations in bothintellectual and adaptive skills like self care, social skill, self direction, health andsafety etc. Intellectual disability is not a disease and it is certainly not contagious. It is a condition which affects an individual because of some change or damage with in the developing brain and neurological system.

The literature shows that approximately 15% of the entire world population constitutes children with intellectual disability. About 25% of cases are caused bygenetic disorder, and for approximately 25-30% of children born with intellectual disability; the cause reveals unknown [1].

Children love cartoons; this feature of children can be utilized for training the self care activities. Animated video with cartoon characters can be effectively utilized for training. At present there are no such teaching modalities available in Kerala. It is essential to develop an animated video on self care abilities to teach the children in an effective manner. It seems to be more helpful as these children easily get attractive towards animated characters and try to imitate them.

## Materials and Methods

The study was done by quantitative approach with pre-experimental one group pretest posttest design on 30 mildly retarded mentally challenged children from VKM Special School Malappuram, Kerala.

Pretest data collected by using demographic proforma, and self care ability assessment tool. The animated video assisted teachingon self-care activities (eating with spoon, combing the hair, brushing the teeth and toileting) provided for 15 days along with the practice (3 times a day).

Schematic design of the study

| Pre test O1 | Intervention X | Post test O2 |
|---|---|---|
| Assessing the self-care activities of mildly retarded mentally challenged children | Animated video on self-care activities | Reassessing the self-care activities of mildly retarded mentally challenged children |

Parents were instructed to use the steps of animated video while performing self-careactivities by children at home too. Post test was done 7 days after the last session of animated video assisted teaching by using the same self-care ability assessment tool. Collected data tabulated and analyzed

## Results

The present study is aimed to assess the effectiveness of animated video assisted teaching on self care activities among mildly retarded mentally challenged children in selected special school, Malappuram Kerala. The data collected were categorized and analyzed based on study objectives and hypothesis by using descriptive and inferential statistics with the application of Statistical Package for Social Sciences (SPSS Version 17).

Figure 1 Shows that the frequency and percentage distribution of skills on self-care ability's score (pre test-post test score) among mildly retarded mentally challenged children. In pre test assessment majority 53.3% (16) sample scored average, 46.7% (14) scored poor and none of the sample scored good. In post test score, majority 93.3% (28) sample scored average, 7% (2) sample scored good, and none of the sample score poor.

Table 1 Reveals the mean pretest score was found to be 16.00 with a SD±4.127 and mean post test score is 23.57 with SD±4.688. The 't' value was 14.021 with 'p' value 0.000 which was significant at 0.05 level of significance. And it found that there is significant difference between the mean pre test and post test scores on level of performance of self care activities among mildly retarded mentally challenged children.

**Table 1**: Effectiveness of animated video assisted teaching on overall self care ability of mildly retarded mentally challenged children

(n=30)

| Variable | Mean | SD | 't' value | Df | 'p' value |
|---|---|---|---|---|---|
| Pre test score | 16.00 | 4.127 | | | |
| Post test Score | 23.57 | 4.688 | 14.021 | 29 | 0.000* |

(* significant at p<0.05)

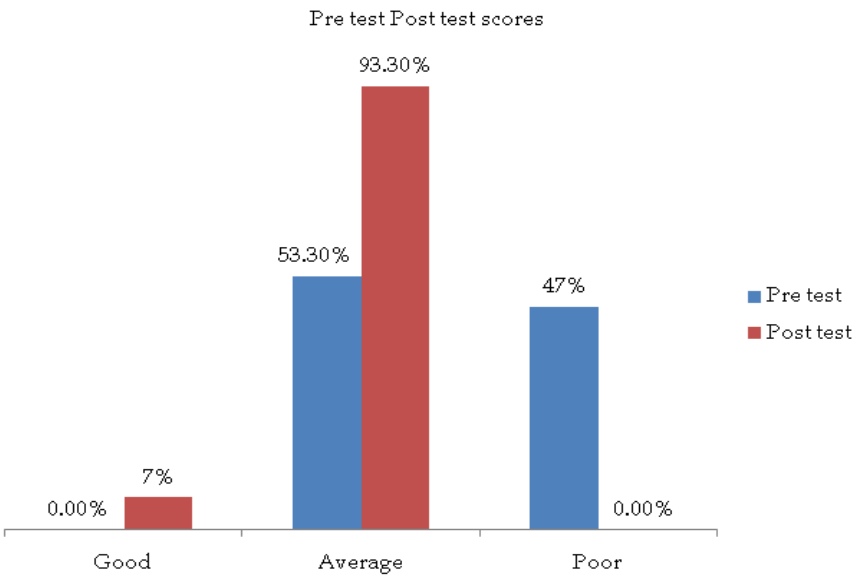


**Fig. 1:** Frequency and percentage distribution of skills on self-care ability score (pre test-post test score) among mildly retarded mentally challenged children

## Discussion

In the present study, 30 children with mild mental retardation were assessed for the effectiveness of animated video assisted teaching on self-care activities. In pre test assessment of cumulative score on self-care activities, majority 53.3% (16) sample scored average, 46.7% (14) scored poor and none of the samplescored good. In post test score, majority 93.3% (28) sample scored average, 6.7% (2) sample scored good, and none of the sample scored poor. The above mentionedvalues clearly identifies that improvement in self-care activities among children withmild mental retardation after the animated video assisted teaching.

An experimental study done to assess the effectiveness of photographic training on self- care activities among children with autism spectrum disorder California. 4 samples were selected for the study by using convenience sampling technique. Selected self-care skills were hand washing and tooth brushing. 10 photographs were used to train the skills, depicting 10 steps of each skill. The intervention is provided for 21 days in 2 sessions. 2 (50%) children showed significant improvement in the self-care. 1 (25%) child had moderate improvement and the remaining 1 (25%) child had no improvement in the self-care activities. Thestudy also emphasized to use different visual training methods for the teaching ofmentally challenged children 35. The findings of this study support the findings of the present study [2].

An experimental study examined the effectiveness of a video-based anchored instruction to enhance self care abilities and communication among mentally disabled children in Taiwan by Hsin-Yih Cindy Shyu. The purpose of this study was to investigate the effects of computer assisted video disc-based anchored instruction on self care abilities and communication. Total 47 samples were selected for the study. Results from a t-test indicate a significant main effect on student ability to perform self care. Results from a two-way repeated measures ANOVA shows that students' self care and communication skills improved significantly with anchored instruction. The findings suggest that video-based anchored instruction provide a more motivating environment that enhanced student's learning and grasping capacity. This study is significant because it establishes an example of video-based anchored instruction for Taiwanese students and also provides empirical evidence of its effects on affective and cognitive responses among mentally challenged children. This study also visualizes the similar concepts of the present study [3].

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# Effectiveness of PTP on Knowledge Regarding First Aid Measures for Selected Minor Ailments of Children among the Primary Teachers

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**Abstract**

A child's world centers around the home, school and the community the biggest threats to children's health in the very places that should be safest home, school and community. First aid measures are the best way to save the children under some health problems and injuries, because the future development of our children depends on their enjoying good health today. Today's children are tomorrow's future, but how we choose to raise our children determine the outcome of our future. Children become the happiness of the society and home as well as future of the country. We cannot ignore their involvement and contribution in the life of parents, teacher and other related persons all through the life. Children are very liked by everyone and life becomes very boring and upset without children. Children are blessed by the God and conquer our hearts with their beautiful eyes, innocent activities and beautiful smiles.

**Keywords:** Injuries; PTP.

## Introduction

School children are active youngsters who receive decreasing amounts of supervision from parents and other adults. All young children can be naughty, defiant and impulsive from time to time, which is perfectly normal. During the school age period, children have more interest in playing and the sense of taste, fully mature prior to the school years and they have more independency. School children attempt to master new motor skills, they are at risk for unexpected injury and fracture during sports hours in school and sometimes due to eating habits and contamination of the food items, children can have diarrhoea, vomiting and food poisoning etc. The occurrence of injury and health problems of school children is unintended and its preventable. Through first aid measures or emergency treatment, we can reduce the disability among children.

First aid measures mean emergency care and treatment of an injured or ill person before complete medical and surgical treatment can be secured. If anyone is in need of protection, it is children, because of their lack of physical and mental maturity. They need special care, firstly from their parents. Responsible for their rearing from the time of their birth and secondly from the teacher that welcomes them. This reality, which seems so elemental, is not always as respected, as it should be.

Knowledge of first aid, which constitutes life-saving treatments for injuries or unexpected illnesses, is important for every individual at every age. First aid and basic life support are so important that teaching basic first aid should be compulsory in all schools.

A Cross sectional survey in rural Tamil Nadu report showed that the rate of accident and poisoning, among children in 0-14 years are poisoning 40.3%, burns 3.8%, animals bites 76%, drawing 7.2%, falls 81.67%, and injury rate was 341.89/1000 child–years and mortality rate of 39.16/100,000 child-years. First aid is the provision of immediate care for an injury or illness. It is usually performed by a sick or injured patient until definitive medical treatment can be accessed. Certain self – limitation or minor injuries may not require further medical care past the first aid intervention. It generally consist of a series of simple and in some cases, potentially life – preserving techniques that person can be trained to perform with minimal equipment.

Basic first aid knowledge helps the teachers to deal with emergency situation. Everyone needs to teach teachers about the mentally prepared for emergencies. Teachers should be taught about different first aid measures at school, which helps emphasize thee important of child safety. This enables them to overcome difficult situations like injuries, bites, and outdoor emergencies. First aid is all about using common sense in the hour of need.

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*Objectives*

1. To assess the pre test knowledge score on first aid measures for selected minor ailments of children among the primary teachers.
2. To assess the post test knowledge score on first aid measures for selected minor ailments of children among the primary teachers.
3. To find the effectiveness of planned teaching program on first aid measures for selected minor ailments of children among primary teachers.
4. To find the association of pre test knowledge on first aid measures for selected minor ailments of children with selected demographic variables.

*Review of Literature*

Literature relevant for this study has been organized in the following sections,

*1. Studies related to First Aid Measures.*

*Prabhjot Saini, P. Ranadive, and R. Mahal, (2009)* conducted "a study of knowledge of first aid management and emergency care". The study was conducted on 50 staff nurses working in burns unit, plastic surgery unit, trauma/casualty and intensive care units of selected hospitals of Ludhiana. The sample consisted of two groups of staff nurses, experimental group and control group. Experimental group have significant group have significant increase in post-test knowledge mean score as evident from 't' value (10) = 5.75, control group shows that there is statistically significant difference in the knowledge scores as evident from 't' value (23) = 2.43.

*1. Studies related to selected Minor Ailments in School Children.*

*Bin Mohanna, MA, Bin Ghouth, AS, and Rajaa. YA, (2007)* conducted a study on fever signs and infection rate among asymptomatic school children in Hajr Valley, Yemen. This study recorded fever signs and the rate of parasitaemia among asymptomatic school children in Hajr Valley, Hadhramout governorate, Yemen. Tests were made for parasites and anaemia in 469 randomly selected primary school children aged 6 – 11 years, together with clinical examination to determine spleen size, and interviews to study sociodemographic factors. Of the children, 12.8% had positive a blood films and 11.3% had spleen enlargement. There were significant associations between infection, anaemia and splenomegaly and fever. Children with malaria parasitameia were more often absent from school.

*2. Studies related to planned Teaching Programme*

*Mrs. Kazi Fauzia Jawaid, (2007)* conducted a study on "effectiveness of a planned teaching programme on first aid for selected accidents and emergencies for school children in selected high schools of Udupi. In this 't' test showed that there was a significant difference between the mean pre-test and post-test skill scores of 'first aid for closed fracture of the hand' of the high school children t=24.5, t (55)= 2, $p<0.05$ which is significant. The 't' test showed that there was a significant difference between the mean pre-test and post-test skill scores of 'first-aid for poisonous snake bite' of the high school children t = 22.54, t (55) = 2, $p<0.05$ which is significant. Hence the null hypothesis was rejected indicating that the PTP was effective method in improving the skills of the high school children.

*Hypotheses*

$RH_1$: The mean post-test knowledge score on first aid measures for selected minor ailments of school children will be higher than the mean pre-test knowledge score among primary teachers.

$RH_2$: There will be significant association between the mean pre-test knowledge score on first aid measures for selected minor ailments of school children among the primary teachers with their selected demographic variables.

## Methodology

An evaluator approach with one group pre-test design was used for the study. The samples consisted of 60 primary teachers selected by Non probability convenient sampling technique. The setting for the study was Shri Nikhil Chetna Public School Bawliya Khurd, Rukhma Devi Public School, Marodhat, Jai Minesh Public School at Indore. Data was collected by administering a structured knowledge questionnaire by the investigator before and after planned teaching programme. Post-test was conducted after 7 days of pre test. Data were analysis using descriptive & inferential statistics (Paired't' test, Chi- square test, Karl- Person's correlation).

*Analysis And Interpretation:*

1. *Description of the Demographic Variables of the Samples*

This section shows the analysis of the frequency and percentage distribution of the samples according to selected demographic variables which include age, educational qualification, total years of teaching experience, and marital status, religion.

**Table 1:** Frequency and percentage distribution of samples according to their demographic variables.

n = 60

| S. No | Demographic Variables | Frequency | Percentage |
|---|---|---|---|
| **1** | **Age in Years** | | |
| a. | 26 – 30 | 17 | 28.33 |
| b. | 31 – 35 | 26 | 43.34 |
| c. | 36 – 40 | 17 | 28.33 |
| **2** | **Educational qualifications** | | |
| a. | Diploma in Teaching | 22 | 36.67 |
| b. | Graduate in teaching | 14 | 23.33 |
| c. | Post graduate in teaching | 24 | 40 |
| **3** | **Total years of teaching experience** | | |
| a. | 2 – 5 years | 50 | 83.33 |
| b. | More than 5 years | 10 | 16.67 |
| **4** | **Marital status** | | |
| a. | Married | 56 | 93.33 |
| b. | Unmarried | 4 | 6.67 |
| **5** | **Religion** | | |
| a. | Hindu | 39 | 65 |
| b. | Christian | 9 | 15 |
| c. | Muslim | 12 | 20 |

*2. Section B: Area-wise analysis of the knowledge scores*

This part deals with area- wise mean, SD and mean percentage of pre test knowledge scores of teachers regarding first aid measures for selected minor ailments in children.

**Table 2:** Area- wise mean, SD and mean percentage of pre test knowledge scores of teachers regarding first aid measures for selected minor ailments in children

| Areas | Maximum score | Minimum Score | Mean | SD | Mean% |
|---|---|---|---|---|---|
| Area I | 5 | 5 | 2.18 | 1.32 | 43.6 |
| Area II | 5 | 4 | 2.02 | 1.20 | 40.4 |
| Area III | 5 | 5 | 2.93 | 1.13 | 58.6 |
| Area IV | 5 | 5 | 2.85 | 1.19 | 57 |
| Area V | 5 | 5 | 2.58 | 1.23 | 51.6 |
| Area VI | 5 | 3 | 0.87 | 0.60 | 17.4 |
| Area VII | 5 | 3 | 0.98 | 0.68 | 19.6 |
| Area VIII | 5 | 3 | 1.08 | 0.70 | 21.6 |
| Area IX | 5 | 3 | 1.23 | 0.83 | 24.6 |
| Overall knowledge | 45 | 24 | 16.73 | 3.82 | 37.18 |

Data in the above Table and Figure revealed that teachers had highest knowledge in the Area III that is, first aid for diarrhoea with a mean percentage of 58.6% followed by Area IV which is first aid of vomiting with a mean percentage of 57%, then the Area V that is, first aid of poisoning with a mean percentage of 51.6%, then in Area I that is general information about first aid with a mean percentage of 43.6 followed by area II first aid of fever with a mean% of 40.4% and least in the area VI that is, first aid of fainting with a mean percentage of 17.4%. The mean knowledge score was 16.73±3.82, with a mean percentage of 37.18% revealing that the overall knowledge of the teachers regarding first aid of selected minor ailments of children is inadequate.

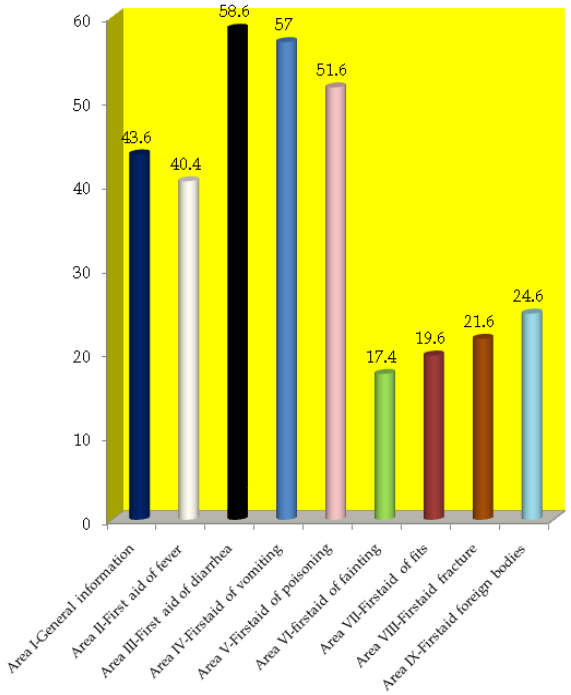


**Fig.4.2:** The bar diagram shows area-wise percentage distribution of teachers knowledge.

**Table 4.4:** Mean, SD, Mean difference of pre test and post test

| Areas | No. of items | Knowledge score | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Pre-test(A) | | | Post-test(B) | | | Effectiveness(B-A) | | |
| | | Mean | SD ± | Mean% | Mean | SD ± | Mean% | Mean | SD (±) | Mean% |
| Area I | 5 | 2.18 | 1.32 | 43.6 | 3.8 | 0.97 | 76 | 1.62 | 0.35 | 32.4 |
| Area II | 5 | 2.02 | 1.20 | 40.4 | 3.25 | 1.13 | 65 | 1.23 | 0.07 | 24.6 |
| Area III | 5 | 2.93 | 1.13 | 58.6 | 3.8 | 0.92 | 76 | 0.87 | 0.21 | 17.4 |
| Area IV | 5 | 2.85 | 1.19 | 57 | 3.77 | 1.01 | 75.4 | 0.92 | 0.18 | 18.4 |
| Area V | 5 | 2.58 | 1.23 | 51.6 | 3.65 | 1.10 | 73 | 1.07 | 0.13 | 21.4 |
| Area VI | 5 | 0.87 | 0.60 | 17.4 | 2.77 | 1.17 | 55.4 | 1.9 | 0.57 | 38 |
| Area VII | 5 | 0.98 | 0.68 | 19.6 | 2.75 | 1.23 | 55 | 1.77 | 0.55 | 35.4 |
| Area VIII | 5 | 1.08 | 0.70 | 21.6 | 2.67 | 1.24 | 53.4 | 1.59 | 0.54 | 31.8 |
| Area IX | 5 | 1.23 | 0.83 | 24.6 | 2.87 | 1.31 | 57.4 | 1.64 | 0.48 | 32.8 |
| Total | 45 | 16.73 | 3.82 | 37.18 | 29.32 | 4.14 | 65.16 | 12.59 | 0.32 | 27.98 |

*4.4 Effectiveness of Planned Teaching Programme on First Aid Measures for Selected Minor Ailments in Children*

This part deals with Area-wise Mean, SD, and Mean percentages of pre test and post test knowledge scores and Comparison of knowledge and effectiveness in pre-test with post test

*Section A: Area-wise, Mean, SD, and Mean percentages of pre test and post test*

This part deals with Area-wise Mean, SD, and Mean percentages of pre test and post test knowledge scores

The data presented in the table 4.4 shows that the total mean knowledge score is increased by 27.98% with mean ±SD of 12.59±0.32 after the administration of Planned teaching programme.

Comparison of the area wise mean and SD of the knowledge scores showed that, the effectiveness of planned teaching programme in the area of 'First aid general measure' had 32.4% increase in the mean percentage knowledge scores with the mean and SD of 1.62±0.35 was observed with that of 43.6% in pre-test and 76% in the post test. Highest increase was found in the area of 'first aid of fainting' was 38% increase in the mean percentage knowledge scores with the mean and SD of 1.9±0.57 was observed with that of 17.4% in pre-test and 55.4% in post test. Least increase was found in the area of 'First aid of diarrhoea' was 17.4% increase in the mean percentage knowledge scores with the mean and SD of 0.87±0.21 with that of 58.6% in pre-test and 76% in the post test. The results reveal that the overall knowledge was more compared to that of the pre test as the post test knowledge score come under good knowledge which was inadequate in the pre-test assessment.

**Table:** Association between pre-test knowledge with demographic variables

N = 60

| Demographic variable | $\chi^2$ | Knowledge | | |
|---|---|---|---|---|
| | | Df | p-value | Inference |
| Age | 0.102 | 1 | 0.749 | NS |
| Education | 1.071 | 1 | 0.301 | NS |
| Total teaching | 0 | 1 | 1 | NS |
| Marital status | 0 | 1 | 1 | NS |
| Religion | 1.071 | 1 | 0.301 | NS |

Table value χ2 3.84, df-1 S = Significant; NS = Not significant

*Association Between Pre-Test Knowledge Score of Primary Teachers on First Aid Measures for Selected Minor Ailments of Children with Selected Demographic Variables*

Chi-square test was computed to test the association between the knowledge of the subjects and selected demographic variables; the following null hypothesis was formulated.

$H_{02}$: There will be no significant association between knowledge score with selected demographic variables.

## Discussion

- *Area-wise analysis of the knowledge scores*
  - The area-wise analysis revealed that the teachers scored highest in the area III of first aid of diarrhoea (Mean percentage 58.6%).
  - The area-wise analysis revealed that the teachers scored lowest in the area VI of first aid of fainting (Mean percentage 17.4%).
  - The overall mean knowledge score was 16.73±3.82, with a mean percentage of 37.18%.

The study findings were supported by a descriptive study conducted on 'the knowledge and practices regarding the first aid training among teachers of preschool children in a selected urban community at Indore city. The samples were 60 teachers at Indore. The data was collected using a structured questionnaire. The results shows that only 59.7% of teachers are knowledgeable about first aid measure and among them only 52.2% teachers are giving proper first aid training to their children. The highest mean knowledge (78.3%) found in the aspect of emergency readiness followed by first aid management (67.1%).

*Effectiveness of planned teaching programme on first aid measures of selected minor ailments in children.*

- The results shows that the total mean knowledge score is increased by 27.98% with mean SD of 12.59±0.32 after the administration of planned teaching programme.

Comparison of the area wise mean and SD of the knowledge scores showed that,

- The effectiveness of planned teaching programme in the area of 'First aid general measure' had 32.4% increase in the mean percentage knowledge scores with the mean and SD of 1.62±0.35 was observed with that of 43.6% in pre-test and 76% in the post test.
- Highest increase was found in the area of 'first aid of fainting' was 38% increase in the mean percentage knowledge scores with the mean and SD of 1.9±0.57 was observed with that of 17.4% in pre-test and 55.4% in post test.
- Least increase was found in the area of 'First aid of diarrhoea' was 17.4% increase in the mean percentage knowledge scores with the mean and SD of 0.87±0.21 with that of 58.6% in pre-test and 76% in the post test
- The pre-test knowledge of all the teachers was inadequate 36.67%, moderate 63.33% and adequate 0%,
- The post test knowledge adequate 41.67%, moderate 58.33% and none of them had inadequate knowledge regarding first aid measures of selected minor ailments in children

The overall effectiveness of the study showed that,

- ❖ The value of 't' was calculated to analyses the difference in knowledge score of parents in pre-test and post-test.
- ❖ The calculated' value (19.23, $p<0.05$) in knowledge aspect was greater than the table value (1.83) at 0.05. Therefore, the null hypothesis was rejected and the research hypothesis was accepted indicating the gain in knowledge was not by chance.
- ❖ Hence it is concluded that there is very highly significant gain in knowledge of teachers on first aid measures of selected minor ailments in children after the planned teaching programme.
- ❖ The findings revealed that the mean post test score was significantly higher than their mean pre test score.

The study findings were supported by a pre experimental study on 'the effectiveness of a planned teaching program on first aid measures to mothers of children between one to three years of age in selected day care centres at Indore. The samples were 60 mothers having children between one to three years of age at Mangalore. The data was collected using structured questionnaire. The results shows that 95% of mothers have good knowledge score that is 70-100% in the post test as compared to average knowledge score that is 50-69% obtained among 73.33% of samples in the pre test. The researcher reaches the conclusion that a planned teaching program helps to improve the knowledge of mothers regarding first aid measures of children.

- ➢ *Association between Pre-test knowledge scores regarding first aid measures of selected minor ailments in children with selected demographic variables.*
  - There was not significant association between the pre-test knowledge score with the demographic variables.
  - The null hypotheses were rejected.

Rivara. FP, Booth. CL, Bergman. AB, Rogers. LW, and Weiss.J, (1991) conducted a study on prevention of pedestrian injuries to children: effectiveness of a school training program. Pedestrian injuries are a complex problem for which no single intervention will be completely effective. One component of a community wide program, training of school children in street-crossing skills, is evaluated. The program targeted public school students in grades K through 4 with an eight session training program by a single teacher, cross age teaching, videotape feedback, and in 1990 parent child activity workbooks. Children's street crossing was observed pre-training and post-training and graded on four behaviours: walking on sidewalk/

shoulder vs in the street; stopping at the curb; looking L-R-L before crossing; keep looking while crossing. Observations were completed on 137 children in 1989 and 92 in 1990. It is concluded that pedestrian skills of children can be improved but that such a program must be part of a broader effort if pedestrian injuries are to decrease.

## Results

The result of this study indicates that there was a significant increase in the post-test knowledge scores compared to pre-test scores of first aid minor ailments of children. The mean percentage knowledge score was observed 37.18% in the pre-test and after implementation of planned teaching programme post-test mean percentage was observed with 65.16%. This is shows the effectiveness of planned teaching programme was 27.98%.

*Interpretation and Conclusion*

The findings of this study provide information for conducting educational programme for first aid measures for selected minor ailments of children. This study proved that there was a significant increase in the post-test knowledge score compared to pre-test score in all area & there was a significant increase in the knowledge score among the primary teachers.

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*Original Article*

# A Study Assess the Knowledge and Attitude of Mothers of Under-Five Children Regarding Immunization in Selected Ruralareas of Uttar Pradesh

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**Abstract**

Immunization had laid a major development in areas of preventive pediatrics. Immunization had also helped in preventing various childhood diseases and decreasing mortality rates among children. Child Health is a major concern in developing countries like India. The objectives of the study were to assess the attitude regarding of Mother of under five children regarding Immunization, assess the knowledge of Mother of under five children regarding Immunization and to find the association between knowledge and demographical variables. The 60 samples were selected by purposive sampling technique and study was conducted in mau village under mohanalalganj community health center. Three types of tool were used such as Questionnaire to assess demographic variable, Questionnaires for knowledge assessment and a Five point Likert scale for attitude assessment. The results showed that 31.7% had moderate knowledge, 68.3% had inadequate knowledge and none had adequate knowledge. The results also concluded that 70% had moderate attitude and none had good attitude. There was statistical significant association in knowledge level of mothers with age ($\chi 2=5.805^*$), Educational level ($\chi 2=3.651^*$), religion ($\chi 2 = 6.158^*$), The remaining variables likeOccupation, Number of children, Family income, Type of house, Type of family, were found to be not significant.

**Keywords:** knowledge; attitude; immunization; underfive children

## Introduction

Immunization had laid a major development in areas of preventive pediatrics. Immunization had also helped in preventing various childhood diseases and decreasing mortality rates among children.Child Health is a major concern in developing countries like India. In spite of rapid advancement in the field of antibiotics and chemotherapeutics, immunization plays a major role in eradicating communicable diseases. Despite these advancement in this field three million children die every year from vaccine preventable diseases and another three million are permanently disabled. The present study judges the existing knowledge and attitude of mothers of under-five children regarding immunization.

*Objectives*

- Assess the attitude regarding of Mother of under five children regarding Immunization
- Assess the knowledge of Mother of under five children regarding Immunization
- Find the association between knowledge and demographical variables.

## Methods

An evaluative research was used to collect data from samples. The 60 samples were selected by purposive sampling technique and study was conducted in mau village under mohanalalganj community health center. Before collecting datas from samples permission was obtained fromthe Community Health center and informed consent was taken from participants. Three types of tool were used such as Questionnaire to assess demographic variable, Questionnaires for knowledge assessment and a Five point Likert scale for attitude assessment.

## Results

The results of study are as follows;

The table 1 illustrates that majority of mothers (46.8%) age is between 21-30 years and majority of children (45%) are male. Most of the mothers belong to hindu religion (70%) and most of the mothers are graduates (53.3%). Majority of mothers (53.2%) are self employed and most of them (61.6%) belongs to nuclear family. Majority (60%) of the mothers have income less than 5000 and most of them (51.6%) have single child only (Table 1).

**Table 1:** Description of samples based on Demographic variables n = 60

| S. No | Variable | Characteristics of sample | | |
|---|---|---|---|---|
| | | Category | f | Percentage |
| 1 | Age of mother in year | Less than 20 years | 21 | 35 |
| | | 21-30years | 28 | 46.8 |
| | | 31-40years | 10 | 16.6 |
| | | More than 40 years | 1 | 1.6 |
| 2 | Age of child | Male | 27 | 45 |
| | | Female | 33 | 55 |
| 3 | Religion | Hindu | 42 | 70 |
| | | Muslim | 17 | 28.4 |
| | | Others | 1 | 1.6 |
| 4 | Education | Less than high school | 24 | 40 |
| | | Graduation | 32 | 53.3 |
| | | Post graduation and above | 4 | 6.7 |
| 5 | Occupation | Employed | 28 | 46.8 |
| | | Self employed | 32 | 53.2 |
| 6 | Family | Joint family | 23 | 38.4 |
| | | Nuclear family | 37 | 61.6 |
| 7 | Income | Less than Rs 5000 | 36 | 60 |
| | | Rs 5001-10000 | 18 | 30 |
| | | More than Rs 10001 | 6 | 10 |
| 8 | Number of child | Single child | 31 | 51.6 |
| | | Two child | 26 | 43.4 |
| | | More than two child | 3 | 5 |

- Description of samples based on attituderegarding Immunization

**Table 2:** Mean and standard Deviation of samples based on attitude regarding Immunization

| | Descriptive Statistics | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| Attitude | 60 | 24 | 62 | 42.72 | 7.235 |
| Valid N (listwise) | 60 | | | | |

**Table 3:** Frequency and Percentage distribution of samples based on attitude regarding Immunization

| | f | % |
|---|---|---|
| Poor attitude | 18 | 30 |
| Moderate attitude | 42 | 70 |
| Good attitude | 0 | 0 |

**Table 4:** Frequency and Percentage distribution of samples based on knowledge regarding Immunization

| | f | % |
|---|---|---|
| Inadequate knowledge | 41 | 68.3 |
| Moderate knowledge | 19 | 31.7 |
| Adequate knowledge | 0 | 0 |

**Table 5:** Mean and standard Deviation of samples based on knowledge regarding Immunization

| | Descriptive Statistics | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| knowledge | 60 | 4.00 | 15.00 | 8.7167 | 2.83496 |
| Valid N (listwise) | 60 | | | | |


**Fig.1:** Frequency and Percentage distribution of samples based on attitude regarding Immunization

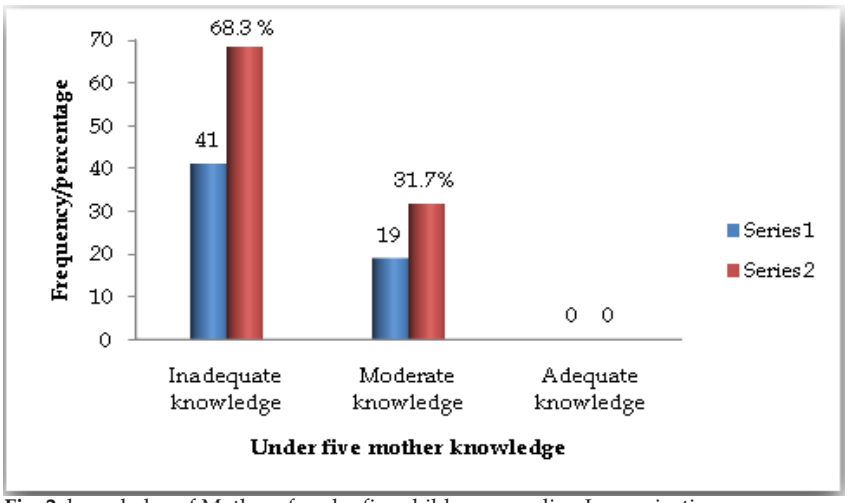


**Fig. 2:** knowledge of Mother of under five children regarding Immunization

**Table 6:** Description of association between knowledge and demographical variables. n =60

| S.No | Variable | Characteristics of sample | | | df | Chi-square value |
|---|---|---|---|---|---|---|
| | | Category | f | percentage | | |
| | Age of mother in year | Less than 20 | 21 | 35 | 3 | 5.805* |
| | | Years 21-30 year | 28 | 46.8 | | |
| | | 31-40 years | 10 | 16.6 | | |
| | | More than 40 years | 1 | 1.6 | | |
| | Age of child | Male | 27 | 45 | 1 | 0.030 NS |
| | | Female | 33 | 55 | | |
| | Religion | Hindu | 42 | 70 | 2 | 6.158* |
| | | Muslim | 17 | 28.4 | | |
| | | Others | 1 | 1.6 | | |
| | Education | Less than high school | 24 | 40 | 2 | 3.651* |
| | | Graduation | 32 | 53.3 | | |
| | | Post graduation and more | 4 | 6.7 | | |
| | Occupation | Employed | 28 | 46.8 | 1 | .115 NS |
| | | Self employed | 32 | 53.2 | | |
| | Family | Joint family | 23 | 38.4 | 1 | 1.212 NS |
| | | Nuclear family | 37 | 61.6 | | |
| | Income | Less than Rs 5000 | 36 | 60 | 2 | .741 NS |
| | | Rs 5001-10000 | 18 | 30 | | |
| | | More than Rs 10001 | 6 | 10 | | |
| | Number of child | First child | 31 | 51.6 | 2 | 2.309 NS |
| | | two child | 26 | 43.4 | | |
| | | More than two child | 3 | 5 | | |

**Note:** *- Denotes significant at 5% level ($p<0.05$) and NS- Not significant at 5% level ($p>0.05$).

The table 6 depict the association between selected demographic variables and knowledge level among mothers of under five childrenregarding immunization. Chi-square test was done to find the association between the knowledge of the mothers of under five children with selected socio demographic variables. From the table, it is found that there is statistical significant association in knowledge level of mothers with age ($\chi^2$=5.805*), Educational level (($\chi^2$=3.651*), religion ($\chi^2$ = 6.158*), The remaining variables likeOccupation, Number of children, Family income, Type of house, Type of family, were found to be non significant

## Discussion

The Present study results showed that 31.7% had moderate knowledge, 68.3% had inadequate knowledge and none had adequate knowledge. The results also concluded that 70% had moderate attitude and none had good attitude. There was statistical significant association in knowledge level of mothers with age ($\chi^2$=5.805*), Educational level ($\chi^2$=3.651*), religion ($\chi^2$ = 6.158*), The remaining variables likeOccupation, Number of children, Family income, Type of house, Type of family, were found to be not significant.

The study was similar to that of a cross-sectional study which was conducted at Lotus Children's Hospital, Hyderabad, India from June 2013- June 2014. Immunization knowledge and attitude among 550 parents was evaluated through a questionnaire. The results showed that eighty percent of the parents were unaware that there are few vaccines which are in the recommended immunization calendar, but are not administered as per national program. Most of the parents are unaware of the newer vaccines being available and the disease prevented by them. Parents have misconceptions regarding vaccine efficacy, side effects, safety profile. Doctors were the main source of information (55%) and mass media (television, radio, newspaper) was underutilized. Level of knowledge directly correlated with maternal literacy ($p \leq 0.05$) and to a lesser extent with fathers' literacy and advancing age was associated with better knowledge ($p \leq 0.05$). The study also concluded that there is limited knowledge among parents regarding newer vaccines.

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# Assessment of the Level of Knowledge and Attitude on Effects of Mobile Phones and Internet Usage among Mothers of Adolescents

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**Abstract**

Mobile phones have become an almost essential part of daily life. The Internet is a global linking of computers that allows information transfer. Internet is being integrated as part of our every day's life. Nearly, 243 million adolescents live in India as per the UNICEF report. *Statement of the problem*: A study to assess the level of knowledge and attitude on effects of mobile phones and internet usage among mothers of adolescents at selected community, Kancheepuram District. *Objectives:* To assess and correlate the level of knowledge and attitude on effects of mobile phones and internet usage among mothers of adolescents and To associate the level of knowledge and attitude on effects of mobile phones and internet usage among mothers of adolescents with their demographic variables. *Materials and Methods:* Research approach was quantitative and research design was descriptive research design. 100 samples who fulfilled the inclusion criteria were selected by non-probability convenient sampling technique. The tool used for the data collection comprises of 3 sections: Section A - Demographic variables; Section B -A structured questionnaire on knowledge to assess the effects of mobile phones and internet usage among the mothers of adolescents, formulated by the investigators. It comprises of 15 knowledge questionnaires and Section C - A structured 5 point Likert scale statements to assess the level of attitude on effects of mobile phones and internet usage among the mothers of adolescents formulated by the investigators. Data collected were analyzed by using descriptive and inferential statistics. *Results:* The analysis reveals that 37 (37%) mothers of adolescents have inadequate knowledge; 54 (54%) have moderate knowledge; 9 (9%) have adequate knowledge. The level of attitude among mothers of adolescents reveals that 10 (10%) have poor attitude; 72 (72%) have fair attitude; 18 (18%) have good attitude. The analysis depicts that there is no co – relation between level of knowledge and attitude on effects of mobile phones and internet usage among mothers of adolescents. There is significant association found between the "Educational Qualification and Occupation of Mother" with knowledge and there was no significant association between the other demographic variables. The analysis reveals that the demographic variables are not significant with level of attitude and hence there is no significant association with demographic variables. *Conclusion:* The study findings concludes that majority mothers of adolescents 54 (54%) have moderate knowledge. The majority mothers of adolescents 72 (72%) have fair attitude. The nurse administrator should plan to improve the academic performance and to prevent physical, psychological and social problems in adolescents.

**Keywords**: Mobile Phones; Internet Usage and Mothers of Adolescents.

## Introduction

We are living in an era of technology with a full blown technical revolution. There is a plethora of latest electrical gadgets hitting the market everyday and science and technology has reached heights, we could barely imagine in the last few decades. Mobile phones have become an almost essential part of daily life since their rapid growth in popularity the late 1990's [1].

Mobile phones are considered as an important mode of communication. In the current state, they are viewed as the most convenient and accessible method to contact people. Conversely, although mobile phones are very beneficial to the society and in everyday life of an individual, there are a number of disadvantages to the use of mobile phones [2].

The Internet is a global linking of computers that allows information transfer. The internet was established in early 1990's by the US Department of defense, primarily for military purpose. Since then, the continual improvement of the internet technology has provided an extraordinary level of public accessibility to a wide range of forms of communication, e.g. intra-organizational email, data storage, management and transfer, social websites like face book, text messaging such as twitter, and so forth [3].

The amount of time we are spending in front of our mobile screens is more than ever and little do we realize that psychologically and socially. As internet access have become more common [4]. The traditional agents of socialization are families and school. The mobile phone has the power to undermine the school authority and weaken their control over students as well as affects their level of academic performance. Surprisingly research on influence of mobile phones on our schools today has not been given much attention [5].

According to majority of research done so far, it was discovered that use of mobile phones in schools is problematic. Mobile phones gives room to blending students, roles with others roles thus distracting and disrupting students' academic world [6]. Today, 20% of people in the world are adolescents, constituting 1.2 billion people worldwide. Nearly, 243 million adolescents live in India as per the UNICEF report [7].

*International Journal of Innovative Research Science, Engineering Technology, (2013)* conducted a study that focused on exploring the pattern of mobile phones usage among teens and young adults in Chennai. It also attempted to examine the extent of addictive behavior towards the usage of mobile phones. Questionnaire survey method was used to elicit the responses. Higher secondary students and first year students were considered as population and random sampling technique were used to select the sample of 201 students. The study revealed that all of the young people are at risk of developing addictive pattern of behavior and had poor academic performance due to their extent usage of mobile phones [8].

Thus the investigators wants to do research on assessing the knowledge and attitude on effects on mobile phones and internet usage among mothers of adolescents in Maraimalainagar.

## Materials and Methods

Research approach was quantitative and research design was descriptive research design.100 samples who fulfilled the inclusion criteria were selected by non-probability convenient sampling technique. The tool used for the data collection comprises of 3 sections: Section A - Demographic variables; Section B - A structured questionnaire on knowledge to assess the effects of mobile phones and internet usage among the mothers of adolescents, formulated by the investigators. It comprises of 15 knowledge questionnaires with total score 15 and Section C - A structured 5 point Likert scale statements to assess the level of attitude on effects of mobile phones and internet usage among the mothers of adolescents formulated by the investigators. It comprises of 15 statements with the score of 75. The positive statements are scored as follow 5 for strongly agree, 4 for agree, 3 for neutral, 2 for disagree, 1 for strongly disagree. The negative statements are scored in reverse order.

Data collected were analyzed by using descriptive and inferential statistics. The content of the tools were established on the basis of opinions of nursing experts. Suggestions were incorporated in the tool. In order to assess the reliability of the questionnaire, the test-retest method was done on the sample in the village. On statistical analysis the reliability of the tool was found to be 0.8.

### *Ethical considerations*

The study was approved by the dissertation committee of SRM College of Nursing, Kattankulathur, Kancheepuram District. Permission was obtained from the Panchayat Officer and informed consent was obtained from each participant for the study before starting data collection. Assurance was given to the subjects that anonymity of each individual would be maintained and they are free to withdraw from the study at any time. The investigator explained the objectives and methods of data collection. The data collection was done during the day time. Self-introduction about the investigator and details about the study was explained to the samples and their consent was obtained. The confidentiality about the data and finding were assured to the participants.

Data collected were analyzed by using descriptive and inferential statistics.

## Results

The Table 1 depicts the frequency and percentage distribution of mothers of adolescents**.** Regarding the age group of children majority of them 41 (41%) are in the age group (16-19) years. Considering the gender 51 (51%) are females. Considering the educational status of the adolescents 34 (34%) are in (6-7 standard). The educational qualification of the mother 32 (32%) had high school education. Considering the occupation of mother 27 (27%) are Home makers. Regarding the family income 26 (26%) are earning in between Rs. 7878-11876. Considering the duration of children using the mobile gadgets/ day 36 (36%) are using 3 Hours / day. Considering the exposure to information regarding effects of mobile phones and internet use among mothers 48 (48%) from friends and relatives. Most of the adolescents 37 (37%) are operating smart phones. Considering the child's development of interest and learning to

**Table 1:** Frequency and percentage distribution of the demographic variables of mothers of adolescents N=100

| S. No. | Demographic Variables | Class | No. of respondents | Percentage (%) |
|---|---|---|---|---|
| 1 | Age group of children | 10 -12 Years | 29 | 29 |
| | | 13 - 15 Years | 30 | 30 |
| | | 16 -19 Years | 41 | 41 |
| 2 | Gender of Adolescents | Male | 49 | 49 |
| | | Female | 51 | 51 |
| 3 | Education of the Adolescents | 6 -7 Standard | 34 | 34 |
| | | 8 - 9 Standard | 20 | 20 |
| | | 10 -12 Standard | 22 | 22 |
| | | UG - I Year | 24 | 24 |
| 4 | Educational qualification of the mother | No formal education | 11 | 11 |
| | | Primary | 13 | 13 |
| | | High School | 32 | 32 |
| | | Higher secondary | 22 | 22 |
| | | Graduate | 16 | 16 |
| | | Postgraduate and Above | 6 | 6 |
| 5 | Occupation of Mother | Home Maker | 27 | 27 |
| | | Un skilled worker | 12 | 12 |
| | | Skilled Worker | 23 | 23 |
| | | Non professional | 15 | 15 |
| | | Professional | 23 | 23 |
| 6 | Family income per month | Rs. 1590 - Rs. 4726 | 11 | 11 |
| | | Rs. 4727 - Rs. 7877 | 17 | 17 |
| | | Rs. 7878 - Rs. 11876 | 26 | 26 |
| | | Rs. 11876 - Rs. 15753 | 25 | 25 |
| | | Rs. 15754 - Rs. 31506 | 18 | 18 |
| | | > Rs. 31507 | 3 | 3 |
| 7 | Duration of children using the mobile gadgets/day | 1 Hour | 20 | 20 |
| | | 2 Hours | 27 | 27 |
| | | 3 Hours | 36 | 36 |
| | | 4 Hours & above | 17 | 17 |
| 8 | Exposure to information regarding effects of mobile phones and internet use among mothers of adolescents | Mass Media | 25 | 25 |
| | | Health care professional | 27 | 27 |
| | | Friends and relatives | 48 | 48 |
| 9 | The typeof gadget the child operates | Computer | 26 | 26 |
| | | Laptop | 19 | 19 |
| | | IPod | 18 | 18 |
| | | Smart phones | 37 | 37 |
| 10 | The child developed interest and learned to use mobile gadgets and internet | Self | 37 | 37 |
| | | From Parents | 19 | 19 |
| | | From Elder Siblings | 30 | 30 |
| | | From Peers/Others | 14 | 14 |
| 11 | The purpose of the child to use mobile/internet | Playing games | 36 | 36 |
| | | Watching and listening music | 31 | 31 |
| | | Watch Movies | 18 | 18 |
| | | For Educational Purpose | 15 | 15 |

The Table 1 above represents the frequency and percentage distribution of mothers of adolescents.

The Table 2 (a) analysis reveals that 37 (37%) mothers of adolescents have inadequate knowledge; 54 (54%) mothers of adolescents have moderate knowledge; 9 (9%) mothers of adolescents have adequate knowledge.

The Table 2 (b) analysis reveals that 10 (10%) mothers of adolescents have poor attitude; 72 (72%) mothers of adolescents have fair attitude; 18 (18%) mothers of adolescents have good attitude.

The Table 3 reveals that P-value of Pearson's correlation co-efficient is not significant (since the P-value is greater than 0.05) and hence there is no significant correlation between level of knowledge and attitude on effects of mobile phone and internet usage among mothers of adolescents.

**Table 2(a):** Level of Knowledge on effects mobile phones and internet among mothers of adolescents.

N=100

| S. No. | Knowledge Level | No. of Mothers | Percentage (%) |
|---|---|---|---|
| 1 | Inadequate Knowledge | 37 | 37 |
| 2 | Moderate Knowledge | 54 | 54 |
| 3 | Adequate Knowledge | 9 | 9 |

**Table 2(b):** Level of attitude on effects of mobile phones and internet usage among mothers of adolescents.

N=100

| S. No. | Attitude Level | No. of Mothers | Percentage (%) |
|---|---|---|---|
| 1 | Poor attitude | 10 | 10 |
| 2 | Fair attitude | 72 | 72 |
| 3 | Good attitude | 18 | 18 |

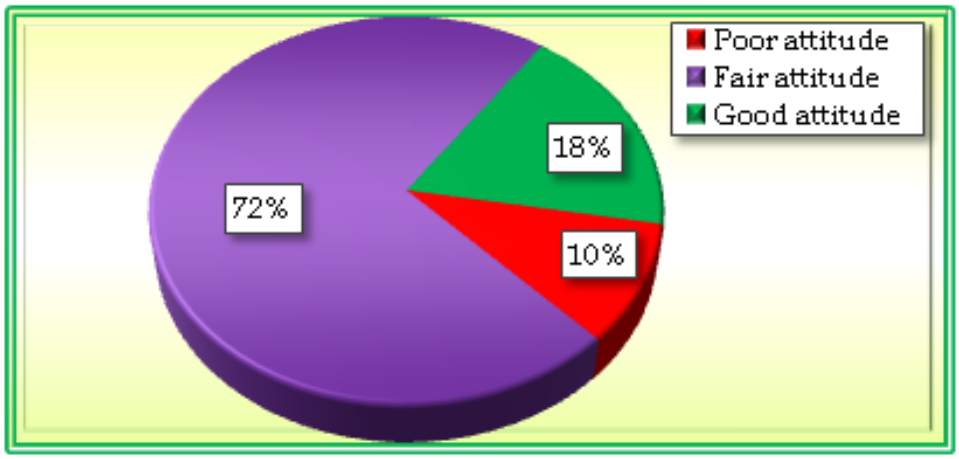


**Fig.1:** Percentage distribution of level of attitude on effects of mobile phones and internet usage among mothers of adolescents.

**Table 3:** Correlation between the level of knowledge and attitude on effects of mobile phones and internet usage among mothers of adolescents.

N= 100

| | Level | Mean | SD | Pearson's Correlation Co-efficient | P-value |
|---|---|---|---|---|---|
| 1 | Knowledge | 8.57 | 2.105 | -0.130 | 0.196 |
| 2 | Attitude | 48.92 | 7.679 | | |

**Table 4:** Shows association between the level of knowledge of mothers of adolescents with their demographic variables. N= 100

| Demographic Variable | Class | Knowledge Level | | | Chi-Square Value | DF | P-Value |
|---|---|---|---|---|---|---|---|
| | | Inadequate Knowledge | Moderate Knowledge | Adequate Knowledge | | | |
| Age group of children | 10 -12 Years | 9 | 17 | 3 | 3.282 | 4 | 0.512 |
| | 13 - 15 Years | 9 | 19 | 2 | | | |
| | 16 -19 Years | 19 | 18 | 4 | | | |
| Gender of Adolescents | Male | 14 | 28 | 7 | 5.003 | 2 | 0.082 |
| | Female | 23 | 26 | 2 | | | |
| Education of the Adolescents | 6 -7 Standard | 14 | 16 | 4 | 2.203 | 6 | 0.900 |
| | 8 - 9 Standard | 6 | 12 | 2 | | | |
| | 10 -12 Standard | 7 | 13 | 2 | | | |
| | UG - I Year | 10 | 13 | 1 | | | |
| Educational Qualification of the Mother | No formal education | 4 | 6 | 1 | 29.696 | 10 | 0.001** |
| | Primary | 3 | 10 | 0 | | | |
| | High School | 14 | 16 | 2 | | | |
| | Higher secondary | 9 | 12 | 1 | | | |
| | Graduate | 7 | 8 | 1 | | | |
| | Postgraduate and Above | 0 | 2 | 4 | | | |
| Occupation of Mother | Home Maker | 8 | 16 | 3 | 21.374 | 8 | 0.006** |
| | Un skilled worker | 5 | 7 | 0 | | | |
| | Skilled Worker | 14 | 9 | 0 | | | |
| | Non professional | 7 | 8 | 0 | | | |
| | Professional | 3 | 14 | 6 | | | |
| Family income per month | Rs. 1590 - Rs. 4726 | 5 | 5 | 1 | 9.420 | 10 | 0.493 |
| | Rs. 4727 - Rs. 7877 | 8 | 8 | 1 | | | |
| | Rs. 7878 - Rs. 11876 | 6 | 19 | 1 | | | |
| | Rs. 11876 - Rs. 15753 | 11 | 11 | 3 | | | |
| | Rs. 15754 - Rs. 31506 | 7 | 9 | 2 | | | |
| | > Rs. 31507 | 0 | 2 | 1 | | | |
| Duration of children using the mobile gadgets/day | 1 Hour | 7 | 11 | 2 | 1.360 | 6 | 0.968 |
| | 2 Hours | 11 | 15 | 1 | | | |
| | 3 Hours | 13 | 19 | 4 | | | |
| | 4 Hours & above | 6 | 9 | 2 | | | |
| Exposure to information regarding effects of mobile phones and internet use among mothers of adolescents | Mass Media | 10 | 14 | 1 | 1.803 | 4 | 0.772 |
| | Health care professional | 11 | 14 | 2 | | | |
| | Friends and relatives | 16 | 26 | 6 | | | |
| The type of gadget the child operates | Computer | 8 | 17 | 1 | 8.996 | 6 | 0.174 |
| | Laptop | 9 | 9 | 1 | | | |
| | IPod | 7 | 11 | 0 | | | |
| | Smart phones | 13 | 17 | 7 | | | |
| The child developed interest and learned to use mobile gadgets and internet | Self | 13 | 18 | 6 | 6.182 | 6 | 0.403 |
| | From Parents | 5 | 13 | 1 | | | |
| | From Elder Siblings | 12 | 16 | 2 | | | |
| | From Peers/Others | 7 | 7 | 0 | | | |
| The purpose of the child to use mobile/internet | Playing games | 11 | 21 | 4 | 2.640 | 6 | 0.852 |
| | Watching and listening music/movie | 14 | 15 | 2 | | | |
| | Watch Movies | 6 | 11 | 1 | | | |
| | For Educational Purpose | 6 | 7 | 2 | | | |

**-Significant at 1% level *-Significant at 5% level

The above table 4 reveals that P-values corresponding to the demographic variables "Educational Qualification of the Mother and Occupation of Mother" are significant at 1% level (since the P-value is lesser than 0.01) and hence there is highly significant association between the "Educational Qualification of the Mother and Occupation of Mother" and "Knowledge level of Mothers".

All other P-values corresponding to the demographic variables are not significant (since all the values are greater than 0.05) and hence that there is no significant association between the other demographic variables.

**Table 5:** Shows association between the level of attitude of mothers of adolescents with thier demographic variables N = 100

| S. No. | Demographic Variable | Class | Knowledge Level | | | Chi-Square Value | DF | P-Value |
|---|---|---|---|---|---|---|---|---|
| | | | Poor attitude | Fair attitude | Good attitude | | | |
| 1 | Age group of children | 10 -12 Years | 3 | 21 | 5 | 5.040 | 4 | 0.283 |
| | | 13 - 15 Years | 4 | 24 | 2 | | | |
| | | 16 -19 Years | 3 | 27 | 11 | | | |
| 2 | Gender of Adolescents | Male | 5 | 38 | 6 | 2.183 | 2 | 0.336 |
| | | Female | 5 | 34 | 12 | | | |
| 3 | Education of the Adolescents | 6 -7 Standard | 6 | 19 | 9 | 7.962 | 6 | 0.241 |
| | | 8 - 9 Standard | 2 | 15 | 3 | | | |
| | | 10 -12 Standard | 1 | 19 | 2 | | | |
| | | UG - I Year | 1 | 19 | 4 | | | |
| 4 | Educational qualification of the mother | No formal education | 3 | 7 | 1 | 13.883 | 10 | 0.178 |
| | | Primary | 2 | 7 | 4 | | | |
| | | High School | 1 | 25 | 6 | | | |
| | | Higher secondary | 3 | 13 | 6 | | | |
| | | Graduate | 1 | 14 | 1 | | | |
| | | Postgraduate and Above | 0 | 6 | 0 | | | |
| 5 | Occupation of Mother | Home Maker | 4 | 15 | 8 | 7.816 | 8 | 0.452 |
| | | Un skilled worker | 1 | 8 | 3 | | | |
| | | Skilled Worker | 1 | 18 | 4 | | | |
| | | Non professional | 2 | 12 | 1 | | | |
| | | Professional | 2 | 19 | 2 | | | |
| 6 | Family income per month | Rs. 1590 - Rs. 4726 | 3 | 6 | 2 | 10.593 | 10 | 0.390 |
| | | Rs. 4727 - Rs. 7877 | 1 | 15 | 1 | | | |
| | | Rs. 7878 - Rs. 11876 | 2 | 20 | 4 | | | |
| | | Rs. 11876 - Rs. 15753 | 2 | 17 | 6 | | | |
| | | Rs. 15754 - Rs. 31506 | 1 | 12 | 5 | | | |
| | | > Rs. 31507 | 1 | 2 | 0 | | | |
| 7 | Duration of children using the mobile gadgets/day | 1 Hour | 3 | 11 | 6 | 5.104 | 6 | 0.531 |
| | | 2 Hours | 2 | 21 | 4 | | | |
| | | 3 Hours | 4 | 28 | 4 | | | |
| | | 4 Hours & above | 1 | 12 | 4 | | | |
| 8 | Exposure to information regarding effects of mobile phones and internet use among mothers of adolescents | Mass Media | 4 | 19 | 2 | 3.394 | 4 | 0.494 |
| | | Health care professional | 2 | 20 | 5 | | | |
| | | Friends and relatives | 4 | 33 | 11 | | | |
| 9 | The type of gadget the child operates | Computer | 2 | 20 | 4 | 9.583 | 6 | 0.143 |
| | | Laptop | 2 | 10 | 7 | | | |
| | | IPod | 3 | 15 | 0 | | | |
| | | Smart phones | 3 | 27 | 7 | | | |
| 10 | The child developed interest and learned to use mobile gadgets and internet | Self | 4 | 25 | 8 | 5.425 | 6 | 0.491 |
| | | From Parents | 2 | 17 | 0 | | | |
| | | From Elder Siblings | 3 | 20 | 7 | | | |
| | | From Peers/Others | 1 | 10 | 3 | | | |
| 11 | The purpose of the child to use mobile/internet | Playing games | 3 | 25 | 8 | 5.608 | 6 | 0.469 |
| | | Watching and listening music/movie | 5 | 19 | 7 | | | |
| | | Watch Movies | 1 | 16 | 1 | | | |
| | | For Educational Purpose | 1 | 12 | 2 | | | |

**-Significant at 1% level *-Significant at 5% level

The above table 5 reveals that P-values corresponding to the demographic variables are not significant (since all the values are greater than 0.05) and hence that there is no significant association between the demographic variables and Attitude level of Mothers.

use mobile gadgets and internet 37 (37%) are by self and 37 (37%) are from peers/others. Considering the purpose of the child to use mobile/ internet 36 (36%) are using for playing games.

## Discussion

The analysis reveals that 37 (37%) mothers of adolescents have inadequate knowledge; 54 (54%) have moderate knowledge; 9 (9%) have adequate knowledge. The level of attitude among mothers of adolescents reveals that 10 (10%) have poor attitude; 72 (72%) have fair attitude; 18 (18%) have good attitude. The analysis depicts that there is no co – relation between level of knowledge and attitude on effects of mobile phones and internet usage among mothers of adolescents. There is significant association found between the "Educational Qualification and Occupation of Mother" with knowledge and there was no significant association between the other demographic variables. The analysis reveals that the demographic variables are not significantwith level of attitude and hence there is no significant association with demographic variables.

## Conclusion

The study findings concludes that majority mothers of adolescents 54 (54%) have moderate knowledge. The majority mothers of adolescents 72 (72%) have fair attitude. The nurse administrator should plan to improve the academic performance and to prevent physical, psychological and social problems in adolescents.

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The investigators would like express their gratitude the Panchayat officer for granting permission to conduct the study and to all the participants for their co-operation and support.

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# Discriptive Study to Assess the Level of Knowledge Regarding National Immunization schedule among Mothers

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**Abstract**

The research project attempts to assess the level of knowledge regarding national immunization schedule for mothers attending OPD at AIIMS Patna. The objectives of the research project was to assess the level of knowledge regarding national immunization schedule for mother attending OPD, to find the association between the national immunization schedule and demographic variables, to provide health education to the mother about national immunization schedule. The conceptual framework of the research project was developed on the basis Roy's adaptation model, non experimentalrandomized control group design used in the research project [9]. The research project was carried out in OPD at AIIMS Patna. The Sample comprised of all mothers who fulfilled the criteria of the research project. The sample was 100 in number. Pilot study was conducted on 10 samples and the tools were found to be feasible. Data collection was done from 25th April 2017 to 4th may 2017. Data was collected by using a questionnaire and analyzed by descriptive and inferential statistics. The reliability of the questionnaire tool was 0.883. The result of the research project shows that, 10% sample have excellent knowledge, 57% have very good knowledge, 28% have good knowledge and 5% having poor knowledge. A relationship between national immunization schedule and demographic variables like education level, religion, area of residence were noticed. The findings of this research project helped the mothers to enhance their knowledge about national immunization schedule and make them to apply this knowledge in their daily life.

**Keywords:** Knowledge; Immunization; Mother.

## Introduction

*"The child is god's gift to the family. Each child is created in the special image and likeness of God for greater things;* to love and to be loved." Immunization schedule is a series of vaccination including the timing of all doses which may be either recommended, or compulsory depending on the country of residence [2].

Since last fifty years immunization has save the lives of many children. Vaccines are safe, simple and one of the most cost effective ways to save and improve the lives of children worldwide [10]. However, many children in developing countries are reluctant to get immunized because of their living standards in community [3]. Vaccines ensuresthat all children must be immunized, no matter what the circumstances are.

In early years the mortality rate of child was high due to communicable diseases and that time immunization has saved 3 million lives worldwide [5].

## Methodology

*Research Approach*

Quantitative research approach

*Research Design*

Non- experimental descriptive research design

*Variables*

Variables were quantities, properties or

characteristics of persons, things or situations that can change or vary and are manipulated or measured in research [7].

*Setting of Study:* Setting refers to the area where the study was conducted [8].

The research project was conducted in OPD at AIIMS, Patna.

*Population:* Population is a group who possess specific attributes that are a researcher is interested in [6].

In present research project population consist of all the mothers who were coming in OPD at AIIMS Patna.

*Sample and Sampling Technique:* A finite subset of population selected with objective of investigating its properties is called sample.

In present research reportthe sample comprise of 100 mothers who attends AIIMS, Patna OPD and for the collection of samples convenient sampling technique was used.

*Sample Selection Criteria*

- The inclusion criteria of subjects in the research project were:
  - Mothers are willing to participate in the research.
  - Mothers who are present at the time of data collection.
- The exclusion criteria of the subjects in the research project were:
  - Mothers who are not able to read, write and understand Hindi language.

*Tools for the Study*

The researcher used appropriate statistical technique for data collection and present in the form of table and diagrams.

Knowledge was analyzed by frequency and percentage distribution.

Level of knowledge was analyzed by mean and standard deviation.

In this research project the investigators had prepared two tools.

Tool 1: Questioner to assess the demographic variables.

This tool used to collect base line information it consist of 10 items, age, type of family, education, area of residence, previous knowledge, number of children, occupation, religion, distance of hospital from home, marriage duration.

Tool 2: Questioner to assess the level of knowledge regarding immunization.

*Interpretation*

| Grade | Score |
|---|---|
| Excellent | 16-20 |
| Very Good | 11-15 |
| Good | 6-10 |
| Poor | 1-5 |

*Reliability*

Reliability of an instrument is the degree of consistency with which it measures the attribute it is suppose to be measure.

Reliability of the tool was calculated by using pretest method and was conducted in 10 samples. The reliability was calculated bycronbach's alpha and the value was 0.886.

*Pilot Study*

Pilot study is defined as a small-scale version or trail of the measure study [4]. Pilot study was conducted from 25th march 2016 to 4th April 2016in OPD at AIIMS Patna. After obtaining permission from the head of the institution and informed consent from the mothers, the tool was administered to 10 mothers who attends OPD at AIIMS Patna. The purpose of the study was explained to the mothers and assured the confidentiality of personal information of mothers. The study was found feasible and practicable.

*Problem Faced;* According to our questioner, pilot study samples were not able to answer the questions so we modified our questioner.

*Data Collection Process*

The data was collected from 25th march 2016 to 4thApril. Before data collection a formal written permission was obtained from the head of the institution and consent from the mothers for conducting the research project. The purpose of the research project was explained to the mothers and assured the confidentiality of personal information of mothers an informed consent form was taken from the mothers.

Data collection process was conclude by thanking each mothers participation and co-operation. The collected data than compiled for data analysis

*Organization of Study Findings*

The analysis of the data was presented under the following headings:

Section I: Description of demographic variables of samples.

Section II: Description of level of knowledge of mothers regarding National immunization schedule.

Section I: Description of demographic variables of samples.

This section includes description of personal variables. The personal variable includes age, type of family, education, previous knowledge, area of residence, duration of marriage, distance of hospital from home, no of child, occupation, religion.

The Table depicts about he frequency and percentage distribution of age, type of family, education level, number of child, occupation religion, area of residence, distance of hospital from house, marriage duration, and previous knowledge regarding immunization.

Section 1: (Socio Demographic Data)

Graphical representation of the socio demographic variables

1. Age

**Table 1:** Distribution of sample based on demographic variable. n=100

| S.No | Demographic Variables | Category | Frequency (f) | Percentage (%) |
|---|---|---|---|---|
| 1 | Age | 11-30 | 79 | 79% |
| | | 31-60 | 21 | 21% |
| 2 | Type of Family | Joint | 55 | 55% |
| | | Nuclear | 45 | 45% |
| 3 | Education Level | <10 Class | 71 | 71% |
| | | >10 Class | 29 | 29% |
| 4 | Number of Child | >2 | 39 | 39% |
| | | <2 | 61 | 61% |
| 5 | Occupation | House Wife | 73 | 73% |
| | | Working | 27 | 27% |
| 6 | Religion | Hindu | 95 | 95% |
| | | Others | 5 | 5% |
| 7 | Area of Residence | Urban | 32 | 32% |
| | | Rural | 68 | 68% |
| 8 | Distance of Hospital from House | 1-4 Km | 73 | 73% |
| | | >4 | 27 | 27% |
| 9 | Marrige Duration | <6 | 62 | 62% |
| | | >6 | 38 | 38% |
| 10 | Previous Knowledge | From Hospital | 50 | 50% |
| | | Mass Media | 50 | 50% |

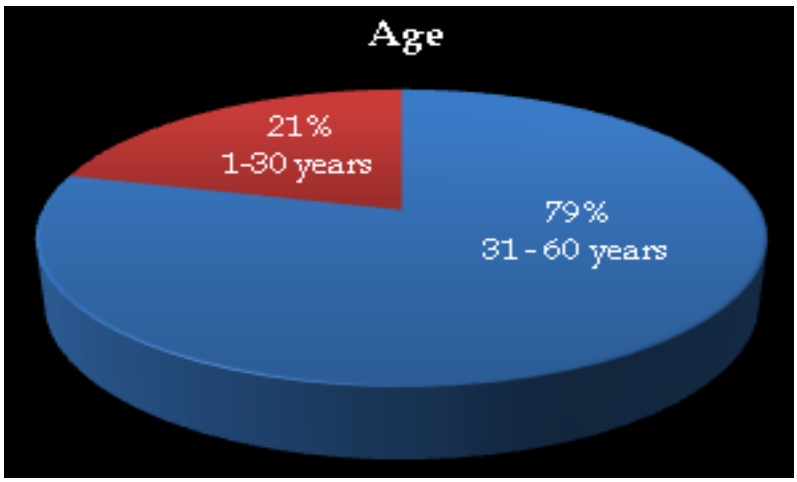


Fig.1: Age wise distribution of samples in relation to their age in years

Figure 1 shows that majority (79%) samples were belongs to age group of 1-30 years.

2. Type of family

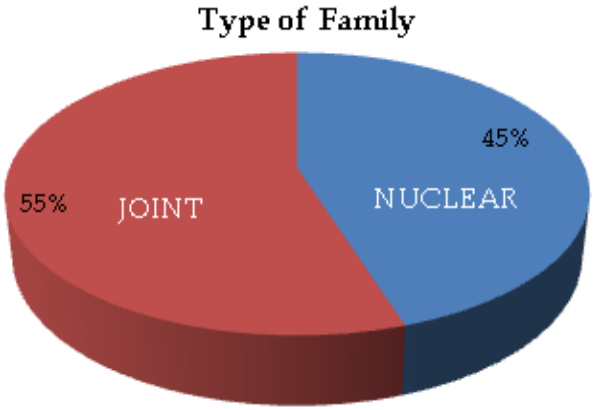


**Fig. 2:** Distribution of sample based on type of family

Figure 2 shows that majority of (55% )sample were from joint family.

3. Education level

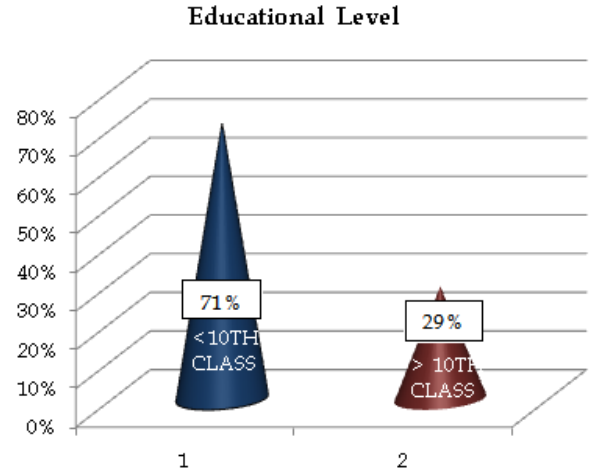


**Fig. 3:** Distrebution based on education leve of mothers

Figure 3 shows that majority of (71%) sample was <10th class pass.

4. Number of child

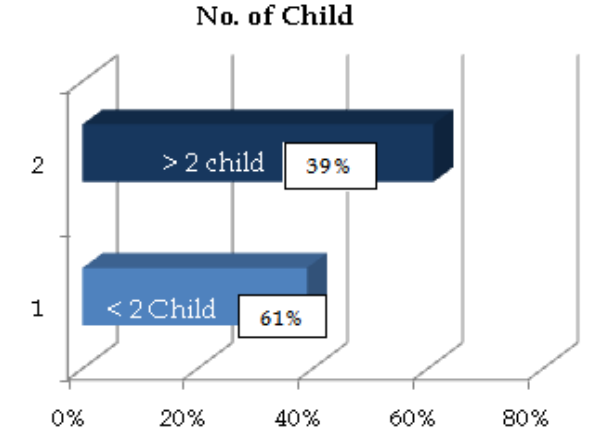


**Fig. 4:** Distribution based on number of child

Figure 4 shows that majority ( 61%) of sample has <2 child.

5. Occupation of Mother

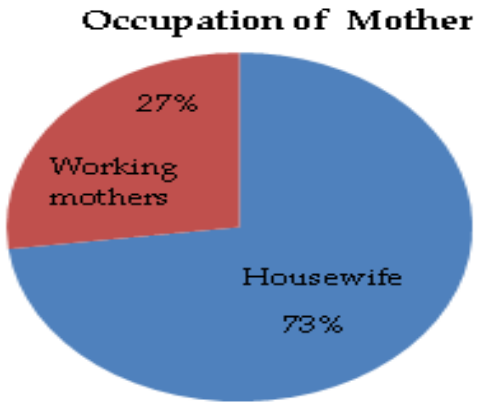


**Fig. 5:** Distribution based on occupation of mothers

Figure 5 shows that majority (73%) of sample were house wife.

6. Religion

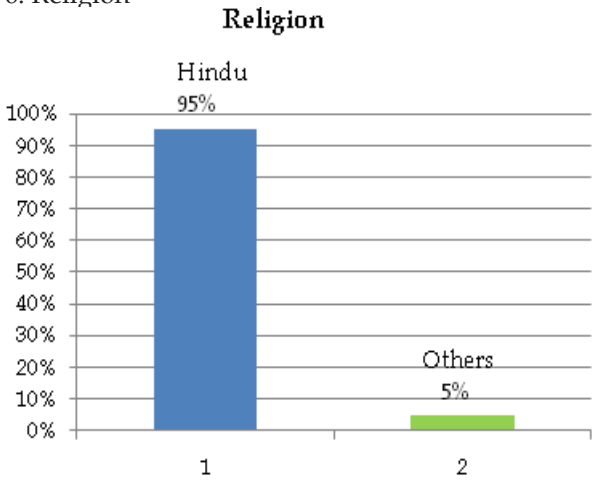


**Fig. 6:** Distribution based on religion

Figure 6 shows thatmajority( 95%) of sample were from to Hindu religion.

7. Area of Residence

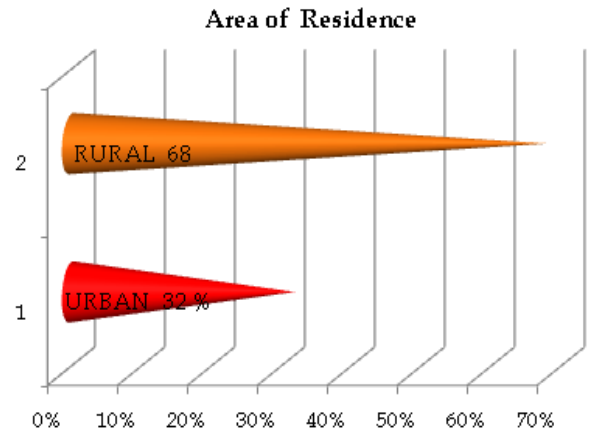


**Fig. 7:** Distribution based on area of residence

Figure 7 shows that majority (68%) of sample were from rural area.

8. Previous Source of Knowledge

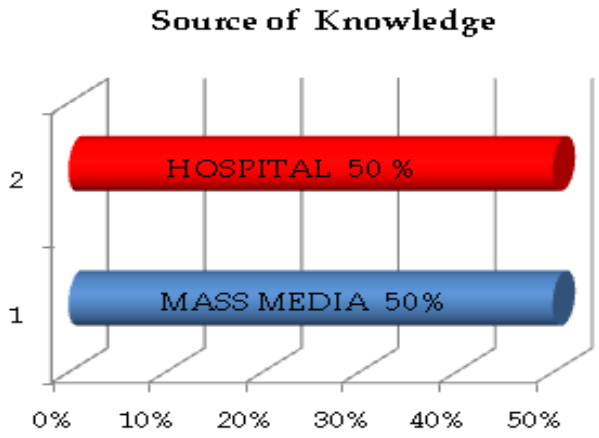


**Fig. 8:** Distribution based on previous source of knowledge

Figure 8 shows that half (50%) of sample gained knowledge from hospital.

9. The basis of distance of hospital from home

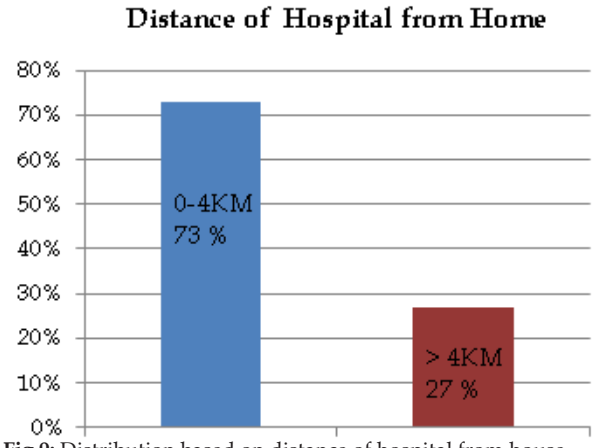


**Fig.9:** Distribution based on distance of hospital from house

Figure 9 shows that majority (73%)of sample were reside between 0-4 km of distance.

10. Marrige Duration

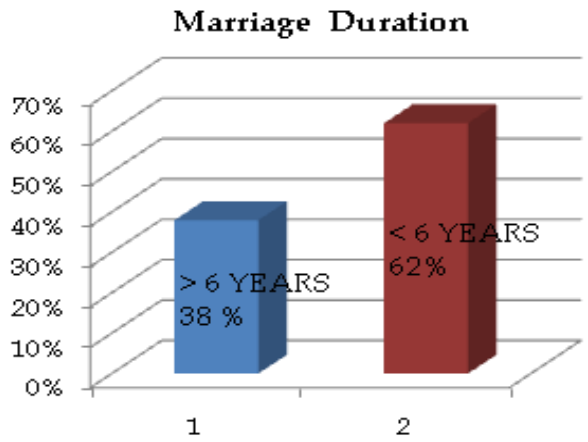


**Fig. 10:** Distribution based on marrige duration

Figure 10 shows that majority (62%) of samples marrige duration were <6 years.

Section B: Description of level of knowledge of mothers regarding NIS.

**Table 2:** frequency and percentage of distribution of mothers / sample based on level of knowledge. n=100

| Level of Knwledge | Frequency (F) | Percentage (%) |
|---|---|---|
| Excellent | 10 | 10% |
| Very good | 57 | 57% |
| Good | 28 | 28% |
| Poor | 5 | 5% |

The data presented in table 2 shows that majority of the sample have very good knowledge (57%), most of sample have good knowledge (28%), few of them have excellent knowledge (10%) and very few of them have poor knowledge (5%).

**Table 3:** Pretest scores of experimental group N=100

| |
|---|
| Mean = 11.8673 |
| Median = 12.0000 |
| SD = 3.30772 |

Section C: Association between level of knowledge regarding immunization among mothers and demographic variables

**Table 3:** Depicts association the level of knowledge regarding immunization among mother with selected demographic variables

n =100

| Socio- Demographic Variables | | Knowledge Score | | | |
|---|---|---|---|---|---|
| | Category | >Medean | <Medean | Df | X2 |
| Age | 11-30 | 46 | 33 | 1 | 1.413** |
| | 31-60 | 9 | 12 | | |
| Type Of Family | Joint | 32 | 23 | 1 | 0.406** |
| | Nuclear | 29 | 16 | | |
| Education Level | >10 Class | 14 | 15 | 1 | 0.025* |
| | <10 Class | 33 | 38 | | |
| Number of Child | >2 | 22 | 17 | 1 | 1.33** |
| | <2 | 39 | 22 | | |
| Occupation | House Wife | 45 | 28 | 1 | 1.881** |
| | Working | 17 | 10 | | |
| Religion | Hindu | 58 | 37 | 1 | 0.86** |
| | Others | 2 | 3 | | |

| Socio- Demographic Variables | Category | Knowledge Score >Medean | <Medean | Df | X2 |
|---|---|---|---|---|---|
| Area of Residence | Urban | 13 | 19 | 1 | 0.002* |
| | Rural | 28 | 40 | | |
| Distance of Hospital from House | 1-4Km | 28 | 45 | 1 | 0.008* |
| | >4 | 1 | 16 | | |
| Marrige Duration | <6 | 25 | 37 | 1 | 0.006* |
| | >6 | 15 | 23 | | |
| Previous Knowledge | From Hospital | 31 | 19 | 1 | 0.04* |
| | Mass Media | 30 | 20 | | |

*not significant at p</= 0.05 level

**significant at p>/= 0.05 level

The chi square calculated to find the association between level of knowledge regarding immunization schedule among mothers with selected demographic variables. Data represented in table three shows that there is no significance association between previous knowledge, marriage duration, distance of hospital from house, education and having significant association between age, type of family, religion, number of child occupation.

## Discussion

The present research report was an attempt to evaluate the knowledge regarding immunization among the mothers who were having under five children and attending AIIMS OPD.

The findings of the research project was discussed in terms of objective and hypothesis and comparison made with other research project findings. The discussion is divided into following headings;

- Description of level of knowledge among mothers
- Association between knowledge of mother regarding immunization schedule and demographic variable

*Description of level of knowledge among mothers*

In present research report finding revealed that most of the mother was aware about immunization at very good level (57%).

According to our research report 5% mother are having poor knowledge, 28% having good knowledge, 10% having excellent knowledge regarding immunization schedule.

The result supported thesimilar quantitative study's result conducted by Farah Azmi, Dr Ratana Prakash (2013) in selected area of Kunderki UP India to assess the knowledge regarding vaccination in infancy among mothers of under five children. The sample size for the study was 30 mothers, sampling technique was convenient sampling. The result of the study had shown that good knowledge score was 10%, average knowledge was 23.34%, poor knowledge score was 66.6% [1].

*Association between knowledge of mother regarding immunization schedule and demographic variable*

Findings revealed that there was a significant association between knowledge of mother regarding immunization and variable such as family, number of children, age of mother and there was no significant association between religion or type of family over the knowledge of mother.

This finding were supported by a research project conducted in AIIMS Patna OPD among 100 mothers attending AIIMS OPD.

The result supported the similar quantitative study's conducted by Ms. Mereena, MrsSujatha R (2014) in Mangalore, Karnataka, India to assess the knowledge and attitude regarding vaccines among mothers of under five children attending pediatrics OPD. The sample size of the study was 300 and sampling technique of data collection was convenient sampling. The result of the study showed that there was a significant association of attitude with age, educational status, religion, monthly income, occupation and number of children [8].

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*Original Article*

# Effect of Immediate Breast Feeding without Intramuscular Oxytocin During NVD in Terms of Duration of Placental Separation and Immediate Blood Loss among Women

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**Abstract**

This study was carried out to find out the effectiveness of immediate breast feeding without intramuscular Oxytocin during normal vaginal delivery in terms of duration of placental separation and immediate blood loss among women. The goal of maternity care is a healthy pregnancy with a physically safe and emotionally satisfying outcome for mother, infant & family. Consistent health supervision and surveillance are of utmost importance in achieving this outcome. The aim of maternal and child health is to ensure that throughout pregnancy, labor and puerperium the mother should have a good health and that every pregnancy may culminate in a healthy mother and healthy baby. The introduction of new non pharmacological interventions in intranatal period is important to prevent post partum complications that inturn helps in the reduction of maternal mortality and morbidity rates.

**Keywords:** Non Pharmacological Intervention; Without Intramuscular Oxytocin; Normal Vaginal Delivery; Placental Separation, Immediate Blood Loss.

## Introduction

Mother's milk is a divine gift for a baby. The joyous moment of birth comes not only after many hours of difficult time during labor but also at the end of nine months waiting and preparation for the babies arrival. Not surprisingly, the majority of mothers experience a tremendous sense of physical relief and emotional excitement when the baby is finally born.

The goal of maternity care is a healthy pregnancy with a physically safe and emotionally satisfying outcome for mother, infant & family. Consistent health supervision and surveillance are of utmost importance in achieving this outcome. Mothers and children constitute a large vulnerable or special risk group. In case of women the risk is associated with child bearing. The aim of maternal and child health is to ensure that throughout pregnancy, labor and puerperium the mother should have a good health and that every pregnancy may culminate in a healthy mother and healthy baby.

This study was carried out to find out the effectiveness of immediate breast feeding without intramuscular Oxytocin during normal vaginal delivery in terms of duration of placental separation and immediate blood loss among women. The goal of maternity care is a healthy pregnancy with a physically safe and emotionally satisfying outcome for mother, infant & family. Consistent health supervision and surveillance are of utmost importance in achieving this outcome. The aim of maternal and child health is to ensure that throughout pregnancy, labor and puerperium the mother should have a good health and that every pregnancy may culminate in a healthy mother and healthy baby. The introduction of new non pharmacological interventions in intranatal period is important to prevent post partum complications that in turn help in the reduction of maternal mortality and morbidity rates.

*Problem Statement*

"An experimental study to assess the effect of

immediate breast feeding without intramuscular Oxytocin during normal vaginal delivery in terms of duration of placental separation and immediate blood loss among women who are admitted in labor room of selected hospitals at Indore."

*Objectives*

- To assess the effect of immediate breast feeding without intramuscular Oxytocin on duration of placental separation in experimental and control group.
- To assess the effect of immediate breast feeding without intramuscular Oxytocin on immediate blood loss in experimental and control group.
- To compare the effect of immediate breast feeding without intramuscular Oxytocin on duration of placental separation and immediate blood loss.
- To assess the association between duration of placental separation and immediate blood loss and selected demographic variable.

*Review of Literature*

- *Thompson, et al. (2010)* A descriptive study conducted to assess the effectiveness of early breast feeding based on quantitative and qualitative data collected via questionnaires completed in the first week postpartum and at two and four months postpartum, Among women with a significant PPH, 63% fully breastfed their babies from birth, whereas 85% said they had hoped to do so ($p < 0.001$). Only 52% of mothers who intended to either fully or partially breastfeed were able to give their baby the opportunity to suckle within an hour of the birth. Delays were longer in women with greater estimated blood loss and women with the longest delays in breastfeeding were less likely to initiate full breastfeeding. 70% of women with PPH of < 2000 ml were fully breastfeeding in the first postpartum week, whereas less than 50% of those with blood loss ≥ 3000 ml were able to do so. Overall, 58% of women with significant PPH were fully breastfeeding at two and 45% at four months postpartum. This study concluded that there is significant effectiveness of breast feeding on preventing PPH.
- *Sohila Pirdadeh Beiranv (2009)* A comparative study to assess the effect of nipple stimulation and oxytocin infusion on the duration of phases of labor, The mean duration active phase of labor for the nipple stimulation group was 203.48±104.90 compared to 191.75±79.01 of the oxytocin infusion group, indicating no statistically significant difference ($p=0.470$) on this. The same thing applied to the second and the third stage of labor between the two groups ($p=0.092$, $p=0.872$). The findings showed that nipple stimulation is a safe effective technique to induce or augment labor.

*Hypothesis*

- *RH1:* There will be significant difference between duration of placental separation and immediate blood loss in experimental group and control group.
- *RH2:* There will be significant association between duration of placental separation and immediate blood loss in experimental group and control group with selected demographic variable.
- *RH0:* There will be a no significant difference between duration of placental separation and immediate blood loss in experimental group and control group.

**Methodology**

True experimental design is used in this research i.e (post test only control group design), An experimental research approach was used to find out the effect of immediate breast feeding without intramuscular Oxytocin during normal vaginal delivery in terms of duration of placental separation and immediate blood loss among intranatal women. The sample consisting of 60 intranatal mothers are admitted in labour room. They were chosen by random sampling technique. The study was conducted in SAIMS hospital and dolphin hospitals at the Indore city.

In the study 6 demographic variables were used for collecting base line data i.e Age, gravida, para, nature of case, educational status and socio economic status.

*Section B:* Assessment criteria/ intranatal observation schedule

It consists of observation schedule of obstetrical factors, which would be assessed at the time of intervention. It consisted of 4 items.

- *Delivery record:* It is the record to assess the progress of labor.

- *Delivery of the baby:* To assess the duration of second stage of labor and the time of initiation of immediate breast feeding without intramuscular Oxytocin i.e., as soon as baby born. The baby is put on mother abdomen for breast feeding only in experimental group.
- *Delivery of placenta and membrane:* It is to assess the duration of placental separation in third stage of labor.
- *Blood loss:* It is to assess the blood loss during third stage of labor.

*Steps followed in the procedure for experimental group is as follows:*

*Step 1:* The swabs, drapes, sponges were weighted before using and its weight was noted.

*Step 2:* Soon after the delivery the baby was placed on mother abdomen for breast feeding and mackintosh under buttock was changed and the weighted swabs, drapes and sponges was used for further management.

*Step 3:* As soon as baby starts sucking the sign of placental separation appears (i.e., the uterus becomes globular in shape and firm, uterus rises in the abdomen, the umbilical cord descends three (3) inches or more further out of the vagina and sudden gush of blood appears) and the placenta delivers without any manipulation.

*Step 4:* The duration of placental separation (Third stage of labor) was noted by using stopwatch (in min).

*Step 5:* The blood loss was measured by weighing the sponges, drapes and swabs was calculated by direct weight converting 1g is equals to 1ml. The amount of blood loss was calculated in ml.

## Analysis and Interpretation

*Comparison of effect of immediate breast feeding and without intramuscular oxytocin on duration of placental separation and immediate blood loss.*

**Table 1:** Descriptive statistics

| Parameter | Group | Mean | Std. Dev. | Std. Error of Mean |
|---|---|---|---|---|
| Time difference in born and delivery of placenta (Minute) | Exp. | 6.7 | 1.32 | 0.24 |
| | Ctrl | 9.1 | 1.47 | 0.27 |
| Blood loss before delivery of the placenta (Milliliter) | Exp. | 37.33 | 13.63 | 2.49 |
| | Ctrl | 58.17 | 15.51 | 2.83 |
| Blood loss during delivery of the placenta (Milliliter) | Exp. | 86.33 | 24.42 | 4.46 |
| | Ctrl | 123.67 | 29.88 | 5.46 |
| Blood loss after delivery of the placenta (Milliliter) | Exp. | 156.00 | 33.07 | 6.04 |
| | Ctrl | 234.33 | 33.60 | 6.13 |
| Total Blood loss (Milliliter) | Exp. | 279.67 | 47.09 | 8.6 |
| | Ctrl | 416.17 | 32.45 | 5.92 |

Comparison between experimental group and control group

| Parameter | Mean Diff | Std. Error of Diff | t-value | p-value (LOS) |
|---|---|---|---|---|
| Time diff between birth and delivery of placenta | 2.40 | 0.360 | 6.66 | p<0.001 |
| Blood loss before delivery of the placenta | 20.83 | 3.769 | 5.53 | p<0.001 |
| Blood loss during delivery of the placenta | 37.33 | 7.046 | 5.30 | p<0.001 |
| Blood loss after delivery of the placenta | 78.33 | 8.607 | 9.10 | p<0.001 ⊕ |
| Total blood loss | 136.50 | 10.440 | 13.07 | p<0.001 ⊕ |

## Results

The data was analyzed by descriptive and inferential statistics.

*Discussion on effectiveness of immediate breast feeding*

This study shows that there is a significant effectiveness of immediate breast feeding on without intramuscular oxytocin during normal vaginal delivery in terms of duration of placental separation and immediate blood loss. Where the t- value is 6.66 (p<0.001) for time difference between birth and delivery of placenta, 5.53 (p<0.001) for blood loss before delivery of placenta, 5.30 (p<0.001) for blood loss during delivery of placenta, 9.10 (p<0.001) for blood loss after delivery of placenta, 13.07 (p<0.001) for total blood loss. In this study hypothesis *RH1* made by the investigator is accepted.

*Discussion of association between placental separation and selected demographic variable*

The study shows that there is significant association between placental separation age of subjects, gravid number, parity, educational status and socio economic status in experimental group and there is no significance between the control group and selected demographic variables.

There was significant $\chi_2^2 = 7.50^*$ *p<0.03)* association between age of the mother and placental separation.

There was significant $\chi_2^2 = 7.04^*$ *(p<0.03)* association between gravida number and placental separation.

There was significant $\chi_1^2 = 5.89^*$ *(p<0.02)* association between parity and placental separation.

There was significant $\chi_3^2 = 8.57^*$ *(p<0.05)* association between educational status and placental separation.

There was significant $\chi_2^2 = 5.00^{**}$ *(p<0.08)* association between socio economic status and placental separation.

There was significant $\chi_2^2 = 6.99^*$ *(p<0.03)* association between age of the mother and total blood loss.

There was significant $\chi_2^2 = 7.04^*$ *(p<0.03)* association between gravida number and total blood loss.

There was significant $\chi_3^2 = 8.10^*$ *(p<0.05)* association between educational status and total blood loss.

There was significant $\chi_2^2 = 6.08^*$ *(p<0.05)* association between socio economic status and total blood loss.

Thus the hypothesis *RH2*- made by the investigator that, there would be a significant between blood loss and placental separation with experiment group and control group.

*Interpretation and Conclusion*

The study results concluded that immediate breast feeding is found to be effective in reduction of duration of placental separation and blood loss. These findings have implications for postnatal care as these women may require greater support, education and assistance in initiating and sustaining breastfeeding. In particular, enabling the opportunity for the newborn to suckle as soon as practice should be encouraged.

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# Effectiveness of Nesting on Bio – Physiological Parameters and Sucking Response among the Low Birth Weight Babies

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**Abstract**

This study aims to determine the effectiveness of "Nesting" among the low birth weight (LBW) babies in selected hospitals of Coimbatore. A Quasi experimental study was conducted for 40 LBW babies by using purposive sampling technique. The babies were further divided into two groups with 20 babies in experimental group and 20 babies in control group. Pre test, Post test control group design was used in which nesting was provided to the experimental group babies for 2 hours in morning and 2 hours in evening for three consecutive days. The Bio – Physiological parameters and Sucking Response were assessed before nesting (Pre test) and after administration of nesting in the evening of second day (Post test I) and third day (Post test II) using Digital Thermometer, Pulse Oximeter and Manual Count of respiration and modified early feeding skills assessment scale respectively. The LBW babies of experimental group exhibits comparatively stable Physiological Parameters and also significant improvement in sucking response after administration of nesting.

**Keywords:** Nesting; LBW Babies; Bio – Physiological Parameters; Sucking Response.

## Introduction

Human Birth is the most miraculous, transformational and mysterious event of life and Newborns are the most vulnerable group in getting adjusted to the new environment [1]. LBW babies need special care after birth such as help with breathing, staying warm, protection against infection and getting enough nutrition. Low birth weight infants are more prone to Hypothermia because they have higher body surface area to weight, thereby exposing more skin surface to the environment [2]. The Physiological changes during stress and discomfort are hypoxemia, increased respiratory rate, heart rate and blood pressure. Due to in-coordinated sucking and swallowing, there are difficulties in self-feeding. LBW babies should be provided with in-utero milieu [3]. LBW babies under developed in all aspects. So the nurses must provide an environment which is safe, adopted to their physiological needs and promotes nursing services to enhance their rate of survival [4]. Positioning and handling techniques promote comfort and minimize stress, while creating a balance between nurturing care and necessary interventions [5]. "Nesting" is a Supportive positioning technique used should enhance flexion, promote comfort and provide opportunities for movement as well as have simulated intrauterine boundaries [6]. Several article reviews reveals that newborn care including positioning and maintaining posture is an important aspect and it can play a major role in the development of newborn babies. Since the incidence of physiological instability, distress and developmental problems related to improper maintenance of posture is increased, the researcher felt that it is the responsibility of nurses to maintain the posture as much as possible to provide maximum comfort to the baby in order to stabilize the bio – physiological parameters such as temperature, heart rate, respiratory rate and oxygen saturation and also to improve the sucking response of LBW babies.

*Statement of the Problem:*

A Study To Assess The Effectiveness of Nesting On Bio – Physiological Parameters And Sucking

Response Among The Low Birth Weight Babies In Selected Hospitals, Coimbatore.

*Objectives*

- To assess the bio – physiological parameters and sucking response among the low birth weight babies.
- To assess the effectiveness of Nesting on the bio – physiological parameters and sucking response among the low birth weight babies in the experimental group.
- To compare the bio – physiological parameters and sucking response among the low birth weight babies between experimental and control group.
- To associate the findings with the selected demographic variables.

*Conceptual Framework:*

The Conceptual Framework used in this study is based on Modified Levine's Conservation Model of Nursing, 1973.[7]

*Definitions*

*Nesting:* It is an intervention which gives comfortable flexed position to the LBW baby by providing a shell – shaped boundary using a rolled cotton.

*LBW Babies:* Babies born with birth weight between 1500 grams and 2500 grams in the selected hospitals.

*Bio–Physiological Parameters:* It Includes Temperature, Heart Rate, Respiratory Rate and Oxygen Saturation which are assessed by using Digital thermometer, Pulse oximeter and manual count of respiration respectively.

*Sucking Response:* Baby instinctively sucks on the nipple that touches the roof of their mouth or lips that is assessed using Modified Early Feeding Skills Assessment Scale.

**Methodology**

*Research Design:* Pretest posttest control group design was adopted in this study.

*Setting:* The study was conducted in three selected hospitals with intensive newborn care facilities in Coimbatore.

*Population:* The neonates who are born with birth weight above 1500 grams and below 2500 grams are considered as target population.

*Sample Size and Sampling Technique:* A total number of 40 LBW babies (20 in experimental and 20 in control group) were selected using purposive sampling technique.

*Criteria for Sample Selection:*

- Neonates with the birth weight between 1500 grams and 2500 grams.
- Neonates whose age is less than 7 days.
- Low birth weight babies with the gestational age between 34 weeks and 37 weeks of gestation.
- Low birth weight babies those who are admitted in the hospital and stay for 3 days or more.
- Neonates who were not on CPAP or ventilator and not diagnosed with severe medical and surgical conditions.
- Neonates whose APGAR score is not less than 7.

*Description of the Tool:*

*Section A:* Demographic variables of mother and LBW babies.

*Section B:* Bio – Physiological parameters which consists of Temperature, Heart rate, Respiratory rate and Oxygen saturation by using digital thermometer, pulse oximeter and manual count of respiration.

*Section C:* Modified early feeding skill assessment scale to assess the sucking response.

*Data Collection*

Data collection was done for a period of one month. By using purposive sampling technique, based on the inclusion and exclusion criteria, 40 samples were selected and assigned to experimental and control group. The demographic data of mother and newborn were obtained by using structured interview and case records. Pretest of Bio – Physiological parameters and Sucking response were assessed for both groups by using respective tools. The babies in the experimental group were kept in nesting on the same day and for next two days and for a duration of 2 hours in the morning and 2 hours in the evening. Posttest were assigned on second day (Posttest I) and third day (Posttest II) using the same tool in both groups.

## Results

*Description of Demographic Variables*

Among the 40 samples, most of the mothers of LBW babies were multigravida (55%) and most of LBW babies are delivered through LSCS (65%).

*Findings Related to Bio–Physiological Parameters*

Regarding temperature, There is a significant difference between the pretest, posttest I and posttest II scores (F = 11.28) among the LBW babies in experimental group, which shows nesting is effective in maintaining the thermal balance for LBW babies. Similarly control group also shown minimal significant difference (F = 9.59) due to routine care.

Similarly, there is a highly significant difference between pretest, posttest I and posttest II scores on heart rate (F = 92.91), respiratory rate (F = 55.19) and oxygen saturation (F = 107.92) among the experimental group. Hence it shows that nesting is effective in stabilizing the heart rate, respiratory rate and oxygen saturation for the LBW babies. Control group also had minimal significant difference between pretest, posttest I and posttest II scores on heart rate (F = 4.81), respiratory rate (F = 3.41) and oxygen saturation (F = 9.96) due to routine care. (Table 1)

*Findings Related To Sucking Response*

In experimental group, concerning the sucking response among the LBW babies, In pretest, none

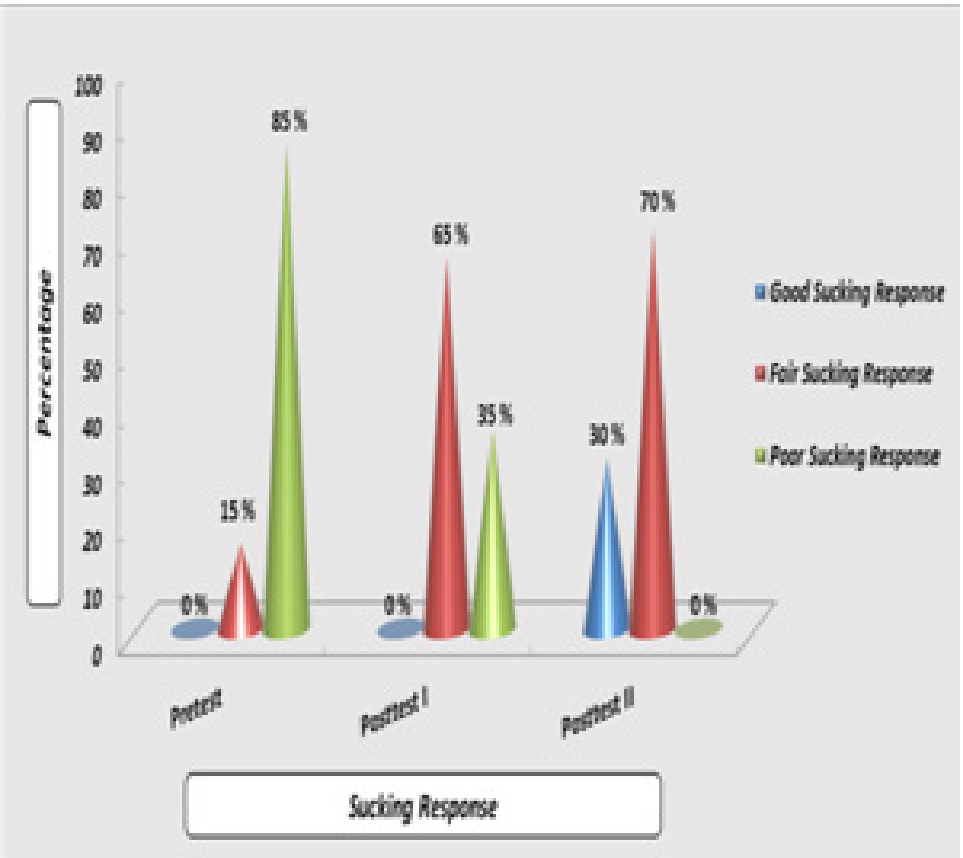


**Fig. 1:** Distribution of Sucking Response among the low birth weight babies in Experimental group

**Table 1:** Comparison of pretest and post test of temperature among the Low Birth Weight babies in experimental and control group.

| Temperature | Source | Degrees of Freedom | Sum of Squares | Mean Sum of Squares | Repeated Means of ANOVA | Table Value of F at 5% Level of Significance |
|---|---|---|---|---|---|---|
| Experimental group | Between values of temperature | 2 | 32.93 | 16.47 | F = 11.28 | F = 3.162 |
| | Errors | 57 | 83.04 | 1.46 | | |
| | Total | 59 | 115.97 | | | |
| Control Group | Between values of temperature | 2 | 6.66 | 3.33 | F = 9.59 | |
| | Errors | 57 | 9.92 | 0.17 | | |
| | Total | 59 | 16.58 | | | |

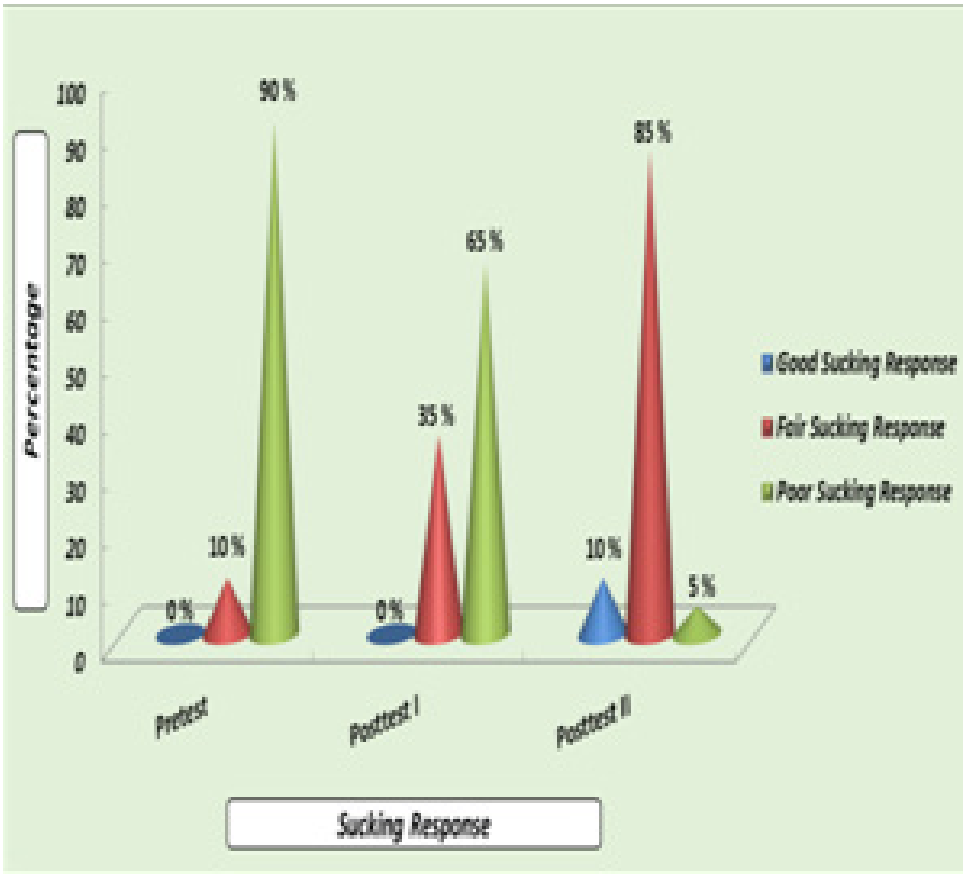


**Fig.2:** Distribution of Sucking Response among the low birth weight babies in Control group

of them had good sucking response, 3(15%) of them had fair sucking response and 17 (85%) of them had poor sucking response. In posttest I, none of them had good sucking response, 13 (65%) of them had fair sucking response and 7 (35%) of them had poor sucking response where as in posttest II, 6 (30%) of them had good sucking response, 14 (70%) of them had fair sucking response and none of them had poor sucking response. In control group, in pretest, none of them had good sucking response, 2 (10%) of them had fair sucking response and 18 (90%) of them had poor sucking response. In posttest I, none of them had good sucking response, 7 (35%) of them had fair sucking response and 13 (65%) of them had poor sucking response where as in posttest II, 2(10%) of them had good sucking response, 17(85%) of them had fair sucking response and 1(5%) of them had poor sucking response.(Figure 1,2) In comparison of pretest, posttest I and posttest II of sucking response of LBW babies in experimental group, there is a highly significant difference between the scores (F = 92.22). Hence it is proved that nesting is effective in improving the sucking response of LBW babies. (Table 2)

*Findings Regarding Association between Pretest Sucking Response of LBW Babies And Selected Demographic Variables:*

There is a significant association between the birth weight and sucking response, gestational age and sucking response of LBW babies in both experimental and control group.

*Recommendations for Future Study:*

- Prospective study can be done to find out the long term outcomes in the LBW babies with poor sucking response.
- Comparative study can be conducted to

**Table 2:** Comparison of pretest and posttests sucking response among the LBW babies in experimental group.

| Source | Degrees of Freedom | Sum of Square | Mean Sum of Square | Repeated Measures of ANOVA | Table Value of F at 5% Level of Significance |
|---|---|---|---|---|---|
| Between Sucking Response Scores | 2 | 1167.43 | 583.72 | | |
| Errors | 57 | 360.50 | 6.33 | F = 92.22 | F = 3.162 |
| Total | 59 | 1527.93 | | | |

assess the sucking response among babies born by normal vaginal delivery and LSCS.

- Comparative study can be done to assess the sucking response among the LBW babies on direct breast feeding and expressed breast milk or formula feeding.
- Prospective study can be done to assess the effectiveness of nesting on length of stay in hospital and number of days in phototherapy.
- Studies can be conducted to assess the effectiveness of structured teaching programme on knowledge and practice regarding handling the LBW babies with nesting among NICU staff nurses.

## Discussion

The study shows that Nesting was effective in to stabilize the bio– physiological parameters and to improve the sucking response among the low birth weight babies. This finding of the study was consistent with the study conducted by F Ferrari (2007) aimed to evaluate the Posture and movement in healthy preterm infants in supine position in and outside the nest. The researcher reported that a nest promotes a flexed posture of the limbs with adduction of shoulders and increase the comfort [8]. This finding was consistent with findings of the study conducted by Comaru, T. to determine the effectiveness of Postural support on distress and pain during diaper change in preterm infants. It was found that all babies displayed increased distress and pain scores during diaper change and this was significantly less for babies nested compared with non nested babies [9]. This was consistent with the findings of the study conducted by Kihara H, Nakamura T. which concluded that a prone position with nested and swaddled positioning support might facilitate sleep and heart rate stability compared to prone positioning alone in Very low birth weight babies [10].

## Conclusion

Children are the gift and reward from the Lord. The most precious jewels that a woman will ever wear around the neck are the arms of their children [11]. It is our prime responsibility to provide maximum comfort to the newborn babies who will reduce the physiological instability and stress in adjusting to external environment. Nesting is one of the measures to keep the baby comfortable. Hence from the data analysis and results, it was concluded that nesting is an effective intervention to stabilize the bio – physiological parameters and to improve the sucking response among the low birth weight babies. Nurses are central in hospital efforts to improve quality care. Comforting interventions in the field of nursing care will contribute to high patient satisfaction and eventually will lead to institutional development. Nurse administrators should provide and recommend the interventions like Nesting in the setting like NICU of the hospital [12].

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*Original Article*

# Knowledge on Health Issues and Utilization Services among Adolescents

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**Abstract**

*Background:* Adolescents are fulcrum of population; it's the window period for adopt the risky behaviors and many health issues which may affect the health in the future. The aim and objective of the study was to evaluate the knowledge on health issues among adolescents residing in the Vellore district. *Materials and methods:* The descriptive, cross sectional study design was adopted. Through the non randomized convenient sampling technique, one hundred fifteen adolescents who are all in the age of 17 to 19 years were enrolled. The data were collected through 45 items multiple choice questionnaires by interview method. The collected data were analyzed by descriptive and inferential statistics. *Results:* Out of 115 adolescents, 81% had inadequate knowledge, 13% had moderate and remaining 6% only had adequate knowledge. The knowledge on health issues and utilization services was low among males as compared to female adolescents. The chi square value depicts that age, education and occupation had significant association with the knowledge score at $p < 0.05$. *Conclusion:* Hence, the poor knowledge makes adolescents face many difficulties to manage and prevent these issues. Thus, there is an urgent need of multi dimensional approach and educational instructional programs must be a vital part to promote their knowledge and achieve wholesome adolescent health.

**Keywords:** Knowledge; Health Issues; Risk Behaviors; Utilization Services and Adolescents.

## Introduction

In the second decade of life, the adolescent is considered to be no longer a child, and not yet an adult. They are experiences not only the rapid physical growth and also include psychological, cognitive and social changes [1]. Around 1.2 billion people or 1 in 6 of the world's population is adolescents aged 10 to 19 years. About 243 million of adolescents i.e., 21% of population are adolescents in India [2]. Among this, most are healthy but there is a significant untimely death, illness, injury and disabilities go on between these age groups. The illnesses can hinder their ability to grow and develop their full potential. The risk behaviors of smoking, alcohol & tobacco use, lack of physical activity, unprotected sex and exposure to violence can jeopardize not only their current health but also their health as adults yet the health of their future children [3].

A lot of changes takes place in their pubertal stage in both genders make the adolescents to get more vulnerable of critical behaviors and many health concerns that will affect health in the future. The leading health related causes of mortalities and disabilities in adolescents are mental health disorders (depression and stress), reproductive health issues (teenage pregnancy, HIV/AIDS), respiratory problems, unintentional injuries resulting from the motor vehicle crashes, drowning and injuries ensuing from interpersonal violence [4]. The adolescent health care needs, the range of approaches including of preventing, detecting or treating young people's health and well being. Hence, the adolescents are an imperative asset of a country because they will become tomorrow's adults and will provide the human potential fundamental for the country's development [5].

## Need for study

In the worldwide, the estimated 1.2 million adolescents died in 2015; over 3000 for every day mostly from various preventable or treatable causes. The road traffic injuries were the first leading cause of mortality; around 330 adolescents died every day. Moreover reproductive health problems are the second major cause of mortality i.e., three million girls undergo unsafe abortions every year. Around 16 million girls give birth to every year in the age of 15-19 years i.e., 49 births per 1000 girl. The unintentional injuries of drowning is next major cause of mortality i.e., 60,000 adolescents, two-thirds of them boys were drowned in 2012. Subsequently, the suicide is also the leading cause of mortality; the depression is the third leading cause of illness and makes disability among the older adolescents. The interpersonal violence represents 43% of all older adolescent male mortalities because of the addiction to alcohol and drug use among 15-19 years [6,7]. Globally, 1 in 10 girls under the age of 20 years reported as experiencing of sexual violence [8].

In developing countries, the most of adolescents are not deworming regularly and many of them are undernourished. In the controversial view; many adolescents are addicted for junk foods makes to enter obesity, oral health problems abets to get more vulnerable to diseases and early death [6,7]. The exclusive data pertaining to the adolescent health issues in Indian scenario is not available when compared to the developed countries. Yet adolescents remain a largely neglected, difficult-to-measure and hard-to-reach population, in which the needs are often ignored. In order to realizing the need in this vulnerable population, international agencies like WHO/UNAIDS and our nation has launched many new schemes focusing on key areas of adolescents health related to reproductive/ sexual transmitted diseases, malnutrition and tobacco consumption issues [9].

Hence, all of the above mentioned factors have urged the investigator to find out whether adolescents knowledge is adequate to manage the health issues and prevent the risk behaviors.

## Materials and Methods

The necessary ethical and administrative permission was obtained. The descriptive cross sectional study design was carried out in selected areas in Vellore district. The non randomized, convenient sampling technique was used to select the samples of 115 adolescents who are all in the age of 17-19 years, unmarried and apparently healthy were enrolled in the study. After getting the assent/informed consent, the structured interview method was used to collect the data from the participants of 20-25 minutes without having any possible interaction with other participants.

*Description of Instrument*

The structured interview questionnaire was prepared; based on the WHO Adolescents: health risks and solutions (2017) updates [6], extensive review of literatures, expert's opinions and investigators personal experiences. The reliability of the tool was established by the test and re-test method. The Performa has 2 sections.

*Section-I:* It contains demographic variables of adolescent includes age, sex, education, occupation, income, type of family, type of housing, religion, type of risk behaviors and source of knowledge.

*Section-II:* It consists of 45 multiple choice questionnaires regarding knowledge aspect of health issues, risk behaviors and utilization services with 6 sub divisions. The questionnaire number 5 to 7, 18 to 23 has slight changes regarding the reproductive health because of gender differences. The scores given for the questionnaires are as follows, for correct answer '1' and for wrong answer '0'. Based on the scores, the level of knowledge on health issues are; inadequate less than 40%, moderate 40 – 60% and adequate knowledge more than 60% of score.

## Results and Discussion

The collected data were analyzed by descriptive & inferential statistics and discussed as follows,

*Regarding the demographic variables,* the mean age of adolescents was 18.02±0.92 years. Considering with educational status, nearly half of adolescents i.e., 47% were completed the higher secondary/undergoing training courses and remaining the equal 15% were undergoing degree course and as well as not going for higher studies. Regarding the occupation, 37% of adolescents were working as daily wages, nearly 18- 20% working in private and business work. In regard to income, the majority 77% of adolescents were getting the income of below Rs.10, 000/-. Apart from this, the majorities of adolescents i.e., 78% were living in nuclear family; 74% residing in rented houses and 76% belongs to Hindu.

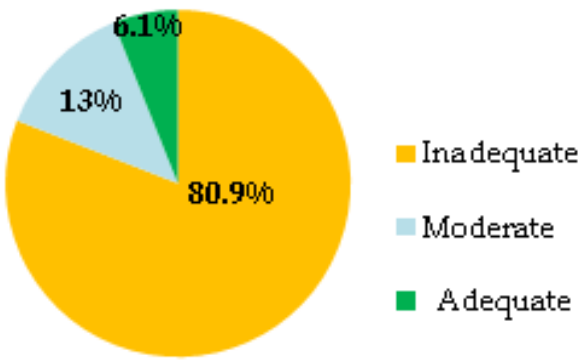


**Fig. 1:** overall level of knowledge on health issues and utilization services among adolescents in percentage wise

Regarding the high risk behaviors, none of the female participants are not exposed to, but males 46% had the habit of cigarette smoking, 38% in alcohol and 22% had both habits. None of the adolescents were not had the habit of tobacco products and sexual exposure. The similar findings were seen in Dutch adolescents; i.e., 16.7% had smoked daily, 57.8% drunken alcohol and 29.7% experienced sexual intercourse earlier [10]. The other study in Egypt depicted the results of middle adolescents; 19.4% were smoked, 7.3% drank alcohol, 11.3% had early sexual intercourse and 10.6% used drugs [11]. In this present study, considering with safety issues while driving the vehicles; only 34% of males and 46% females were obeying the traffic rules and regulations and wearing helmets. It was similar with *Mikler SR* reported that, nearly 40% of the adolescents were engaged in the risky driving behaviors [12].

In regards to source of knowledge in this present study; 34% adolescents were reported as school, 22% from medias/internets, 18% from health centers/health care providers and less than 10% from parents and personals. Similarly, *Amu EO et al.*, reported that; the important sources of information for sexually transmitted infections were electronic media (68.7%); teachers (68.1%); and print media (44.9%) [13]. In other study evaluated the main source of HIV/AIDS information in the public was mass media-television/radio and newspapers [14].

*Based on objectives, knowledge on health issues and utilization services among adolescents are,*

Among the 115 participants, the majorities of the 93 adolescents had inadequate knowledge, 15 had moderate and remaining 7 had adequate knowledge on health issues and utilization services. The figure i shows, the percentage wise overall level of knowledge on health issues and utilization services among adolescents. Currently, many research articles identified and focused the unique, as well as the major concern of adolescent issues especially the reproductive/sexual and mental health aspects alone. So the overall concern of adolescent's knowledge and effects of risk behaviors especially the late adolescents were limited. The findings are supported by, *Ferreira VVS* analyzed the acquisition of knowledge on adolescents based on three themes: oral Health (4.84±1.25), drug use Prevention (2.09±0.96) and sexuality (4.12±1.23) showed their limited knowledge in pretest [15]. The other study in India reviewed the various studies from 2001 to 2015 reported that, sexual health knowledge among adolescents was varied from 40% to poor [16].

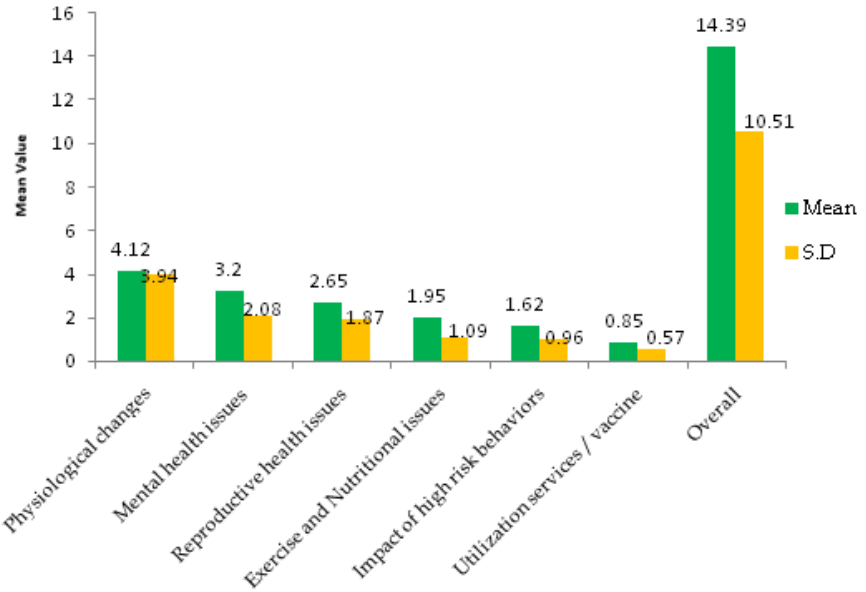


**Fig. 2:** The domain wise mean and standard deviation level of knowledge on health issues and utilization services among adolescents.

Considering with the level of knowledge in each aspects, the adolescents were greatly lack correct information on physiological, psychological and sexual changes. The figure 2 shows, the domain wise mean and standard deviation level of knowledge on health issues and utilization services among adolescents. Regarding awareness of physiological changes in this study; nearly 70% of the adolescents in both genders were aware of their physical changes and 42% only emotional/social changes. In regard to sexual changes, 63% were more aware about pubic and facial hair growth, breast development, menstruation and increase the testicular size. This findings was supported by, *Abiodun O* found that 75% of the adolescents could correctly identify most signs of sexual maturation in both genders but 40% of males were had some misconceptions [17]. Similarly *Kotecha et al.,* revealed that 69.8% male and 52.3% female adolescents perceived physical changes whereas, 5.5% males and 66.1% females adolescents only aware of sexual changes [18]. In controversy, the study conducted by Ahuja and Tewari depicted that, the awareness levels regarding the changes of adolescents were normal or abnormal found to be low in both genders [19].

The half of all mental health disorders in adulthood start by age 14, but most of the cases are undetected and untreated. Regarding these issues, 36% adolescents had knowledge on cause/ impact of stress and depression. The males had more stress on educational period in the schools and currently in the working areas. It was supported by; *Coles ME* revealed that more than 50% of the youth recognized the stress and depression than social anxiety [20]. The other similar study; *Ogorchukwu JM* stated that South Indian adolescents attending pre university college had low percentage of mental health literacy [21]. In further, *Mauro and Williams* reported that there is a need to investigate adolescent's knowledge about the mental health in both general and more specific features [22].

In order to achieve the SDG (3) of "Ensure healthy lives and promote well-being for all at all ages; there is need of growing awareness and recognition of reproductive health in the adolescents are essential. In regard to this issue, nearly half i.e., 55% of adolescents were not aware of their reproductive tract infections and its early symptoms. In females, still 32% were not conscious about hygienic measures during menstruation especially for sanitary pad uses/disposal. The 12% of males don't want to reveal any information regarding these issues. The overall reproductive health knowledge of females was (68%) high when compare to males (48%). It was similar with demographic health surveys (DHS) in Bangladesh reported that, adolescents had poor knowledge and less access to information & services on reproductive health. The female unmarried adolescent's knowledge was limited especially in the use sanitary pad/cotton; wash with hot water / antiseptic liquid during menstruation [23]. In other study found that, 70% felt comfortable in confiding these issues with friends rather than parents, teachers, or medical professionals [24]. In controversy view; the adolescents existing in Ethiopia reported that reproductive health knowledge was higher among males and those with habitual access to a telephone /internet [25].

Developing healthy eating and regular exercises at this age are foundations for good health in adulthood. But the NFHS-3 reported that 60% girls in the late adolescents were found to be anemic. In this study, 62% of adolescents were not aware of the benefit of exercises / yoga; 58% adolescent anemia and the importance of taking the healthy diets. Apart from this, the adolescents were not aware of about oral hygiene (43%), essential of the deworming (79%), malnutrition (64%) causes failure in growth and effects of junk foods (38%). The findings were similar with, knowledge of pre university adolescent girls in Hyderabad depicted that, only 25% had good knowledge about anemia and majorities following faculty food habits [26]. The other study identified that, most of adolescents i.e., 81.7% had below average level of knowledge regarding harmful effects of junk foods and only 18.33% aware on healthy diet [27]. The other study in Nepal also depicted that; 59.0% were aware of brushing teeth and do twice worm infestation for only 14.4% [28]. In controversy view; *Mehta V and Bhat A* revealed that, the adolescents residing in Maharashtra were aware of about the importance of exercise & recreational activities (93.1%), the ill effects of malnutrition and obesity (85.3%) and healthy food concept (79.1%) [29].

One of the foremost coercion for adolescent's health and well-being is risk behaviors. The impact of risk behaviors in this present study, the 41% were only aware of smoking and alcohol causes oral, lungs & liver problems and less than 25% only aware of long term impacts of cancer and nerve diseases. Nearly 97% of the adolescents were aware of sexually transmitted infections of HIV/AIDS and remaining 3% had confusion regarding the mode of spread and its preventive methods. It was supported by; the study identified that females are more aware of the side effects of tobacco smoke (95.2%) cause Hypertension, lung cancer as compared to males (78.3%). In regard to STD,

98.04% adolescents were known about HIV/AIDS and 90.19% knew the correct information about mode of transmission. [30]. In other study, stated that there has been increasing the trend of smoking cigarettes at a younger age which is a matter of great concern [31].

Regarding utilization services, the Government initiated many programs for the adolescents living in both urban and rural areas like Rashtriya Kishor Swasthya Karyakram (RKSK), ARSH, and Rajiv Gandhi Scheme for Empowerment of Adolescent Girls. In this study, more than 95% adolescents were not aware of these programs & its benefits and not known of Tetanus Toxid vaccine to be given at the age of 16. It was supported by *Gupat M et al.,* identified that, awareness about utilizing of curative and preventive health services was significantly less among rural vs., slum (1.1% vs., 4.6%) as compared to urban adolescents i.e., 7.8% significant at p< 0.05. This study also pointed that, there is a need of nutritional counseling, TT immunization, Iron Folic Acid (IFA) tablets, and deworming treatment as compared to reproductive and sexual health services [32]. The similar findings also seen in *Berhane et al.,* study [33]. In other study *Saratu O et al.,* revealed that, the adolescents knew about available adolescent/youth friendly services (A/YFRHS) but did not know where to get these services in Nigeria [34]. The similar study conducted by *Hoopes AJ et al.,* also highlighted that, need to increase the adolescent knowledge on health behaviors and improvement in quality & utilization of services [35].

*To compare the level of knowledge on health issues and utilization services among adolescents in both genders.*

The level of knowledge on health issues among 59

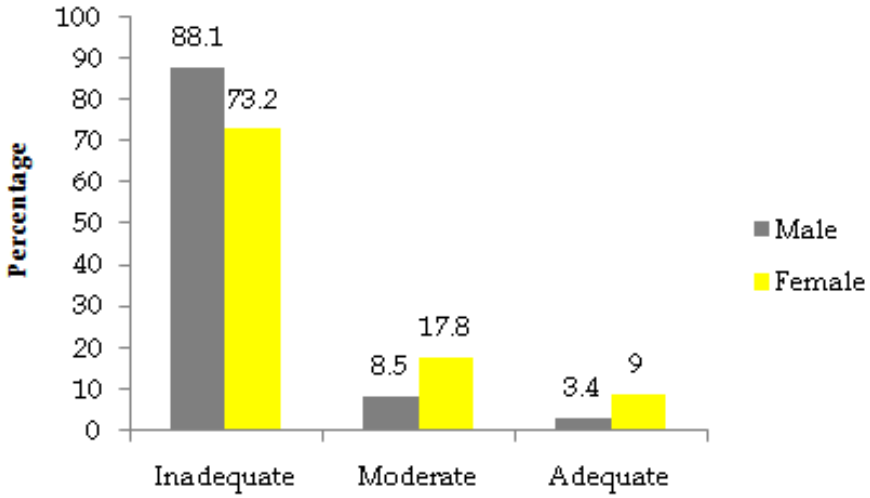


**Fig. 3:** The overall level of knowledge on health issues and utilization services Among adolescents in genders wise.

**Table 1:** Significant variables of knowledge on health problems and risk behaviors among adolescents

| S. No. | Demographic Variables No. | | Inadequate knowledge | | Moderate knowledge | | Adequate knowledge | | Chi square test |
|---|---|---|---|---|---|---|---|---|---|
| | | | % | No. | % | No. | % | | |
| 1. | Age (years) | 17 | 27 | 29.1 | 2 | 13.3 | 1 | 14.2 | 4.09 P=0.04* (S) |
| | | 18 | 43 | 46.2 | 7 | 46.7 | 2 | 28.6 | |
| | | 19 | 23 | 24.7 | 6 | 40.0 | 4 | 57.2 | |
| 2 | Education | Below 9th | 18 | 19.4 | - | - | - | - | 5.45 P=0.02* (S) |
| | | Up to 10th std | 21 | 22.6 | 4 | 26.7 | 1 | 14.2 | |
| | | Upto12thstd / training course | 41 | 44.1 | 8 | 53.3 | 4 | 57.2 | |
| | | Degree | 13 | 13.9 | 3 | 20.0 | 2 | 28.6 | |
| 3 | Occupation | Nil | 27 | 29.1 | - | - | - | - | 4.68 P=0.03* (S) |
| | | Daily wages | 38 | 40.8 | 3 | 20.0 | 2 | 28.6 | |
| | | Private | 13 | 13.9 | 8 | 53.3 | 3 | 42.8 | |
| | | Business | 15 | 16.2 | 4 | 26.7 | 2 | 28.6 | |

males, 52 were inadequate, 5 moderate and only 2 had adequate knowledge. Where as in females out of 56, 41 were had inadequate, 10 had moderate and 5 had adequate knowledge. The chi square value of 12.92 was significant at p< 0.01**. It depicts that overall knowledge of health issues and utilization services was low in males as compared to female adolescents. The figure 3, shows the level of knowledge on health issues and utilization services among adolescents in both genders. It was supported by; *Rahman AA* reported that, the mean knowledge scores for sexual and reproductive health was significantly higher among females (p<0.001) than males in Malaysia [36]. In other study, with same Malaysians adolescents reported with controversial view; the males had more sexual knowledge as compared to females (M = 21.68 > 19.43), and there are significant differences between both genders t = 2.080, p =0.04 [37].

*To associate the level of knowledge on health issues and utilization services among adolescents with selected demographic variables.*

The Table 1 represents that, the knowledge on health concerns was significantly associated with age, education and occupation of the adolescents at p < 0.05. Considering with age, the adolescents who were in the age 19 years had adequate knowledge when compare of other two age categories. In regard to education, the adolescents who were all undergoing training courses and degree had adequate knowledge when compare to the secondary level of education. Hence, the higher age and education enhances the knowledge on health issues. It was supported by; *Berhane et al.,* stated that the awareness/knowledge was significantly associated with older age [33] and *Gadkari RP et al.,* revealed that the overall awareness about reproductive/ sex education is very less but awareness was better with increasing age, and higher education [38]. Regarding the occupation, the adolescents working in the private companies had adequate knowledge when compare to the adolescents in home and working in other areas. Thus, the adolescent's social behaviors and the work areas make an essential role to promote the knowledge.

*Recommendations*

- ✓ There is an urgent need for the regular adolescent friendly information, education and communication activities covering different aspects of needs/problems to be addressed in school curriculum. As the scope for the future research; it is recommended that,
- ✓ Barrier of knowledge regarding changes among adolescents to be identified and addressed.
- ✓ Qualitative studies should be conducted to identify potential adolescent issues so that an intervention can be planned at community level.
- ✓ School based health promotion programs should be carried out to increase awareness among early and middle adolescents especially about healthy food concept/mental health.
- ✓ There are many health issues persists based on adolescent age and gender; need to increase the health awareness according to their level.
- ✓ Impart community education regarding reproductive and sexual health in both genders aids to lead the life of adolescents from prevents the infections.
- ✓ The building of life skills training and counseling of adolescents with safety issues, psychosocial, economic support in community settings can help to promote good mental and future health.
- ✓ Create the awareness of health facilities; in order to enhance the vision of the Government programs and provide adolescent friendly clinic (AFC) health services to boost utilization.

## Conclusion

The adolescents are representing as, the window of opportunity to prepare for the healthy adult life. The study findings directed towards an essential to impart the knowledge on overall the health issues principally reproductive & mental health issues, significance of exercises / yoga and utilization of services. The adolescent health care is challenging part compared to that of children and adults. To achieve wholesome adolescent health we need to have an interdisciplinary care, covering all the adolescent health concerns with special emphasis on behavior change communication towards healthy lifestyle and positive social environment to acquire life skills. Thus, there is an urgent need of multidimensional approach with educational instructional programs must be a vital part to promote their knowledge in order to reduce the mortalities & disabilities of adolescents and as well as build the productive nation in the future.

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# Screen Time Behaviours among School going Adolescents Residing in a Selected District, Kerala

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**Abstract**

*Introduction:* World Health Organization report 'Sedentary lifestyle: a global public health problem' identified sedentary lifestyle as among the top ten leading causes of death and disability in the world. Various international and national organizations have recommended that children above the age of 2 years should not spend more than 2 hours a day in front of the screen. Though there are many potential academic and social benefits for TV/ Computer use, it leads to many negative health outcomes such as unhealthy eating, sedentary lifestyle, physical inactivity, low academic performance, and aggressive behaviour. It was also demonstrated that reducing screen time was associated with reduction in body weight, body fat, and obesity prevalence. In the long term sedentary behaviour have been identified as major independent risk factor for mortality and morbidity for non-communicable diseases. It is one of risk factor which can be modified to counteract the negative effects that may follow in adulthood. *Methodology:* The aim of the present study was to understand the screen time behaviours and its associated factors among adolescents. It was a cross-sectional survey among 252 school going adolescents aged 11 to 13 years, studying at private aided schools of Thrissur district, Kerala, South India, selected using a convenient sampling technique. A structured self administered questionnaire was used to collect data regarding socio demographic personal data and screen time behaviour; screen time, and habit of consuming food in front of television. Analysis was done using SPSS version 20. *Results:* The mean age of adolescents was 12.29±0.5 years. Though the mean screen time was found to be 1.15±0.75 (less than 2hours/day on weekdays), 7.5% of them were watching screen for more than the recommended duration during Saturday and Sunday resp. On weekends the mean duration of screen time was found to be more than 2 hours, but 68.7% and 75.8% of them were engaged in more than the recommended duration. It was also found that 38.9% of them were watching television at least once a day during meals. A statistically significant association was found between more than the recommended average screen time (>2hours/days) during weekdays and male gender ($p<0.05$), occupation of father bring private job ($p<0.01$) and shorter distance from home to school ($p<0.05$). Number of siblings having two or less was significantly associated with engaging in more than 2 hours of screen time during weekends at 0.05 level. *Conclusion:* The present study findings suggest that adolescents are spending more than the recommended duration in front of screen and necessitates actions at family, school, community, government and policy level actions to reduce sedentary behaviour associated with television, videotape, and video game use.

**Keywords:** Screen Time; Behaviours; Adolescents; Sedentary; Lifestyle.

## Introduction

For the last few decades international and national studies have shown a trend towards early onset and increasing prevalence of non communicable diseases especially overweight and obesity among children and adolescents [1]. The addition of behavioural risk factors to the

ethnic or genetic susceptibility superimposed on the biological risk factors can be considered as the reason behind this [2]. Reducing sedentary behaviours, including television (TV) viewing, is important in preventing many lifestyle diseases including overweight and obesity [3,4]. Sedentary behaviors are different from having inadequate levels of physical activity or exercise and are those with minimum energy expenditure. Advances in new technologies and the convergence of different screens have generated a context in which constant interaction with the digital media forms an integral part of young people's lives. Although the social media are the most popular choice, television is the second most common type of screen [5]. In a study carried out by Marta and Gabelas concluded that "television continues to be the most popular screen among minors during their leisure time". Thus, even in this new media context, television continues to form part of young people's lives. They watch it mainly for entertainment, although to a lesser extent, as a source of information also [6]. Though there are many potential academic and social benefits for TV/Computer use, it leads to many negative health outcomes such as unhealthy eating, sedentary lifestyle, physical inactivity, low academic performance, and aggressive behavior. It is not just television that makes youth sedentary. Studies have shown that electronic devices like DVDs, Video games, computer, and videogames when included the time spent in front of screen increases to more than five hours a day.

World Health Organization report 'Sedentary lifestyle: a global public health problem' identified sedentary lifestyle as among the top ten leading causes of death and disability in the world [7]. Various organizations have recommended that children above the age of 2 years should not spend more than 2 hours a day in front of the screen [8].

An association between children's exposure to violent images on television and subsequent aggressive behavior also has been documented repeatedly in the literature [9]. Extended and frequent television viewing also has been shown to decrease the time and opportunity available for social interaction within the family [10]. Watarkar A et al among school going adolescents residing in India found that 21.47% of children watched TV for more than two hours per day and 16.23% spent more than 2 hours per day with computer or mobile. Both these factors were significantly associated with overweight [11]. Kaur H et al. in a study conducted among adolescents found that watching television for more than 2 hours a day doubled the risk of overweight compared to those who watched less than 2 hours a day [12]. Aadahl M et al. in Inter 99 study found a significant relationship between TV viewing and cardiovascular risk factors including waist/hip ratio, body mass index, triglycerides, low density lipoprotein, total cholesterol, systolic blood pressure, and diastolic blood pressure [13]. Unfavourable cardiovascular disease risk factors profile was observed independent of their weight status among adolescence who watches television for more than three hours a day [14]. Similar findings were revealed by Grontved A et al. in a prospective cohort study. Total screen time in adolescence was positively associated with adiposity, triglycerides, and metabolic syndrome in young adulthood. Individuals who increased their TV viewing, computer use, or total screen time with more than 2 hours/day from adolescence to young adulthood had 0.90, 0.95, and 1.40 $kg/m^2$ respectively had higher body mass index, in young adulthood compared with individuals who remained stable or decreased their viewing time [15].

The pathophysiological mechanism behind this could be reduced physical activity [16], increased energy intake while watching screen [17] or reduced metabolic rate [18], increased risk of insulin resistance [19], and alterations in lipid profile. It was also found that children who spend more than two hours per day watching TV are more likely to use tobacco, have poor fitness [20], and poor motor skills [21] as adults. It was also demonstrated that reducing screen time was associated with reduction in body weight, body fat, and obesity prevalence. A randomized trial among elementary school children provided evidence that TV viewing affected boy mass index; when time spent watching TV was reduced, relative to that for children in control schools, BMI was also reduced after 1 year [22].

In the long term sedentary behavior have been identified as major independent risk factor for mortality and morbidity for non-communicable diseases. It is one of risk factor which can be modified to counteract the negative effects that may follow in adulthood. This situation has prompted the investigator to undertake this study in Thrissur district, Kerala, South India where large number of educational institutions is established.

## Material and methods

This was a cross-sectional survey including school going adolescents aged 11to 13 years, studying at private aided schools of Thrissur district, Kerala, South India selected using convenient sampling

technique. Permission to conduct the study was obtained from the directorate of district education, Thrissur and Directorate of Public Instructions, Thiruvanthapuram. The study was approved by Institutional ethics committee. Selected schools were visited and the consent and co-operation for the study was solicited from the concerned authority. Before starting the actual study, a pilot study was conducted to know the feasibility and practicality. Informed written consent procedures were followed for all. Children who were diagnosed as having some cardiovascular diseases, chronic illnesses, severe malnutrition, physical and mental defects or not cooperative were excluded from the study. A total of 252 school going adolescents participated in the study.

Data collection took place in the month of June 2015. Data was collected through a structured questionnaire. The reliability of the questionnaire was found to be r = 0.72. The questionnaire had two parts. The first part had 12 structured items for obtaining information regarding socio -demographic personal profile including age, gender, education and occupation of parents, area of living, sources of information regarding coronary artery disease, number of siblings, family history of chronic diseases, distance from home to school, physical education hours in school curriculum, and hours of attending tuition. The second part had 2 items capturing screen time, and habit of consuming food in front of television.

First item captured estimate time spend in front of Television/ Videos/DVD/ Computer on Saturday, Sunday, and average weekdays during the last 7 days. Weekly screen time was estimated by multiplying weekday viewing hours by 5, and adding viewing hours for Saturday and Sunday.

Category for screen time was formed as follows:

Appropriate - less than two hours /day

Inappropriate - two or more hours /day

Second item was on habit of watching television during meal using a 5-point likert scale with the following options. Always (2 or more times in a day), Quite often (Once in a day), Sometimes (3-5 days in a week), Hardly ever (1-2 days in a week), Never (I don't watch television during meals)

Categories were made as follows:

Appropriate - less than once a day

Inappropriate - at least once a day

The collected data were coded and entered in the master data sheet. Those columns left blank were taken as no responses. It was decided to analyze the data by descriptive and inferential statistics on the basis of objectives and the hypotheses of the study. The data was analyzed in terms of descriptive (mean, standard deviation, percentage) and inferential statistics (independent t- test, chi-sqaure test/fishers exact test). A p value of <0.05 was taken as statistically significant.

## Results and discussion

*Sociodemographic characteristics*

The socioemogrpahic personal characteristics of adolescents participated in the study is given in Table 1. The mean age of adolescents was 12.29±0.5 yrs. n=252

| Variable | Category | Frequency | Percent |
|---|---|---|---|
| Gender | Female | 79 | 31.3 |
| | Male | 173 | 68.7 |
| Education of mother | PG | 10 | 4.0 |
| | UG | 69 | 27.4 |
| | Upto metric | 155 | 61.5 |
| | Literate | 14 | 5.6 |
| | Illiterate | 4 | 1.6 |
| Education of father | PG | 17 | 6.7 |
| | UG | 35 | 13.9 |
| | Upto metric | 174 | 69.0 |
| | Literate | 26 | 10.3 |
| Occupation of mother | Farmer | 1 | 0.4 |
| | Own business | 12 | 4.8 |
| | Pvt job | 50 | 19.8 |
| | Govt job | 38 | 15.1 |
| | Unemployed | 151 | 59.9 |

| Variable | Category | Frequency | Percent |
|---|---|---|---|
| Occupation of father | Farmer | 15 | 6.0 |
| | Own business | 77 | 30.6 |
| | Pvt job | 140 | 55.6 |
| | Govt job | 19 | 7.5 |
| | Unemployed | 1 | 0.4 |
| Area of living | City | 11 | 4.4 |
| | Village | 188 | 74.6 |
| | Town | 53 | 21.0 |
| Source of information | School curriculum | 3 | 1.2 |
| | Media | 2 | 0.8 |
| | Health personnel | 2 | 0.8 |
| | None | 245 | 97.2 |
| No of siblings at home | Two or less | 175 | 69.4 |
| | More than two | 77 | 30.6 |
| Family history of cardiovascular diseases | Yes | 125 | 49.6 |
| | No | 127 | 50.4 |
| Distance to school from home | 0-5km | 141 | 56.0 |
| | 6-10km | 74 | 29.4 |
| | More than 10km | 37 | 14.7 |
| Hours of attending tuition | One or more than 1hr/day | 123 | 48.8 |
| | Less than 1hr/day | 129 | 51.2 |

*Screen time behaviour among adolescents*

From Table 2 it is clear that though the mean screen time was less than 2 hours/day on week days, but 7.5% of them were (Figure 1) watching screen for more than the recommended duration. On weekends the mean duration of screen time was found to be more than 2hours, but 68.7% and 75.8% of them were engaged in more than the recommended duration of screen time. It was also found that 38.9% of them were inappropriately watching television during meals for at least once a day (Figure 2).

The Indian Academy of Paediatrics recommends that parents limit school-age children's total media time (watching TV/videos/computer and playing video games) to less than two hours per day. Various International (Wethington H et al. [23], and Kaur H et al. [24]) and national studies (Nayak BS, [25] Bhuvanesh S and Kaur A, [26] and Kumar D [27]) shows that the amount of time young people spend in sedentary behaviors has increased in recent years. While this includes TV time there is a dramatic increase in other types of screen time such as computers and video games that appears to be driving the trend. There also has been an increase in the percentage of kids who spend an excessive amount of time (2 or more hours per day) in sedentary behaviors.

Sudha R among Indian adolescents demonstrated that, children aged 8-18 years spend more time in front of the computer, that is 6.5 hours daily in front of television, computer and video games and more than half of television viewers in India today are children below 15 years [28].

*Association between screen time habits and selected variables*

In the present study, a statistically significant association was found between more than the recommended average screen time (>2hours/ days) during weekdays and male gender ($p<0.05$), occupation of father being private job ($p<0.01$) and shorter distance from home to school ($p<0.05$).

**Table 2:** Screen time duration (Hours) among adolescents

n=252

| Variable | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| Screen time (weekdays) per day | 0.0 | 3.0 | 1.15 | 0.75 |
| Screen time Saturday | 0.0 | 10.0 | 3.67 | 2.25 |
| Screen time Sunday | 0.0 | 10.0 | 4.03 | 2.17 |
| Total Screen time per day | 0.0 | 4.71 | 1.92 | 0.88 |

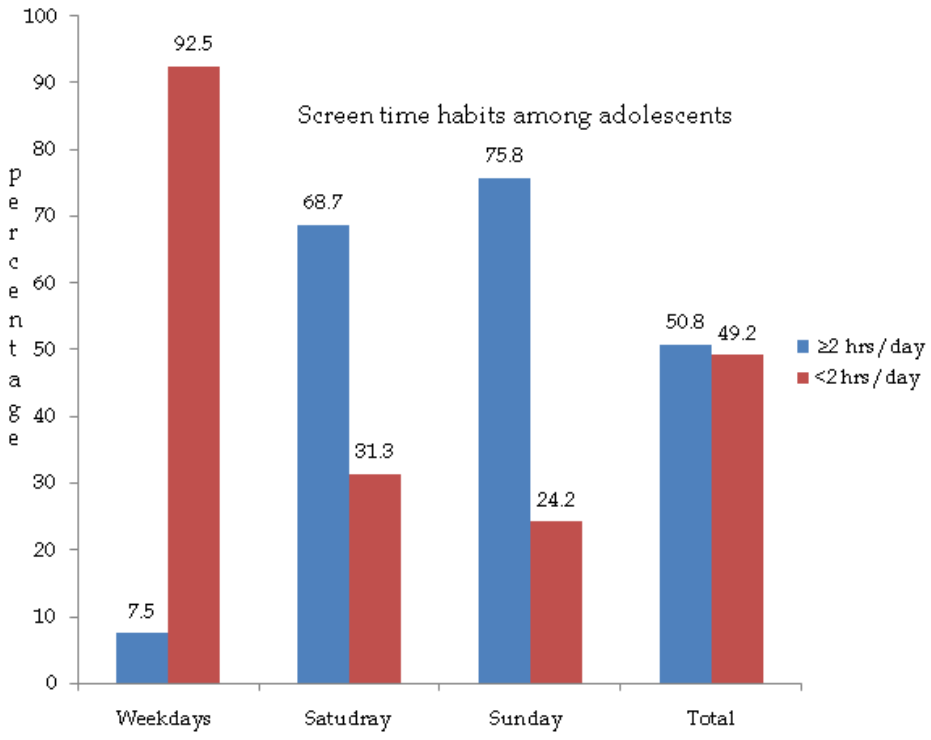


**Fig. 1:** Screen time habits among adolescents

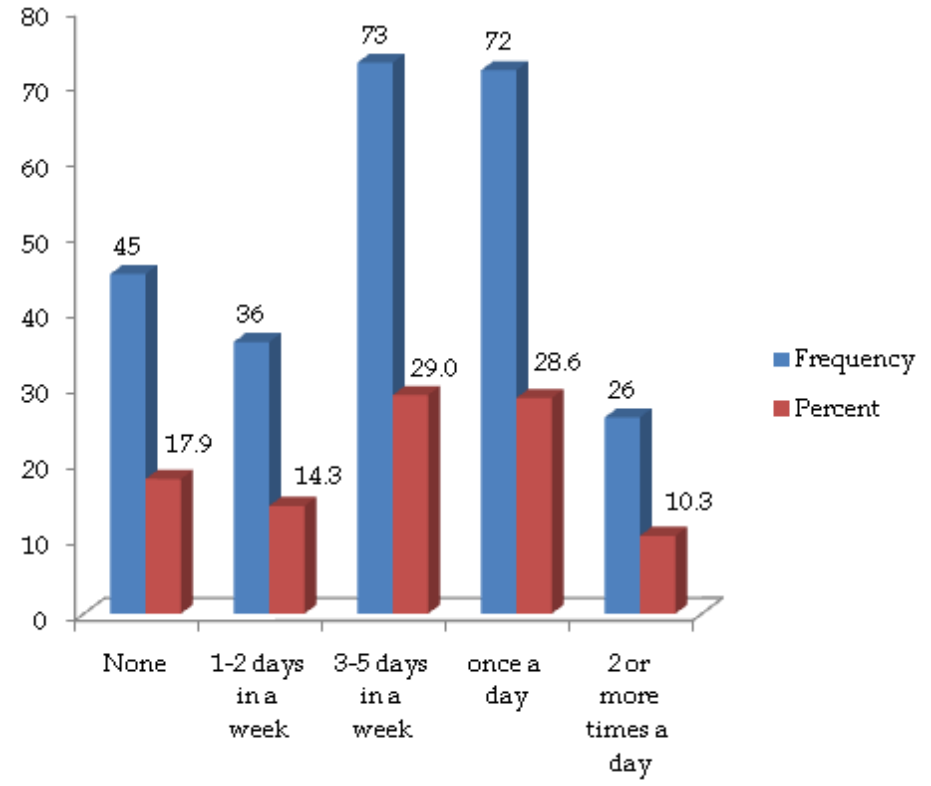


**Fig. 2:** Habit of watching television during meals

Number of siblings two or less was significantly associated with engaging in more than 2 hours of screen time during weekends at 0.05 level.

The prevalence of excessive screen time was 79.5% (95% CI 78.1-81.1) and it was higher in males (84.3%) compared to females (76.1%; p<0.001) [29]. Previous literature shows inconsistent evidence or no evidence for the associations for most social determinants (e.g. parental education, number of siblings, maternal physical activity). The absence of social support can increase children's time spent sedentary and having more TV related parenting risk factors and watching more TV as a family, can result in higher screen time in youth [30].

## Conclusion

The present study findings suggest that adolescents are spending more than the recommended duration in front of screen. Since the previous evidences have shown primary negative health effects of screen time on violence and aggressive behaviour, sexuality, academic performance, body concept and self-image, nutrition, dieting, and obesity, and substance use and abuse patterns, the study recommends actions at family, school, community, government and policy level actions to reduce sedentary behaviour associated with television, videotape, and video game use among adolescents.

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*Original Article*

# A Study to Assess Perceived Stress Level among Care Givers of Child with Major Thalacemia in Selected Hospital Rajasthan

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**Abstract**

*Introduction:* Although optional medical management has reduced the difficulties faced by Thalassemic children and their families, still the psychosocial impact on the development of the sick children and family is a continuous process throughout life. It is possible that uneducated, poor and socially maladjusted parents are more affected in comparison to those who are educated, economically sound and socially well adjusted. The psychosocial burden can affect the quality of life of the care givers. *Method:* Descriptive cross sectional design with 70 care givers of children with Thalassemia Major admitted in Thallassemia unit of UMED hospital by using total enumerative sampling technique was selected and PSS instrument was used to collect date for 7 to 10 minutes through interview approach of self reporting. Association of demographic variables and level of stress was assessed by $\chi 2$ and mean & SD. *Result:* In this present study the care givers experienced moderate level of stress last one month indicating that they have more burden in caring children with thalassemia Major. Study showed that there was no association exist between the demographic variables such as, number of children, and number of children with chronic illness occupation family income and diversion activity, other demographic variables such as age, respondents and, education had significant association. *Conclusion:* The care givers stress need to be addressed adequately with appropriate interventional package. Care givers need frequent guidance and counseling services and need to follow divisional activity to keep them healthy mentally. It is the nurse's role to help caregivers cope with their family and hospital environment by providing adequate health teaching, and directing necessary resources for the caregivers.

**Keywords:** Stress; Care Givers; Child with Thalassemia.

## Introduction

Increasing number of children are admitted to hospitals, with treatment regimens requiring constant vigilance by family members and supportive caregivers. Serious illness and disability often have a devastating impact on caregivers and family members [1]. Thalassemia, affecting children, is one such condition, which requires a family vigilance approach throughout the life of the child. Globally, 15 million people are estimated to suffer from Thalassemia. In India, approximately 30 million people are affected; and 10,000 Thalassemia major children are born every year. Every hour one child is born with Thalassemia. The carrier rate for β-Thalassemia varies from 1-17% in India with an average of 3.2%, which means that on an average one in every 25 Indians is a carrier of Thalassemia. One among 204 children born in a year are affected with Thalassemia [2]. Children with Thalassemia need monthly blood transfusion, regular iron chelation therapy and in some cases, bone marrow transplantation [3]. Thus, parents of these children are exposed to repeated emotional suffering for their offsprings. They perceive themselves to be responsible, guilty and hopeless, as well as worried about the health and future of the affected children [4]. Although optional medical management has reduced the difficulties faced by Thalassemic children and their families, still the psychosocial impact on the development of the sick children and family is a continuous process throughout

life. It is possible that uneducated, poor and socially maladjusted parents are more affected in comparison to those who are educated, economically sound and socially well adjusted. The psychosocial burden can affect the quality of life of the families. Less work has been done regarding the stress level of care givers of chronically ill children [5]. Thus, it is important for the nursing staff to identify the perceived stress level of caregivers of children with Thalassemia.a study therefore was planned aiming to identify perceived stress level of care givers and its association with selected demographic variables.

*Title*

A study to assess perceived stress level among care givers of child with major Thalacemia in selected hospital Rajasthan.

*Objective*

1. To assess the perceived stress level among care givers of child with major Thalacemia in selected hospital Rajasthan.
2. To associate the perceived stress level with selected demographic variable of care givers of child with major Thalacemia in selected hospital Rajasthan.

*Operational definitions*

- *Assessment:* In this study it refers to the organized, systematic continuous of collecting Data from the care givers of children with Thalassemia Major.
- *Stress:* In this study, it refers to the psychological, physiological and sociological imbalance experienced by the care givers for last one month due to chronic suffering of children with Thalassemia Major, which is measured by perceived stress scale.
- *Care givers:* It refers to Father, Mother and grandparents, guardians or primary care giver of children with Thalacemia Major during their sick period.
- *Children:* It refers to the Children less than eighteen years who are in Thalassemia unit.
- *Thalassemia:* It refers to a group of inherited blood disorder characterized by reduced (or) absence of hemoglobin to oxygen carrying proteins inside the red blood cells.

**Material and Methods**

- *Research approach and design:* The research approach used for this study is Qualitative approach. A descriptive cross sectional study design was adopted to assess level of stress among women with infertility
- *Research setting:* UMED hospital, Thalassemia unit.
- *Target population:* Care givers of children with Thalassemia
- *Accessible Sample:* Care givers of children with Thalassemia Major admitted in UMED hospital in Thalassemia unit from blood transfusion, Jodhpur.
- *Sample size:* a total of 70 Care givers who are willing to participate, who are coming to UMED hospital with their child for blood transfusion not less than 3 months, and who is able to understand Hindi, were included in the study and those who are physically and mentally ill and siblings of the Thalassemia child is excluded from the study.
- *Sample design:* Non probability total enumerative approach of purposive sampling technique was adopted. The entire population who is meeting inclusion criteria was included in the study.
- *Development and description of tool:* A standard tool Sheldon Cohen "Perceived Stress Scale" (PSS) for care givers tool was used. Tool contains 10 items, 4 positive stated questions and 6 negative stated questions. The Perceived Stress Scale (PSS) is a classic stress assessment instrument. The tool, while originally developed in 1983, remains a popular choice for helping us understand how different situations affect our feelings and our perceived stress. Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress. The questions in this scale ask about feelings and thoughts during the last month [6,7]. The tool was translated into Hindi version and back translated to check English to check the validity of Hindi version with help of expert opinion, and reliability was assess by test and retest method. The tool contains demographic variables also to assess the association. They includes, Respondent/care givers, Age of care givers, No of Children, Education, Occupation, No of other Children with chronic illness, Family income and Diversion activity followed
- *Reliability:* The reliability was established by assessing the stability of the tool by test–retest method using a correlation coefficient method. The tool was found to be reliable.

**Table 2:** Score and interpretation

| Level of stress | Score |
|---|---|
| Mild stress | 0-13 |
| Moderate stress | 14-26 |
| Severe stress | 27-40 |

**Table 3:** Method of score:

| Rating | Negative item | positive item |
|---|---|---|
| Never | 0 | 4 |
| Almost never | 1 | 3 |
| Sometime | 2 | 2 |
| Fairly often | 3 | 1 |
| Very often | 4 | 0 |

- *Validity:* The content validity of the tool was assessed by obtaining opinion from three experts in the field of Hindi literature and nursing. The tool was translated into Hindi version and back translated to check English to check the validity of Hindi version with help of expert opinion.
- *Ethical safeguard:* Informed Consent were obtained from the participants and explained about the purpose of the study. The ethical guidelines were followed throughout the study.
- *Pilot study:* The pilot-study was conducted from for 10% of total sample. During the study, practicability of the tool and feasibility of the study was assessed. Subjects were given a questionnaire to assess the level of stress among infertile women with reproductive age group.
- *Actual data collection:* The purpose of the study was well explained before data collection. Data were collected by giving standard questions to the care givers after obtaining informed consent. It took 7 to 12 minutes to administer standard PSS for care givers. Survey approach under self reporting method was used to collect data. Data was collected for the duration of one two months time period.
- *Analysis:* Descriptive statistics such as table, mean and standard deviation and inferential statistics such as chi square($\chi^2$) was used to analyze the data and infer the result.

## Result

From the table-1 it is understood that mostly mother is accompanying the children during their hospital visit, and respondent below 35 years are seems to be more than above 35 years. Most of the respondent has 2 children. As per educational qualification most of them had finished matriculation, regarding employment status all most half of the respondent are employed, two respondent have more than 1 children with chronic illness. Only 35.5% of respondent was following one or other divisional activity,

**Table 4:** Frequency and percentage distribution of demographic variables

| Demographic variables | Frequency | Percentage (%) |
|---|---|---|
| 1. Respondent | | |
| a. Mother | 30 | 42.9 |
| b. Father | 23 | 32.9 |
| c. Other | 17 | 24.2 |
| 2. Age | | |
| a. 21-35 years | 41 | 58.6 |
| b. > 35 yrs | 29 | 41.4 |
| 3. No of Children | | |
| a. 1 | 14 | 20 |
| b. 2 | 45 | 64.3 |
| c. >2 | 11 | 15.7 |
| 4. Education | | |
| a. Uneducated | 9 | 12.9 |
| b. Matric | 37 | 52.9 |
| c. Gradate | 24 | 34.2 |
| 5. Occupation | | |
| a. Umemployed | 32 | 54.3 |
| b. Employed | 38 | 45.7 |
| 6. No of other Children with chronic illness | | |
| a. 1 | 68 | 97.1 |
| b. >1 | 2 | 2.9 |
| 7. Family income | | |
| a. >10000 Rs | 12 | 17.1 |
| b. 10000-30000 Rs | 30 | 42.9 |
| c. >30000 Rs | 28 | 40 |
| 8. Diversion activity followed | | |
| Yes | 25 | 35.7 |
| No | 45 | 64.3 |

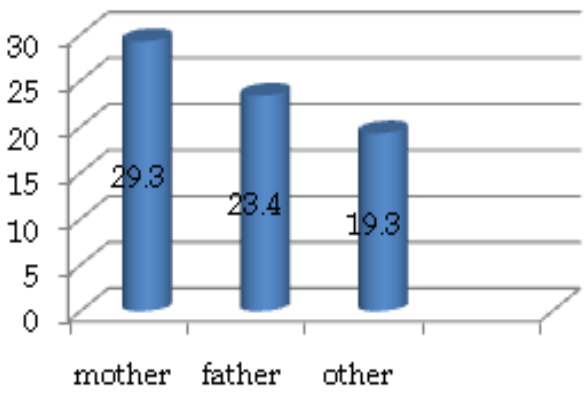


**Fig. 1:** Mean score of the respondents:

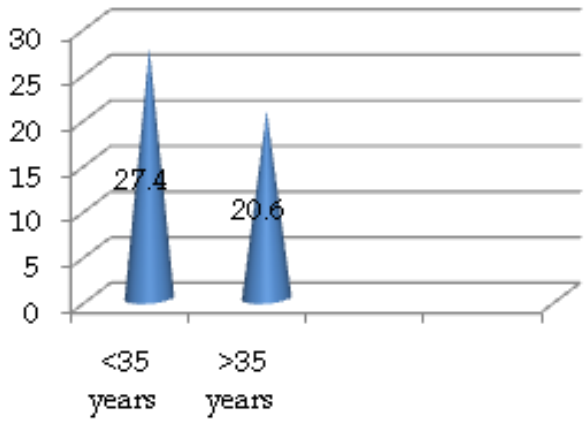


**Fig. 2:** Mean and age of sample

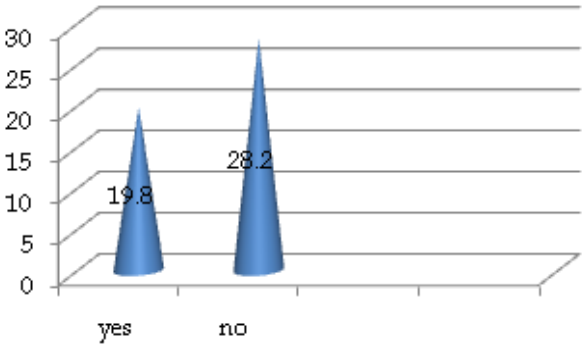


**Fig. 3:** Mean and divisional activity followed

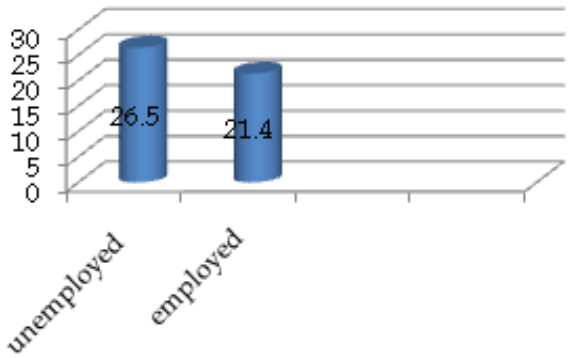


**Fig. 4:** Mean and occupation of the respondent

Among respondent the mother stress was higher (mean 29.3) comparing to father stress level (mean 23.5) and other respondent, care givers >35 years had higher stress level (mean 31. 3) than <35 years, there is no much variations observed in the mean score of care givers with number of children, and number of children with chronic illness, occupation and family income. Graduated person exhibited mild stress level where as other two categories had moderate to severe stress level. Occupation of the care giver influenced the level of stress and mean score of an unemployed care giver was 26.5. The care givers who had one or other form of diversion activities had less stress level (mean 19.8) comparing with others those who do not.

Form the table 5 it was inferred that the 40 samples were suffering with moderate level of stress care givers are suffering with moderate level of stress as the mean score was 24 with the SD of 3.17.

There was a association exist between the demographic variables such as, occupation family income and diversion activity, other demographic variables such as age, respondents, education, number of children, and number of children with chronic illness had no significant relationship.

## Discussion

A study conducted on lived experiences of mother carrying for children with thalassemia major in Thailand. This quantitative study explored the lived experiences of 15 mothers of children with thalassemia major by conducting semi-structured interviews; the data were analyzed utilizing content analysis. Six themes were identified: lack of knowledge about thalassemia, psychosocial problems, concerns for the future, social support systems, financial difficulty and the effectiveness of health services. These findings suggested that a holistic, culturally sensitive nursing approach should be considered when carrying for children with thalassemia [8].

A study conducted about a qualitative study on the experiences of mothers caring for their children with thalassemia in Athens, Greece. Using a semi structured questionnaire, the researchers interviewed convenient sample of 19 mothers who have children with thalassemia. A considerable failure to provide information regarding carrier testing prior to married or genetic screening for thalassemia during early pregnancy at the time of the participant's pregnancies was noted. Emotional distress, fear of death, and difficulty in dealing with feelings were some of the mothers concerns [9].

**Table 5:** Frequency, Percentage, Mean, Median and Standard Deviation of perceived stress level:

| Score | Interpretation | Frequency | Percentage | Mean | Median | Standard deviation |
|---|---|---|---|---|---|---|
| 0-13 | Mild stress | 21 | 30 | 24 | 24.4 | 3.17 |
| 14-26 | Moderate stress | 40 | 57.1 | | | |
| 27-40 | Severe stress | 9 | 12.9 | | | |

A study Conducted on analysis of parenting problems for caregivers of children with thalassemia. A situational analysis of problematic situations was conducted for 37 caregivers of children with thalassemia who ranged in age from 5-13 years. Participants responded to a semi-structured interview related to caring for a child with thalassemia. The interview included the domains of medication adherence, nutrition, minimizing and coping with pain episodes, social problems, academic difficulties and children's expression of negative feelings related to having thalassemia. Caregivers described 356 problems. Almost all caregivers reported experiencing problems with their children's nutrition, minimizing pain episodes and their children expressing feelings about having thalassemia. Moderately challenging and emotionally upsetting problems were reported for coping with symptoms. Nutrition issues were more frequently reported for younger children. Findings have salient clinical implications for the care of children with thalessemia [10].

From the present study it was inferred that the care givers are suffering with moderate level of stress and the mean score was 24 and the range is towards upper limit, it indicates that over the period of time they may develop severe level of stress. Among respondent the mother stress was higher (mean 29.3) comparing to father stress level (mean 23.5) and other respondent, care givers >35 years had higher stress level (mean 31. 3) than <35 years, there is no much variations observed in the mean score of care givers with number of children, and number of children with chronic illness, occupation and family income. Graduated person exhibited mild stress level where as other two categories had moderate to severe stress level. Occupation of the care giver influenced the level of stress and mean score of an unemployed care giver was 26.5. The care givers who had one or other form of diversion activities had less stress level (mean 19.8) comparing with others those who do not.

There was no association exist between the demographic variables such as, number of children, and number of children with chronic illness occupation family income and diversion activity, other demographic variables such as age, respondents and, education had significant association.

## Conclusion

In this present study the care givers experienced moderate level of stress indicating that they have more burden in caring children with thalassemia Major. Study showed that there was no association exist between the demographic variables such as, number of children, and number of children with chronic illness occupation family income and diversion activity, other demographic variables such as age, respondents and, education had significant association. The inherited disorders of hemoglobin are responsible for an extremely complex series. Sickle cell anemia and Thalasemia can cause chronic ill-health and can be life-threatening. Thalassemic children are not like children with blood malignancies, who are treated with chemotherapy protocols and marrow transplantation, where as thalassemic children need monthly blood transfusion and regular iron chelation. Thus, parents of these children are exposed to practice emotional suffering very frequently and constantly for their off springs' devastating health problem. They are usually responsible, guilty and hopeless, as well as worried about the health and future of their child. The care givers stress need to be addressed adequately with appropriate interventional package. Care givers need frequent guidance and counseling services and need to follow divisional activity to keep them healthy mentally. It is the nurse's role to help caregivers cope with their family and hospital environment by providing adequate health teaching, and directing necessary resources for the caregivers.

*Recommendations*

The present study assesses only the perceived level of stress of care giver but not the coping ability, the coping ability in relation to perceived level of stress can be assessed by using coping check list, correlation can be done between these variables, and also the study sample is only care givers of child with major thalacemia who is in need of blood tansfusion and visiting to UMED hospital thalacemia unit every 10 days once, but similar study can be conducted for care givers of children with thalacemia major and minor and comparison can be mad.

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*Conflict of interest:* No Conflict of Interest.

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*Review Article*

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# Effective Counseling Skills for Teachers

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**Abstract**

Academic life is becoming more and more stressful for students pursuing higher education which can obviously impact the ability of the students to successfully complete their program of study. The role of counselors is indispensible in the rapidly advancing world of technology as counseling not only supports the students with psychological difficulties, it also contributes to the overall development of the student. The counselor needs to be skillful, to counsel students effectively. By establishing rapport and by interview, the counselor collects the dataabout the students. The counselor uses techniques which include knowing counselee's expectations, listening actively and attentively, establishing hierarchy of needs, encouraging effective questioning, giving information and removing obstacles to change and arriving at an agreement which helps the counselee explore the possible solutions for problems. In collaboration with the counselor the counselee identifies possible solutions and achieves emotional release and finally makes decisions and master over his problems.

**Keywords:** Interviewing; Trustworthiness; Active Listening; Concreteness; Paraphrasing and Reflecting.

**Let's Build Bridges, Not Walls!**

***Martin Luther King* Jr**

## Introduction

Counseling existed across globe from time immemorial. The role of counselors is indispensible in the rapidly advancing world of technology. Counseling and guidance principles began in ancient Greece and Rome with the philosophical teachings of Plato and Aristotle. Evidence suggests that techniques of modern-day counseling were practiced by Catholic priests in the Middle Ages. In some countries, once children reach adolescence, they are taught to be on their own, living away from their parents. On the other hand, children in countries like India are taken nannyish care. Many times, the mother does half of the school assignments. All of a sudden when the child is made to be on his own in the college campus, and in the hostel, he/she feels very inadequate and breaks down as this poses a challenging environment to the student.

Academic life is becoming more and more stressful for students pursuing higher education. Academic issues such as assessments and increased expectations along with external pressures such as adjustment problems and financial difficulties escalate their stress. (Allan, McKenna & Dominey, 2013). Research reveals that college students are experiencing emotional problems that are consistent with those experienced by the general population (Macaskill, 2013). These difficulties can obviously impact the ability of the students to successfully complete their program of study. Thompson (2014) states that counseling not only supports the students with psychological difficulties, it also contributes to the overall development of the student.

Some of the common personal problems of students include:

- Anxiety due to being in new environment, the college or the hostel with unknown people,
- Stress due to lack of confidence, performance anxiety, academic demands, career choice,etc.
- Problems with peers, engaging in sexual relationships,
- Lack of knowledge to navigate professional settings, policies, etc.

- Financial difficulties to meet the expense for studies,
- Deviation from ethical and moral codes,
- Health problems,
- Other socially unacceptable behaviours such as, substance abuse, indulgence in violent activities, misconduct in examination, absenteeism, thoughts of suicide, etc.

As per the governing bodies of educational institutions, it is mandatory that all the colleges and schools must have counseling services. But there is reluctance to seek counseling by many students because of the social stigma attached to it. Student do not want to join the 'you too have problem?' list made by onlookers, who may be their peers, teachers, etc. Student athletes have been raised in an environment that stresses the importance of resiliency. The good of the team takes precedence over individual problems. It is highly embarrassing for a highly recognized student athlete on campus to be seen at a counseling center (Etzel, Ferrante & Pinkney, 2013).

*What is counseling?*

"Counseling is the helping relationship, that includes someone seeking help, someone willing to give help who is capable or trained to help, in a setting that permits help to be given and received".

*- Cormier and Hackney (1987).*

Counseling is a dynamic diverse, multicultural and process. It is a professional relationship that empowers individuals, families and groups to accomplish mental health, wellness, educational, career goals, maximize personal growth and empowerment concerns. The progress comes through the thinking that a person with a problem does for himself. Often students will not know what questions to ask, what information they need, or what options are available to them. A good counselor can lessen such confusion in a few minutes, by getting to know about the students as he/she is familiar with the information that can be useful for students.

*Effective Counseling Skills*

Teaching is a difficult task and not every teaching brings about students' learning. The teacher as counselor, serves as mother and father in the institutions and students are blessed to have them. The counselor needs to be skillful, to counsel the students effectively. By establishing rapport and by interview, the data about the individual are collected. The educational, occupational and other needed information are given to the counselee. The counselee achieves emotional release and finally makes decisions and master over his problems.

The following skills are considered as effective counseling skills required for a good counselor:

*Interview:* Interview is an effective technique for building rapport. It makes the counseling process easy. In the introductory interview, the counselor introduces himself and states the purposes of the interview for obtaining mutual interests. It also reflects confidence in the counselor's knowledge and competence. Introductory interview does not provide all the details of the counselee. To get more details, it is to be followed by the fact finding interview. This helps the counselor to identify the counselee's feelings towards family, peers, academics and situations. The counselor also gains insight about the strengths and weaknesses of the counselee.

*Trustworthiness:* Creating an environment of trust is essential for the counselor so that the counselee trusts the counselor. A congruent, warm, empathetic, and non judgmental attitude conveys trustworthiness.

*Listening:* The act of listening has the following components;

*a. Attending:* The counselor make himself available to the counselee and gives his undivided attention by switching of his cell phone, having eye contact; not being distracted, encouraging expressions; not often changing body postures; leaning forward, looking to the counselee not at the counselee, occasionally keeping or breaking silence, saying words like "yes," and "please continue" etc, shows respect. Paying attention to the "subtext", undertones of the student's words, attitude, the bodily messages, and capturing and understanding the verbal and non-verbal information communicated by that counselee yields a lot of information. Researchers estimate that about 80 percent of communication takes place non-verbally. The counselor, determines the mood, feelings, and reactions of the counselee by studying the spatial movements and conditions of communication (proxemics), exhibited by the counselee.

*b. Active Listening:* A good counselor must be an attentive, active, careful and good listener. Hearing exactly what the student tells counselor

without making conclusions or judgment, is very essential part of an effective counseling process. Communicating without words, shows the counselor's interest towards the student's needs, as it paves way for open communication. Repeating the information, is important to make sure, that the counselee has understood correctly.

*Structuring:* When the individual enters counseling, the counselor should discuss the agenda for the day with their counselee, the activities, and the processes that they will go through. This structuring will help both the counselee and the counselor's to think how this schedule will work for them.

*Counselee Expectations:* The counselor needs to know the expectations of the counselee, their opinions and beliefs about counseling. The counselee should express their expectations. This can help the counselor to structure, guide and direct the counseling process.

*Hierarchy of Needs:* This technique involves the counselor assessing in what order their counselee's needs are to be met. The needs that they have are: physiological needs, safety needs, love and affection, self esteem and self actualization needs.

*Core Conditions:* Some of the essential traits that the counselor needs to integrate for effective counseling are: positive regard, empathy, congruence or genuineness. Unconditional positive regard is showing a caring attitude, warmth, conveying acceptance by responding to the counselee's verbal and non-verbal messages with nonjudgmental responses, conveying respect to the counselee by expressing counselor's sincere belief that every person possesses the inherent strength and capacity to make it in life, and that they have the right to choose and make their own decisions. Confirmatory, corrective, and motivating statements show unconditional positive regard. Empathy is the ability to perceive another's experience (standing on other's shoes) and then revealing that back to the individual to clarify the meaning of it. It is another important essential trait. Genuineness is the ability of the counselor to be congruent with his activities, outer words and behaviors with inner feelings, e.g. When a counselee consults on abortion issue, and the counselor shows signs of discomfort with the topic, this will lead to mistrust and serve as a barrier for the counseling process.

*Concreteness:* This is keeping communications clear to the point, focusing on facts and feelings concerned, while avoiding generalizations, vague discussions, or talks other issues, unrelated to the counselee. This includes the following functions:

a. Helping counselee to focus on a specific problem from the other ones.
b. Prompting the counselee of the task, so as to complete the session.
c. Offering suggestions to help the counselee to make the goals clear.
d. Use a here-and-now focus to effect the process of counseling, which helps to solve the problem.

*Encouraging:* Encouraging is an essential technique that will help facilitate confidence and self respect. Here the counselor focuses on the counselee's strengths and assets to help them see themselves in a positive light.

*Focusing:* Focusing helps the counselor to determine what the counselee needs to get next, in the counseling process.

*Giving Clear Information:* Before giving information, the counselor needs to know, what the student already knows. Providing information in the language that the student understands, is very important. Asking the student to repeat the information helps to confirm, whether the conversation is understood correctly.

*Capping:* Capping involves changing a conversation's direction from emotional to cognitive aspect. E.g. shifting from crying, to the details of the rest of the problem under discussion.

*Effective Questioning:* Effective questioning is important to elicit facts. ***Open ended Questions*** helps to assist the counselee in clarifying thoughts or feelings. Here, the counselor requests, detailed information and not a very brief answer. An open ended question (OEQ) usually gets a long answer. The Socrates questions; who-what-where-why-when-how, are asked to get detailed information. OEQ's are (e.g., "What made you to choose Nursing as your carrier?") critical for eliciting feelings and for starting the interview.

- What brought you in here today?
- How do you feel right now?
- Us of "why?" question may make the student uncomfortable, and also implies judgment. Sometimes, the student may not answer such questions.
- Use of probing questions, e.g. "Please tell me more about?", yields in-depth information

- *Closed ended Questions* (CEQ are used

to gather, non-sensitive information instantly. (e.g., name, age, residence, etc. These questions are needed not only for getting the necessary information, but also to bring back a chatty student back on track.

- *Miracle Question:* This type of question will help the counselee see the world from different point of view. A miracle question could be: "What would the world look like, if a miracle occurred in your life?"

*Paraphrasing:* This technique involves repeating in other words, what the student has told the counselor. This helps the counselor, to clarify what the student told the counselor. It also assures that the student has been heard correctly. The tone of the counselor's voice should be kind, considerate and the same time, firm enough to gather information, not be authoritative. The student may not remember what was said, but he or she will remember, how counselor made them feel. This shows the counselees that the counselor is listening to their information and processing what they have been telling him or her. Paraphrasing is also good to reconsilate any misinformation that might have occurred.

*Reflecting and Validating Feelings:* This involves clarifying the feelings the student expresses so as to help, understand his or her emotions. E.g. "Do you feel low in front of others, to say that counselor got lower marks?" It is helpful for students to let them know that their reactions to such situations are normal, valid and that these feelings are common to all students.

*Spheres of Influence:* This information helps the individual to look at areas of their life and see which areas may be impacting and influencing them. The counselee's job is to find out which spheres give them strength, and which ones give them stress. Example of some spheres of influence to consider are, counselee himself or herself, family, friends, college, community, ethnicity or religion, and any external influences.

*Self-Disclosure:* The counselor will make note, when personal information is disclosed at certain points of therapy. This will help the counselor learn more about the counselee and use this information only to benefit them. In counselor self-disclosure, the counselor shares with the counselee, personal feelings, experiences, which includes relevant information, intended to help the counselee. As a rule, it is better to not self-disclose unless there is a pressing clinical need which cannot be met in any other way.

*Interpretation:* In interpretation, the counselor is providing new meaning, reason, or explanation for behaviors, thoughts, or feelings so that the counselee can see problems in a new way. Interpretations can help the counselee make connections between isolated statements of events, can point out themes, or can offer a new framework for understanding. An interpretation may be used to help a counselee, focus on a specific aspect of their problem, or provide a goal.

*Information Giving and Removing Obstacles to Change:* Supplying data, opinions, facts, resources or answers to questions will help the counselee explore the possible problems which may serve as a barrier to the change process. In collaboration with the counselor the counselee can identify possible solutions.

*Summarizing and Arriving at an Agreement:* This technique involves clarifying and summarizing the decisions that students have to make, during the counseling session. In summarizing, the counselor focuses on the main points of the session so as to give the "gist", of the counseling session, to see if the counselor is accurate and to imply that counselor is open to some changes in perspective. Sum-ups can be at the beginning and at the end of a session. It's important the both the student and counselor isr "reading from the same page." In a ***beginning summary***, counselor is recalling what happened at the last meeting. In an ***ending summary***, counselor is attempting to condense what has happened over 40 minutes into a few minutes worth of material.

*Avoidance of Inappropriate Responses in Counseling:* Avoidance of inappropriate responses in counseling makes the counselee comfortable through the counseling process. The following are some examples:

- *Judging:*, "You wouldn't have had these problems if you would have acted differently!"
- *Attacking:* "How could you be so irresponsible?
- *Denial:* "No! No! that is not important."
- *Pity:* "Alas! It would not have happened!"

*Engagement:* As a therapist, having a good, yet professional relationship with counselee is essential. However, there are bound to be difficult moments in counseling sessions, which will require influential engagement on the counselor's behalf.

*Network Building:* Building a professional network is a lifelong process that can be crucial in finding a

satisfying career. The student needs relationships, both inside and outside of the organization and relationships across diversity, such as gender, race, age and social class. Building a diverse network of relationships will make students feel empowered and confident. Counselor can be a powerful ally for students by helping them build their network of contacts which includes the counselor, other faculty acquaintances, and off-campus people met through internships, or meetings of professional societies. One way to increase counselor awareness of important student issues and develop rapport is to work with student organizations and initiatives. This will also increase counselor accessibility to students. Referrals can also be made to community resources regarding personal issues, financial assistance or specialized treatment programs, etc.

## Conclusion

Counselors work in areas that involve personal and interpersonal issues, which include concerns related to finding meaning, adjustment, and fulfillment in mental and physical health and the achievement of goals in the college. Thus the role of counselors is indispensible in the rapidly advancing world of technology. Teacher counselor and the student can be mutually beneficial, but counseling process requires time, energy and commitment. Counseling offers numerous resources with the purpose of enhancing students' personal, academic and career development. Counselors who utilize different techniques, effect definite behavioural changes and modifications in the students.

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# Nipah Virus Infection: Preventive and Control Measures in Children

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**Abstract**

Nipah virus is a newly emerging zoonosis of paramyxoviridae family which causes severe disease in both humans and animals. The natural reservoirs are the fruit bats of Pteropus genus and pigs in different outbreaks. The virus can spread from animals to humans through either close contact or eating contaminated fruits and or from humans to humans through close contact or respiratory droplets from an affected person. An individual can show symptoms after exposure within 5-14 days with fever, headache initially to severe encephalitis leading to coma and death. Bacteremia, kidney damage and other complications are possible in severely ill patients. There is no vaccine available at present but the treatment should be focussed upon managing fever and other neurological symptoms, standard safety measures such as regular hand hygiene, using personal protective equipment and healthy eating habits to fight against infection. An overall death rate of 40 to 75% is approximated. This article throws emphasis on the prevention and control measures of Nipah virus in children.

**Keywords**: Nipah Virus; Encephalitis; Transmission; Fruit Bats.

## Introduction

In recent past, Nipah virus caught the attention of the medical world due to outburst in southern India in 2018 [1]. It is an emerging paramyxovirus which causes severe encephalitis in humans [2]. Nipah Virus is a contagious disease which was first seen in domestic pigsduring the period of 1998-1999 in Malaysia and Singapore.There is also a mark of Nipah infection in dogs, cats, goats, horses and sheep [3]. The disease was named after a Malaysian village, Kampung Sungai Nipah, where the first viral isolate was obtained [4]. According to WHO list of Blueprint diseases stated in 2018 review,there is an urgent need for fast-tracked research and development of the Nipah virus [5].

### *Chronology of Past Outbreaks*

Numerous cases of the Nipah Virus in humans were diagnosed as Japanese encephalitis (JE) before the sequestration and identification of the newly revealed Nipah Virus. A large Malaysian farms were affected due to deforestation. As a result fruit bearing trees were reduced enormously. So the bats were attracted to the trees near the pig farms. This resulted inthe contact of the pigs to bat excretions containing the virus [4].

### *Outbreak in Malaysia and Singapore*

There was an occurrence of the first NiV recorded in Malaysia during 1998–1999 in both humans and pigs. Out of 265 infected cases, 105 were dead. This tragedy happened in the pig farmers near Ipoh in the Kinta District of Perak, 200 km north of Kuala Lumpur. It didn't confine to the same area but also spread to the other three other major pig-rearing areas in Negeri Sembilan and Sungei Buloh in Selangor and they were the largest in South-east Asia.

The number of subclinical infections fluctuated from 8 to 15 per cent. Pigs were the main cause of infection for farm and slaughter house workers those who got direct contact with live pigs, resulting in severe encephalitis among those people. There was also an outbreak of infectious respiratory and neurologic disease in domestic pigs, outwardly after spill over of virus from Malaysian bats. The calamity not only affected Malaysia but also Singapore and11 abattoir workers were affected with one death due to direct handling of pigs from infected farms during March, 1999. Majority of the

patients had symptoms associated with central nervous system in Malaysia, whereas respiratory system involvement in Singapore. The outbreak was not reported after 1999 in Malaysia or Singapore [4].

*Outbreak in Bangladesh*

Nipah virus was identified between December and May and it was noted as a seasonal virus. It is the period of date palm sap is reaped [6]. Several Nipah outbreaks were noted among people in several districts during 2001-2013 almost every year. There were 292 cases out of them 221 died. It was a very high percentage of death rate which amounts to 75.7%. Nipah virus spreads to humans when they are in contact with bats directly or indirectly and through materials that are contaminated by bats. It was found that clay pots kept for collecting date palm sap in most of the countries are one of the causes of Nipah virus. Usually fruit bats of genus Pteropus giganteus do drink the sap of palm trees during nights. When the bats salivate or urinate, the sap is tainted withNiV that causes death to humans.There is another possibility too. In 2004, it was found that human to human transmission also causes NiV due to close contact with sick persons in Faridpur. The NiV strains ofMalaysia were like to the strains of Bangladesh [4].

Other countries assumed to be at risk for Nipah outbreak were Australia, Cambodia, China, Indonesia, Madagascar, Taiwan, Thailand, Bhutan, Brunei, Laos, Madagascar, Myanmar, Nepal, Philippines, Papua New Guinea, and Vietnam [7].

*Outbreak in India - West Bengal and Kerala*

The first documented outbreak of Nipah virus (NiV) encephalitis in India stroked in winter during 2001, even though the causative organism could be identified 5 years after the occurrence of nipah infection in 2006 [2].

***West Bengal***

There were two major outbreaks in Siliguri during 2001 and Nadia in 2007 in humans without any involvement of pigs. Out of 66 cases, 45 deaths were reported in Siliguri, outbreak between January 31 and February 23, 2001. Overall, 75% of cases were reported due to spread of virus within healthcare setting among hospital staff or visitors. Later there were 5 deaths among 30 cases in Nadia district. Almost all cases were affected with fever, acuterespiratory distress and/or neurological symptoms. The warning signs in patients were fever, headache, muscle pain, vomiting, altered sensorium, increased respiratory rate, acute respiratory distress and convulsions [4].

***Kerala***

It was a sudden and recent outbreak that was reported in Kozhikode district of Kerala, Southern India for the first time on 19th May, 2018 [8]. The two affected districts were Kozhikode and Mallapuram [9]. As of 1st June, there are 19 cases and 17 deaths [10]. The affected members suffered from a quick onset of symptoms which include fever, vomiting, disorientation, mental confusion, encephalitis and eventually death in 70% of humans [11].

**Definition**

Nipah virus is a newly emerging zoonotic disease caused by the Henipavirus genus of Paramyxoviridae family that causes severe infection both in animals and humans [4,12]. The synonyms of Nipah virus were bat virus, brain virus or Nipah encephalitis [1].

*Incidence*

Nipah virus infection is endemic in Malaysia, Singapore, India and Bangladesh [13]. According to the World Health Organization, Nipah virus first

Morbidity and Mortality due to Nipah or Nipah-like Virus Encephalitis in WHO South-East Asia Region, 2001-2018

Bangladesh

| Month/Year | Location | No. of cases | No. of deaths | CFR(%) |
|---|---|---|---|---|
| April-May 2001 | Meherpur | 13 | 9 | 69 |
| January 2003 | Naogaon | 12 | 8 | 67 |
| January 2004 | Rajbari | 31 | 23 | 74 |
| April 2004 | Faridpur | 36 | 27 | 75 |
| January-March 2005 | Tangail | 12 | 11 | 92 |

| Month/Year | Location | No. of cases | No. of deaths | CFR(%) |
|---|---|---|---|---|
| Jan-February 2007 | Thakurgaon | 7 | 3 | 43 |
| March 2007 | Kushtia | 8 | 5 | 63 |
| April 2007 | Pabna, Natore and Naogaon | 3 | 1 | 33 |
| February 2008 | Manikgonj | 4 | 4 | 100 |
| April 2008 | Rajbari | 7 | 5 | 71 |
| January 2009 | Gaibandha, Rangpur and Nilphamari | 3 | 0 | 0 |
| | Rajbari | 1 | 1 | 100 |
| February-March 2010 | Faridpur | 8 | 7 | 87.5 |
| | Faridpur, Rajbari, Gopalgonj | 8 | 7 | 87.5 |
| | Kurigram, | 1 | 1 | 100 |
| January-February 2011 | Lalmohirhat, Dinajpur, Comilla Nilphamari, Faridpur, Rajbari | 44 | 40 | 91 |
| January 2012 | Joypurhat | 12 | 10 | 83 |
| January-April 2013 | Pabna, Natore, Naogaon, Gaibandha, Manikganj | 24 | 21 | 88 |
| January-February 2014 | 13 districts | 18 | 9 | 50 |
| January-Febraury 2015 | Nilphamari, Ponchoghor, Faridpur, Magura, Naugaon, Rajbari | 9 | 6 | 67 |

India

| Month/Year | Location | No. of cases | No. of deaths | CFR (%) |
|---|---|---|---|---|
| February 2001 | Siliguri | 66 | 45 | 68 |
| April 2007 | Nadia | 5 | 5 | 100 |
| May* 2018 | Kerala | 14 | 12 | 86 |

CFR- Case Fatality Rate

*As of 24 May 2018 [15]

As of 1st June, there are 19 cases and 17 deaths with a mortality rate of 89% in Kozhikode, Kerala [10].

reported during 1998-1999 in Malaysia, affecting 265 with 105 deaths [14]. The morbidity and mortality rate of Nipah virus in South-East Asian region is as follows:

*Etiology*

***Causative Agent***

The main agent of Nipah virus belongs to the genus Henipavirus of Paramyxoviridae family [4].

***Species Affected***

There were species that causes this virus. Those are P. vampyrus, the Malayan flying fox and P. hypomelanus,the island flying fox in Malaysia and P. giganteus, the Indian flying fox in Bangladesh, India and probably other locations [6].

***Reservoir Host***

- The Pteropus bats (fruit bats) are the natural reservoir [16]. Saliva of bats, urine and birthing fluids contain this virus [3].
- Even pigs also wereone of the hosts in Malaysia and Singapore. Serological studies indicated that NiV occurred in dogs, cats, horses and goats in the outbreak areas of Malaysia [4].

*Risk Factors*

- Drinking fermented date palm sap is a risk factor in few cases [6].
- Either direct or close contact with infected pigs [17].
- Close and direct, unprotected contact with infected patients who have respiratory symptoms [8].
- Traditional practices such as sharing of beds and utensils of patients pose increased risk of infection within the families [10].

*Incubation Period in Animals and Humans*

***Animals***

The period of incubation was approximately 7–14 days [4].

***Humans***

The period of incubation in humans ranged from 4 to 14 days and may also extend till 45 days [5]. Clinically incubation period as short as 2 days or as long as a month or more has been reported [6].

*Mode of Transmission*

***Animal to Animal Transmission***

It is evident from the research analysis that the NiV strain appeared as it was transmitted initially from bats to pigs. The deforestation led the bats to come into the dwellings of the pigs. The pigs got in contact of the excretion of the infected bats and as a result pigs were infected [4].

***Animal to Human Transmission***

It is found that the virus spread from animals to human through either direct contact with infected bats or infected pigs [17]. More over contact with respiratory secretions(throat or nasal) of pigs, drinking infected fruit juice especially unpasteurised raw palm juice, eating tainted fruits without washing, peeling or cooking transmits infection to people [18].

***Human to Human (Person to Person)***

This virus can spread from human to human through direct contact or close contact with the patients. Exposure to respiratory secretions, saliva and urine of infected patients also spread the virus between humans. Among those; respiratory secretions of infected clients is considered as the main transmission of virus. There is also a possibility. to get this virus while burying a deceased patient who got this virus. If standard infection control measures are inadequate, it results in nosocomial transmission where human to human transmission can arise [6].

*Survival and Resistance Rate of Nipah Virus*

Nipah virus is very strong and can long last for 3 days in some fruit juices or mango fruit, and for at least 7 days in artificial date palm sap (13% sucrose and 0.21% Bovine Serum Albumin in water, pH 7.0) held at 22°C. This virus is reported to have a half-life of 18 hours in the urine of fruit bats [6]. Nipah is inactivated by 60°C/60 minutes. It is stable at pH 4 and 10. The virus is vulnerable to soaps and disinfectants, lipid solvents such as alcohol and ether. Also susceptible to sodium hypochlorite solution which can be used as an effective agent for cleaning and disinfection [19].

**Pathology**

Bats or pigs pass the infection to humans through direct or close contact. The infection, then latches onto proteins ephrin-B2 and ephrin-B3 on the surface of nerve cells and endothelial cells lining blood and lymph vessels. Primarily, it targets the respiratory system, then the nervous system and brain. Further, it invades lung and kidney cells. Inflammation of blood vessels and a swelling of the brain occur in the later stages of infection which leads to death [11].

Pathological lesions can be detected in the brain with disseminated microinfarction and vasculitic lesions in the respiratory tract, kidneys and heart. The NiV also targets medium and small sized blood vessels which results in endothelial multinucleated syncytia and fibrinoid necrosis [20].

**Clinical Signs in Animals and Humans**

*Animals*

As Nipah Virus targets the respiratory and nervous systems in pigs, it is termed as porcine respiratory and neurologic syndrome, porcine respiratory and encephalitic syndrome (PRES), and barking pig syndrome (BPS). They develop afebrile respiratory disease with severe cough and dyspnea. Encephalitis also occurs mainly in sows and boars with twitching, trembling, muscle contraction, spasms, muscle weakness, convulsions and death. Some animals remain without any symptoms [3].

*Humans*

A person is symptomatic after 5-14 days of exposure to Nipah virus [17].

***Initial Symptoms***

- Flu-like, with fever, headache, sore throat and myalgia
- Nausea, vomiting and non-productive cough
- Atypical pneumonia or acute respiratory distress syndrome
- Neurological signs may or may not develop [6].

***Distinctive Clinical Signs***

Suggestive of brain-stem and upper cervical cord involvement

- Segmental myoclonus (involuntary contractions)
- Normal or absent reflexes
- Decreased muscle tone
- Increased blood pressure
- Elevated heart rate [20]

*Signs and Symptoms of Encephalitis*

Nipah disease is also associated with encephalitis where the illness is presented with

- Fever and headache
- Drowsiness
- Disorientation
- Mental confusion
- Finally leads to coma within 24-48 hours [7]

Certain people diseased with Nipah develop relapsed or late-onset inflammation of brain in the future, months or years later. It occurs in an individual who was either priorly asymptomatic or non-neurological symptoms. Some cases are lethal [6]. Rapid development to life-threatening illness occurs in about 60% of patients [8]. The mean interval of illness from inception of manifestations to death was 16 days [20].

*Complications*

There are chances for complications like bacteraemia, bleeding from the stomach and intestinal tract, kidney damage and other complications are possible in critically ill clients [6].

*Diagnostic Findings*

In order to detect the virus there are some diagnostic tests such as Real Time Polymerase Chain Reaction (RT-PCR) from bodily fluids and antibody detection via enzyme-linked immunosorbant assay (ELISA) [5].

*RT-PCR*- detects viral genetic material [10]

*ELISA*- can diagnose henipavirus-specific IgM or IgG, and serum neutralization. Antibodies to Nipah can be identified in serum and/or CSF. IgM can be noticed in majority of patients throughout the infection [6].

*Electron microscopy, PCR and virus isolation*- a varied range of fresh tissues (lungs, spleen, kidneys, tonsil, and central nervous system) can be used [21].

*Histopathology*- detects the changes in tissues (lung and airway) [21]

*Immunohistochemistry*- discloses viral antigens in tissues [6].

*Brain MRI*- reveals multiple small subcortical and deep white matter lesions, without surrounding edema, however these deformities can be noted in other acute CNS infections [8].

*Treatment*

There is no vaccine available for Nipah, as it contains RNA which can alter its own structure accordingly in the body, hence the treatment is mainly concentrated on management of pyrexia and neurological symptoms [22]. The vital aspect of Nipah is isolation of the infected person. In case any person develops develops flu like warning signs with high fever, headache, muscle pain, nausea, vomiting, he/she should be immediately shifted to a local hospital or health personnel for treatment. If patient has encephalitis symptoms, he/she should be transferred to intensive supportive care for prompt treatment [23]. Ribavirin in acute Nipah disease was associated with 36% drop in death rate and many were protected from neurological deficits [20].Administration of antibodies to Nipah virus is being investigated in preclinical studies [6].

**Prevention and Control Measures in Pigs / Bats and Humans**

*Pigs or Bats*

- Emphasis on immediate obliteration by mass culling of infected pigs and antibody observation of high risk farms to prevent future outburst of infection.
- After culling, the burial sites should be decontaminated with chlorinated lime and sodium hypochlorite.
- Prohibition on transportation of pigs.
- A short-term ban on pig farming in the affected regions.
- Enhancement of biosecurity practices e.g. reducing the chances of bats in contact with pig farming.
- Educating the use of gloves, mask, safety helmets, goggles and boots to persons who were exposed to infected pigs.
- Proper hygiene at pig farming's is advised.[3]

**Humans**

***General Measures***

Nipah can be prevented and controlled by the following steps:-

- Stay away from infected patients.
- Don't eat half-eaten fruits that are consumed by birds.
- Wear respirator masks (N95) to infection.
- Wash the fruits with clean water before peeling.
- Avoid drinking raw palm juice.
- Palm juice must be boiled before sipping.
- Keep away from animal pens [1].
- Avoid sick animals for food.
- Don't get close/direct contact with bats.
- Have a closed (e.g., bamboo sap) sap collection sites so as to keep bats away.
- Sanitize the raw palm sap areas with lime not to attract the bats.
- Emphasis on good personal hygiene.
- Hands must be washed before consuming any food and it decreases the risk of infection [6].

### *Quarantine Measures*

The Governments and the local bodies have to take stringent quarantine measures especially the areas where a lot of mobs gather. Temporary closure of schools, colleges and other educational institutions is highly recommended. In addition, avoiding gatherings in parties, functions, and other party occasions have to be postponed. Media has to play a greater role in publicising and educating the people. Local Government officials of the infected locations must take additional precautions. This is the time where the health departments have to be extra cautious in creating awareness as well as taking the necessary preventive measures [23].

#### *Standard Safety Measures in Health Care*

Nipah virus is classified as a Biosafety Level-4 agent, so standard safety precautions should be followed to avoid risk of transmission of Nipah. Strict barrier nursing should be used to protect patients against infectious diseases. Hand hygiene is a standard precaution to fight against infection. Wash hands with clean water and soap or use any hand-rubs. Follow hand washing technique. Use PPE (personal protective equipment) such as clean or sterile gloves, gown, mask, eye protection or face shield. Isolation of patients is essential criteria to prevent the contagious diseases from being spread from one patient to another [6]. Droplet precautions should be taken to prevent the spread of respiratory droplets when a patient coughs or sneezes so as to prevent person to person transmission. The blood samples should be collected and handled by expertise staff working in the labs [5].

#### *Advice for Travellers in Endemic Areas*

Traveller's should avoid visits to endemic regions till the infection is reduced. In case of recent travel, look for symptoms such as fever, headache and cough, consult physician immediately [22]. If travelling to endemic areas with active Nipah infection, stay away from bats or sick animals and their environments. Avoid drinking raw or partially fermented date palm. Wash fruit with clean water and avoid half-eaten fruits that may be contaminated by bats or other animals [8].

#### *Preventiveand Control Measures in Children*

The major and primary responsibility of the parents is to safeguard the children from being attacked by Nipah virus infection. The vital role in child's care is played by the parents as they are the primary caregivers. Some of the key points regarding the prevention and control measures to be taken especially in child's care are:

- Use of N95 respirators that protect the child from droplet infection.
- Perform hand washing to the child at regular intervals before and after food, and elimination.
- Encourage and make sure hand hygiene is being carried out especially when the child returns from play.
- The child's hands and feet should be washed with soap under running water.
- Educate the child regarding the importance of hand sanitizers and its use.
- Fresh fruits should be served to the child to prevent infection from Nipah virus.
- Carefully wash or peel the fruits after washing with clean and fresh water.
- Avoid unpasteurized fruit juices.
- Instruct the child not to eat any fruits fallen on the ground outside especially in the garden.
- Emphasize the importance of personal hygiene.
- Wear clean clothes to the children.

- Sanitized wipes also can be used frequently.
- Keep child away from the sick people as their immune system is poor.

Besides children, the parents also should follow the preventive and control measuresand practice the safety measures to safeguard the children from Nipah virus infection in day to day life [24].

*Prognosis*

The overall case fatality rate between outbreaks is approximated to be 40% to 75% [5]. Older patients, especially with diabetes mellitus and severe brain-stem involvement had poor prognosis [4].

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*Review Article*

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# A Review Article on Pain in Neonates: Causes, Effects, Responses, Assessment, & Management

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**Abstract**

Neonates do not express the feeling of pain. So, they respond through only physiological, behavioral cues and hormonal or metabolic responses. The most common causes of pain in neonates are various minor procedures like heel sticks, venipunctures and so on. Hence, assessment and management of pain is very important for every health professionals who are working in NICU.

**Keywords:** Effects of Pain; Assessment of Pain; Management of Pain; Nicu; Behavioral Cues.

## Introduction

Pain is an unpleasant sensory and emotional experience which is associated with actual or potential damage of tissues. So, pain is almost considered as a *fifth vital sign*. Unfortunately, neonates cannot verbalize their own pain experience and they have todepend on their caregivers to assess and manage it. Neonates admitted to the NICU may experience pain because of diagnostic or therapeutic interventions or as result of various illness. However, in both preterms and term neonates, pain system is intact and functional.

*What causes pain to a neonate in NICU*

- *Acute pain:* acute pain will lasts for short period of time and it results from various minor procedures like heel sticks, venipunctures, tracheal suctioning, lumbar puncture, circumcision.
- *Prolonged/chronic pain:* It causes from illness such as NEC, meningitis, birth trauma and from therapeutic procedures such as mechanical ventilation, Central line insertion and removal, chest tube insertion and removal, chest physiotherapy dressing change, gavage tube insertion, intramuscular injection, peripheral venous catheterization, tracheal intubation and extubation, tracheal suctioning.
- *Post-operative pain:* It causes from surgical interventions such as hernia repair, ligation of PDA, VP shunts, abscess drainage etc.
- *Routine care:* it occurs from daily routines like diaper change, daily weights, removing adhesive tapes, burns from transcutaneous probes and cold light, rectal stimulation.

*Effects of pain*

1. Immediate effects
2. Long term effect of untreated pain

*Immediate Effects*

- Reduced Tidal Volume (TV) and Vital Capacity(VC) in the lungs.
- Increased demands in the CVS.
- Hypermetabolism resulting in neuro-endocrine balances, increased oxygen consumption, hypoxemia, myocardial ischemia.
- Mobilization of endocrine and metabolic resources resulting in changes in blood pressure, changes in skin color and temperature.
- Prolonged catabolic reactions as well as circulatory and metabolic complications after surgery when anesthetic agents were not administered or were inadequate

*Long Term Effects of Untreated Pain*

- Alteration in cerebral neuro anatomy.
- Avoidance and alteration in response to stimuli.
- Developmental delays.
- CNS handicap.

*Assessment of Pain*

Pain assessment in neonates is not as same like adults. Interestingly, the character, location, duration and rhythm cannot be measured in neonates. So, pain assessment instrument should be sensitive and specific for neonates of all gestational ages and it should be contextual. Concomitantly with the vital signs, assessment of neonatal pain must be undertaken every 4-6 hours or as indicated by the clinical condition of the neonate. Pain assessment should be comprehensive and multidimensional, including behavioral and physiological indicators.

*Pain scales*

Pain scales in neonates are used to assess the acute procedural pain and post-operative pain. There are different types of pain scales available for neonates.

**Table 1:** Pain Scales

| Sl. No | Name of the scale |
|---|---|
| 1 | PIPP-Premature Infant Pain Profile |
| 2 | NIPS-Neonatal Infant Pain Scale |
| 3 | CRIES score |
| 4 | The Pain Assessment Tool (PAT) |
| 5 | SUN Scale (Modified) |
| 6 | Neonatal Facial Coding System (NFCS) |
| 7 | N-PASS Scale (Neonatal Pain, Agitation & Sedation Scale) |

*PIPP scale (Premature Infant Pain Profile)*

PIPP consists of seven indicators including assessment of gestational age and behavioral state (contextual indicators), heart rate and oxygen saturation (physiological indicators), and facial actions—brow bulge, eye squeeze, and nasolabial furrow (behavioral indicators) This scale can be used in neonates whose gestational week lies between 27th week and term gestation.

*Minimum frequency of assessment:*

- Intensive care: Within 1 hour of admission. Hourly with observations

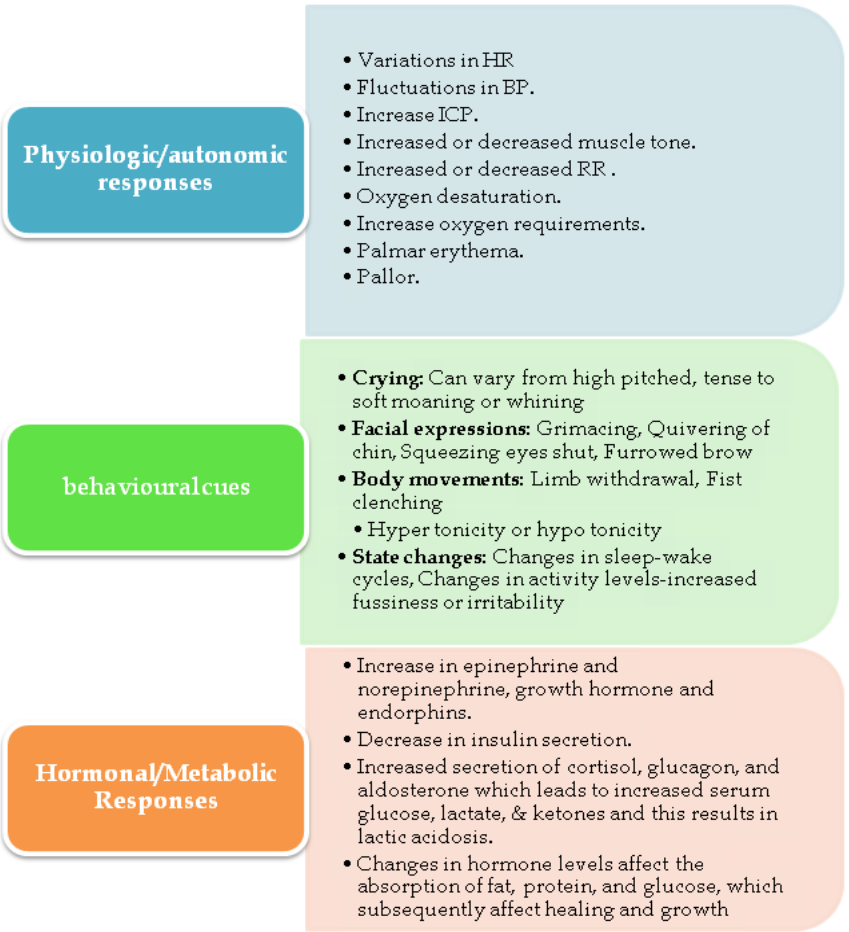


**Chart 1:** How the newborn responds to Pain

- High dependency: Within 1 hour of admission. 6-8 hourly (before cares) or if signs of distress /discomfort
- Special care: Within 1 hour of admission. If baby shows signs of distress/discomfort not associated with need for routine care giving
- Post-operatively: Hourly for first 8 hours. 4 hourly until 48 hours post-op.

*NIPS Scale (Neonatal Infant Pain Scale)*

The Neonatal Infant Pain Scale (NIPS) is a behavioral scale and can be utilized with both full-term and pre-term infants. It is composed of six (6) indicators such as facial expression, cry, breathing patterns, arms, legs and state of arousal

*CRIES Score*

CRIES is an observer-rated pain assessment tool which is performed by a healthcare practitioner

**Table 2:** PIPP Scale

| Criteria | 0 | 1 | 2 | 3 |
|---|---|---|---|---|
| Gestational age | >/= 36wks | 32-35wks | 28-31wks | </=28wks |
| Behavioral state (observe for 15seconds) | Active/ awake | Quiet/awake | Active/ sleep | Quiet/sleep |
| Heart rate | 0 bpm increase | 5-15 bpm increase | 15-24 bpm increase | >24 bpm increase |
| O2 saturation | 0-2.4% decrease | 2.5—4.9% decrease | 5-7.4% decrease | 7.5%or > decrease |
| Brow bulge | None | Minimum | Moderate | Maximum |
| Eye squeeze | None | Minimum | Moderate | Maximum |
| Nasolabial furrow | None | Minimum | Moderate | Maximum |

Scoring

| Score | Level of pain | Remarks |
|---|---|---|
| Score 0 – 6 | Generally indicates the infant has minimal or no pain | No Action |
| Score 7-12 | Generally indicates slight to moderate pain | Institute comfort measures |
| Score > 12 | may indicate severe pain | Pharmacological Intervention |

**Table 3:** NIPS Scale (Neonatal Infant Pain Scale)

| NIPS | 0 point | 1 point | 2 points |
|---|---|---|---|
| Facial expression | Relaxed | Contracted | - |
| Cry | Absent | Mumbling | Vigorous |
| Breathing | Relaxed | Different than basal | - |
| Arms | Relaxed | Flexed/stretched | - |
| Legs | Relaxed | Flexed/ stretched | - |
| Alertness | Sleeping/calm | Uncomfortable | - |

Scoring

| Score | Level of pain | Management |
|---|---|---|
| 0-2 | mild to no pain | None |
| 3-4 | mild to moderate pain | Non-pharmacological intervention with a reassessment in 30 minutes |
| >4 | severe pain | Non-pharmacological intervention and possibly a pharmacological intervention with reassessment in 30 minutes |

**Table 4:** *CRIES Score*

| CRIES scale | 0 | 1 | 2 |
|---|---|---|---|
| **C**rying | No | High pitch consolable | Inconsolable |
| **R**equired Fio2 | No | <30% | >30% |
| **I**ncreased HR & BP | No | 11-20% or higher | >20% higher |
| **E**xpression | None | Grimace | Grimace/grunt |
| **S**leepless | No | Wakes frequent interval | Constantly awake |

*Scoring:* If the score is ≥ 5, administer analgesics to relieve pain. The scale should be used every 2 hours in first 24hours after painful procedures, followed by every 4 hours for at least 48 hours.

such as a nurse or physician. CRIES assesses crying, oxygenation, vital signs, facial expression, and sleeplessness

*SUN Scale (Modified)*

Compared to other scale it's easy to use. It has 5 parameters, each scored 0-2. There are 3 behavioral categories such as facial expression, CNS state, movement and 2 physiological categories such as breathing and heart rate.

**Table 5:** The Pain Assessment Tool (PAT)

| Parameters | Description | Score |
|---|---|---|
| Posture/tone | Flexed and/or tense | 2 |
| | Extended | 1 |
| Sleep pattern | Agitated or withdrawn | 2 |
| | Relaxed | 0 |
| Expression | Grimace | 2 |
| | Frown | 1 |
| Cry | Yes | 2 |
| | No | 0 |
| Color | Pale/ dusky/flushed | 2 |
| | Pink | 0 |
| Respiration | Apnea | 2 |
| | Tachypnea | 1 |
| Heart rate | Fluctuating | 2 |
| | Tachycardia | 1 |
| Saturations | Desaturation | 2 |
| | Normal | 0 |
| Blood pressure | Hypotensive/ hypertensive | 2 |
| | Normal | 0 |
| Nurse's perception | Yes pain | 2 |
| | No pain | 0 |

Scoring

| Score | Management |
|---|---|
| <5 | Nursing Comfort Measures (NCM) |
| >5 | Paracetamol and NCM |
| >10 | Paracetamol, NCM and opioid (bolus/ infusion to be commenced) |

**Table 6:** SUN Scale (Modified)

| Parameters | | Score |
|---|---|---|
| Facial expression | Normal, relaxed | 0 |
| | Increased tension, furrowed brow | 1 |
| | Furrowed brow, tightly closed eyes, grimace, vigorous cry | 2 |
| Central nervous system state | Asleep or awake, quiet, calm | 0 |
| | Anxious, fussy | 1 |
| | Hyper-alert, panicked | 2 |
| Movement | Relaxed, normal tone | 0 |
| | Intermittent increased activity, flexion and extension of extremities | 1 |
| | Frequent flexion and extension or flaccid, minimal movements | 2 |
| Breathing | Quiet respiration, relaxed normal pattern. If intubated synchronized | 0 |
| | Intermittent increased rate >60. If intubated frequent non-synchrony | 1 |
| | Frequent increased rate >60. If intubated, fighting ventilator | 2 |
| Heart rate | Baseline | 0 |
| | Elevation 10%-15% | 1 |
| | Elevation >15% | 2 |

*Score:* usually treat with score of 4 or more.

*Neonatal Facial Coding System (NFCS)*

This scale measures the facial expression of neonates during painful procedure.

Facial action monitored.

a) Brow lowering
b) Eyes squeezed shut
c) Deepening of the naso-labial furrow
d) Open lips
e) Vertical mouth stretch
f) Taut tongue (cupping of tongue)
g) Chin quiver (high frequency vibration of the chin and lower jaw)
h) Lip pursuing (tightening of the muscles around lips to form an "OO")
i) Tongue protrusion (this can see only in preterm infants, not in term babies)

*Interpretation*

- Minimum score: 0
- Maximum score for premature infants :10

**Table 7:** Neonatal Facial Coding System (NFCS)

| Action | Points |
|---|---|
| Did not occur | 0 |
| Occurred | 1 |

- Maximum score for full term infants :9

*N-PASS Scale (Neonatal Pain, Agitation & Sedation Scale)*

The N-PASS tool is used to assess sedation and agitation. Currently, this is the only scale for measuring pain that has also been used in the assessment of sedation in critically ill, premature neonates.

*Scoring pattern*

- Sedation does not need to be assessed or scored with every pain assessment.
- A score of 0 is given if infant's response to stimuli is normal for gestational age.
- Pain is scored from 0 to +2for each behavioral and physiological criteria
- Total score in +10
- Score ≤ 3: start pain management

*Management of pain*

Management includes non-pharmacological (behavioral) and pharmacological ways.

**Table 8:** N-PASS Scale (Neonatal Pain, Agitation & Sedation Scale)

| Assessment criteria | Sedation | | Normal | Pain/ agitation | |
|---|---|---|---|---|---|
| | -2 | -1 | 0 | 1 | 2 |
| Crying Irritability | No cry with painful stimuli | Moans or cries minimally with painful stimuli | Appropriate crying Not irritable | Irritable or crying at intervals Consolable | High pitched or silent continuous cry Inconsolable |
| Behavior state | No arousal to any stimuli No spontaneous movement | Arouses minimally to stimuli Little spontaneous movement | Appropriate for gestational age | Restless, squirming Awakens frequently | Arching, kicking Constantly awake or arouses minimally/ no movements (not sedated) |
| Facial expression | Mouth is lax No expression | Minimal expression with stimuli | Relaxed appropriate | Any pain expression Intermittent | Any pain expression continual |
| Extremities Tone | No grasp reflex Flaccid tone | Weak grasp reflex Decreased muscle tone | Relaxed hands and feet Normal tone | Intermittent clenched toes, fists, or finger splay Body is not tense | Continual clenched toes, fists, or finger splay Body is tense |
| Vital signs HR, RR, BP, SaO2 | No variability with stimuli Hypoventilation or apnea | <10% variability from baseline with stimuli | Within baseline or normal for gestational age | Increase 10-20% from baseline SaO2 76-85% with stimulation- quick increase | Increase in >20% from baseline SaO2 <75% with stimulation- slow increase Out of sync with vent |

*Pharmacologic Treatment*

Analgesia drugs should be chosen carefully based up on comprehensive assessment of the newborns. Efficacy and safety of the drug, the clinical setting, and experience of the personnel using the drug.Drug doses, including those for local anesthetics, should be calculated carefully based on the current or most appropriate weight of the neonate, and initial doses should not exceed maximal recommended amounts.

Examples:

a) Morphine is the drug of choice for most situations requiring pain relief

b) Morphine sulphate 0.05-0.1 mg/kg IV or Fentanyl 2-3 mic gr/kg IV

c) Acetaminophen (oral) 10-15 mg/kg 4-12hrly up-to max 60mg/kg & rectal 20mg/kg/dose, 6-12hrly up to max 80mg/kg

d) Fentanyl 0.25-0.5 micrograms /kg Q 4-6 hrs.

*Non-pharmacologic treatment of neonatal pain (comfort measures)*

- *Environmental Interventions*

a) Reduction of excessive light levels, and alternating day and light conditions can reduce stress, promote increased sleep ad weight gain.

b) Toys: The sound produced from Toys like rattles, and keys alleviates crying and pain

- *Swaddling, Positioning and Touch*

a) Swaddling is the wrapping of infants in cloth to restrict their movements which reduce pain-elicited distress during and after heel prick.

b) Facilitated tucking, side lying or supine position with flexed arms and legs close to the trunk significantly lower the crying time, decrease mean sleep disruption time and decrease sleep states changes

- *Nonnutritive Suckling (NNS):* The nonnutritive sucking of a pacifier or a gloved finger may decrease hyperactivity and regulate newborns' discomfort. NNS significantly decrease HR without stimulation, and during painful stimulation. **Blass and watt,** found that NNS is only effective when suck rate exceeds 30suck/min. It may also reduce the intensity and duration of acute pain in preterm and full term infants undergoing painful procedures. Its effects are associated with increased oxygenation, improvement in respiratory and gastrointestinal functions (feeding by gavage), decreased heart rate and energy expenditure

- *Sucrose&Glucose*

a) 25% - 30% sucrose (glucose) 1.5 – 3ml PO ~ 2 minutes prior to the procedure for term new-borns

b) 25% sucrose (glucose) 0.5 – 1.5 ml PO ~2 minutes prior to the procedure for preterm NB

- *Skin to skin contact (kangaroo care):* 10-15min skin to skin contact between mothers and their newborns reduces crying, grimacing, HR during heel lance procedure in full term.

- *Breast feeding:* Breast feeding during a painful procedure has been found to be a potent analgesic.

- *Music therapy:* Music defined as an intentional auditory stimulus with organized elements including melody, rhythm, harmony, timbre, form and style. However, it should be not provided for longer than 15min per intervention due to the risk of sensory overload

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*Review Article*

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# How to Develop a Evidence Based Protocol in Nursing; from a Researcher's Perspective

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**Abstract**

Protocol is' the official procedure or system of rules governing affairs of state or diplomatic occasions.' or the original draft of a diplomatic document, especially of the terms of a treaty agreed to in conference and signed by the parties. The clinical protocols include Plan of care, Standard order set, Clinical pathways, Carealgorithms, Decision trees and Bundles of recommended care actions. There are 11 steps in the development of Protocol. Evidence Based Protocols are Concise and clinically focused, Credible, Multidisciplinary and Up-to-date.

**Keywords:** Evidence Based Protocol; Nursing.

## Introduction

EBP movement has both advocates and critics. Supppose argue that EBP offers a solution to a improving healthcare quality in cost constrained environments. EBP is viewed as a rational approach to providing the best possible care with the most effective use of resources. Advocates also note that EBP provides self directed lifelong learning that is essential in an era of rapid clinical advances and information explosion.

*What is a Protocol in Nursing?*

The dictionary meaning of a protocol is' the official procedure or system of rules governing affairs of state or diplomatic occasions.' Or the original draft of a diplomatic document, especially of the terms of a treaty agreed to in conference and signed by the parties.

*Clinical Protocols in Nursing*

- Plan of care
- Standard order set
- Clinical pathways
- Care algorithms
- Decision trees
- Bundles of recommended care actions

*What is an Evidence Based Clinical Protocol in Nursing?*

It is set of care actions for a patient population that has been endorsed by the hospital, agency, clinic or health care facility. Protocols are not agency specific and contextual. Clinical protocols are standards of care that should be given to the patients who are part of a defined population.

*Steps in the Development of an Evidence Basec Protocol in Nursing*

1. Identify the problem.
2. Identify stakeholders and form a team.
3. Develop an action plan to include project goals and a timeline.
4. Review the available evidence and benchmark.
5. Examine current practice and identify gaps as well as best practices.
6. Develop the protocol and modify as needed, focusing on gaps.
7. Initiate the approval process.
8. Evaluate the availability of treatment options and modify as needed.
9. Educate the staff.
10. Implement the protocol.
11. Evaluate protocol safety, effectiveness, and adherence.

**Table 1:** Nursing care protocol for patients with a ventricular assist device

| Action | Description |
|---|---|
| 1. Clarification of the patient in relation to the risk-benefit ratio of the device | Aimed at providing humanized care and reducing patient anxiety |
| 2. Equipment functionality monitoring Prevention of console-related problems. | Prevention of possible obstruction of the system. |
| 3. Monitoring: HR, MAP, RAP, LAP, CO, HI, and SvO2. | Aimed at obtaining appropriate monitoring and clinical compensation. |
| 4. Monitoring of pulse oximetry, urine output, and temperature. | Aimed at obtaining appropriate monitoring and clinical compensation. |
| 5. Use of pressure relief mattresses to prevent pressure ulcers. | Redistribute and soften the pressure of a body on a surface and prevent skin injuries. |
| 6. Maintenance of the patient in horizontal decubitus position and contraindication of changing of decubitus. | Avoid obstruction and/or rupture in the system used by the device. |
| 7. Assessment of laboratorial exams such as gasometry, creatinine, urea, lactate, sodium, potassium, magnesium: 6⁄6 hours. | Analyze the occurrence of adverse prognoses, such as renal and respiratory changes and ineffective tissue perfusion. |
| 8. Collection of total proteins and albumin, control of bilirubin, liver enzymes and amylase, fibrinogen and D-dimer: daily. | Analyze the occurrence of liver complications and coagulopathies. |
| 9. Administration of prophylactic antibiotic therapy during the seven first days as prescribed. | Perform the prophylaxis of infections related to the surgical wound. |
| 10. Collection of tracheal secretion culture and surgical wound culture: in case of presence of secretion. | Identify microorganisms that cause infections in the surgical wound for an appropriate antibiotic therapy, if necessary. |

*Characteristics of Evidence Based Clinical Protocol in Nursing*

- Evidence-based
- Concise and clinically focused
- Credible
- Multidisciplinary
- Up-to-date

## Conclusion

Once the EBP protocols developed next step is pilot test in clinical setting and evaluate the outcome. A variety of research strategies and designs can be used to evaluate the innovation. In most cases informal evaluation may be adequate .Qualitative information can also contribute to evaluation.Finally EBP team should develop a plan when new protocol will be reviewed and if necessary updated based on new research evidence.

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*Review Article*

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# STP on Interventions of Burns and Scalds Wound Healing among Mothers of Under Fives

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**Abstract**

*Introduction:* According to WHO, in India, over 10 lakh people are moderately or severely Burnt every year. The Ministry says India records 70 lakh burn injury cases annually of which 1.4 lakh people die of every year. Around 70% of all burn injuries occur in most productive age group (15-35 years). Around four out of five burnt cases are women and children. The objective of the study were to 1. To Assess the knowledge of the mothers having under fives regarding Interventions of burns and scalds wound healing 2. To evaluate the structured teaching Programme on interventions of burns and scalds wound healing 3.To Associate the relationship between demographic variables with the level of knowledge of mothers having under fives on interventions of burns and scald wound healing. *Materials and methods:* Quasi experimental single group pre and post -test design was used. The Sample for the study was n=50 mothers of under fives admitted in Pediatric ward at SVRRGH, Tirupati selected by using Convenient sampling technique. The pre-test was introduced to assess the knowledge among the group of samples in view with pre test result STP was formulated and introduced to the samples after that post-test was conducted and the result were evaluated through structured questionnaire. Descriptive statistics such as percentage, mean, standard deviation were used for demographic data, pre and post-test scores. Inferential statistics of chi-square test was used for analyzing the association between demographic characteristics with that of knowledge, paired t-test was used for analyzing the difference between the pre and post test. The average pre-test knowledge score among mothers found to be 10.320 after STP The mean post-test knowledge score was 13.260. thus the difference in level of the knowledge was confirmed by the obtained t test value (8.228) this was statistically significant ($p<0.01$). *Conclusion:* The study concluded that the structured teaching programme was effective in improving knowledge of mothers on interventions of Burns and Scalds wound healing.

**Keywords:** Level of Knowledge; Interventions; Burns and Scalds; Under Fives.

## Introduction

Accidents have become the usual occurrence in today's world. Road traffic accidents, Domestic accidents Industrial accidents and railway accidents contribute to large proportion of mortality, morbidity and disability. Burns of all kinds and degrees are also considered as a type of accidents. Burns cause aesthetic problems as well as acute physical problems and if not taken proper care, they can cause serious complication in the form of secondary bacterial infection, various degrees of contractures which restrict the daily activities, septicemia, etc. people affected are mostly of poor socioeconomic status. The cost of managing these injuries is high. In developing countries, the problem of burn injuries is more severe due to the reason that the care of burn patients requires specialized staff and medical technological that are expensive and not always readily available.

Throughout the world, burns remain a huge health issue, at least In terms of morbidity, especially in the developing countries. it is the nature of man ''to want to do something'' whenever there is an injury, and leads to the application of various agents to burns. While some of these agents used

in treating such injuries may be beneficial, many of them are harmful and have no scientific basis for their use. The use of such harmful agents therefore calls for education of the people In order to prevent their damaging effects.

*Need for the study*

Burns is a second leading cause of accidental death in children. According to the WHO global burden of disease estimates for 2004, just over 3,10000 people died as a result of fire-related burns, of which 30% were under the age of 20 years. Fire related burns are the 11th leading cause of death from burns, with a global rate of 3.9 deaths per 1, 00000 populations. Among all people globally, infants have the highest death rates from burns. Globally nearly 96,000 children under the age of 20 years were estimated to have been fatally injured as a result of a fire related burn in 2004.

In 2010, a study was conducted on 62 children of Benin teaching hospital. Benin City, between January 2002 and December 2006. There were 34 male and 23 female children. Children under 3 years considered 56.5% where the leading cause of burns in all the children was flame burns from kerosene explosions (52%), scalds were responsible for (68%) of cases in those under three. The extent of burn injury ranged from 6 to 50% and most of them presented late 64% were discharged within three weeks. Wound sepsis and post burn contractures were the most frequently encountered complications (19.4% and 9.7% respectively). There were two deaths r (3.2%) related to sepsis.

Particular attention to burn safety precautions in children, safer storage and dispensing of combustible chemicals particularly petroleum product is advocated. Fire safety awareness, correct first aid measures and early presentation in the hospital will reduce the morbidity and mortality. Early physiotherapy and splinting strategies will reduce contractures. There is the need for locally for the establishment of specialized burn centers both to treat these children and to stimulate interests in burn management.

*Statement of the problem*

A Study to assess the effectiveness of structured teaching Programme on interventions of Burns and Scalds wound healing among mothers of under fives admitted in pediatric ward at SVRRGGH, Tirupati.

*Objectives*

- To Assess the knowledge of the mothers having under fives regarding interventions of burns and scalds wound healing.
- To Evaluate the effectiveness of structured teaching Programme on interventions of burns and scalds wound healing.
- To Associate selected demographic variables of mothers of under fives with the level of knowledge o interventions of burns and scalds wound healing.

*Hypothesis*

There is a significant difference in the knowledge of mothers of under fives on interventions of burns and scalds wound healing before and after structured teaching programme.

**Methodology**

1. *Research design*

Quasi experimental single group pre-test and post- test design was adopted.

2. *Setting*

The study was conducted in SVRRGGH, Tirupati, Chittoor district, Andhrapradesh.

3. *Sample and sampling technique:*

50 mothers of under fives were selected by using Convenient sampling technique.

4. *Criteria foe sample selection*

*Inclusive criteria*

1. Mothers of under- five children
2. Mothers who were willing to participate in the study

*Exclusive criteria*

1. Mothers who cannot speak and understand Telugu
2. Mothers who were not willing to participate in the study.

5. *Data collection Instrument:* The study was carried out by using structured interview schedule and structured teaching programme on interventions of burns and scalds wound healing among mothers of under-fives.

| Parameter | Group | N | Mean | SD | 't' value | 'P' value | significance |
|---|---|---|---|---|---|---|---|
| Knowledge score | Pretest | 50 | 10.320 | 3.449 | 8.228 | 0.000 | *** |
| | posttest | 50 | 13.260 | 3.906 | | | |

*** Significant improvement (p<0.01)

*Tool description:* The questionnaire consists of two sections.

Section I: It consists of socio demographic data.

Section II: knowledge questionnaire was used to assess knowledge on burns and scalds wound healing.

*6. Score interpretation:* The score were interpreted in the following manner.

<50%: Inadequate knowledge

50 – 75%: Moderately Adequate knowledge

>75%: Adequate knowledge

## Results and Discussion

The average pretest knowledge score among mothers of under fives found to be 10.320. After STP the mean post test knowledge score was 13.260. The standard deviation in pre and post test were 3.449, 3.906 respectively. Thus the difference in the level of the knowledge was confirmed by the 't' test value 8.228, this was statistically significant (p<0.01). The study also found that there is an association between level of knowledge and educational status of mothers(p<0.01).

Hence Research hypothesis is accepted. That is the mean post test knowledge regarding interventions of burns and scalds wound healing was significantly higher than the mean pre test knowledge score of mothers of under five children who had structured teaching programme on interventions of burns and scalds wound healing.

*Recommendations*

- The same type of study can be done in all community areas.
- A comparative study can be done between urban and rural mothers.
- A similar study can be done to assess the effectiveness of self instructional module on knowledge on mothers.

## Conclusion

The present study assessed the knowledge of mothers of under fives on interventions of burns and scalds wound healing and found that there was a significant improvement In knowledge of mothers of under fives on interventions of burns and scalds wound management after giving structured teaching programme. The study concluded that the structured teaching programme was effective in improving knowledge of mothers on interventions of burns and scalds wound healing.

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**Standard journal article**

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. J Oral Pathol Med 2006; 35: 540-7.

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[3] Fleischer W, Reimer K. Povidone iodine antisepsis. State of the art. Dermatology 1997; 195 Suppl 2: 3-9.

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[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

**Reference from electronic media**

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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