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A Descriptive Study to Assess the Knowledge Regarding Seizure Among Mothers of Under-five Children at Selected Paediatric Hospital in Jaipur City with a View to Develop Informational Booklet

Deepesh Bhardwaj[1], Rajendra Prasad Sharma[2], Manali Parashar[3]

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Abstract

Children under-five years of age are very small and their all systems are in developing stage. Because of their play activities, poor feedings and immaturity of immune system causes are frequent attack of infections like respiratory tract infection, otitis media, diarrhea, gastroenteritis; etc. Fever is a common manifestation present in most of the infection. In some children severe fever can result seizure. So the care of under-five children is important to decrease morbidity and mortality due to seizure in under-five children.

Keywords: Seizures; Mothers of under-five children; Psychological Outcome; Prevention Knowledge.

Introduction

A child is precious not only to the parents, family, community and nation but also to be the world at large. In fact child is a citizen of world and thus it becomes the responsibility of the wide population of the whole universe to look after the interest of children all over. Children are the assets of our country.[1]

Children under-five years of age are very small and their all systems are in developing stage because of their play activities, poor feedings and immaturity of immune system causes are frequent attack of infections like respiratory tract infection, otitis media, diarrhea, gastroenteritis etc. Fever is a common manifestation present in most of the infection. In some children severe fever can result seizure. A febrile seizure is a seizure occurring in a child, precipitated by fever arising from infection outside the nervous system in a child who is otherwise neurologically normal.

Approximately one in every 25 children will have at least 1 febrile seizure and more than one that of these children will have additional febrile seizure before they outgrow the tendency to have them children rarely develop their first febrile seizure before the age of 6 months or after 3 years of age.[2]

Persons with childhood onset seizure are at a high risk of poor psychosocial outcomes even without experiencing co-morbidities. It is defined as neurological conditions whereby there is an abnormal electrical discharge from the brain resulting in abnormal involuntary movement of the body.[3]

As we speak fever can lead to seizure, but there are other factors like infection, congenital abnormality, family history and perinatal factors etc. that can cause different types of seizure and sometimes lead to death of child.

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While for health care workers, seizure may be common experience devoid of worrisome implications, for the uniformed and inexperienced parents witnessing their child throwing a fit may be a nightmare and a frightening experience.

Speaking to the parents about the disorder, explaining to them the link between fever and other factors and seizure, allaying their fears and anxieties and addressing their concerns about recurrence and seizure will help in reduction of episodes of febrile seizure in children and improves quality of life of the child. Teaching Programs may improve related knowledge on prevention of febrile seizure, reduce misconceptions regarding seizure like it is a divine curse or in is a contagious disease or it affects one intelligence; etc. and improve attitude and perception of care giver regarding seizure. They can sometime also reduce recurrent episodes of febrile seizure and improve compliance with anticonvulsant drugs.

Education is threefold process of imparting knowledge developing skills and interests, attitudes and life values in human life. As health problems depends upon the geographical area and demographical aspect, health education of the mothers is an important part of prevention of health problems.[4]

As mothers are primary caregivers therefore mothers are included in the study hence it become essential to enhance their knowledge on this conditions. This can only be achieved if mothers' knowledge towards childhood seizures is well assessed and documented[5].

Need of the Study

Children are the future of our society and special gift to the world. Mother's knowledge on care of children greatly influences the health status of child by reducing the mortality and morbidity rate. However, supervision of health of the children is important.[5] It is difficult to convenience the parents, that this is a begin illness, which children will go out off. Parents also may fear allowing their child to attend Nursery school or to be away from them. In case of fever should rapidly appear followed by seizure, the person might not be prepared to handle.[6]

"Seizures cause intense parental anxiety. This coupled with ignorance, is often responsible for the various forms of intervention offered by parents and caretakers when a child has an episode of seizure".[7]

Objectives of the Study

1. To assess the knowledge regarding seizure among mothers of under-five children.
2. To find out association between knowledge and selected demographic variable among mothers of under-five children.
3. To prepare an informational booklet on seizure.

Hypothesis

H_1 - There will be significant association between the knowledge of the mothers of under-five children regarding seizure with selected demographic variable.

Results and Discussion

Analysis is the process of categorizing, ordering, manipulating and summarizing the data to obtain answers to research questions. The purpose of analysis is to reduce data to intelligible and interpretable form so research problem can be studied and tested.

The data obtained was analyzed and presented in 2 different sections :

Section I : Description of demographic variables of mothers of under-five children.

Section II : Analysis of existing knowledge score of mothers of under-five children.

Section I

Description of demographic variables of mothers of under-five children.

This section deals with distribution of participants according to the demographic characteristics.

The obtained data on sample characteristics were described under the sub headings which include age, religion, type of family, education, occupation, family income, number of children, knowledge of any children suffering from seizure, previous knowledge regarding seizure. Data was analysed using descriptive statistics and summarized in terms of frequency and percentages.

Distribution of mothers according to the demographic variables (N = 100)

Table 1: Shows the frequency and percentage of demographic variables among the mothers

S. N.	Variables	Frequency	Percentage (%)
1	**Age of mother in years**		
	(a) Up to 22 years	11	11
	(b) 23–28 years	60	60
	(a) 29–34 years	22	22
	(d) 35 years and above	7	7
2	**Religion**		
	(a) Hindu	70	70
	(b) Muslim	18	18
	(c) Christian	10	10
	(d) Others	2	2
3	**Type of family**		
	(a) Nuclear family	34	34
	(b) Joint family	66	66
4	**Educational status of mother**		
	(a) Upto Secondary	27	27
	(b) Senior Secondary	42	42
	(c) Graduate	22	22
	(d) Post graduate and above	9	9
5	**Occupational status of mother**		
	(a) Housewife	72	72
	(b) Private employee	26	26
	(a) Government employee	2	2
6	**Family Income**		
	(a) 2750 or below 2750/month	4	4
	(b) 2751–4500/month	6	6
	(c) 4501–7400/month	36	36
	(d) 7401–12500/month	21	21
	(e) 12501 or above 12501/month	33	33
7	**Number of children**		
	(a) 1	25	25
	(b) 2	46	46
	(c) 3	20	20
	(d) 4 or above	9	9
8	**Have seen any child suffering from seizure**		
	(a) Yes	22	22
	(b) No	78	78
9a	**Previous knowledge regarding seizure in children**	28	28
	(a) Yes	72	72
	(b) No		
9b	**Source of information**		
	(a) Health personnel	21	21
	(b) Family and relatives	7	7

Section II

Level of knowledge of mothers of under-five children regarding seizure in children.

In order to find out the level of knowledge of mothers, a four point scale was used. The percentage scores were graded arbitrarily as follows: 0–33 poor knowledge, 34–59 average knowledge, 60–74 good knowledge and 75–100 excellent knowledge.

Assessment of knowledge of mothers of under-five children showed that 12% of the Mothers had poor knowledge regarding seizure children, 54% had average knowledge, 28% of the mothers had good knowledge and 6% of mothers had excellent knowledge regarding seizure in children.

Table 2: Assessment of knowledge of under five children regarding seizeure

(*N* = 100)

S. No.	Level of knowledge	% score	No. of Mothers	% of Mothers
1.	Poor	0–33	12	12
2.	Average	34–59	54	54
3.	Good	60–74	28	28
4.	Excellent	75–100	6	6

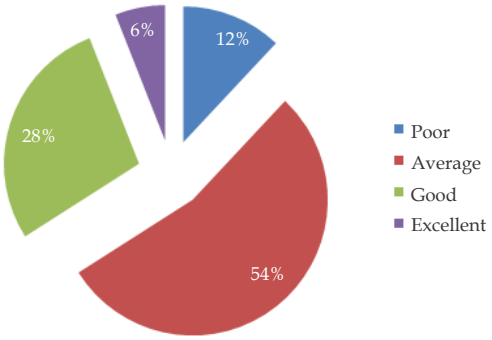

Fig. 1: Distribution of mothers of under-five children according to their level of knowledge regarding seizure in children.

Suggestions:

- Reinforcement of health education should be initiated in hospitals during visits.
- Health care personnel's can conduct camps, dramas and puppet shows to create awareness regarding prevention and first-aid management of seizure in children among mothers.

Conclusion

Mothers have special needs for knowledge regarding seizure to better health of under-five children. The study revealed that majority of mothers of under-five children belonged to 23–28 years of age group. Mothers of under-five children had inadequate exposure to seizure children. This study gave mothers entry in involvement in case of under-five children and shapes their early transition to motherhood.

List of Abbreviation

1. WHO- World Health Organization
2. AAP- American Academy of Paediatrics
3. SEAR- South East Asia Region
4. IPD- In Patient Department
5. PWS- Person With Seizure
6. ILAE- International League Against Epilepsy
7. P- Level of Significance

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Relationship between Body Mass Index and Self Esteem among Early Adolescents in a Selected School, Coimbatore

J Anitha[1], Blanshie Rajila William[2]

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Abstract

Introduction: Body Mass Index plays a vital role for early adolescents for their physical look and psychological well-being. In India, body weight is directly associated with their social life. In urban areas, adolescents are involved in various dietary activities to reduce body weight and they are more conscious for their body image than the rural counterparts. During the last decades, the increase in the rate of children and adolescents that are overweight or obese is alarming and it is related with the lower social competency and low self- esteem. *Objective:* is to examine the relationship between BMI and self-esteem among early adolescent. *Method:* Quantitative approach and descriptive correlational design was adopted. 60 participants are included in the study by using simple random sampling technique. An explanation about the purpose and the nature of the study was explained for each participant. The subjects were asked to complete the questionnaire and measured their weight and height. The tools consist of three sections to collect data: the sociodemographic, Body Mass Index and Rosenberg's Self-Esteem Scale (RSE). The validity and reliability of the measurements were ensured. Data was collected from the private school. *Results:* The mean and standard deviation of Body Mass Index are (Mean 18.56, SD 5.61) and the level of self-esteem (Mean 36.2, SD 9.04). Pearson's correlation showed that there was a significant negative correlation between Body Mass Index (BMI) and self esteem score (r = –0.4). *Conclusion:* The self esteem decrease while with the increase in body mass index among early adolescent

Keywords: Body mass index; Self-esteem; Obesity.

Introduction

Body mass index is a value derived from the mass and height of the person.[1] It is a physical measurement used to assess the individual total amount of fat.[2] Body mass index (BMI) is a person's weight in kilograms divided by the square of height in meters. A high BMI can be an indicator of high body fatness. BMI can be used to screen for weight categories that may lead to health problems but it is not diagnostic of the body fatness or health of an individual.[3] The prevalence of obesity and overweight is growing in both developed and developing countries, but at different Lobstein et al., (2004).[4] World Health Organization (WHO) has to designate obesity as one of the most important public health menace.[5] (Lee, 2005). Self-esteem, as the evaluative component of the self-concept, is vitally important for good mental health, and research indicates that it predicts a variety of other important life outcomes.[6] In urban areas, adolescents are involved in various dietary activities to reduce body weight and they are more conscious for their body image than the rural counterparts. In rural areas, adolescents are not aware about their diet and lifestyle pattern. Other than ignorance, myths related to dietary play a role in development of malnutrition. Malnourished, whether underweight

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or overweight is very stressful to adolescents. Due to over consciousness, students go into depression and may lead into low self-esteem.[7]

During the last decades, the increase in the rate of children and adolescents that are overweight or obese is alarming and it is related with the lower social competency and low self-esteem.[8] Self-esteem is an individual subjective evaluation of their own worth.[9] Low self-esteem is one of the main psychosocial factors related to childhood overweight. Yet not all overweight children are affected. Little is known about what characterises the group of overweight children with the lowest self-esteem. Our aim was to identify factors related to low domain-specific self-esteem in children with overweight/obesity. Adolescence is considered as crucial and significant period of an individual's life.[10] Davies & Katzman (1997) highlight that many obese people show signs of anxiety or depression more frequently than the general population Also, these people think about themselves as being less valuable than others showing negative feelings towards their appearance. Early adolescents with overweight have low self-esteem which affects children and their developing social skills. And it leads to various problems such as depression and anti-social behavior.[11] Hence, the researcher felt there is a need to take this study to find out the relationship between BMI and Self Esteem and to educate those regarding healthy eating habits.

Objectives

- To assess the body mass index among early adolescents.
- To assess the level of self-esteem among early adolescents.
- To correlate the body mass index and self-esteem among early adolescents.
- To associate the body Mass Index with the selected demographic variables.
- To associate the level of self-esteem with the selected demographic variables.

Materials and Methods

Research approach was quantitative and research design was descriptive research design, 60 samples that fulfilled the inclusion criteria were selected by simple random sampling technique. Children who had less attention and sick were excluded in the study. The tool consists of three sections.

Section A: Demographic variables which consists of age, gender, Religion of the family, education of the child, educational status of the parents, occupation of the parents, number of siblings, birth order of the child, primary care giver of the child, parenting style, family problems, source of information and dietary pattern.

Section B: It consists of body mass index or Quetelet Index[12] it is statistical measures, which compares the height and weight. It is calculated by BMI = Weight in kg/Height in m^2.

Table 1: Score and interpretation of BMI

Classification of BMI	Score
Underweight	<18.5 kg/m^2
Ideal	18.5–24.9 kg/m^2
Overweight	25–29.9 kg/m^2
Obese	More than 30 kg/m^2

Section C: Rosenberg Self-esteem Scale (RSES)[13] which is designed to measure self-esteem in early adolescent. It is a four point Likert scale. It ranges from strongly agree to disagree. It consists of 20 items. Maximum score is 60 and minimum score is 0. 10 items are positive and 10 items are negative. For positive statements the score will be given as strongly agree (3) agree (2) disagree (1) strongly disagree (0) and for negative statements the score will be strongly disagree (3) disagree (2) agree (1) strongly agree (0). The interpretation will be given as in Table 2.

Table 2: Interpretations of score for self-esteem

Level of self-esteem	Score
Low self-esteem	Below 30
Moderate self-esteem	30–40
High self-esteem	Above 40

The written permission was obtained from the principal, to conduct the study in a private school. The researcher introduced personally and explained the purpose and the importance of the study, and got oral consent from the school children. Data was collected from each child by interview method. Data were analysed by using descriptive and inferential statistics.

Results

Regarding the demographical variables the most of the children were females between the age group

of 12–13 years. The parents most of them were completed schooling, and working in a private sector and earning more than ₹10,000 and they belong to Hindu religion. Most of the children were found to be a second child from urban area. It is found that most of the children cared by their own mother and handled their children softly. The student received the information mostly from friends and belongs to non-vegetarian. Eventually, there were less family problems.

Regarding the distribution of level of body mass index among early adolescents. Among 60 early adolescents 42 (70%) of them were underweight and 5 (8%) of them were normal 10 (17%) of them were overweight and 3 (5%) of them were obese (Fig. 1).

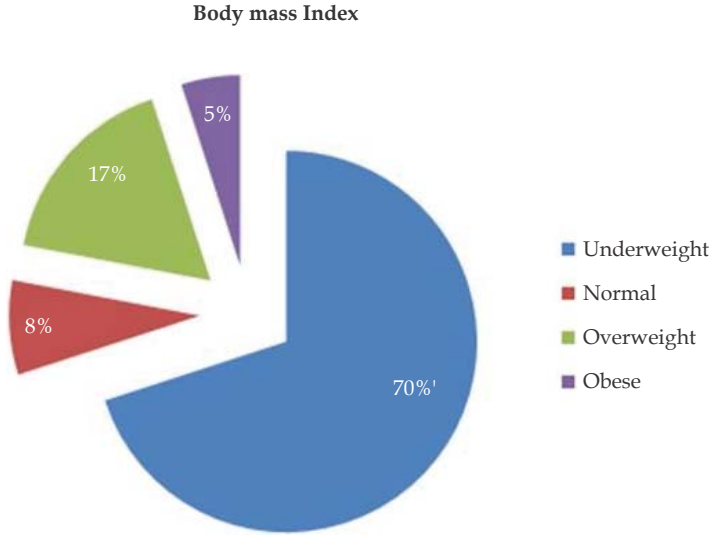

Fig. 1: Distribution of body mass index among adolescents.

From the Fig. 2. It was inferred that the distribution of level of self- esteem among 60 early adolescent 18 (30%) of them had low self-esteem, 17 (28%) of them had moderate self-esteem and 25 (42%) of them had higher self-esteem**.**

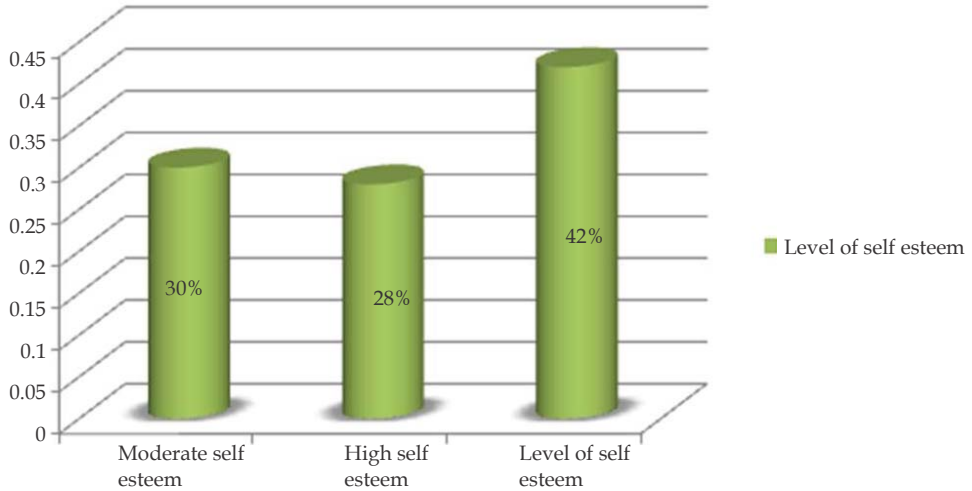

Fig. 2: Distribution of level of self esteem among early adolescent.

Regarding the correlation co-efficient, it shows that there is a significant negative correlation (r = –0.4) between BMI and self-esteem among early adolescent. Hence, it concludes that, when body mass index increases the self-esteem decreases among early adolescents.

Table 3: Distribution of correlation co-efficient between body mass index and self-esteem among early adolescent

N = 60

S. No	Variables	Mean	Standard deviation	*r*
1.	Body mass index	18.56	5.61	–0.4
2.	Self-esteem	36.2	9.04	

Regarding the association of body mass index with selected demographical variables the calculated value of chi-square is greater than the tabulated value of chi-square at 5% level of significance in residential area and birth order of the child. So it concludes that there is a significant association between residential area and birth order of the child and there is no significant association between the age of child, gender of child, education status of child, educational status of father, education status of mother, occupation status of father, family income per month, residential area, number of siblings in family, birth order of the child, primary care giver of the child, parenting style, family problem, source of information and dietary pattern. Regarding the association of level of self-esteem with selected demographical variables the calculated value of chi-square is greater than the tabulated value of chi-square at 5% level of significance in primary care givers of the child, hence, it concludes that there is a significant association between primary care givers of the child, and there is no association between the age of child, gender of child, education status of child, educational status of father, education status of mother, occupation status of father, family income, residental area, number of sibilings in family, birth order of child, primary care giver of the child, parenting style, family problem, source of information and dietary pattern among early adolescents among early adolescents.

Discussion

Adolescents who are overweight were more likely to be in the low self-esteem group. The present study concluded that there is a negative correlation between BMI and self-esteem which shows that higher the body mass index indicates lower the self-esteem. Another study by Swallen KC, he founded that there was a statistically significant relationship between BMI and physical health while adolescents who were overweight had significantly worse self-reported health and lower self-esteem and social functioning.[14] The present study findings concluded that there is a significant association between the BMI and self-esteem with selected demographic variables this may be congregant with the study done by Elfhag et. al. (2010) explained that family environment can contribute to the formation of self-esteem among early adolescents.[15] The findings were also supported by Aldaqal et al. emphasized, that significant poor self-esteem and impairment in all domains of quality of life in obese adolescent are compared with normal weight adolescent ($p < .001$).[16]

Conclusion

The present study findings showed that there is negative correlation between body mass index and self-esteem. This denotes that higher the BMI lower the self-esteem among adolescence. Obesity impacts the self perception of children entering adolescence especially in girls but in selected areas of competence obese children are at particular risk of low perceived competence in sports, physical appearance and pear engagement. It is necessary to plan actions aimed us reinforcing and increasing self-esteem focusing on the early adolescents with overweight and obesity problems. Parents should encourage and participate in improving diet and increasing physical activity which helps in improving self-esteem of early adolescence.

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(Dinesh Kumar Kashyap)

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Relationship Between Quality of Sleep and Behavioral Problems among School Children, Coimbatore

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Abstract

Children are vital to the nations present and its future. In recent years there has been an increased focus on issues that affect children and on improving their health. Children from different parts of the world have radically different habitual sleep durations. Children are "in need of more sleep" and that children are chronically sleep deprived contemporary concerns in our society. The aim of the study is to identify the relationship between quality of sleep and behavioural problems among school children. The objectives of the study were to assess the quality of sleep and behavioural problems among children, to correlate the quality of sleep and behavioural problems among children and to find out the association between quality of sleep and behavioural problems with selected demographic variables. Quantitative approach and descriptive research design was adopted. This study was conducted on 50 samples after getting necessary permission from private school authority, consent was obtained from each sample. Data were analysed by using descriptive and inferential statistics. This study findings shows that there is a positive relationship between quality of sleep and behavioural problems. Sleep and behavioural problems had significant association with selected demographic variables. Sleep is associated with gender, screen time of the child and education of the child. Behavioural problems are associated with gender, education of the child and screen time of the child. Hence this study concludes that Parents are prime responsible person to establish positive and quality sleep habits to the children.

Keywords: Sleep; Behavioural problems; Screen time.

Introduction

Children are the world's most valuable resource and its best hope for the future,[1] Children are the rock on which our future will be built, our greatest asset as a nation. They will be the leaders of our country and creators of our national wealth who care for and protect our people.[2] Sleep is a power source that keeps their mind alert and calm. Every night and at every nap, sleep recharges the brain's battery. Sleeping well, increases brain power just as weight lifting builds stronger muscles, because sleeping well increases the attention span and allows the child to be physically relaxed and mentally alert.[3] Children with sleep problems may have over –reactive emotional responses to events during the day and be preoccupied with trying to regulate their emotional system. This limits their opportunity to focus and benefit from activities that build attentional regulation.[4] Sleep problems not only disrupt a child's nights–they disrupt his days, too, by making him less mentally alert, more inattentive, unable to concentrate, and easily distracted. They also make him more physically impulsive, hyperactive or lazy.[4] In adequate sleep –whether too short or poor quality –causes specific changes in mood and thinking. to prevent sleep problems in children, parents should establish

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positive sleeping habits. These habits include setting a bedtime, having a consistent bedtime routine and encouraging children to fall asleep independently. In addition, keeping all electronics out of the bedroom will help children to get a good night's sleep.[4] This study aims to assess the relationship between quality of sleep and behavioral problems.

Objectives

- To assess the quality of sleep among school children.
- To assess the behavioral problems among school children.
- To correlate the quality of sleep and behavioral problems among school children.
- To associate the quality of sleep with demographic variables among school children.
- To associate the behavioral problemswith demographic variables among school children.

Materials and Methods

Research approach was quantitativeand research design was descriptive research design, 50 samples that fulfilled the inclusion criteria were selected by simple random sampling technique. Children who had less attention and sick were excluded in the study. The tool used for the data collection comprises 3 sections— Section A: Demographic variables which consists of age, gender, education of the child, education of the parents, occupation of the parents, type of the family, number of siblings, religion, bed time of the child, screen time, day time sleep, duration of playing games, dinner pattern. Section B: It consist of 15 statements related to quality of sleep and Section C: consists of 15 statements regarding to behavioural problems. After written permission was obtained from the principal, the study was conducted in a private school. The researches were introduced personally and explain the purpose and the importance of the study and get the oral consent from the school children. Data was collected from each child by interview method. At the end of the study pamphlets was given regarding sleep hygiene. Data were analyzed by using descriptive and inferential statistics.

Results

Regarding the demographical variables most of the children are females between the age group of 11–12 years. Most of the parents were graduates working in a private sector and they belong to Hindu religion. Many children were found to be a single child from nuclear family. It is found that most of the children go to bed regularly between 9:00 pm and 10:00 pm after watching TV. Usually most of the children sleep one hour daily in day time and play games daily one hour. Most of the children daily eat less in the night time.

Regarding the distribution of quality of sleep among children 27 children have moderate sleep disturbance and 23 children have severe sleep disturbance (Fig. 1).

Regarding the distribution of behavioural problems among school children 28 children have moderate behaviour problems, and 22 children have severe behavioural problems.

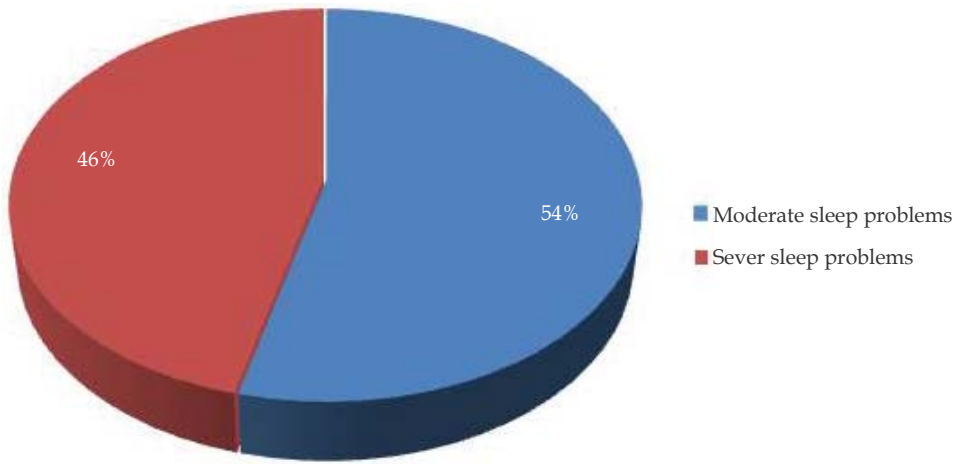

Fig. 1: Distribution of sleep

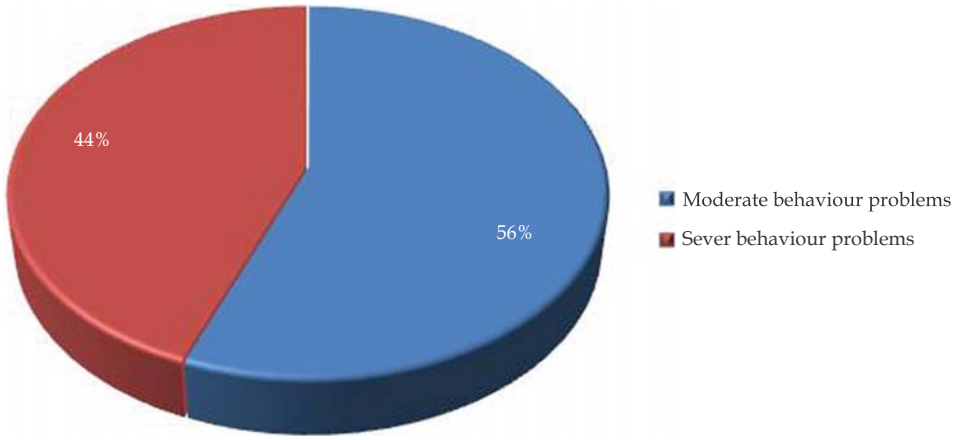

Fig. 2: Distribution of behavioural problems

Regarding mean and standard deviation the quality of sleep (mean–30.9, SD–5.19), the behavioural problems (mean–30, SD–5.89) regarding the correlation coefficient between quality of sleep and behavioural problems among school children the *r*-value is 0.638. It shows that there is a positive correlation between quality of sleep and behaviour problems (Table 1).

Table 1: Correlation of coefficient between quality of sleep and behavior problems among school children.

n = 50

S. No	Variables	Mean	SD	*r*
1.	Quality of Sleep	30.9	5.19	0.638
2.	Behavior problems	30.0	5.89	

Regarding association of the quality of sleep with selected demographical variables, there is significant association between gender of the child, and education of the child and screen time of the child (Table 2).

Table 2: Association between quality of sleep among school children

n = 50

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
1	**Age in years**				
	(a) 10–11 years	5	6	0.64	
	(b) 11–12 years	23	16	(NS)	
2	**Gender**				
	(a) Male	8	13	4.71	
	(b) Female	20	9	(S)	
3	**Education of the child**				
	(a) 6th standard	8	16	7.93	
	(b) 7th standard	19	7	(S)	
4	**Education of the parents**				
	(a) Under graduate	15	17	0.0047	
	(b) Graduate	13	10	(NS)	
5	**Occupational status of the parents**	2	2	0.074	3.84
	(a) Government employee	26	20	(NS)	
	(b) Private employee and daily wages				

(Contd.)

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
6	**Types of family**				
	(a) Joint family	13	10	0.0047	
	(b) Nuclear family	15	12	(NS)	
7	**Number of siblings**				
	(a) One	26	21	0.046	
	(b) Two and three	2	1	(NS)	
8	**Religion**				
	(a) Hindu	20	9	1.15	
	(b) Muslim and christian	8	13		
9	**Bed time of the child**		9	0.14	
	(a) 7–8 pm and 8–9 pm	10	13	(NS)	
	(b) 9–10 pm	18			
10	**Screen time of the child**				
	(a) Up to 9 pm	13	20	8.97	
	(b) Up to 10 pm and up to 11 pm	15	2	(S)	
11	**Day time sleep of the child**				
	(a) 1 hour	20	19	0.85	
	(b) 2 hours and 3 hours	8	3	(NS)	3.84
12	**Duration of playing games**			0.93	
	(a) 1 hour	14	14	(NS)	
	(b) 2 hours and 3 hours	14	8		
13	**Dinner pattern of the child**				
	(a) Eat less	17	19	2.85	
	(b) Eat more and eat only snacks	11	3	(NS)	

Note: NS – No significant S – Significant

Regarding the association of behavioural problems with selected demographical variables, there is a significant association between gender, education of the child, screen time of the child and behaviour problems (Table 3).

Table 3: Association between the behavior problems in selected demographic variables among school children

N = 50

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
1	**Age in years**				
	(a) 10–11 years	5	6	0.41	
	(b) 11–12 years	22	17	(NS)	
2	**Gender**				
	(a) Male	7	14	6.23	
	(b) Female	20	9	(S)	
4	**Education of the child**				
	(a) 6th standard	9 18	15	5.06	
	(b) 7th standard		8	(S)	
5	**Education of the parents**				
	(a) Under graduate	12	15	1.34	3.84
	(b) Graduate	13	14	(NS)	

(Contd.)

S. No	Demographical variables	Quality of sleep		Calculated value of X^2	Tabulated value of X^2 at 5% level of significant
		Above mean	Below mean		
6	**Occupational status of the parents**				
	(a) Government employee	1	3	0.48	
	(b) Private employee and daily wages	26	20	(NS)	
7	**Types of family**				
	(a) Joint family	12	11	0.06	
	(b) Nuclear family	15	17	(NS)	
8	**Number of siblings**				
	(a) One	25	22	0.02	
	(b) Two and three	2	1	(NS)	
9	**Religion**				
	(a) Hindu	18	16	0.05	
	(b) Muslim and christian	9	7	(NS)	
10	**Bed time of the child**				
	(a) 7–8 pm and 8–9 pm	11	8	0.19	
	(b) 9–10 pm	16	13	(NS)	
11	**Screen time of the child**				
	(a) Up to 9 pm	14	19	3.95	
	(b) Up to 10 pm and up to 11 pm	13	4	(S)	
12	**Day time sleep of the child**				
	(a) 1 hour	18	21	1.48	
	(b) 2 hours and 3 hours	8	3	(NS)	
13	**Duration of playing games**				
	(a) 1 hour	14	14	0.93	
	(b) 2 hours and 3 hours	14	8	(NS)	
14	**Dinner pattern of the child**				
	(a) Eat less	18	18	1.83	
	(b) Eat more and eat only snacks	9	5	(NS)	

Note: NS- No Significant S- Significant

Discussion

The present study findings show that there is a positive relationship between quality of sleep and behavioural problems, this may be related to the statement stated by E. Joulia Paa Voren, that short sleep duration and sleeping difficulties are associated with children behavioural problems.[8] Mark Aistein stated that, there was an association between the sleep pattern and behaviour problems.[9] Dr. Dean Beeb states that inadequate sleep whether too short or poor quality causes specific changes in mood and thinking.[5] These studies are congruent with the result of the present study which revealed that when sleep problems occurs children have the behaviour problems. The results concluded that there is a significant association between the quality of the sleep and screen time of the child, education of the child and gender of the child.

Conclusion

Every living creature needs to sleep. It is the primary activity of the brain during early development.[6] Sleep is especially important for children as it directly impacts mental and physical development. Children who don't get enough sleep also don't pay attention as well as likely to think before they act and are not able to solve problems as well.[7] So the author concluded that parents are the prime responsible person to establish positive and quality sleep habits to the children to prevent the sleep problems and behavioural problems.

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Effectiveness of Video Assisted Teaching Program (VATP) Regarding Knowledge on Road Safety Measures Among School Age Children

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Abstract

In the hectic world, the children are prone to meet with the accidents, consequently it will affect the children's life such as loss of limbs, depression etc., Therefore, it is imperative to protect the children from the road traffic accidents the quasi experimental research design was adopted. Through randomization method, 60 school age children were selected based on the inclusion criteria. The pre-test data collected through 30 self-administered questionnaires related to knowledge on road safety measures followed by video assisted teaching Program and video show for 45 minutes. After 4 weeks, the post-test data was collected with same questionnaire. In the results, the pre- test mean score of knowledge among the children was 10.94 ± 6.16 and the post-test mean score was 24.54 ± 2.75. The calculated paired *t*-value of $t = 13.38$ found to be statistically significant at $p < 0.001$*** level. It depicts that, the VATP had a significant impact on the knowledge on the road safety measures among the school age children.

Keywords: Effectiveness; Knowledge; Video assisted teaching program; Road safety measures & school age children.

Introduction

In the worldwide, the school age children represent about 25% of the total population. The health care needs of this school children can contribute to the overall health status of the country.[1] The health and well-being of this population have become high profile issue, lying at the heart of numerous government initiatives and policies make to the considerable public attention.[2] The road traffic injurieswere responsible for the maximum mortalities, i.e. 38.4% among the children and adolescents when compared with other reasons. There was more than two-fold increase in injury-related mortalities from the childhood to adolescence (1:2.3). In gender wise, the mortalities are high in males, i.e. 45.2% and 37.4% in females.[3] Nirmala AS et al. (2015) stated that, 2.5 million people are hospitalized, 8–9 million people were suffered with minor injuries and nearly 1030 of the hospital registrations are due to road traffic injuries. The study suggests a clear road safety policy, a central coordinating agency, allocation of adequate resources, strict implementation of proven interventions and reliable information systems are urgently required.[4]

Need for the study

The number of deaths on the world's roads remains unacceptably high, with an estimated 1.35 million people dying every year. The road traffic injuries are 8th leading cause of mortality for all the ages and number onecauses for the children and young adults aged 5–29 years, However, it also indicates that progress to realise Sustainable Development

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Goal (SDG) target 3.6 which emphasis for a 50% reduction in the number of road traffic deaths by 2020.[5]

In India, according to National survey on the road traffic accidents, every year, nearly million people are injured and mortality rate of more than 70,000 people; this needs to be recognized as an important public health issue. The other traffic violations such as jumping and red lights at intersections have increased.[6] In Tamilnadu, the incidence of road traffic accidents in 2016 was, the children between 5–9 years fatality rate was 448, 10–14 years injured rate was 30% among them 69.4% were males and 30.6% female children. The major causes for the accidents are 44% due to two- wheeler crashes and 36% falls. The Pedestrian road traffic injuries among the children and adolescents are most important cause of death and disability.[7] Therefore, it is very much important to protect the life of the children and to provide safer environment.

Matrials and Methods

The necessary ethical and administrative permission was obtained. The Quasi experimental, pre and posttest research design was carried out in government schools in vellore district. Based on inclusion criteria, the non- randomized convenient sampling technique was used to select the samples of 60 school age children.

Description of instrument

The structured interview questionnaire was prepared, based on the extensive review of literatures, the expert's opinions and the investigators personal experiences. The Performa has III sections.

Section I: It consists of demographic variables of the students age, gender, level of education, education of father & mother, father's occupation, family income, type of family and residence

Section II: It comprises of the background variables of, source of information, playing outdoor games and mode of travelling to school.

Section III: This section deals with 30 open ended questionnaires related to the knowledge on road safety measures among school age children. The each correct answer given a score of one and the Wrong answer scored as (0) zero. The knowledgescore was interpreted as follows, Inadequate (≤50%) Moderately adequate (51–75%) and adequate (75% and above).

Data collection procedure

The Pre-test was conducted on the knowledge regarding road safety measures and on the same day, the students were engaged with video assisted teaching program with power point presentation and video show for 45 minutes. After the intervention, within period of 4 weeks the post level of knowledge was assessed.

Results and Discussion

The collected data were analyzed by using descriptive and inferential statistics and based on objectives, the results were discussed below.

Regarding the demographic and background variables

Among 60 samples, the majority of 64% were aged 9–10 years, 66% were males and 64% were studying in 5th level of class, Regarding the educational qualification, the majority 80% of mothers has no formal education whereas fathers nearly half of i.e., 49% completed the high school of education. Considering the occupation of fathers the majority 64% were working as for daily wages, 84% belongs to nuclear family and half of them living in urban area. Considering the source of information, the majority of 82% of teachers has been the source of information, (14%) used to play outdoor games, most of the students 32 (64%) are travelling through cycle to school, 8(16%) are travelling by walk to the school, 10 (20%) are travelling through public transport to the school.

To assess the level of knowledge among school age children before and after video teaching program

The (Fig. 1), shows in assessment score before video assisted teaching program the majority 35 (70%) were with inadequate knowledge and 15 (30%) were with moderate knowledge. Whereas after video assisted teaching program, 20 (40%) were with moderate and 30 (60%) were with adequate knowledge. The similar findings are seen in Mathew TA (2014) stated that, the pre-test showed 2% of children had the inadequate knowledge, 98% had moderately adequate and none of them had adequate knowledge. In post-test, none of them had inadequate knowledge, 4% had moderately adequate and 96% had adequate knowledge in experimental group.[8] It reveals that, the experimental group has more knowledge than the control group after the administration of structured teaching program.

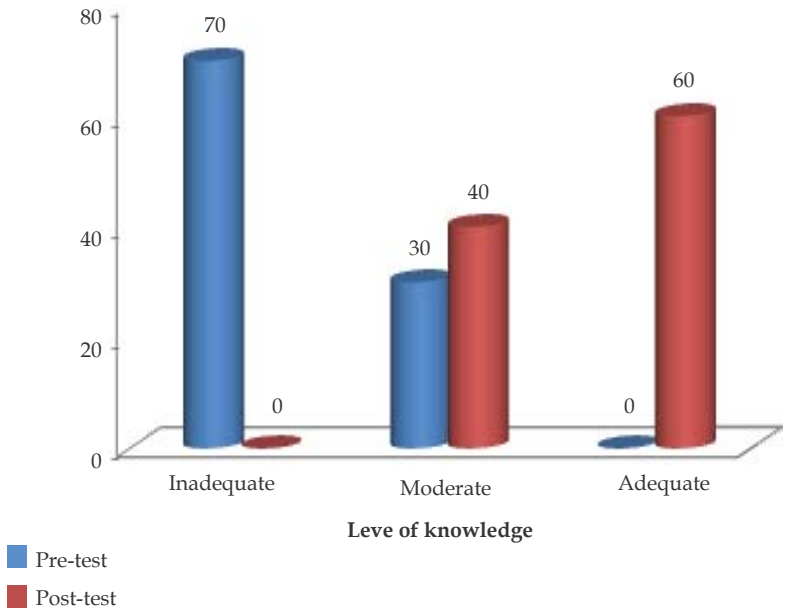

Fig. 1: Shows the level of knowledge among School age children before and after video teaching program

To compare the preand post-test score of the level of knowledge on road safety measures among school age children

In Table 1 shows, the pre-test overall mean and SD score were 10.94 ± 6.16 whereas in post-test were 24.54 ± 2.75. The mean difference of 13.6. It depicts that, the video assisted teaching was effective to improve the knowledge regarding road safety measures. The calculated paired *t*-value of $t = 13.38$ found to be statistically significant at $p < 0.001$ level. This clearly indicates that, the video assisted teaching imparted theroad safety measures knowledge to school going children. The results were similar with, Jayavel M (2014) in pre-test, 18% of children had inadequate knowledge, 82% had moderately adequate and none of had adequate knowledge. In post-test 4% of the children had the inadequate knowledge, 94% had moderately adequate and 2% had adequate knowledge. This reveals that experimental group has more knowledge than the control group after administration of structured teaching program reveals that the hypothesis of there is significant difference between the pre and post-test score was accepted.

Table 1: The pre and post-test mean score of knowledge regrading road safety measures

Knowledg	Pre-test		Post-test		Mean difference	*t*-value	*p*-value
Important	2.42	1.70	5.74	0.63	3.32	12.43	$p < 0.001$***
Cause	1.34	1.00	3.52	0.50	2.18	14.77	$p < 0.001$***
Impact	2.68	1.58	4.36	0.79	1.68	7.38	$p < 0.001$***
Traffic sing and symbols	2.46	1.7	5.8	1.31	3.34	9.68	$p < 0.001$***
Prevention	2.04	1.66	5.12	1.80	3.08	8.42	$p < 0.001$***
Overall	10.94	6.16	24.54	2.75	13.6	13.38	$p < 0.001$***

Association between effectiveness of pre and post knowledge score with selected demographic variables

There is no significant association between the selected demographic variables exceptthe type of family since the $p < 0.012$* shows that it's significant. Here, the nuclear family children were attained more knowledge when compared to the joint family. It revealed that, there is significant association between pre and post-level of knowledge regarding road safety measures was accepted. The similar findings were seen with Malik M, Pradhan K S, identified that, the sex of the children and mode of transport are significantly had association with knowledge score.[10]

Recommendations

1. The similar study can be replicated on a larger sample size to increase validity and generalization of findings.
2. The nurse investigator encourages the use of video assisted teaching Program for school health education Programs.
3. A similar study can be conducted in various settings like Community and hospitals.
4. The descriptive study can be done regarding attitude of road safety measures among school going children.

Conclusion

The study findings reveals that there was a significant difference in the preand post-test level of knowledge on the road safety measures using the video assisted teaching. Hence, the video assisted teaching program had a significant impact on the knowledge on the road safety measures among thechildren studying in the selected schools. This study is focused on, protect the children from the road traffic accidents and bring - up the children in safer environment for their proper mental as well as physical growth and development.

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Original Article

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A Study to Assess the Effectiveness of Structured Teaching Program on Prevention of Neonatal Infection Among the Postnatal Mothers in Selected Hospital at Salem District

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Abstract

Neonatal infections are major cause of morbidity and mortality in children, particularly significant in developing countries like India. Patient attendance attributed to neonatal infections is high 20–40% of all out patients, 12–35% of in patients. Neonatal infections are infections of the neonate (newborn) acquired during prenatal development or in the first four weeks of life (neonatal period). Neonatal infections may be contracted by mother to child transmission, in the birth canal during childbirth, or contracted after birth. The title of the study is ''Effectiveness of structured teaching Program on prevention of neonatal infections among the post-natal mothers in selected hospitals at Salem District, Tamilnadu". *Objectives: (*1) To assess the existing knowledge on prevention of neonatal infection among postnatal mothers. (2) To determine effectiveness of structured teaching Program on regarding prevention of neonatal infections among postnatal mothers. (3) To fine the association between post-test knowledge level regarding postnatal mothers of neonates with their selected demographic variables. *Methodology:* Quasi–experimental research design was used. Among 60 mothers using non-probability convenient sampling and data was collected using structured knowledge questionnaire regarding neonatal infection & its prevention among postnatal mothers. *Results:* In pre-test the mean score of general information regarding neonatal infections is 1.58, Eye infection was 2.18 Umbilical cord infection was 2.27, skin infection was 2.38 and oral thrush was 2.97. During the pre-test 95% of the samples had inadequate knowledge, 5% of samples had moderate knowledge and 0% of the samples had adequate knowledge. And during post-test 10% of postnatal mothers of neonates had moderately adequate knowledge and 86.67% of postnatal mothers of neonates had adequate knowledge and 3.33% of postnatal mothers of neonates had inadequate knowledge. During post-test knowledge mean score was 23.72 and in pre-test the mean was 11.38 and the mean difference was 12.34 and the obtained' *t*-test value = 45.018 which was significant ($p < 0.05$). Hence, concluded after structured teaching Program the level of knowledge is increased.

Keywords: Neonatal; Infection; Newborn; Child & Postnatal mother.

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Introduction

According to World Health Organization (WHO) estimates, there were about 5 million neonatal deaths in 1995, 98% of which occurred in less developed countries. The number of neonatal deaths decreased to 4 million in 2005, but 98% still occurred in less developed countries. Among them, infection was a main cause. Neonatal infection can

be acquired in utero, during the birth process, or soon after birth. Not all types of neonatal infections are apparent at birth but may manifest with signs of disease in weeks, months, or years. After birth, neonates are exposed to infectious agents in nurseries or community. Postnatal infections may be transmitted by direct contact with hospital personnel, mothers, family members, breast milk, or various in animate sources. In Korea, postnatal care for the mother and newborn baby was traditionally carried out at home by all family members including maternal and paternal grandmothers to prevent neonatal infections.[1–4]

Among neonatal deaths, three fourths occur during the first week of life, while 25–45% occur within the first 24 hours after birth. The majority occur at home. A strategy that promotes universal access to antenatal care, skilled birth attendance and early postnatal care has the potential to contribute to sustained reductions in neonatal mortality. To complement facility-based care, home-based strategies to promote optimal neonatal care practices have been proposed. Two related modalities for this purpose have been attempted in Programs and research trials in the last decade. The first involves home visits for the promotion of optimal neonatal care; the second includes home-based management of neonatal infections and other neonatal problems arising during birth, including neonatal resuscitation if required, plus the promotion of preventive interventions.[5–8]

Need for the study

The first week of life is the most crucial period in the life of an infant. In India 50–60% of all infant death occurs within the first month of life. The risk of death is greatest during the first 24–48 hrs after birth. Neonatal infection of the leading cause for neonatal mortality, now account up to two-thirds of all infant deaths and half of under five child mortality in developing countries. Current status of neonatal health services in India was disorganized. Recently 20 to 125 medical colleges in the country have special care neonatal units. A series of Services of neonatal centers conducted in the country revealed that, out of 28 units, only 50% had satisfactory resuscitation facilities while 33% had inadequate. the present figure of 40 per 100 live births in India is too high. Neonatal morbidity was as 56.8% and 37.3% amongst slum. Neonatal morbidity distribution among the non-slum areas in Luck now was respiratory illness 12%, eye-infections 4% and five neonates from slums were taken to quacks, out of which four had very severe disease symptoms. Two of these neonates subsequently died within 4–6 weeks of life, one due to probable meningitis and the other due to neonatal sepsis.

Major causes of death in neonates were due to respiratory disorders, GI disturbances and Chickengunya. More than 1.25 million suspected cases have been reported from Karnataka State (7,52,245), Maharashtra (2,58,998) and also affected states were Andhra Pradesh, Madhya Pradesh, Tamil Nadu and Gujarat. Nearly 50% of all infant deaths occur during the neonatal period. Half of their deaths occur in the first seven days due to infections and prematurity which can be prevented by proper and timely care of the newborn. A study was conducted on post-natal and neonatal health problems and remedies used during puerperium in one urban community at Delhi. The sample was 100 neonates. The results revealed that 10% neonates had eye infections and 10% had GIT infection. A study was conducted on "Maternal and child health care in slums of Ludhiana City (n = 200) revealed that 96% of mother delivered at home and out of this 76% was without any medical assistance. Further analysis showed that the neonatal Infections were more prone to children who were born in unhygienic conditions.

Inadequate post-natal counseling to mothers on neonatal care including neonatal danger signs was observed. The potent risk factors for neonatal infection were the number of siblings and baby care during post-natal care. A recent study focused on the necessity of exclusive breast feeding which necessary for protection against infection during infancy. Separation of newborns from young siblings to prevent neonatal infection needs to be explained to mothers, and also regarding post-natal care, home remedies to decrease the incidence of neonatal infection. Standards of hygiene during post-natal period need to be established for the prevention of infections in neonates. Based on the review of literature and the personal experience of the investigator visits during in hospitals in urban areas, it was found that many neonates were affected with neonatal infections and there was less awareness and practice on prevention of neonatal infections among the post-natal mothers. Hence the investigator felt the need to assess the knowledge on prevention of neonatal infections among post-natal mothers of neonates, with a view to prepare structured teaching Program which will be useful for the mothers in prevention of neonatal infections.

Meterials and Methods

Study design: Quasi experimental design

Study area: OPD department Sisu Hospital, Salem Poly Clinic, Salem

***Setting of the study*:** Salem poly clinic Salem Area

Sample size: The smple compraise 60

Sampling technique: Under non-prpbablity convinent Sampling

***Sample*:** A total 60 Post-natal mothers in Sisu Hospital

Inclusion criteria:

- Mothers who are in early postnatal period.
- Mothers who are willing to participate in the study.
- Available during data collection period.
- Will be able to read and write Tamil and English.

Hypotheses:

H_1: There will be significant difference between pre -test and post-test knowledge scores of mothers regarding prevention of neonatal infection.

H_2: There will be significant association between pre -test and post-test knowledge scores of mothers regarding prevention of neonatal infection with their demographic variables.

Development of tool for data collection:

The final data collection instrument had two section which include, Section A: Demographic Variables, Section B: Structure knowledge questionnaire on prevention neonatal infection.

Reliability:

Reliability is concerned with how consistently an instrument measures the concept of interest reliability of the tool will be estimated by Karl Pearson's formula. The reliability value of the instrument 0.8 was found to be reliable.

Pilot study:

The pilot study was conducted on Sisu Hospital hospital, Salem district. After getting formal permission from the dean of the hospital. Six samples were taken for pilot study. The samples were selected by using non-probability purposive sampling method who fulfill the inclusion criteria. A structured knowledge questionnaire was used to collect the data from postnatal mothers of neonates during post study. The study was found to be feasible.

Results and Discussion

The study was conducted in Salem poly clinic and Sisu hospital at Salem district. A written permission was obtained from the chief medical officer. The researcher introduced herself to the postnatal mothers and developed good rapport with them. The purpose of the study was explained every samples. So as to get their full co-operation.

A Pre-test questionnaire on knowledge regarding prevention of neonatal infections was administered to the postnatal mothers of neonates and structured teaching Program was given to obtain knowledge regarding prevention of neonatal infections. Evaluation done by conducting post-test after the implementation of structered teaching Program (Tables 1–4 and Figs. 1–13).

Table 1: Frequency and percentage of description of postnatal mothers of neonates according to the selected demographic variables

Demographic Variables		Frequency	%
Age in years	18–22 years	22	36.67
	23–26 years	18	30.00
	27–31 years	16	26.67
	32 and above	04	6.67
Number of children	1	18	30.00
	2	28	46.67
	3 and above	14	23.33
Educational status of the mother	Non-formal education	16	26.67
	Primary education	32	53.33
	Higher secondary education	12	20.00
	Graduate and above	0	0.00

Demographic Variables		Frequency	%
Type of family	Nuclear family	31	51.67
	Joint family	20	33.33
	Extended family	9	15.00
Religion	Hindu	43	71.67
	Muslim	13	21.67
	Christianity	4	6.67
	Others	0	0.00
Occupation of the mother	Coolie	26	43.33
	House wife	34	56.67
	Government employee	0	0.00
	Private employee	0	0.00
Family monthly income	₹3000–₹5000	21	35.00
	₹5001–₹6000	24	45.00
	₹6001–₹7000	11	18.33
	₹7001 and above	04	6.67
Source of health information	Health professionals	21	35.00
	Electronic media	24	45.00
	Print media	5	8.33
	Family members and friends	10	16.67
Birth order of the child	First	23	38.33
	Second	28	46.67
	Third	8	13.33
	Others	1	1.67
Type of delivery	Vaginal	60	100.00
	Cesarean section	0	0.00
Place of delivery	Government hospital	54	90.00
	Private hospital	6	10.00
	House delivery	0	0.00
Type of feed to baby	Breast feed	39	65.00
	Bottle feed	20	33.35
	Others	1	1.67
Birth weight of the new born (grams)	1500 grams	15	25.00
	2000 grams	18	30.00
	2500 grams	17	28.33
	2500 grams and above	10	16.67

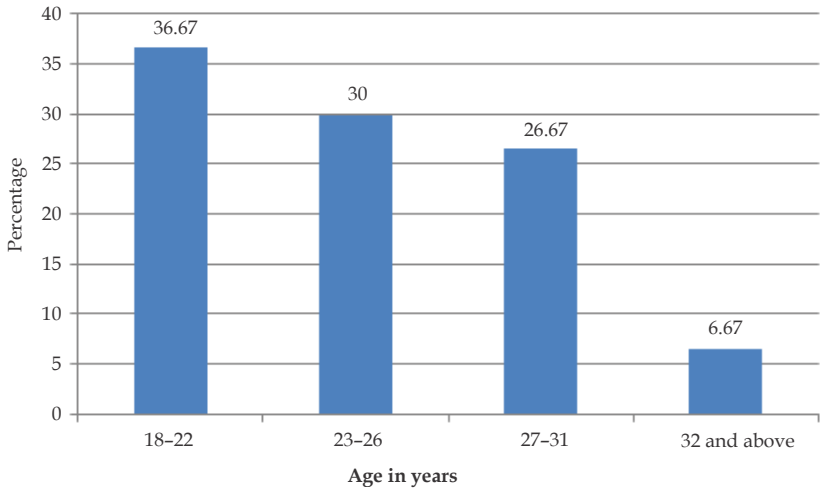

Fig. 1: Bar diagram showing percentage wise distribution of postnatal mothers of neonates according to the age.

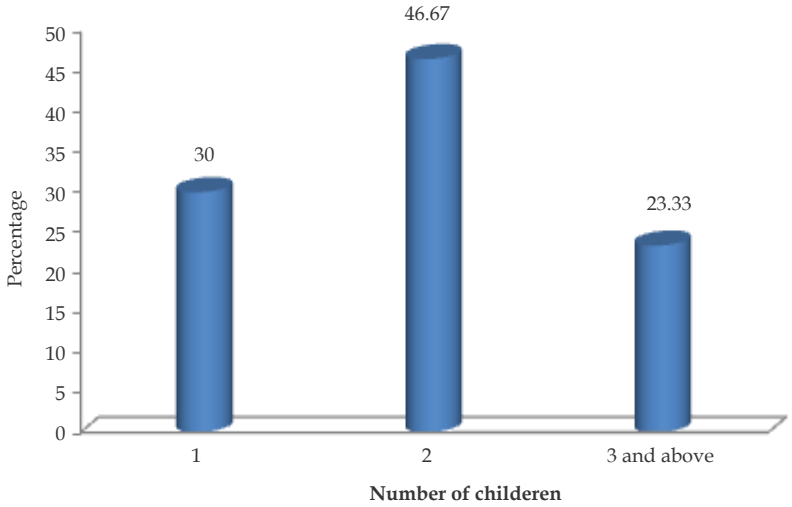

Fig. 2: Bar diagram showing percentage wise distribution of postnatal mother of neonates according to the number of children.

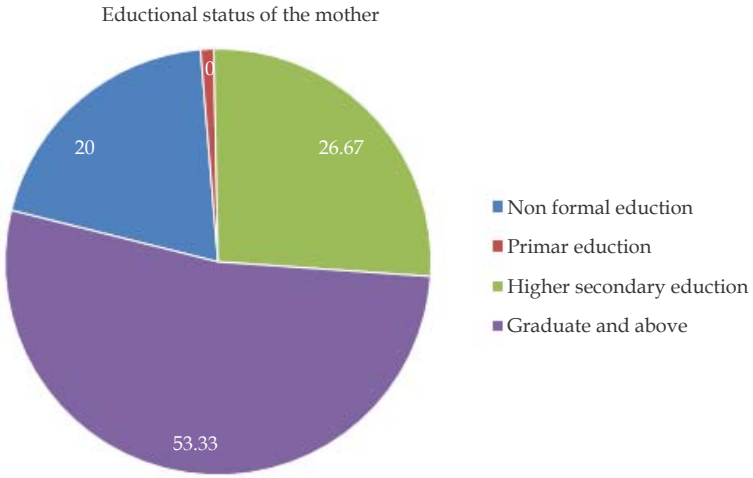

Fig. 3: Pie diagram showing percentage wise distribution of postnatal mothers of neonates according to the educational status.

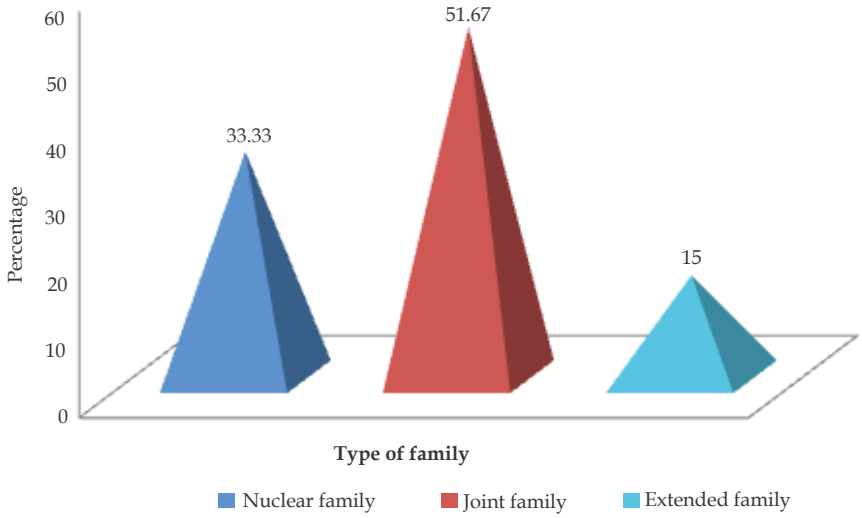

Fig. 4: Cone diagram showing percentage wise distribution of postnatal mothers of neonates according to the educational status.

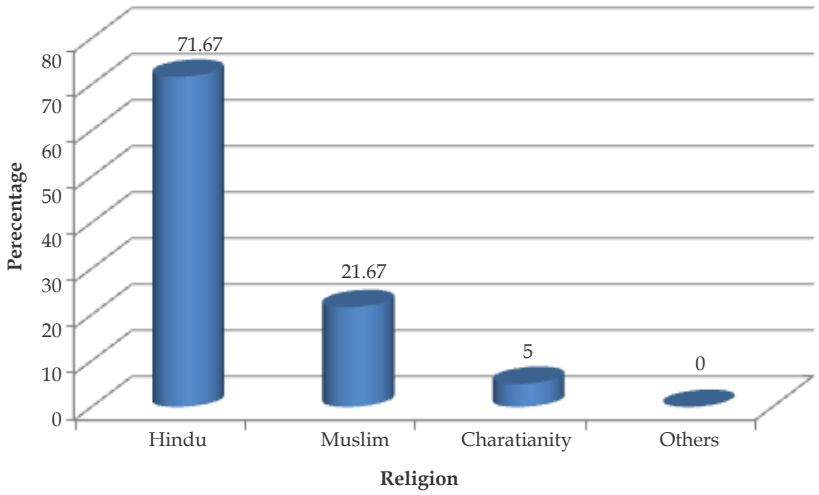

Fig. 5: Bar diagram showing percentage wise distribution of postnatal mothers of neonates according to the religion.

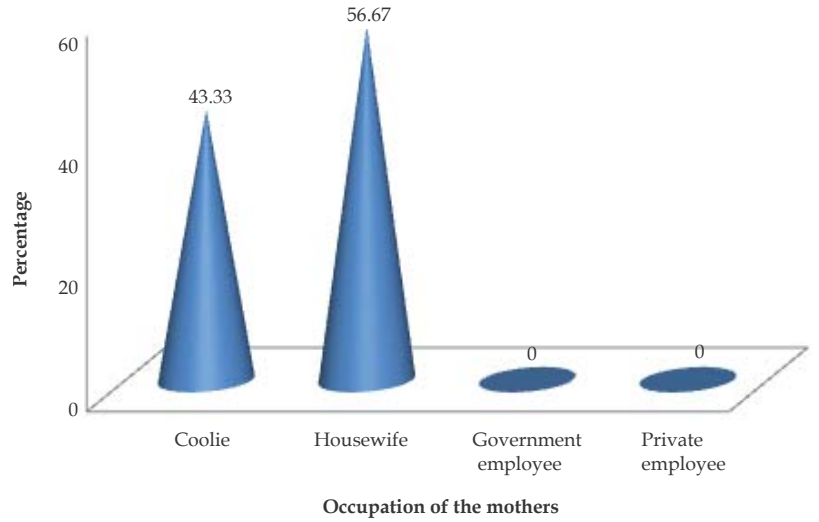

Fig. 6: Cone diagram percentage wise distribution of postnatal mothers of neonates according to the occupation of the mother.

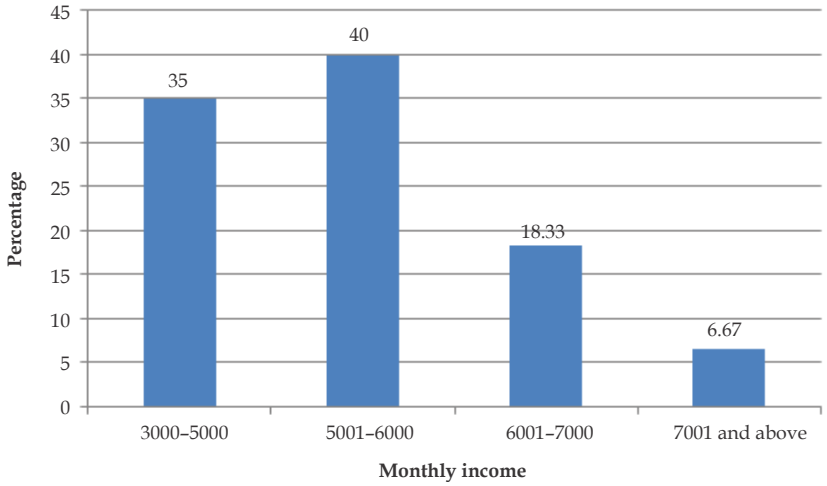

Fig. 7: Bar diagram showing percentage wise distribution of postnatal mothers of neonates according to the monthly income.

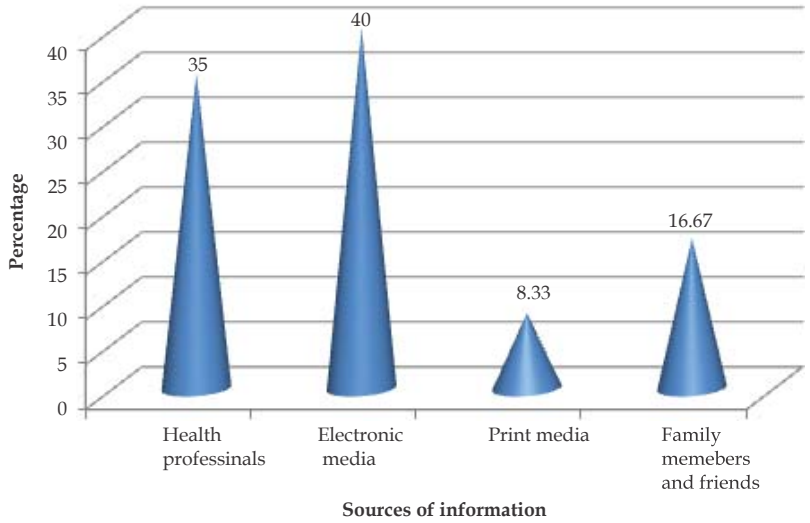

Fig. 8: Cone diagram showing percentage wise distribution of postnatal mothers of neonates according to the source of information.

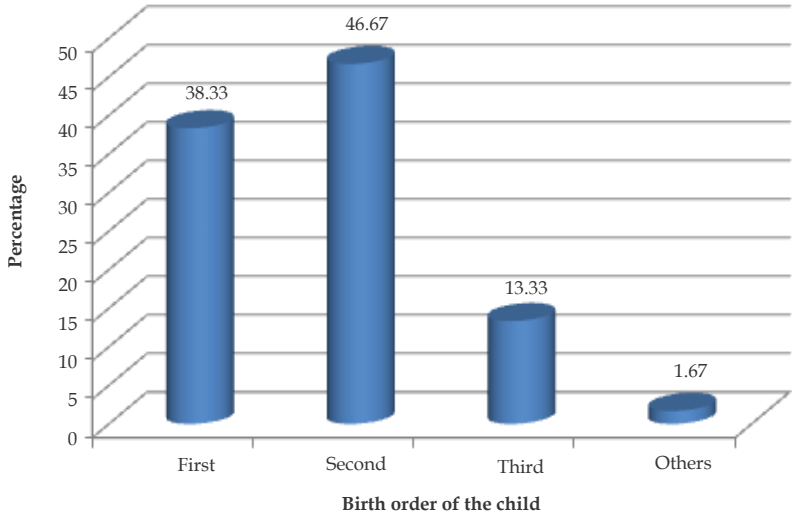

Fig. 9: Bar diagram showing percentage wise distribution of postnatal mothers of neonates according to the birth order.

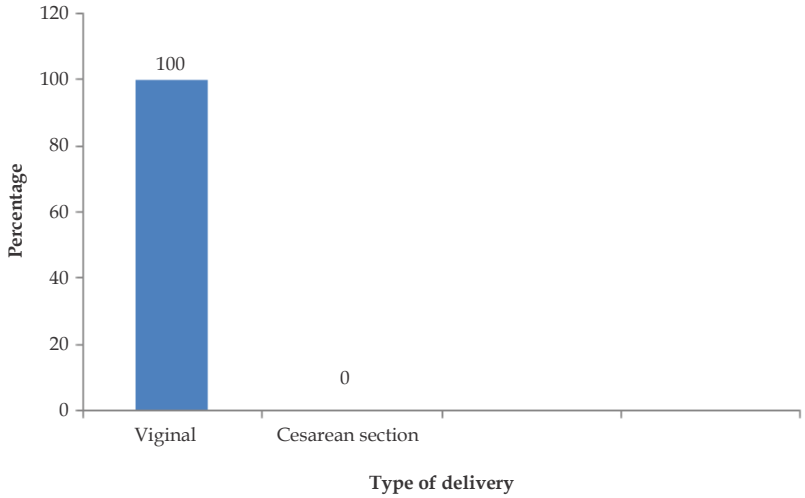

Fig. 10: Bar diagram showing percentage wise distribution of postnatal mothers of neonates according to the type of delivery.

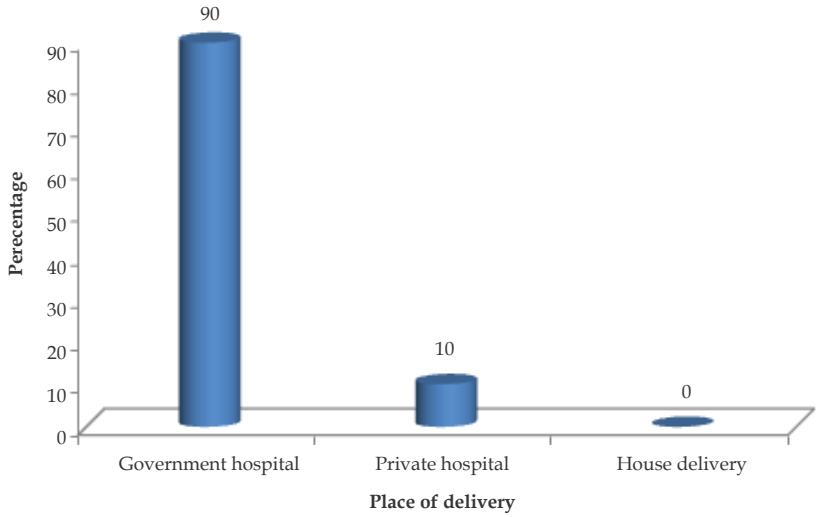

Fig. 11: Bar diagram showing percentage wise distribution of postnatal mothers of neonates according to the place of delivery.

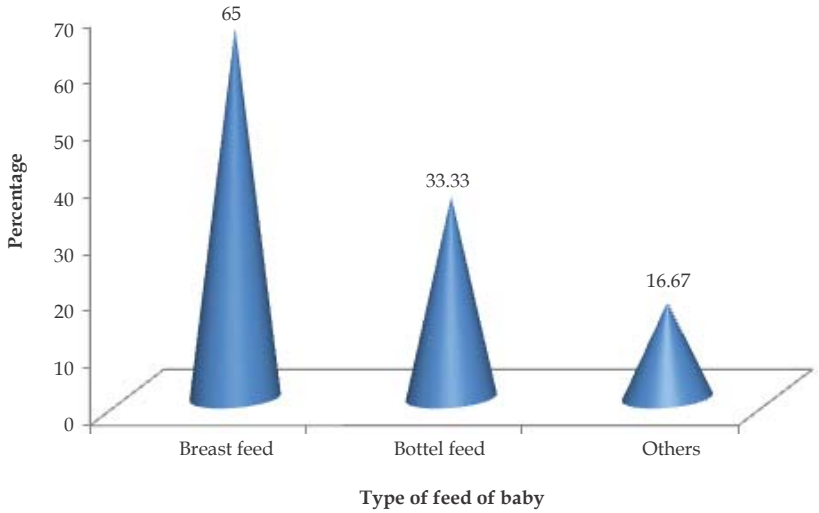

Fig. 12: Cone diagram showing percentage wise distribution of postnatal mothers of neonates according to the type of feed to baby.

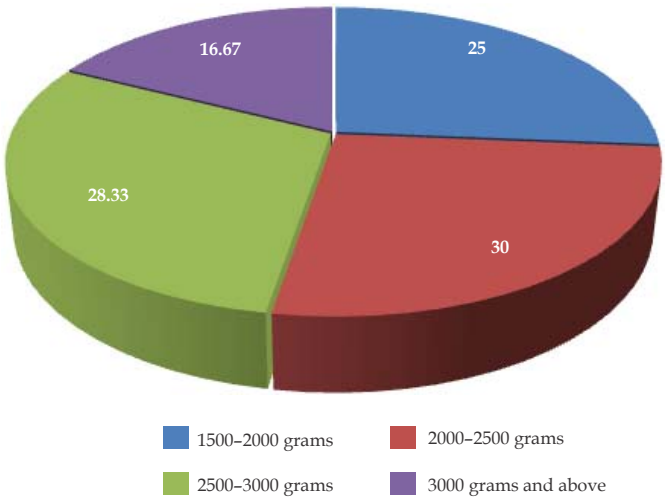

Fig. 13: Pie diagram showing percentage wise distribution of postnatal mothers of neonates according to the Birth weight of newborn.

Table 2: Area wise distribution of mean, SD, and mean percentage of pre-test knowledge scores on neonatal infections among postnatal mothers

Area	Max score	Mean	SD	Mean %
General information regarding neonatal infections	5	1.58	1.01	31.67
Eye infection of neonate	6	2. 18	0.83	36.39
Umbilical cord infection of neonate	6	2.27	0.63	37.78
Skin infection of neonate	6	2.38	0.88	39.72
Oral thrush of neonate	7	2.97	0.74	42.38

Table 3: Area wise distribution of mean, SD, and mean percentage of post-test knowledge scores on neonatal infections among postnatal mothers

Area	Max score	Mean	SD	Mean %
General information regarding neonatal infections	5	3.97	0.94	79.33
Eye infection of neonate	6	4.88	0.69	81.39
Umbilical cord infection of neonate	6	4.70	0.62	78.33
Skin infection of neonate	6	5.00	0.64	83.33
Oral thrush of neonate	7	5. 17	0.81	73.81

Table 4: Level of knowledge in pre-test and post-test regarding neonatal infections among postnatal mothers

Level of knowledge	Pre-test		Post-test	
	F	%	*F*	%
Adequate (>76%)	0	0.00	52	86.67
Moderate (51–75%)	3	5	6	10
Inadequate (<50%)	57	95	2	3.33

Table 5: Comparison of mean, SD, and mean percentage of pre-test and post-test knowledge scores on neonatal infections among postnatal mothers of neonates

Area	Max score	Pre-test scores			Post-test score			Effective ness (%)	*t*-value
		Mean	SD	Mean %	Mean	SD	Mean %		
General information regarding neonatal infections	5	1.58	1.01	31.67	3.97	0.94	79.33	47.66	15.86
Eye infection of neonate	6	2. 18	0.83	36.39	4.88	0.69	81.39	45.00	16.87
Umbilical cord infection of neonate	6	2.27	0.63	37.78	4.70	0.62	78.33	40.55	22.09
Skin infection of neonate	6	2.38	0.88	39.72	5.00	0.64	83.33	43.6	20.15
Oral thrush of neonate	7	2.97	0.74	42.38	5. 17	0.81	73.81	31.43	15.17

The table 5 shows that pre-test knowledge score of General information regarding neonatal infections is 1.58 and standard deviation is 1.01 and in post-test the mean score is 3.97 and standard deviation is 0.94 with the effectiveness of 47.66% and paired *t*-value = 15.86 and it was statistically significant. The knowledge on eye infection was 2.18 and standard deviation is 0.83 in pretest and in post-test the mean was 4.70 and standard deviation is 0.62 with the effectiveness of 45% and paired *t*-value = 16.87 and it was statistically significant. The knowledge on Umbilical cord infection was 2.27and standard deviation is 0.62 in pre-test and in post-test the mean was 4.88 and standard deviation is 0.69 with the effectiveness of 40.55% and paired *t*-value = 22.09 and it was statistically significant. The knowledge on skin infection the mean was 2.38 and standard deviation is 0.88 in pre-test and in post-test the mean was 5.00 and standard deviation is 0.64 with the effectiveness of 43.6% and paired *t*-value = 20. 15 and it was statistically significant. The knowledge on oral thrush, the mean was 2.97 and standard deviation is 0.74 in pre-test and in post-test the mean was 5.17 and standard deviation is 0.81 with the effectiveness of 31.43% and paired *t*-value = 15.17 and it was statistically significant.

Table 6: Comparison overall of mean scores between pre-test and post-test knowledge on neonatal infections among the postnatal mothwers of neonates

Components	Observation	Mean	SD	Mean difference	*t*-value	Significance
Prevention of Neonatal Infection	Pre-test	11.38	1.44	12.34	45.018	$p < 0.05$ Highly significant
	Post-test	23.72	2.06			

The Table 6 illustrate that post-test knowledge mean score was 23.72. Thus the difference in level of knowledge was confirmed by obtaining by period *t*-value = 45.018 which was significant ($p < 0.05$).

Table 7: Association between post-test knowledge scores regarding prevention of neonatal infections with their selected demographic variables

Demographic Variables		Chi-square value	D.f	Table value	Level of significnce
Age in years	18–22	14.973	6	2.447	S
	23–26				
	27–31				
	32 and above				
Number of children	1				
	2	5.098	4	2.776	NS
	3 and above				
Educational status of the mother	Non-formal education				
	Primary education	12.644	6	2.447	NS
	Higher secondary education				
	Graduate and above				
Type of family	Nuclear family				
	Joint family	6.159	4	2.776	NS
	Extended family				
Religion	Hindu				
	Muslim	2.545	6	2.447	NS
	Christianity				
	Others				
Occupation of the mother	Coolie				
	House wife	2.909	6	2.447	NS
	Government employee				
	Private employee				
Family monthly income	₹3000–₹5000				
	₹5001–₹6000	1.0380	6	2.447	NS
	₹6001–₹7000				
	₹7001 and above				
Source of health information	Health professionals				
	Electronic media	13.897	6	2.447	NS
	Print media				
	Family and friends				
Birth order of the child	First				
	Second	13.897	6	2.447	NS
	Third				
	Others				
Type of delivery	Vaginal				
	Cesarean section	0.318	2	4.303	NS
Place of delivery	Government hospital				
	Private hospital	0.527	4	2.776	NS
	House delivery				
Type of feed to baby	Breast feed				
	Bottle feed	10.725	4	2.776	NS
	Others				
Birth weight of the new born (grams)	1500 grams				
	2000 grams	3.181	6	2.477	NS
	2500 grams				
	2500 grams and above				

The data presented in Table 7 indicated that there is a significant association between post-test knowledge scores of mothers of neonates on prevention of neonatal infections with selected demographic variables like mothers age, educational status of the mother, source of health information the type of feed to the baby at (p > 0.05). Hence the null hypothesis is rejected. Where as there is no significant association between posttest knowledge scores of mothers of neonates, with over variables like number of children, type of family, religion, occupatin of the mothers, family income per month, birth order of the child, type of delivery, place of delivery, birth weight of the new-born. Hence the null hypothesis is accepted.

During post-test knowledge mean score was 23.72 and in pre-test the mean was 11.38 and the mean difference was 12.34 and the obtained t-test value = 45.018 which was significant (p < 0.05).

Hypothesis (H_1)

The difference between the overall pre-test and post-test mean revealed that there was significant increase in knowledge regarding prevention of neonatal infections after structured teaching Program. First hypothesis was accepted.

The third objective was "to find the association between post-test knowledge level regarding prevention of neonatal infection among the postnatal mothers of neonates with their selected demographic variables." There was a significant association between the post-test knowledge of post-natal mothers of neonates with the demographic variables like age, family monthly income and type of feed to baby. Hence second hypothesis was accepted.

Summary

In pre-test the mean score of General information regarding neonatal infections is 1.58, Eye infection was 2.18 Umbilical cord infection was 2.27, skin infection was 2.38 and oral thrush was 2.97.

During the pre-test 95% of the samples had inadequate knowledge, 5% of samples had moderate knowledge and 0% of the samples had adequate knowledge. And during post-test 10% of postnatal mothers of neonates had moderately adequate knowledge and 86.67% of post-natal mothers of neonates had adequate knowledge and 3.33% of post-natal mothers of neonates had inadequate knowledge.

During post-test knowledge mean score was 23.72 and in pre-test the mean was 11.38 and the mean difference was 12.34 and the obtained t-test value = 45.018 which was significant (p < 0.05).

There was a significant association between the post-test knowledge of postnatal mothers of neonates with the demographic variables like age, family monthly income and type of feed to baby. Hence second hypothesis was accepted.

Conclusion

The study supports the need of pediatric nurse to conduct awareness regarding prevention of neonatal infections. The study has proved that the postnatal mothers of neonates had remarkable increase in knowledge regarding prevention of neonatal infections after the administration of structured teaching Program.

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Review Article

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Efficacy of Delayed Cord Clamping on the Neonatal and Maternal Outcome: A Review Article

Shikha Malik[1], Tanima Verma[2]

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Abstract

The timing for umbilical cord clamping (more specifically, immediate or early cord clamping versus delayed cord clamping) remains a controversial issue and a subject of continuing debate. Delayed cord clamping (DCC) has been shown to increase placental transfusion, leading to an increase in neonatal blood volume at birth of approximately 30%. In the term infant, although this may result in an increase in iron stores, thereby decreasing the risk of anemia, some studies shows increase the risk of jaundice and the need for phototherapy. In the preterm infant, DCC decreases the need for blood transfusions for anemia, the number of such transfusions and the risks of IVH (Intraventricular hemorrhage) and late-onset sepsis. Delayed cord clamping appears to be beneficial as compared to immediate cord clamping in term and preterm infants. The present review article taken in between (1993–2019).

Keywords: Immediate cord clamping; Delayed cord clamping; Neonate; Maternal.

Introduction

The umbilical cord is a tube like structure that link between fetus and placenta. Umbilical cord extends to from the fetal surface of placenta. Contains the two umbilical arteries and the umbilical vein. The umbilical cord carries oxygen, delivers nutrients from the placenta into the fetus blood circulation and removing waste products and deoxygenated blood.

WHO (2014) recommendation; Immediate or early cord clamping is generally carried out within the first 15–30 seconds after birth (or in the first 60 seconds). "Delayed" umbilical cord clamping is perform not earlier than 1 min after the birth, more than 1 minute or when the umbilical cord pulsation has ceased or unless the neonate is not breathing and needs to be immediately moved for resuscitation. In term or preterm infants who do not require bag and mask Ventilation, DCC is recommended while initiating simultaneous essential neonatal care for improved infant and maternal health and nutrition outcomes. There are many possible benefits of delayed cord clamping (DCC) as compared with immediate cord clamping (ICC),[1] DCC increases neonatal blood volume by increasing placental transfusion and improves transitional hemodynamic. DCC helps in reducing childhood anemia by increasing iron stores.[2]

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Optimal timing of cord clamping

WHO (2012): In term or preterm babies (newly born) the umbilical cord should not be clamped earlier than 1 min after birth who do not require positive-pressure ventilation, the cord should be clamped and cut to allow effective ventilation to be performed When term or preterm babies require positive-

pressure ventilation, Newly born babies who do not breathe spontaneously after thorough drying should be stimulated by rubbing the back 2–3 times before clamping the cord and initiating positive-pressure ventilation. Late cord clamping (approx 1–3 min after birth) is recommended for after every delivery, while initiating simultaneous essential neonatal care, early umbilical cord clamping (less than 1 min after birth) is not recommended unless the neonate is asphyxiated and needs to be moved immediately for resuscitation.

ACOG (2017): Recommends the term early and late umbilical clamping is defined as clamping within 1 minute of birth, and more than 5 minutes after birth respectively and delayed umbilical cord clamping suggested for at least 30–60 seconds after birth for most healthy term and preterm infants.[1].

The Royal College of Obstetricians and Gynecologists (2015): Also recommends for deferred umbilical cord clamping at least 2 minutes after birth for healthy term and preterm infants.[3]

The American College of Nurse-Midwives (2014): Recommends delayed umbilical cord clamping for 2–5 minutes after birth for term and preterm infants.[1,4]

WHO guidelines on basic newborn resuscitation (2012): For compromised term and preterm newborn who may require positive pressure ventilation or resuscitation, clamp and cut the cord immediately.[5]

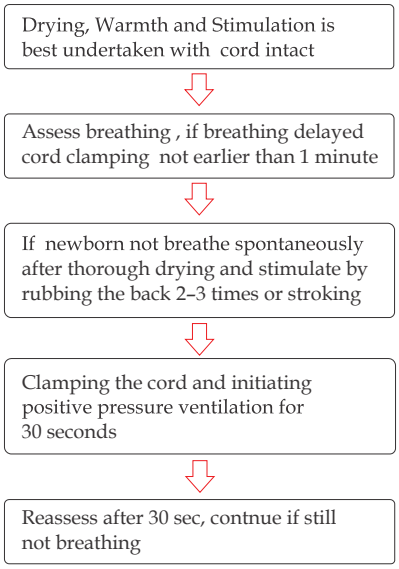

Fig. 1: The first 60 seconds of neonatal assessment

Indication for immediate cord clamping:

ICC: No respiratory effort, white color, poor tone, meconium liquor and no respiratory effort no response or HR < 100 after drying, HR < 100 at any time or regular respiratory effort not established by 90 seconds, double clamp cord and resuscitate.

Indication for delayed cord clamping

DCC: Clear liquor, baby reactive, meconium liquor and baby making any respiratory effort, no delay in respiratory effort, good or improving tone and color, normal APGAR calculated at 60 seconds.

Neonatal outcomes of DCC- term infants

Transfer of placental blood (approx. 80 ml) 1 minute after birth, and may reach to (approx 100 ml) 3–5 minutes after birth.[3] Higher circulating blood volume during the first 24 hours of life increasing up to 30% of the baby's blood volume at birth.[6] Delayed cord clamping improves iron stores in the first several months of life of newborn, thus decrease the risk of side effects associated with iron deficiency.[7,8] Increases hemoglobin concentration in infants thus reduces and prevents iron deficiency anaemia during the first year of life.[9] Favorable effect on developmental outcomes.[10] Facilitates transfer of immunoglobulin and stem cells, which are essential for tissue and organ repair.[11]

Neonatal outcomes of DCC- preterm infants

Found better red blood cell volume.[12] Improved transitional circulation.[13] Reduces the need for blood transfusion.[6] DCC is effective in reducing the risk for IVH (Intraventricular hemorrhage) and late onset sepsis.[14,15] Lower incidence of necrotizing entercolitis.[16]

Maternal outcomes

Delayed umbilical cord clamping does not increase the risk of postpartum haemorrhage or increased blood loss at delivery.[2,17] Delayed cord clamping does not associated with a difference in postpartum haemoglobin level or need for blood transfusion.[18]

Risk related to DCC

There is a slightly increase in the incidence of

jaundice that requires phototherapy in term infants which can be easily handled in resource-rich settings.[19] Occurrence of polycythemia in some evidences.[20]

Delayed cord clamping for special group

Multiple Gestation: At this time, there is not sufficient evidence to recommend for or against delayed umbilical cord clamping in multiple gestations

HIV mother: All pregnant, breastfeeding women and their infants with HIV positive should receive appropriate antiretroviral (ARV) drugs to prevention of mother to child transmission (PMTCT) of HIV. HIV status should be ascertained at birth, if not already known, and HIV positive women and infants should receive the appropriate ARV drugs.[21] Thus delayed cord clamping is recommended in all HIV positive mothers.

Limitations of studies reviewed

The definition of timing for ICC and DCC varies in the studies reviewed, especially with respect to the term infant. Most studies use 30 seconds to distinguish between ICC and DCC, but others define DCC as occurring more than one minute after delivery or after cord pulsations have ceased.

Conclusion

Overall, the available evidence appears to suggest that DCC likely to result in better neonatal outcomes (in both term and preterm infants) and maternal outcome as compared to immediate cord clamping. Therefore it's time to create awareness and recommend delayed cord clamping, however, there is insufficient evidence to date to support a recommendation to delay cord clamping in non-vigorous infants requiring resuscitation.

Prior publication- Nil

Support- Nil

Conflicts of interest- Nil

Permission- Nil

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