

Effect of Structured Teaching Program on Knowledge Regarding Shaken Baby Syndrome among Caregivers of Infants

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Abstract

Shaken baby syndrome is the medical term used to describe the injuries resulting from shaking an infant or young child. Physical abuse is the one of the main causes of serious head injury in infants. The main aim of the study was to raise the awareness of shaken baby syndrome among care givers of infant. A pre experimental one group pre test post test design was undertaken to assess the effectiveness of structured teaching program on knowledge of caregivers of infants regarding shaken baby syndrome. Purposive sampling technique was used to select 60 caregivers of infant, who were meeting the sampling criteria. Structured knowledge questionnaire was used during data collection, pretest was conducted on day one followed by teaching program among the same care givers in Bhouri, Bhopal. Post test was conducted on the eighth day. Descriptive and inferential statistics were used to analyze data. The finding of the study revealed that mean post test knowledge score (57.8) were significantly higher than the mean pre test knowledge score (36.8) which was significant at 0.05 level. The study revealed that the structured teaching program was effective in enhancing the knowledge of caregivers of infant regarding shaken baby syndrome.

Keywords: Effectiveness; Shaken Baby Syndrome; Structured Teaching Program.

Introduction

Physical abuse is one of the leading causes which lead to serious head injuries among infants. The physical abuse in the past has been a diagnosis of exclusion; data regarding the nature and frequency of head trauma consistently support the need for a presumption of child abuse when a child is younger than one year has suffered an intracranial injury [1].

Shaken baby syndrome is a serious form of child abuse, which results from extreme rotational cranial acceleration induced by violent shaking or shaking impact. Which would be dangerous if not noticed on timely? Shaken baby syndrome is not an isolated event but the Evidences shows that the child abuse is common [2].

Need for the study:

A descriptive study conducted on children

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hospitalized for Shaken Baby Syndrome in Canada depicts that 19% died, 59% had neurological, visual impairment and/or other health effects and only 22% appeared well at discharge. Recent data indicate that babies who appear well at discharge may show evidence of cognitive or behavioral difficulties later on, possibly by school age [3].

The researcher found an article in the journal regarding shaken baby syndrome after reading the topic the researcher decided to conduct research on it because researcher found very less incidence regarding knowledge of shaken baby syndrome in India. So, further, the investigator concluded that it would be a great contribution and it is important to enlighten the caregiver about the shaken baby syndrome. Hence, the researcher planned to designed structure teaching program.

Statement of problem:

A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding Shaken Baby Syndrome among Caregivers of Infants in Selected Rural Area, Bhopal.

Objectives:

1. To assess the existing knowledge regarding

- shaken baby syndrome among caregivers of infants in rural area.
- To evaluate the effectiveness of structured teaching program regarding of shaken baby syndrome among caregivers of infants.
 - To associate knowledge of caregivers regarding shaken baby syndrome with selected demographic variables.

Hypotheses:

H_1 - There is a significant difference between post and pre test mean knowledge scores regarding shaken baby syndrome among caregivers of infants.

H_2 - There is a significant association of knowledge scores among caregivers of infants with their selected demographic variables.

Research Methodology

A pre - experimental, one group pre-test post - test research design was used for the present study. The setting utilized was Bhourri at Bhopal. The population of the study was all the care givers of infant residing at Bhourri. The sampling technique used was non probability purposive sampling technique. All the caregivers of infant available during data collection were included. There were 60 care givers of infant selected for present study. The tool used for data collection comprised of two sections. Section A - background information was gathered using demographic proforma such as caregiver of infants, age of the caregiver, occupation of caregivers, educational status of caregivers, type of family, age of the child, gender of the child, order of the child and source of information. Section B- Structured questionnaire: This is a self - administered tool to assess the knowledge of caregivers of infant regarding shaken baby syndrome. It has twenty questions to assess the knowledge regarding shaken baby syndrome among caregivers of infants in following aspects:- 1- Knowledge on general information of shaken baby syndrome. 2- Knowledge on Incidence and

etiology of shaken baby syndrome. 3- Knowledge on clinical manifestation and mechanism of shaken baby syndrome. 4- Knowledge on management and prevention of shaken baby syndrome. The maximum score was 20. To interpret the level of knowledge scores were distributed as follows. Inadequate knowledge: <50% Moderately adequate knowledge: 50-75% Adequate knowledge: >75%.

The STP was prepared for four session namely general information of SBS, incidence and etiology of SBS, clinical manifestation and mechanism of injury of SBS, management and prevention of SBS. All the four session lasted for 45 minutes for four consecutive days. Before the main study pilot study was conducted at Fanda by selecting 10 sample to know the feasibility of the study, followed by main study was conducted. Following the pre assessment, the STP was provided to the subjects. Post - assessment was then administered one week after to evaluate the effectiveness of the STP. Institutional Ethics committee clearance was obtained.

Results

The data were analyzed according to the objectives of the study using descriptive and inferential statistics.

Section A: finding related to effectiveness of structured teaching program.

The table 1 depicts that the scores of related to level of knowledge among the respondents of which the respondents gain the knowledge after STP. The moderately adequate knowledge had the highest frequency of 40 (66.7%) and the inadequate

Table 1: Frequency distribution & Percentage of knowledge regarding caregivers of infants after STP. n=60

Level of knowledge	Frequency	Percentage (%)
Inadequate knowledge	12	20.0
Moderately adequate knowledge	40	66.7
Adequate knowledge	8	13.3
Over all	60	100

Table 2: Frequency distribution & Percentage of knowledge regarding caregivers of infants before and after STP.

n=60

Level of knowledge	Before STP		After STP	
	Frequency	%	Frequency	%
Inadequate knowledge	50	83.3	12	20.0
Moderately adequate knowledge	10	16.7	40	66.7
Adequate knowledge	-	-	8	13.3
Over all	60	100	60	100

knowledge were 12 (20.0%) and finally the level of adequate knowledge was found 8 (13.3%) among the caregiver of infants.

Section B: Finding related to comparison of knowledge before and after structure teaching program.

In table 2 the scores of related to the level of knowledge among caregivers of infant in which 100% (60) respondents had the low levels of knowledge at pretest and they were classified under the various level. The inadequate level of knowledge had the highest frequency of 50 (83.3%) and the moderate level of knowledge had the lower frequency of 10 (16.7%) and finally the level of adequate knowledge was found nil among the caregiver of infants. After STP shaken baby syndrome, the test results had shown improvement in respondents level of knowledge regarding shaken baby syndrome, 12 (20.0%) of respondents had inadequate knowledge, 40 (66.7%) of respondents had moderate level of knowledge, 8 (13.3%) of respondents had adequate level of knowledge regarding shaken baby syndrome. There was a difference in pre-test level of knowledge scores and post test level of knowledge scores which was shown below as graphical representation.

The above Table 3 presents the outcome of paired 't' test analysis based on enhancement of knowledge regarding shaken baby syndrome shown in mean difference and Mean % after STP. Mean difference for general information was found to be highest 1.62 with a mean % of 40.5 and mean difference for clinical manifestation and mechanism was found to be lowest as 0.92 with a mean percentage of 15.3. Mean difference for overall aspect of knowledge was found to be 4.20 with a mean % of 21.0. Paired 't' was carried out and found to be invariably significant at $p < 0.05$. It was also seen for the other aspects on knowledge such as incidence and etiology, management and prevention. In all these aspects of knowledge the enhancement was shown in Mean difference and Mean%, also the paired 't' test was invariably found to be significant at $p < 0.05$.

Hence, it is inferred that there is a significant increase in the level of knowledge of caregivers of infants regarding shaken baby syndrome after the STP.

Section C: Finding related to association on pre and post test knowledge scores with their selected demographic variables.

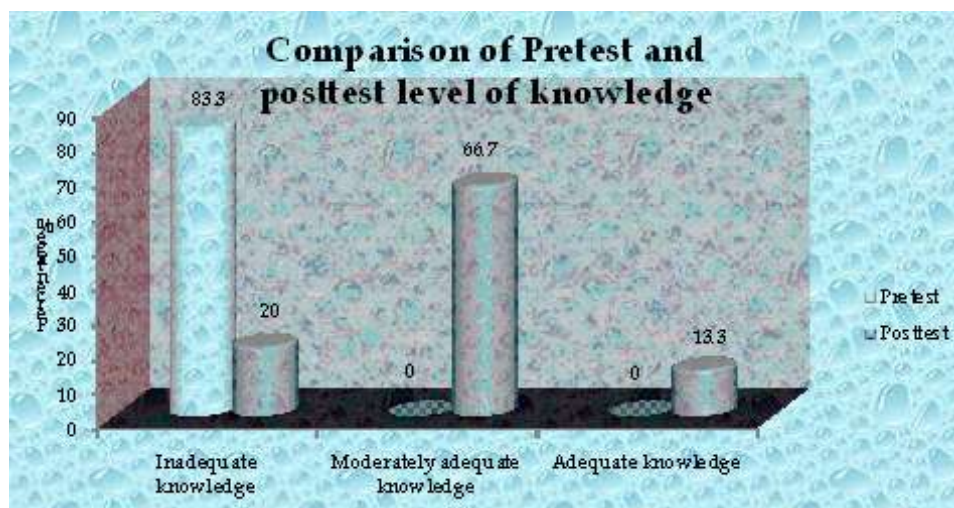


Fig. 1: Frequency and percentage distribution of care givers of infants according to knowledge regarding shaken baby syndrome before and after STP

Table 3: Enhancement score of pre and post test knowledge regarding shaken baby syndrome and statistical significance.

n=60

Aspects of knowledge	Max. Score	Mean difference	% of mean difference	Paired t-test value	p<value
General information of SBS.	4	1.62	40.5	18.11*	p<0.05
Incidence and etiology of SBS.	4	1.51	37.7	11.37*	p<0.05
Clinical manifestation and mechanism of injury. of SBS.	6	0.92	15.3	3.67*	p<0.05
Management and prevention of SBS.	6	1.12	20.3	6.27*	p<0.05
Over all	20	4.20	21.0	11.02*	p<0.05

Note: * denotes significance at 5% level ($p < 0.05$)

The results showed that association of knowledge with selected demographic variables of caregivers of infant such as care giver of the infant, age of the care giver, occupation of the care giver, educational status, type of family, age of the child, gender of the child, order of the child and source of information

The chi- square analysis was carried out to determine the association between knowledge and selected demographic variables. The association between educational status (χ^2 - value = 11.665 df = 3) and order of the child (χ^2 - value = 6.046 df = 2) were significantly associated with knowledge at 0.05 level i.e. $p < 0.05$ and the remaining variables such as caregivers of infant, age of the care giver, occupation of the care giver, type of family, age of the child, and gender of the child was found to be not significant at 0.05 level, i.e. $p > 0.05$ and source of information was not applicable. The above results evidenced that knowledge of caregiver of infants was influenced by educational status and order of the child.

Research Hypothesis

H_2 - There is a significant association of knowledge with selected demographic variables of caregiver of infant regarding shaken baby syndrome.

Hence, the research hypothesis H_2 is accepted. 'There is a significant association of knowledge with selected demographic variables on caregiver of infant regarding shaken baby syndrome.

Discussion

The results shows that the frequency and percentage distribution of level of knowledge of caregivers of infants before STP in which out of 60 caregivers of infants most of them 83.3% (50) had inadequate knowledge, 16.7% (10) had moderately adequate knowledge and none of them had adequate knowledge regarding shaken baby syndrome. Overall mean percentage score were found 36.8% with mean of 7.37 and SD of 2.24. The present study findings were consistent with the study done at Nationwide Crisis Line and Hotline Directory among social workers in child welfare with regard to vicarious and secondary trauma. Result shows that in particular, the prevalence and nature of vicarious trauma is largely unknown in this field. In response, this study was designed to facilitate increased knowledge about the prevalence of secondary traumatic stress among social workers in the child welfare field [4]. At the same time, there are studies that demonstrated findings with

higher and lower mean scores when compared to the present findings. A study was conducted at united states by Barr RG, Rivara FP showed a mean score of (0-100 point) and highest mean 63.8 among the mother who receive purple material and the lowest mean 58.4 among the mothers who receive the control materials for calming the crying baby. Mothers had the knowledge to sooth the crying the baby other than shaking and also know that shaking may cause harm to their baby, which is in contrast to the present study finding [5].

The current study shows the enhancement in all the four aspects and overall aspect of knowledge of caregivers of infants regarding shaken baby syndrome with regard to Mean difference, SD, Mean % comparing before and after STP. Mean difference for overall aspect was 4.20 with Mean % of 21.0. The paired 't' test was carried out and was found 11.02 which is significant at $p < 0.05$ level. However the mean score obtain in the present study remain less in all four aspect before the STP. Another study performed at California by Dr. Marks. Dias and colleagues also show that mean score accelerated parents knowledge level increased after reading the pamphlet and view a video titled preventing shaken baby syndrome, than their earlier knowledge related to shaken baby syndrome [6]. However, all the study including the present study reveals that a satisfactory level of knowledge among caregivers of infants was not found. The finding suggest that awareness program among the caregivers of infant are required to prevent the incidence of shaken baby syndrome.

The association of knowledge of caregiver of infant regarding shaken baby syndrome with selected demographic variables showed that it was found not significant with all the variables at $p < 0.05$ level except educational status and order of the child. Similar findings were elicited related to cognitive squealed of school - aged victims of shaken baby syndrome. In a study conducted at Quebec Canada by Stipanovic A, Nolin P projected that socio - economic status and family composition age and gender were significant with the weakness were noted in the clinical group for intelligence quotient [7].

Recommendations

Based on the findings of the study the following recommendations are put forward for further research:

- Similar study can be undertaken with a larger sample to generalize the findings.
- A similar study can be conducted by utilizing

the other domains like knowledge, and attitude of shaken baby syndrome among staff nurse.

Source of fund: Self

Conflict of interest: None

Implications:

The investigator has drawn the following implications from the studies

- The present study emphasis an enhancement of knowledge to develop a favorable attitude towards the caregiver of infant regarding shaken baby syndrome.
- The study would be a motivation for budding researchers to conduct similar studies on a large scale.
- A comparative study can be done between the urban and rural caregiver of infant regarding shaken baby syndrome.

Conclusion

It is important to implement awareness program among caregivers of infant regarding shaken baby syndrome in the hospital and during the home visit to provide structured teaching to these care givers of infants on SBS. These interventions are vital to prevent the incidence of SBS and also to develop the positive attitude toward SBS. However, the present study finding shows that the knowledge related to shaken baby syndrome among care givers of infant was inadequate during pre test which was accelerated after the structured teaching program.

Ethical consideration: Obtained

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