



“A study to assess the effectiveness of planned teaching program on knowledge regarding Shaken Baby Syndrome among community people at selected area of Kheda District”

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Article History

Received: 12 March 2023

Revised: 21 August 2023

Accepted: 09 October 2023

ABSTRACT:

BACKGROUND:

Shaken Baby Syndrome (SBS) occurs in infants when subjected to excessive acceleration–deceleration of the head. SBS was first pointed out by Norman Guthkelch, who noticed that infants with subdural hematoma did not always have gross markings, which signified the shaking of a baby as a possibility. Rotational force pushes the brain against the skull leading to various types of injuries to the head and neck.

Aims:

The goal of the study is to assess and improve the knowledge regarding Shaken Baby Syndrome among community people of Kheda District.

Methodology:

DESIGN AND SETTING: Quasi experimental Design (one group pre-test post-test design) was used in this study A Non probability Purposive Sampling technique was used to drawn samples. The tool validation from various experts, all questions were given to the community people and inform consent form also has been conducted for data collection from the samples. Prior to data collection written setting permission obtain from Medical Officer, Chief Medical Officer of various PHC, CHC and Chief District Health Officer of Kheda District. The total sample size was 80 samples.

The tool consists of following

SECTION A: Sociodemographic variables

SECTION B: Structure knowledge Questionnaire

Results: The study reveals that the level of knowledge among

<p>CC License CC-BY-NC-SA 4.0</p>	<p>community people, In the pre-test 4(5%) of community people had good knowledge, 18(22.5%) had Moderate knowledge and 58(72.5%) of them poor knowledge. After intervention of planned teaching method, in the Post-test 3(3.8%) community people had Poor knowledge, 42(52.5%) had moderate knowledge and 35 (43.8%) people had good knowledge.</p> <p>The mean score and mean percentage for the pre-test knowledge is 9.3750 and 36.78%. The mean score and mean percentage for the post-test knowledge is 16.1125 and 63.21%. The calculated paired t-test value is 20.286 **with a degree of freedom (dfs) of 79. The result is statistically significant with a p-value (Sig.) of 0.000, which is less than 0.05.</p> <p>Conclusion: The study concluded that further research and intervention can build upon these finding to continue improving education approaches and curriculum development in community people.</p> <p>KEY WORDS: Shaken baby syndrome, Knowledge, USA, Indian city slums</p>
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INTRODUCTION:

One of the skills all parents and caregivers need to learn is how to cope with stress. This is especially important when there seems to be no end to a baby’s crying. Reacting impulsively in anger or frustration can be harmful or deadly. Babies are not able to fully support their heavy heads. Because of this, violently and forcefully shaking a baby’s brain to be injured.¹ Shaken Baby Syndrome (SBS) occurs in infants when subjected to excessive acceleration–deceleration of the head. SBS was first pointed out by Norman Guthkelch, who noticed that infants with subdural hematoma did not always have gross markings, which signified the shaking of a baby as a possibility. Rotational force pushes the brain against the skull leading to various types of injuries to the head and neck²

The prognosis is poor and approximately 25% of infants die of SBS within days or weeks. Approximately 75% of survivors suffer from long term damage with physical, handicaps, hearing loss, visual disturbance up to blindness and mental disorders or combination of these conditions (Article in German,2009).³ The number one reason given for shaking a baby is, “I just wanted the crying to stop. “Shaking usually occurs when parents, babysitters, or other care givers become frustrated and lose control because of persisted crying.⁴

Doctors often fail to identify the cause of head trauma in children who suffer from SBS because children usually do not show outward signs of trauma. According to analysis of German Police Statistics for the year 2006 indicates an annual incidence of around 30 cases of abuse and three homicidal deaths per 100000 children under the age of 6 years. Surveys carried out in the USA, 50% to 75% of teenagers and young adults stated they did not know that shaking was dangerous and between 2.6% and 4.4% of the parents of children under 2 years of age reported they had shaken their child at least once.⁵

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National Centre for Shaken Baby Syndrome (USA) estimates that each year between 1200 to 1400 children are injured by abusive head injuries annually in USA. According to Shaken Baby Alliance 199 children died from Shaken Baby Syndrome in Texas in 2021.⁶ According to California Evidenced Based Clearing House, the period of purple crying program is the name given to Shaken Baby Syndrome prevention program developed by National Centre on SBS.

The letter PURPLE stands for,

- P: Peak pattern (crying peaks around 2 months, then decreases)
- U: Unpredictable (crying for long periods can come and go for no reason)
- R: Resistant to soothing (the baby may keep crying for long periods)
- P: Pain-like on face
- L: Long bouts of crying (crying can go on for hours)
- E: Evening crying (baby cries more in the afternoon and evening)

A major step that is required on the part of the government is that of spreading awareness among the general public about the danger of shaking an infant. Many people shake child for stopping them from crying without any intention of causing harm. And since shaking does not show any external injuries, many people believe that it is right to do so.⁷

Objectives:

1. To assess pretest –posttest level of knowledge on Shaken Baby Syndrome among community people at Kheda District.
2. To assess effectiveness of planned teaching program on knowledge regarding Shaken Baby Syndrome among community people at Kheda District.
3. To find association between demographic variable and pretest knowledge on Shaken Baby Syndrome among community people at Kheda District.

Hypothesis

H1- There will be significant difference in knowledge of community people regarding Shaken Baby Syndrome before and after of intervention.

H2- There will be a significant association between the pre-test score among community people on knowledge regarding Shaken Baby Syndrome with their selected demographic variable.

MATERIAL AND METHODS:

Research Approach: A quantitative Approach was used in this study.

Research design: Quasi experimental Design (one group pre-test post-test design.)

Variables:

1.Demographic Variable: In this study Gender, Age, Types of family, Marital status, Occupation, Education, Religion, Area of Residency, Attend Program.

2.Reaseach Variable: Research variable are qualities, properties or characteristics which are observed or measured in natural settings without manipulating or imposing the effect of intervention or treatment.

Sample Size: The sample size for the study was 80 of Kheda district.

Sampling criteria:

Tool For Data collection:

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Section A: The demographic variable in that Gender, Age, Types of family, Marital status, Occupation, Education, Religion, Area of residency etc... was used in this study.

Section B: The structure knowledge Questionnaire and planned teaching program was used in the study.

Procedure For Data Collection: The Knowledge Assessment Tool was administered to the people. time take by each respondent for filling the questionnaire the question was average 10-15 minutes.

A developed planned teaching programme was Implemented to people.

STASTICAL ANALYSIS/RESULT

SECTION 1

Table 1.1: Analysis of Socio Demographic variable of community people.

SR NO	DEMOGRAPHIC DATA	FREQUANCY N=80	PERCENTAGE (%)
1. Gender	Male	14	17.5%
	Female	66	82.5%
	Other	00	00
2. Age	20-30 years	26	32.5%
	31-40 years	29	36.3%
	41-50 years	18	22.5%
	51-60 years	7	8.8%
3. Types of family	Nuclear	19	23.8%
	Joint	59	73.8%
	Extended	2	2.5%
4. Marital status	Married	65	81.3%
	Unmarried	14	17.5%
	Widow	1	1.3%
5. Occupation	Labor work	6	7.5%
	House wife	47	58.8%
	Job(Govt.Private)	19	23.8%
	Business or other	8	10.0%
6. Education	Illiterate	1	1.3%
	Primary	12	15.0%
	Secondary	41	51.0%
	Graduate and above	26	32.5%
7. Religion	Hindu	74	92.5%
	Muslim	2	2.5%
	Christian	4	5.0%
8. Area of residency	Urban	50	62.5%
	Rural	30	37.5%
9. Attended program	Yes	00	00%
	No	80	100%

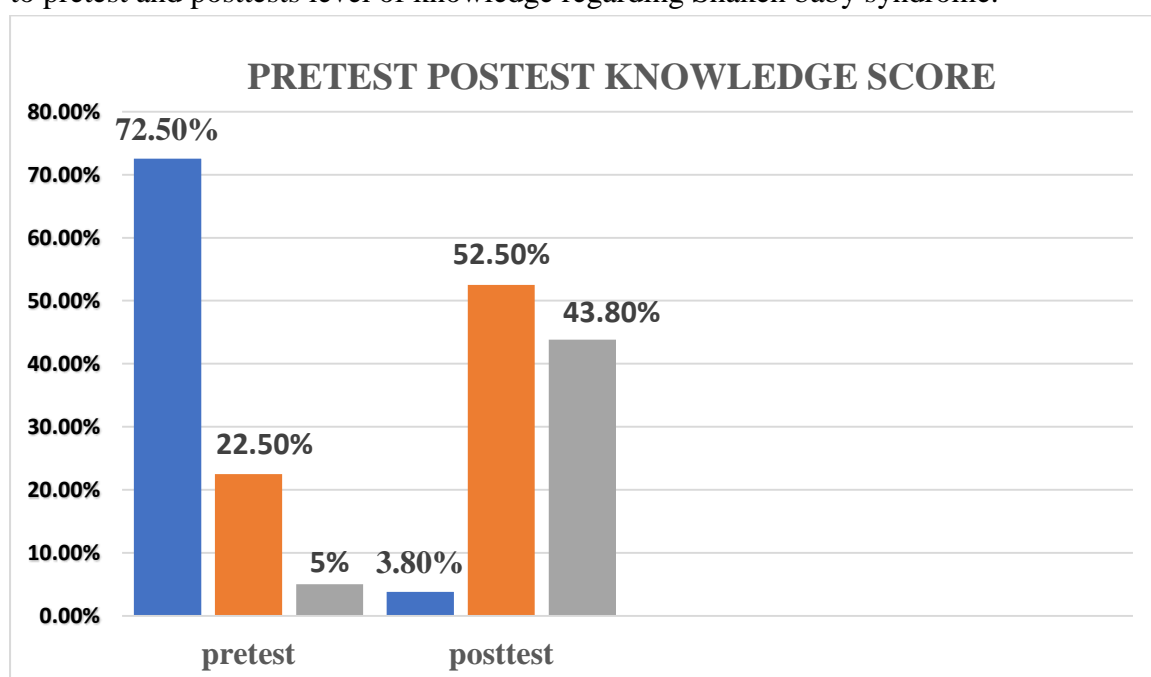
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SECTION-2

Table 2.1: Assessment of pretest and post-test Knowledge Regarding Shaken baby syndrome.

Sr.no	Level of Knowledge	Pretest knowledge	Post test knowledge
1.	Good Knowledge	4(5%)	35(43.8%)
2.	Moderate Knowledge	18(22.5%)	42(52.5%)
3.	Poor Knowledge	58(2.5%)	3(3.8%)
Total		80(100%)	80(100%)

The Above table show Frequency and percentage distribution community people According to pretest and posttests level of knowledge regarding Shaken baby syndrome.



GRAPH 2.1: Mean, Frequency, Standard Deviation, Standard Error Mean of community people in pretest and posttest level of knowledge regarding Shaken baby syndrome.

Knowledge	Mean	Standard Deviation
Pre-test	9.3750	3.53777
Post-test	16.1125	2.37067

The above table 2.2 show the knowledge in pretest the mean 9.3750 and standard deviation 3.53777. Post-test knowledge the mean score 16.1125 standard deviation was 2.37067.

SECTION 3

Effectiveness of planned teaching program on Shaken baby syndrome among community people before and after.

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Table 3.1: Paired t-test analysis for the significance effectiveness of planned teaching program pre-test and post-test knowledge regarding Shaken baby syndrome among community people. n=80

Knowledge	Max Score	Enhancement Score		Paired t-test	P- value
		Mean	SD		
Overall Knowledge	23	6.73750	2.89366	20.286** S df=79	P<0.05 Sig.=0.000

Table 3.2: Mean and mean percentage of pre-test and post-test, and Enhancement mean scores regarding Shaken baby syndrome among community people.

Mean score and Mean Percentage			Calculated Paired T-Test value
Pre-test Knowledge	Post-test Knowledge	Knowledge Enhancement Score	
9.3750	16.1125	6.73750	20.286** S df=79 P<0.05, Sig.=0.000
36.78%	63.21%	26.43%	

Table 3.2 shows that the mean scores and mean percentages for the pre-test knowledge and post-test knowledge enhancement score are as follows:

Pre-Test Knowledge:

Mean Score: 9.3750

Mean Percentage:36.78%

Post Test Knowledge Enhancement Score:

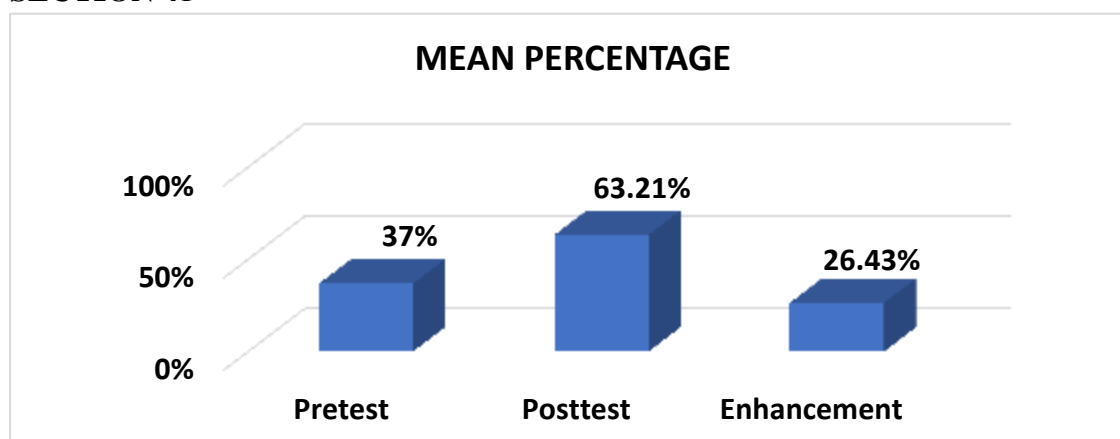
Mean Score: 16.1125

Mean Percentage: 63.21%

The calculated paired t-test value is 20.286 **with a degree of freedom (df) of 79. The result is statistically significant with a p-value (Sig.) of 0.000, which is less than 0.05.

The findings indicate a significant improvement in the post-test knowledge enhancement score compared to the pre-test knowledge. The mean score increased from 9.3750 to 16.1125, representing a 26.43% improvement in mean percentage.

SECTION 41



GRAPH 4.1: Association between Posttest Knowledge score regarding Shaken baby syndrome among community people with their selected demographic variables

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Demographic data	F	%	Level of knowledge			χ^2 value	Tabulated value p-value
			Good	Moderate	Poor		
Gender							
Male	14	17.5%	6	6	2	5.327 (df=2)	P<0.05 Sig.0.070
Female	66	82.5%	29	36	1		
Other	00	00%	00	00	0		
Age in years							
20-30	26	32.5%	13	12	01	5.098 (df=6)	P<0.05 Sig.0.531
30-40	29	36.3%	13	15	01		
40-50	18	22.5%	08	10	00		
50-60	07	8.8%	01	05	01		
Type of family							
Nuclear	19	23.8%	09	10	00	3.782 (df=4)	P<0.05 Sig.0.436
Joint	59	73.8%	24	32	03		
Extended	02	2.5%	02	00	00		
Marital Status							
Married	65	81.3%	28	35	02	1.842 (df=4)	P<0.05 Sig.0.765
Unmarried	14	17.5%	06	07	01		
Widow	01	1.3%	01	00	00		
Occupation							
Labor work	06	7.5%	02	04	00	12.218 (df=6)	P<0.05 Sig.0.057
House wife	47	58.8%	20	26	01		
Job	19	23.8%	10	09	00		
Business or other	08	10.0%	03	03	02		
Education							
Illiterate	01	1.3%	00	00	01	31.776 (df=6)	P<0.05 Sig.0.000
Primary	12	15.0%	04	07	01		
Secondary	41	51.2%	15	25	01		
Graduate and above	26	32.5%	16	10	00		
Religion							
Hindu	74	92.5%	31	40	03	1.825 (df= 4)	P<0.05 Sig.0.768
Muslim	02	2.5%	01	01	00		
Christian	04	5.0%	03	01	00		
Area of residency							
Rural	30	37.5%	16	13	01	1.798 (df= 2)	P<0.05 Sig.0.407
Urban	50	62.5%	19	29	02		
Attended program						No statistics are computed because attended any program is a constant.	
Yes	00	00	00	00	03		
No	80	100%	35	42	03		

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Table 4.1 Association between Posttest Knowledge Score on SBS and Selected Demographic Variables among community people.

CONCLUSION

Based on the findings, it can be concluded that the video-assisted teaching method was effective in enhancing knowledge regarding SBS among community people. The significant improvement in knowledge scores indicates the positive impact of the intervention on the participants understanding of the topic.

The study highlights the importance of utilizing Effectiveness of planned teaching program on SBS video-assisted teaching methods in community people before and after to enhance knowledge acquisition and understanding of complex topics. The results support the use to improve knowledge regarding shaken baby syndrome in community people at selected area of Kheda.

RECOMMENDATION

A similar study can be implicated using a large sample so that findings can be generalized for a large population.

A comparative study can be conducted in order compare the knowledge and attitude about SBS.

A similar study can be undertaken with control group design.

A similar study can be done to detect the SBS cases.

CONFLICT OF INTEREST

The authors certify that not be involved in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

FUNDING SOURCE: Self-funded

REFERENCES

1. **Shaken baby syndrome: Protect your infant from abusive head trauma [Internet].** **Healthychildren.org.** Available from: <https://www.healthychildren.org/English/safety-prevention/at-home/Pages/Abusive-Head-Trauma-Shaken-Baby-Syndrome.aspx>
2. **Thiblin, I., Andersson, J., Wester, K., Wikström, J., Högberg, G., & Högberg, U. (2020). Medical findings and symptoms in infants exposed to witnessed or admitted abusive shaking: A nationwide registry study. PloS One, 15(10), e0240182. <https://doi.org/10.1371/journal.pone.0240182>**
3. **Reith, W., Rohrer, T., Ahlhelm, F., & Papanagiotou, P. (2009). Shaken-baby-Syndrome. Der Radiologe, 49(10), 926–931. <https://doi.org/10.1007/s00117-009-1839-6>**
4. **Never ever shake A baby. (2011, September 13). Kids Health NZ. <https://www.kidshealth.org.nz/never-ever-shake-baby>**
5. **Matschke, J., Herrmann, B., Sperhake, J., Körber, F., Bajanowski, T., & Glatzel, M. (2009). Shaken Baby Syndrome. Deutsches Arzteblatt International, 106(13), 211. <https://doi.org/10.3238/arztebl.2009.0211>**
6. **Joyce, T., Gossman, W., & Huecker, M. R. (2023). Paediatricss Abusive Head Trauma. <https://pubmed.ncbi.nlm.nih.gov/29763011/>**

“A study to assess the effectiveness of planned teaching program on knowledge regarding Shaken Baby Syndrome among community people at selected area of Kheda District”

7. **Preventable Tragedy, A. (n.d.). Shaken Baby Syndrome: Cdc.gov. Retrieved September19, 2023, from <https://www.cdc.gov/violenceprevention/pdf/SBSMediaGuide.pdf>**