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# Testing Educational Strategies for Shaken Baby Syndrome

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## Abstract

Shaken Baby Syndrome (SBS) occurs from the violent shaking of an infant, which may lead to brain damage or death. The goal of this study was to assess educational methods used to teach new mothers about SBS.

**Methods:** Forty six parents at a community hospital were selected and randomly divided into three groups. Group 1 received a short lesson about SBS. Group 2 received the lesson and watched a locally developed SBS video. Group 3 received the lesson and watched a true dramatization of SBS created by a national organization. Pre and post surveys were administered.

**Results:** Study groups were similar in regard to age, marital status, socioeconomic status and education. Group 1 parents showed no differences in scoring. Group 2 parents showed a significant increase in defining SBS and what to do for persistent infant crying. Group 3 parents scored significantly higher in defining SBS.

**Conclusion:** Both video presentations improved scoring on understanding SBS but only the local video presentation increased scores in the management of persistent infant crying.

## Introduction

Child abuse continues to be a common and dangerous problem for society's most defenseless victims, i.e. infants. Although all types of

child abuse result in a spectrum of adverse effects, perhaps the most overtly devastating to the patient is the shaken baby. Formally known as Shaken Baby or Shaking Impact Syndrome, twenty-five percent of these affected infants will die. Twenty-five percent of survivors have major long term complications, including blindness, deafness, irreversible brain damage, cerebral palsy and developmental delays. The impact of losing even one infant to this remarkable violence commands the healthcare provider to seek effective and timely prevention modalities for parents.

The literature indicates a variety of child abuse prevention efforts. Hebert, Lavoie and Parent (1) studied 55 parents who participated in a child sexual abuse prevention workshop. Results indicated these parents had better knowledge and suggested management of the affected child than 217 nonparticipating parents. The authors note attendance to the workshop was low. Child abuse prevention home visitation programs typically target the high risk family. Hahn et al (2) from the Task Force on Community Preventive Services reviewed twenty-two studies about effects of home visitation programs and child abuse. The authors concluded that the program yielded a forty percent reduction in child abuse or neglect. Alternatively, an intensive prenatal couples (n=35) program by Bryan (3) included teaching information about parental roles and infant development. Post-testing indicated higher scores for these couples with an improved understanding of parent-baby interaction. When considering child abuse prevention, a major aspect includes teaching the parent what is developmentally

expected and how to handle associated problems. For example, the persistently crying infant may be the stimulus to the caregiver's extreme frustration and subsequent physical abuse of the child.

Accordingly, in an effort to teach new parents about the "shaken baby syndrome" (SBS), a study was undertaken to assess a video as an effective educational tool for new parents to learn about SBS.

## Methods

This study was reviewed and approved by the Institutional Review Board at Marshall University School of Medicine. A total of forty-six mothers and fathers were selected for this study from a community hospital mother baby unit. These parent sets were randomly divided into three groups. All of the groups received a five minute discussion and handouts concerning SBS. Group 1 received no further instruction. Group 2 also viewed a twenty minute educational video which included local sports and medical personalities. Group 3 viewed a 20 minute drama/reenactment video of a true story about an infant who died due to medical complications secondary to shaking. All three groups were administered a pre and post survey. See Appendix 1.

All mothers had Medicaid insurance and most received nutritional financial assistance. Over half of the mothers were between 21-26 years old, a third of the mothers were between 15-20 years old. One third of the participating fathers were 21-26 years old with a majority of the fathers' ages unknown. Most parents were Caucasian. Over ninety-percent of the parents had at least one other child. One third of the parents were high school graduates. Seven percent

**Table 1. Define Shaken Baby Syndrome (SBS).**

Group	N	Change	P Value
1 (talk)	14	-2	.336
2 (local community video)	16	+2	.007
3 (dramatic video)	16	+3	.004

**Table 2. The number one reason for shaking a baby?.**

Group	N	Cry	Stress	Anger	P Value
1	14	+4	0	0	.763
2	16	-1	0	+3	.608
3	16	0	+3	+5	.542

**Table 3. What to do if the infant does not stop crying?**

Group	N	Change	P Value
1	14	+4	.126
2	16	+8	.005
3	16	+2	.360

**Table 4. The best way to calm the infant?**

Group	N	Physical	Comfort	P Value
1	14	+1	-1	.604
2	16	-1	-1	.875
3	16	-1	-1	.350

of the parents were college graduates. The majority of mothers were homemakers and thirty-seven percent of fathers were employed. Type of housing was evenly distributed for house, apartment or trailer.

Pre and post surveys were evaluated using the Fischer Exact Analysis. (Tables 1-4) When asked to define SBS, Group 1 parents who only received a discussion and handouts were judged to do worse after the intervention, whereas, Groups 2 and 3 showed statistical improvement in their definitions. The second question, "What is the number one reason an adult would shake a baby?" was evaluated by responses that

included the key phrases of cry, stress or anger. Although Group 3 had a greater change in their responses, there was no statistical significant difference among the groups. For the question, "What can you do if an infant does not stop crying?" Group 2 parents demonstrated a statistical significant improvement in their recognition of calling/asking for help when the infant does not stop crying. The fourth and final question, "What is the best way to calm an infant?" resulted in no statistical significant differences among the groups where all parents reported before and after intervention that they would meet the physical needs (diaper change, feeding) or

provide comfort measures (rocking, holding, singing) to the child.

## Conclusions

Overall, the results suggest that the video educational tool may have been more helpful in describing SBS than simply reading handouts or orally reviewing the subject with the new parent. In reference to the question "What to do if an infant did not stop crying," Group 2, who watched an educational video with local personalities, statistically improved their responses. This result suggests that new parents may be more receptive to gaining information from trusted individuals in the community. Where there were no changes regarding the best way to calm an infant, the parents may have felt comfortable in their initial knowledge of meeting baby's basic needs.

A limitation of this study is the size of the study groups. The majority of the participants were not first time parents. A follow up study with larger sample size and monitoring of first time parents through the baby's first year, including tracking of all healthcare visits, would be helpful to verify these findings.

## References

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