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Teaching Children to be Safe: A Study of the Intervention Effectiveness of a Puppet Show

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ABSTRACT

Part of the child socialisation process includes the learning of road rules and other safety information, such as how to handle unwelcome advances by strangers and what to do with abandoned syringes. This paper explores the effectiveness of a children's puppet show in disseminating such safety information to children between the ages of six and eight. The findings suggest that puppet shows may be an effective means of reinforcing existing knowledge and communicating new information.

ARTICLE

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Introduction

The objective of the study reported in this paper was to explore the extent to which children understand and recall the safety issues raised in the Constable Care puppet show. The puppet show is currently used in Western Australian primary schools to provide basic safety information to children, including how to cross roads, how to handle unwelcome advances by strangers, and what to do with abandoned syringes. Children were interviewed prior to and after exposure to the puppet show to assess the extent to which new information was provided and existing knowledge reinforced.

Literature Review

It is generally agreed that it is necessary to change attitudes prior to achieving lasting changes in health behaviours, with the provision of information being an important element of the attitude change process (Rimal, Flora, and Schooler 1999; Schooler, Chaffee, Flora, Roser 1998). Given the importance of information provision to behavioural change, it is the objective of health campaigns to disseminate a clear message by achieving appropriate levels of exposure among members of the campaign target audience (Rimal et al. 1999). However, one of the most difficult aspects of implementing health campaigns is recognised to be the assessment of their effectiveness (Richardson 1998).

While there exists significant literature on the dissemination of health information among the adult population, there is much less information available regarding effective ways to provide health information to children. Children receive health-related information from a variety of sources, including parents, teachers, and the media (Goldsmith 1995). Providing information to children can be more complex than communicating with adults due to the varying processing abilities of children of different ages and maturity levels. There are competing perspectives on the child development process, with the argument polarised into two main viewpoints. Piaget emphasises a set of specific developmental stages while Vygotsky focuses on the effects of social interaction on the learning process (McLeod 1997; Watson 1997). Dockett and Perry (1996, p 7) summarise the debate as follows: "Is knowledge constructed as a result of social interaction and then internalised (the Vygotskian view), or is knowledge constructed by the individual as a result of experience and then refined through testing in social situations (the Piagetian view)?"

One area of agreement appears to be that in early life children learn through the building of scripts that enable them to participate in everyday activities (Shopen and Shopen 1995; Zeman and Shipman 1998). These scripts become more complex as children gain maturity with age (Docherty and Sandelowski 1999). It is thought that children will then only change their beliefs of reality once they are faced with adequate evidence that contradicts their existing assumptions (Watson 1997). The information they obtain through experience enables them to refine their understanding of the world around them (Szarkowicz 1999).

Puppet shows as a form of information dissemination to children have been almost ignored in the education and social marketing literatures. One exception is Synovitz's (1999) discussion of the positive benefits that can accrue from the use of puppetry to communicate health information to children. According to Synovitz

(1999, p.145),

Puppetry should be considered for use as an educational and clinical tool because it provides a creative learning strategy that allows children freedom of expression while stimulating learning through play. Because young children love to pretend and to engage in dramatic characterizations, using puppets affords them the opportunity to manifest this behaviour.

As a form of dramatic characterisation, puppet shows enable the acting out of scripts for educational purposes. Given that the level of involvement the audience feels with the message is an important influencing factor on the extent of information assimilation that is achieved (Rimal et al. 1999; Schooler et al. 1998), puppet shows may be a means of increasing children's involvement levels with health and safety information. Synovitz (1999) cites numerous campaigns targeted at children where puppet shows have been effectively used to communicate information relating to subjects such as cancer prevention, drug avoidance, first-aid, and AIDS. However, she also notes the need to measure the effectiveness of puppetry as a form of communication in terms of pre- and post-levels of knowledge among the target children. This study begins to address this need in the Australian context through an examination of the ability of the Constable Care puppet show to impart safety information to children between six and eight years of age.

The Constable Care puppet show is directed at primary school aged children. The story told in the puppet show involves a young boy and girl who go out riding on their bicycles to the local park. There they are approached by a stranger who proceeds to attempt to lure them into his car by offering sweets. The children demonstrate the appropriate evasion strategies to escape the stranger, and Constable Care (a fictional police character used to provide a child-friendly face to the Western Australian police force) arrives in time to protect the children and to take the stranger away. At the conclusion of the performance, the puppeteers come out and speak to the children. They ask questions designed to reinforce the information imparted during the show, and they raise additional points such as appropriate ways to deal with an abandoned syringe. Both humour and fear are effectively used throughout the show to entertain the children and deliver important safety messages.

Methodology

Researching children can be considerably more difficult than researching adults due to children's more limited attention spans (Keim, Swanson, Cann and Salinas 1999), their language limitations (Wiley and Hendricks 1998), and the lack of guidance in the literature for interviewing children (Docherty and Sandelowski

1999). On the positive side, even very young children have been found capable of high levels of recall for specific events, although they tend not to be capable of recounting the same level of detail as older children (Docherty and Sandelowski 1999). While the most effective way to assess children's knowledge is to observe them engaging in the behaviour of interest (Wiley and Hendricks 1998), this is not always possible. Interviews represent an alternative form of data collection that has been found effective in eliciting information from children (Stern and Peterson 1999; Wright 1999). Group interviews as a form of interviewing have not been widely discussed in the context of a sample comprised of children, an exception being Keim et al. (1999) who found the group interview to be effective with children where it is kept brief and focused.

In this study, primary school children between the ages six and eight were interviewed in groups after being exposed to the Constable Care puppet show. A first round of interviews was conducted two weeks after exposure, and a second round of interviews with different children from the same school was conducted four months after exposure. Different students attended the two weeks and four months interviews to prevent the reinforcement of the campaign messages during the first round of interviews from influencing the results of the second round (Docherty and Sandelowski 1999). The objective was to assess the children's retention of the safety information soon after and some time after exposure to the puppet show. To compare their safety knowledge levels to those of children who had not been exposed to the puppet show, interviews were also conducted with children of similar demographic profiles who attended schools where the puppet show had not yet been introduced. The questions asked were designed to assess the children's awareness of the safety knowledge that is imparted in the Constable Care puppet show, namely the need to: (1) avoid abandoned syringes; (2) advise parents/carers before going outside to play; (3) look and listen before crossing the road; (4) avoid strangers; (5) dismount bicycles before crossing the road; (6) maintain bicycles by checking tyres, brakes, and bells; and (7) wear a bicycle helmet.

In total, 58 students were interviewed in groups of children of the same age. The size and composition of the interview groups were determined by the availability of students in terms of the return of permission slips signed by parents/guardians and the attendance of these children on the day on which the group interviews were run. Fifteen children were interviewed in two separate groups for the interviews conducted after two weeks, and 11 children were interviewed in two groups for interviews conducted after four months. A further 32 children in the same age bracket were

interviewed in three groups at a different school where the puppet show had not yet been performed. This second school was located in a neighbouring suburb that shared a very similar demographic profile to the suburb in which the first school was located. One of the limitations of this study is that both schools were in relatively affluent areas, and it has been noted that those with higher socio-economic profiles tend to assimilate health information more rapidly (Rimal et al. 1999).

The interviewing method was group interviews as opposed to focus groups, as the children involved were too young to be able to engage productively in interaction with each other during the interviews. Efforts were made to minimise the mimicking of others by encouraging the children to state if they were unsure of the appropriate response and giving them time to think of their own answers before asking the group for a response. All the group interviews ran for approximately 20 minutes. This was adequate time to cover the relevant material, and it was apparent that by the end of this time the students' attention spans were close to exhaustion. This was more notable among the boys than the girls.

Findings

Students interviewed two weeks after exposure had a firm grasp of most of the information areas covered in the puppet show. In particular, they were very aware of the need to ignore strangers, to wear a bicycle helmet, and to notify an adult before going outside to play. However, the level of detail recalled differed by age group. Younger children, for example, were aware of the need to avoid strangers but they did not appear to recall the strategy of moving to a populated area to increase their safety. Both older and younger children had difficulty remembering the parts of a bicycle that require maintenance, although when some assistance was provided older children were able to remember more quickly and completely than were younger children. The need to provide prompts more frequently for younger children than for older children is consistent with past research that has found that the younger the respondent and the longer ago the event, the more prompts are required to enhance recall (Docherty and Sandelowski 1999). The differences between older and younger children were more apparent at the four month interviews. While most of the basic information had been well retained by both younger and older students, the younger students had considerably more difficulty recalling the need to listen for traffic before crossing the road than they had in the previous round of interviews. However, even the younger members of the second round of interview groups had a better understanding of the need to listen than older, unexposed students.

Some students demonstrated an integration of previously-learned information with the information content of the puppet show in their responses. For example, some of the students said that the appropriate way to cross the road was to stop in the centre before proceeding to the other side. This detail was not part of the instructions given during the puppet show, although it was sometimes remembered as such.

There were several significant differences in knowledge levels between those students who had been exposed to the puppet show and those who had not. Generally, the students who had been exposed to the puppet show were less hesitant and more uniform in their responses. Even where the unexposed students possessed the relevant knowledge (e.g., avoiding strangers and the need to look both ways before crossing the road), they did not appear as confident in their responses as those students who had seen the show. The unexposed students found the task of nominating the parts of bicycle that require maintenance extremely difficult, and began listing off every part of a bicycle that they could think of, including the seat and handle bars. It appears that this information is not common knowledge, and constitutes new information provided by the puppet show. However, it was on the issue of abandoned syringes that the greatest difference was apparent between exposed and unexposed students' responses. All exposed groups knew that they were never to touch an abandoned syringe, and that they were to notify an adult immediately. By comparison, the six and seven year old unexposed students offered a mixture of solutions. While most said that the syringe should be avoided, others suggested picking it up, throwing it in the bin, and kicking it away. By eight years of age, however, all the students interviewed (exposed and unexposed) knew they should not touch an abandoned syringe under any circumstances. A further piece of new information for some students provided by the puppet show was the need to check the traffic three times (i.e., look, right, left, and then right again). Unexposed students were more likely to state the procedure as being to look just left then right.

Creating involvement

To explore children's feelings about the puppet show, exposed students were asked to describe their favourite aspects of the show. Even after four months they became excited when discussing the issue of stranger danger as it was portrayed in the puppet show. They recalled very specific details concerning the physical characteristics of the "stranger" depicted in the show, such as the his car, his name, the colour of his hair and the colour of his clothing. Some of the male children were quite creative in their descriptions of the appropriate behaviour around a stranger, stating

that they would like to punch, hit, or kick the stranger. Despite this stated desire to physically hurt the stranger, they also acknowledged that they knew not to speak with or interact with the stranger, and that they should seek help immediately.

The children interviewed particularly delighted in recalling the humorous aspects and re-living them throughout the group interviews. The comic-relief grandmother figure was a special favourite. They also recalled the fearful situations depicted, and were animated in describing how they would deal with the same problems. Younger children were particularly creative and enthusiastic in their descriptions of the show. When talking about the lollies that the stranger in the show was offering, some made the assumption that there were drugs inside the lollies. They also suggested that there may be a dog hiding in the car who would bite them if they got into the stranger's car. These additions to the story may represent efforts by the children to add concrete reasons for avoiding the behaviour that is being prohibited (Bem 1972).

CONCLUSIONS

The ways in which the sampled children responded to this study are consistent with the findings of previous studies. Younger children had good recall levels, although were able to provide less detail than older children (Docherty and Sandelowski 1999). Their attention levels waned significantly after about 20 minutes of interviewing (Keim et al. 1999), and they tended to provide their responses in the form of stories or scripts (Shopen and Shopen 1995; Zeman and Shipman 1998).

In general, the use of a puppet show to convey the safety information to primary school children appeared to increase the children's involvement with the subject matter. It did this by inviting them to become engrossed in the story and to experience emotions in response to the scenarios depicted. The results of this study are encouraging for those organising the Constable Care puppet show and other groups wishing to employ effective means of educating children about important health and safety issues. The show was very popular among the children interviewed, and through the enjoyment they experienced they were able to recall most of the safety information imparted during the show. Compared to unexposed students, exposed students tended to answer most questions with greater speed, certainty, and uniformity. They were more confident answering questions for which all groups had good knowledge levels, such as ignoring strangers, wearing a bicycle helmet and notifying an adult before going outside to play. As such, it appears that the puppet show is effective in reinforcing the basic safety information that students acquire elsewhere, such as through

parents, teachers, and the media. In addition, there were some issues that were much better understood by exposed children, including the appropriate behaviour around a discarded syringe and the need to listen when crossing the road.

Although it appeared highly likely that at least some of the children had improved their knowledge and understanding of the safety information disseminated by the puppet show, it is not possible to know the extent to which this improved knowledge will be translated into behavioural change. In other words, a demonstrated understanding of the information imparted by the puppet show during interviews may be accompanied by an inability to demonstrate this knowledge in other contexts (Szarkowicz 1999). However, Rimal et al. (1999) argue that hierarchical models of campaign effects demonstrate that knowledge gains can be assumed to have facilitated behavioural change.

The most important finding from this study is that it appears that exposure to the Constable Care puppet show effectively brings the young children's awareness levels of key safety issues up to those of older children. In other words, the exposed six and seven year olds exhibited similar levels of awareness and understanding of the safety issues as unexposed eight year olds. This result suggests that the puppet show can play a valuable role in making children safer in their early school years, supporting Synovitz's (1999) arguments in favour of the use of puppetry to communicate health and safety information to children. The ability of the puppet show information format to increase involvement levels, especially among younger children, suggests that it may be useful across a range of information contexts.

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