

## MEASURING CHILDREN'S RETENTION OF SKILLS TO RESIST STRANGER ABDUCTION: USE OF THE SIMULATION TECHNIQUE

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**Abstract**—This paper describes an evaluation which builds upon an earlier project to measure actual behavioral change in the form of reduction of vulnerability to abduction and abuse by strangers; change attributable to participation in a primary prevention program. Simulations, life-like scenarios previously described, were used to address three key questions: (1) Did children who had demonstrated mastery of prevention skills acquired six months earlier retain those skills? (2) Would reteaching the prevention program result in mastery for those children who failed to demonstrate required skills after the first presentation of the prevention program? (3) Could the experimental group results of the first project be repeated with the previous control group? Several findings validated the earlier work and enhanced the understanding of what can be accomplished through prevention programming. Thirty of the original 44 children who participated six months earlier were again available to take part in the final simulation. Of those, all of the previous experimental group children who had performed successfully when participating in the simulation upon completion of the first project were again successful six months later in resisting the invitation of a stranger to leave their school. Each of the previous control group children were successful in the final simulation after participation in the program. But reteaching of the prevention program was successful for just two of the four children who had earlier failed following participation in the program. These findings document the immediate and continued benefits which may accrue from experientially based prevention programming and suggest an important research agenda to facilitate the further evolution of prevention programming and evaluation.

**Résumé**—Cet article décrit une évaluation reposant sur un projet effectué antérieurement et destinée à quantifier le changement de comportement, la réduction de la vulnérabilité et la réduction de la vulnérabilité lors d'enlèvements et de sévices infligés par des personnes inconnues de l'enfant. Ce changement en principe était attribué au fait d'avoir pris part dans un programme de prévention primaire. Comme dans les études antérieures déjà décrites, des scénarios très réalistes et des simulations ont été utilisées pour introduire trois questions fondamentales, les trois questions fondamentales suivantes: (1) Est-ce que les enfants qui semblaient avoir acquis de bons réflexes préventifs 6 mois auparavant ont retenu leur capacité de se protéger? (2) Ceux qui n'ont pas gardé leurs bons réflexes acquis grâce à l'enseignement, peuvent-ils les regagner lorsqu'on les reclasse dans une situation d'apprentissage? (3) Est-ce qu'il est possible de réutiliser le même groupe témoin que lors de la première expérience pour comparer les enfants? Quelques-uns des résultats ont confirmé les observations antérieures et affiné la compréhension de ce que l'on peut faire à travers un programme de prévention. 30 enfants parmi les 44 qui avaient 6 mois auparavant déjà participé au programme étaient à nouveau disponibles pour être réévalués. Ceux du groupe expérimental, qui avaient passé le test avec succès à la fin de leur première période

d'enseignement l'ont à nouveau passé avec succès après 6 mois c'est-à-dire qu'ils ont su résister à l'invitation d'un inconnu qui essayait de les attirer en-dehors de leur école. Même chaque enfant dans le groupe témoin qui avait réussi le premier test de nouveau l'a réussi après participation au programme. Mais parmi les enfants qui avaient raté le test après avoir participé la première fois au programme seulement 2 sur 4 ont eu une meilleure réaction après la deuxième période d'enseignement. Ces résultats sont intéressants dans le sens qu'ils montrent les limites de ces programmes de prévention et démontrent l'intérêt de les appliquer sur une base expérimentale. Ils montrent la voie en quelque sorte aux éducateurs qui veulent continuer dans la voie des programmes destinés à prévenir les abus sexuels.

## INTRODUCTION

AS PREVENTION OF CHILD ABUSE programing emerges from the idealism of its youth, more stringent criteria for evaluation are being called for from all sectors. The National Committee for the Prevention of Child Abuse has outlined the need for evaluations which measure the effects of prevention programs, knowledge of prevention concepts, assessment strategies to measure behavioral change attributable to the intervention, and methods to determine the durability of retention insuring that children remain protected [1].

The National Center on Child Abuse and Neglect in a published summary of research reported that "one of the major difficulties in assessing the efficacy of different programs is the lack of any standard means of measurement" [2:26]. The development of measures of program effectiveness more meaningful than those typically used has been cited as a priority in the field of child abuse [3, 4].

Consistent with this need to assess primary prevention programs and to evaluate the relationship between proximate measures and actual behavioral change attributable to intervention, a unique evaluation was designed and implemented as earlier reported [5]. Two groups of children enrolled in kindergarten and the first and second grades of an inner city elementary school were tested for their risk to stranger abduction. A simulation was implemented in which a member of the research team asked the child to accompany him to his car to help bring some items into the school. In the first simulation the group that was not scheduled to participate in the intervention program did better (more often refused the stranger's request) than the children who initially participated in the training. But the experimental group, following the program, did much better on a second simulation than did control group children who had previously reacted more favorably when taking part in a simulation. Traditional cognitive measures of knowledge and understanding of prevention concepts were found to be generally poor predictors of the child's behavior in a situation in which he/she is at risk [5]. If the child agreed to the stranger's request, he/she was judged to have failed the simulation. The process, program, safeguards, and outcome have previously been described in detail [5].

Six months after that activity, a second related project was undertaken with the same two groups of children. It addressed three major questions: (1) Did the children in the experimental group who demonstrated mastery of the prevention skills retain that ability? (2) Would retraining the children in the experimental group who failed the second simulation produce the desired level of skills? (3) Could the results of the first project be repeated with the control group children?

## METHOD

Thirty of the 44 children who had participated in both simulations six months earlier were still enrolled and present the day of retesting. The conduct of one of the simulations was unsatisfactory as later discussed. The third simulation was very similar to the two

used during the preceding school year. This time each child was asked to accompany the stranger to his car to bring in some equipment for the gymnasium. Again the collaboration of school administration, staff, and faculty made possible presentation of the program and evaluation of its effectiveness. Officials of the school and school district had been briefed concerning the results of assessment of the value of the first block of instruction, and were enthusiastic about this second effort.

The role-play-based instruction of the Children Need to Know Personal Safety Training Program [6] was presented as before to all control group children and to the four children of the experimental group who had failed the second simulation. The experimental group children who had passed received no further instruction. The battery of cognitive tests used in conjunction with the prior program was not readministered. The same elaborate provision was made to handle any indication that the simulation might be in any way traumatic to a child. Again, none of the children exhibited undue anxiety. All simulations were videotaped.

## RESULTS

Results of the evaluation were supportive of both the effectiveness of the intervention and the validity of the simulation as a measure of risk to abduction and abuse by a stranger. There were only two failures among the 29 (6.9% failure rate) children who took part in the final simulation. This can be contrasted with 23 failures of the 44 (52.3% failure rate) children prior to any intervention,  $p < .001$  for computed chi-square. Actually, attrition from the children who took part in both simulations six months earlier was heaviest among those who had done well. Of the 29 who took the third simulation, 18 (62.1% failure rate) had failed the first simulation. Improvement can be attributed to the program since change occurred immediately following the intervention. The sequence of events depicted in Table 1 with percent of the group that passed the simulation in parentheses illustrates this cause and effect relationship.

## DISCUSSION

The quasi-experimental design employing two comparison groups randomly assigned enabled isolation of the effect of the program and documents the reduction in risk for which it accounts. But examination of the sequence of outcome by case also speaks strongly for the validity of the simulation as a measure of program effectiveness in reducing vulnerability. There were three children in the control group whose performance went from pass to fail in the first two simulations. This suggests that, in the absence of intervention, future safety based on a single passed simulation cannot be assumed. In contrast, none of the children who participated in the program went from pass to fail; all

Table 1. Program Participation and Simulation Outcome Sequence

	Passed first simulation	Program	Passed second simulation	Program	Passed third simulation
Control group	(52.4%) (11/21)	No	(52.4%) (11/21)	Yes	(100.0%) (14/14)
Experimental group	(43.5%) (10/23)	Yes	(78.3%) (18/23)	Yes*	(86.7%) (13/15)

\* Only four experimental group children who failed the second simulation participated in the program a second time.

adhered to the pass-pass pattern. The intervention then can be seen as both a teacher and reinforcer of the skills required to resist stranger abduction and abuse. And the outcome of the simulation is clearly not a random event.

Examination of sequence of simulation outcome by case reveals another important phenomenon. Six months after program participation, retention of skills was total. All of the children who passed the simulation immediately after instruction in the previous year passed the final simulation. Most exhibited strict adherence to the four basic rules upon which the "safety with strangers" portion of the curriculum of the program is founded [6]. They seemed no less prepared than students who had just undergone instruction. This remarkable evidence of retention of skills raises new questions about the need for periodic retraining. Further research which assesses retention for a period longer than six months is needed to prescribe an ongoing program of prevention of abuse for children. But the protection derived from a single, intense, experiential intervention does not appear to be short-lived.

There is, however, a negative aspect of this finding. The two children who failed the third simulation had also failed the two preceding simulations. Even more disturbing is the fact that they, along with the two other experimental group members who failed the second simulation after having participated in the program, were retrained. They received a second block of instruction, attending along with control group students. There may then be a small percentage of children who do not profit significantly, even from repeated exposure to prevention programming. Individual attention to their specific needs appears to be in order.

Finally, the delicacy of the staging of simulations was demonstrated by one problem encountered. Due to scheduling difficulties, the simulations for three of the kindergartners had to be performed in the afternoon of the day of the third simulation. Simulations for the other children had taken place during the morning. Every effort had been made to schedule simulations consecutively for the students in a manner that precluded their interaction and insured a consistency of the scenario. Protracted process can become disruptive to school operations as can be restriction of student and staff movement in designated areas, availability of support personnel, etc.

As a part of the simulation, the children were told they were going to have their eyes checked. In the morning this eye test was administered by a female researcher. In the afternoon, it was necessary to use a male researcher. This seemingly insignificant change became significant when one of the children mistook the male stranger for the person to whom he had been directed for the purpose of having his eyes tested. When he realized his mistake, he backed away and refused to go with the stranger, but the scientific intent of the simulation had not been fully realized.

Simplicity of simulation is imperative, particularly with younger children. While these life-like simulations represent a meaningful advance in the measurement of risk to stranger abduction and abuse of children, they are sensitive to subtle variations in protocol and their further refinement is appropriate substance for future research.

## CONCLUSIONS

The insights gained from this second stage of evaluation can be concisely summarized. Its results were supportive of first phase findings of effectiveness of the intervention and value of the use of simulated situations in assessing the risk of children to abduction and abuse by a stranger. The surprising degree to which children retain, for a considerable period of time, skills acquired through program participation was revealed. There is, how-

ever, a discouraging corollary to this finding. A very small percentage of children may not benefit from generally efficacious programing, even if trained repeatedly.

Although this evaluation has enhanced understanding of what can be accomplished from well-conceived prevention programing, it also suggests the need to address an explicit research agenda. That agenda consists of the following objectives:

1. Allow this work to inform and provide a basis for expansion of the simulation concept into other areas of risk which prevention programing addresses.
2. Establish age and sex appropriate sets of standardized simulations, which will facilitate large scale comparison of relative risk to children.
3. Determine the duration of retention of prevention skills by children with the precision necessary to prescribe longer term program regimen than is currently possible, and to explore the possible influence of various factors on retention.
4. Examine fully the causes and implications of the failure of some children to acquire prevention skills from participation in the program, and identify modifications of program and/or other remedial procedures to extend to them protective benefits.
5. Identify and evaluate other techniques, less cumbersome than simulations, which will allow classroom teachers to measure the efficacy of classroom-based prevention programing.

Finally, the simulation technique and the clear results of this evaluation have stimulated public school interest in prevention programing. School districts previously not receptive to implementation of prevention programing have recently made major commitments to program implementation. Tangible, definitive results couched in credible, nonesoteric terms are responsive to the need to be accountable for the quality of programing presented to children. They constitute a genuine statement of justification for finally according prevention programs their proper place as an ongoing integral part of the school curriculum.

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