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**An Evaluation of the Maintenance of Changes in Knowledge
and Behaviour Skills effected by a School-based Personal
Safety Program for the Primary Grades**

Sandy E. Ages

**A thesis submitted to the Faculty of Graduate
Studies and Research in partial fulfilment of
the requirements for the
Degree of Doctor of Philosophy
Department of Psychology**

Carleton University

April 1991

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Abstract

This study evaluated the maintenance of changes in information and behavioural skills effected by a school-based personal safety program. A particular focus was the efficacy of incorporating "booster sessions" (short review sessions by classroom teachers) to maintain changes. In addition, the effects on behavioural skills of including a videotaped role play intervention was examined.

A total of 165 children in grade 1 were included in two experiments. All children participated in the Ottawa Board of Education's Personal Safety Program of six 30-minute lessons. Information was assessed by individual administration of a 24-item information questionnaire. Behavioural skills were assessed by one-on-one role playing with different adult males at the different assessment times. A self-esteem measure was individually administered at the pre-test and 12-month assessments. During the role play intervention, the children were shown videotapes of a child role model and then received feedback of their own videotaped role play. The appropriate assertive behavioural responses were taught to the children by the researcher at these interventions.

In Experiment 1, 116 grade 1 children were divided into four groups. Each group received pretest and posttest assessments of the information and behavioural skills. Group

1 were administered evaluations of information and behavioural skills at 6 and 12-months. Group 2 were evaluated on information and behavioural skills only at 12-months. Group 3 received 6-month and 12-month booster sessions and 6-month and 12-month evaluations of information and behavioural skills. Group 4 were evaluated at 6-months and at 12-months and received a booster session prior to the 12-month evaluation.

Group 3 showed the best retention on the information questionnaire providing strong evidence to support the success of a booster program for maintenance of information learned. Group 3 also demonstrated a significant increase in their self perception of the assertiveness of their performance across time. This suggests that the booster sessions and role play interventions had a significant effect on the children's perception of their own performance. While there was an increase in experimenter rated assertive behavioural skills across time for all groups, there were no significant group differences on role play per se for Experiment 1.

A total of 49 children in grade 1 were included in Experiment 2. The assessment instruments were the same as Experiment 1. However, the assessment times included pre-test, post-test and 6-months only. Group 5 received the videotaped role play intervention at 6-months only. Group 6 received the videotaped role play intervention at the post-test and the 6-month assessments. Group 6 performed

significantly better on the role play than Group 5. The results indicate a significant effect of the role play intervention on the behavioural skills acquired.

There was a significant increase over time in the number of children who would tell the secret of the rules of the role play. The inclusion of the role play intervention appeared particularly important to increasing rates of this disclosure. Higher self-esteem before instruction and higher knowledge scores after instruction were not predictive of a reduction in vulnerability to sexual abuse as measured by the response in a simulated role play.

Overall, the inclusion of booster sessions to facilitate maintenance of changes is warranted in prevention programs. Also, videotaped role plays are an effective tool in teaching the desired behavioural skills. The results of the present studies demonstrate the value of follow-up research in the evaluation and appropriate modification of sexual abuse prevention programs.

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Introduction

Child sexual abuse is a prevalent social problem that has attracted wide public concern since the mid-1980's. There are frequent media reports of both current and historical abuse. Canadian newspapers have reported in detail regarding incidents in Quebec (Thurso), Ontario (Prescott, Alfred, Ottawa) and Newfoundland (Mount Cashel) each with multiple perpetrators and many victims. The public pressure over the past six years has produced a variety of programs for children to prevent child sexual abuse. These educational programs have focused on teaching children information and skills to prevent abuse and to stop abuse where victimization already has begun. Parental awareness is a component of many programs.

To date there is little controlled research studying the efficacy of such child-centered programs. The present study extends the evaluation of one sexual abuse prevention program.

Definition

Child sexual abuse is a term that refers to the sexual exploitation and/or coercion of a child by an adult or older adolescent (Finkelhor, 1979). Finkelhor (1979) employed a widely accepted operational definition of five years as the minimal age gap between child and perpetrator. Sexual abuse includes a continuum of behaviour ranging from verbal non-physical abuse to forcible or non-forcible touching offenses. Such abuse may refer to exhibitionism, exposure to pornographic material, fondling and manipulation of the child's genitalia, or

rape. The duration of abuse can range from a single encounter with an exhibitionist or occasional fondling by a casual family acquaintance or relative, to years of continuous abuse by a nuclear family member.

Prevalence Estimates

There are several reports examining or estimating the incidence of sexual abuse. Finkelhor (1979) suggested that 20% of females and 9% of males may have been sexually victimized as children. Finkelhor's American study employed a questionnaire and examined 796 male and female college students. Russell (1983) reported statistics that are fairly similar in her American study involving personal interviews with 930 women. She found that 25% of female children had been victimized before the age of 14 years and 33% of females before the age of 18 years. The Badgley Report (1984) based on a confidential self-report noted that approximately 15% of females and 8% of males may have been sexually abused and that prevalences vary for different categories of abuse. A national Canadian survey (Bagley, 1989) found that 17.6% of adult females and 8.2% of adult males recalled "unwanted" sexual touching or assault prior to their 17th birthday.

In such efforts to establish prevalence estimates, the difficulties of validity and reliability of method of report, and of obtaining a representative sample, are rivalled by the lack of consensus regarding what acts

constitute sexual abuse. Obviously the characteristics of the sample, the reporting method, and the definition of abuse will influence empirical estimates. These problems are evidenced by the disparities in some of the rates presented in the above reports.

A similarity that does emerge from both the Finkelhor (1984) and Russell (1983) studies, is that sexual abuse is more likely to occur at a younger age (prior to 13 years) than at an older age. In Finkelhor's study, 89% of the abuse began prior to age 13 with 25% of all abuse occurring before age 7. In Russell's study, 74% of abuse began prior to 14 years of age.

Clinical experience and public response has made it evident that child sexual abuse is perceived to be a serious problem that affects large numbers of children (Conte & Fogarty, 1990). Education, treatment and prevention programs for child sexual abuse and parental awareness have been key concerns of national centers established in both Canada and the United States (e.g., National Center on Child Abuse and Neglect, National Clearinghouse on Family Violence).

Vulnerability of Children

Prevention programs aimed at children address their vulnerability. A number of factors contribute to this issue. Differences in age, size, experience, and intellect contribute to the discrepancy of power between child victim

and abuser (Sanford, 1980). Young children are at risk partly because of their lack of information and lack of self-protective behavioural skills. Also, it is easy for children to be strategically coerced by threats of violence to them or their loved ones, or withdrawal of money, affection, or food (Burgess, Groth, Holmstrom, & Sgroi, 1978; Conte, Wolf, & Smith, 1989). Finally children's inexperience may allow them to be sedulously persuaded over time and they may be naively unaware of what is happening to them with a trusted and affectionate adult. Some research indicates that children of low self-esteem are more vulnerable (Bagley, 1988; Fryer, Kerns Kraizer, & Miyoshi, 1987). Furthermore, most offenders will stop and look for a more timid child if they have resistance or confrontation with a child (Conte, Wolf, & Smith, 1989). Therefore, prevention programs need to address self-esteem and the "assertiveness" of children's behaviour.

Contrary to public belief, most offenders are known to the child. De Francis (1969) reported that 75% of the offenders were known to the victims and were either members of the victim's household, relatives, neighbours, or friends of the victims. Corsini Munt (1982) found that in 84% of the cases, the victim knew the offender. Overall prevention initiatives must take into account that children are most at risk from those who are responsible for their care.

The Impact of Child Sexual Abuse

Some studies have examined the impact of child sexual abuse and have concluded that there are harmful effects

(Alter-Reid, Gibbs, Lachenmeyer, Sigal, & Massoth, 1986; Browne & Finkelhor, 1986; Lusk & Waterman, 1986). However, there are a number of methodological problems which make results difficult to interpret. The term "effects" can be misleading because it suggests a direct causal relationship between sexual abuse and observed behaviour (Beitchman, Hood, Zucker, da Costa, & Akman, 1988). Misinterpretation of statistical significance may also contribute to the confusion since high correlations between variables do not necessarily imply causal relationships. There are methodological issues that limit the interpretability of findings and the ability to make comparisons across studies. For example, the process of obtaining samples for child sexual abuse studies may lead to biased findings. Generally sampling of children comes from child protection agencies that are willing to cooperate with research investigators (de Francis, 1969; Maisch, 1972) and sampling of adults for retrospective studies comes from clinical settings (James & Mayerling, 1977; Lukianowicz, 1972; Meiselman, 1978). Also, many studies on children lack comparison groups which does not allow us to assign observed effects specifically to the sexual abuse.

In examining the short-term effects of child sexual abuse, many samples were drawn from psychiatric clinics and consequently may overestimate the prevalence and severity of symptomatology associated with child sexual abuse in the general population. Symptoms noted in the literature list sleep disturbances, bedwetting, and nightmares (Adams-Tucker,

1982; Mannarino & Cohen, 1984; Schultz & Jones, 1983), excessive fearfulness and clinginess (Gomes-Schwartz, Horowitz, & Sauzier, 1985), and depression, guilt, and hostility (De Francis, 1959; Kaufman, Peck, & Tagiuri, 1954). Inappropriate sexual behaviour with dolls, requesting sexual stimulation and age-inappropriate sexual knowledge have been noted in young children who have been sexually abused. Since none of these studies included normal or psychiatric control groups, it is not clear that the prevalence of the symptoms among sexually abused children is greater than that in the general population nor that there are symptoms specific to having been sexually abused.

Other symptoms commonly reported are behavioural and academic problems at school (Herman, 1981; McKittrick, 1981; Saffer, Sansone, & Gentry, 1979). Studies that reported school problems did not include control groups and, therefore, it is not possible to determine whether these symptoms are attributable to sexual abuse per se. However, Burgess, Hartman, and McCormack (1987) studied 17 adolescent males who had been exploited through sex rings and compared them to a normal control group matched for age, sex, race, and family structure. There was a significantly higher incidence of illicit drug use, compulsive masturbation, prostitution, physical fights with friends and parents, and criminal behaviour among the sexually abused boys compared to the control group. The researchers noted that the small sample size ($n = 34$) and

the selectivity of the sample of sexually abused children from criminal court files made it impossible to suggest any causal link between childhood sexual abuse and social deviance.

Studies examining outcome in adult victims of child sexual abuse report some long term consequences (Budin & Johnson, 1989). The attributed sequelae included frigidity (Lukianowicz, 1972), depression (Herman, 1981; Meiselman, 1978), and psychosexual problems (Briere, 1984; Jehu & Gazan, 1983; Tsai Feldman-Summers, & Edgar, 1979). Fifty-two percent of prostitutes have been sexually victimized (James & Meyerling, 1977) as compared to 23% in the general population that have been abused (Gagnon, 1965).

Since the majority of studies did not include appropriate control groups, it is difficult to draw any firm conclusions regarding sequelae specific to child sexual abuse. However, although there is a lack of empirical evidence for specific consequences of child sexual abuse, the potentially negative impact on children and adults in our culture cannot be ignored.

Focus: To Decrease Victimization of Children

Child-oriented programs designed to prevent child sexual abuse have been developed recently in clinical, educational, and community settings (Bridgework Theater, 1984; Care, 1984; Edmonton Public Schools, 1986; Halton

Board of Education, 1986). These programs represent a positive workable effort toward decreasing the victimization of children by training this potentially vulnerable group. Primary prevention programs have proliferated only since the mid 1980s (Durfee, 1989). Such educational approaches aim to increase the child's knowledge and repertoire of behaviours to avoid abuse and increase parental awareness. Children lack information on the resources available to them for assistance. In fact, the majority of victims do not seek assistance (Badgley, 1984). "The child's best defense against sexual exploitation is a sense of his or her own power, knowledge about inappropriate touching, and awareness of the resources available for support and protection" (Downer, 1984, p. 90). In addition, research has shown that oftentimes offenders perceive the passive child as a willing participant in the sexual encounter. What evidence there is suggests that most offenders will stop and find a more timid child if there is resistance or confrontation (Conte, Wolf, & Smith, 1989; Gagnon, 1965; Sanford, 1980).

There have been nation-wide public awareness campaigns through the media and local educational programs for adults and children. A primary focus of these programs has been on children's understanding regarding inappropriate sexual conduct by adults.

Rationale for Present Study

Current interest in personal safety programs is expanding (Wolfe, MacPherson, Blount, & Wolfe, 1986) but there is a need for more research to systematically evaluate these prevention programs (Helfer, 1982; Roberts, Alexander, & Fanurik, 1990). The absence of empirical evaluations for many programs does not mean that they do not work, but it does mean that their efficacy has not been established (Wurtele, Sasklawsky, Miller, Marrs, & Britcher, 1986). Programs vary widely in their context, curricula, duration, use of teaching aids, and in the person who delivers them to the children. Thus, it is essential that evaluations of programs be implemented in order to determine empirically whether programs which appear intuitively sound are actually effective (Reppucci & Haugaard, 1989).

Protection against sexual abuse is a very complex process (Reppucci & Haugaard, 1989). Important concerns must be emphasized when examining the programs in this area. First, educators need to be cautious in using sexual abuse prevention curricula simply because they have been published. Essential questions to be asked are: "What does the program teach the child?" and "What skills and information have been acquired by the child?". Conte (1987) set out some caveats for programs: "When a child 'graduates' from a safety education program, we have

essentially said to the child - and to the adults who care for and love the child - this kid is protected. I think the risk is that the kid is not actually protected because initial learning may not be maintained or the child never learned in the first place" (Conte, 1987, p. 3). We need to evaluate what has actually been learned by the child.

Conte (1987, p. 4) noted that "pre/post testing ought to be part of every program so that kids who aren't learning can be identified and receive some kind of tutorial". It is important to demonstrate knowledge enhancement, and it is equally important to indicate whether children can translate this knowledge into action (Conte, Rosen, & Saperstein, 1986; Stilwell, Lutzer, & Greene, 1988; Wurtele, Sasklawsky, Miller, Marrs, & Britcher, 1986). It has been suggested that multiple dependent variables should be selected to reflect the multidimensional impact of the programs. Paper and pencil measures or interview measures should be balanced by complementary behavioural ratings (Lorion, 1983). It is essential to use systematic behavioural evaluation procedures in the experimental design, e.g., role playing a simulated potential abuse situation (Conte, 1987; Kerns Kraizer, 1986; Leventhal, 1987; Wolfe, MacPherson, Blount, & Wolfe, 1986). Furthermore, research must examine variables which promote behaviour skill acquisition (and not just information acquired).

Sexual abuse program evaluations need to examine the information learned and the behavioural skills acquired by the children using a longitudinal framework. Most of the evaluations in sexual prevention programs focus on information gathered shortly after administration of the program (Sarason & Sarason, 1981). One approach to maintaining changes in education-oriented prevention programs is the use of follow-up "booster sessions" (Ray, 1984). These "booster sessions" are short presentations designed to support and supplement information and skills acquired in the program. If such booster sessions are effective, we also will require information on parameters necessary to optimize the benefits of these sessions.

Programs to decrease or prevent sexual abuse must focus on several components that make children vulnerable to abuse, i.e., lack of knowledge, lack of appropriate assertive skills, lack of self-esteem. This present study focused on information acquired by the children by using a questionnaire to ascertain what had been learned in the program. The study examined behavioural skills acquired in the program by evaluating role play simulations. A measure of self-esteem was used to examine children of high and low self-esteem and vulnerability to abuse.

Review of Child Sexual Abuse Prevention

Program Evaluations

It has been noted that the school system has great potential to teach prevention to its students (Brassard, Tyler, & Kehle, 1983; Trudell & Whatley, 1988) and has responded to the increasing recognition of the scope of the problem (Binder & McNiel, 1987). Elementary school teachers interact extensively with the children over long periods of time and are, therefore, ideally situated to play a key role in the prevention and detection of child abuse (McClare, 1983). The school serves an important role vis a vis parental awareness.

There are an increasing number of evaluations of sexual abuse prevention programs. Over the past several years some school boards and research foundations have implemented evaluations of sexual abuse prevention programs (e.g., C.A.R.E., 1984; Ottawa Board of Education, 1986; Winnipeg School Division, 1985). This literature review will focus on thirteen sexual abuse prevention program evaluations. The majority of these programs were taught within school settings. The target population age and grade will be described. A brief description of the programs will include the duration of the program, number of sessions, and specific audio-visual aids utilized. There will be a focus on the assessment of information and/or behavioural skills and the types of instruments

employed. Study design will be described noting whether a control group was included and whether statistical comparisons were carried out.

C.A.R.E.

The Child Abuse Research and Education Productions Association of British Columbia, Canada (C.A.R.E.) developed a program for the prevention of child sexual abuse. The program was designed to be taught from kindergarten to grade 3 (Kerr-Halls, 1986). The program took from three to six weeks to complete depending on the size and ages of the class. Daily lessons of 15 to 20 minutes were recommended.

The objectives of the C.A.R.E. program were to teach a child (1) his/her body belongs to him/her, (2) knowledge of correct names of private parts of the body, (3) differences between caring and uncaring touches, (4) to recognize uncomfortable feelings as a signal that something is wrong, (5) to recognize a situation where an adult may try to trick, bribe, coerce or embarrass a child to inappropriate touching, (6) how to say "NO" assertively, (7) to recognize the difference between good and bad secrets, (8) to be able to tell about sexual abuse to a trusted adult until someone believes him/her.

C.A.R.E. kits for the program contained message cards, discussion cards, and a hand puppet for classroom use. The

kit also contained program evaluation questionnaires for teacher training, parent meetings and classroom presentation.

Kerr-Halls (1986) did a student evaluation immediately after the classroom implementation of the program to see how well the children integrated the information. There was no pretest assessment in the study. The interview questionnaire was administered to a random sampling of 30 students. The control group did not participate in the C.A.R.E. program but received the same questionnaire. The responses were either dichotomous Yes or No answers, or involved a more descriptive statement such as telling about a touch if someone touched his/her private parts. The questionnaire was designed to be given verbally to individual pupils by the classroom teacher.

The evaluation report consisted of bar graphs for each question depicting the percentage of correct responses in the experimental and control groups. There were no statistical analyses. The evaluation indicated that the pupils in the C.A.R.E. program gained sufficient knowledge and awareness, and retained the concepts of personal safety and the prevention of child sexual abuse immediately following the program according to the report. The researcher reported that the responses of the control group tended to be more passive or aggressive while the C.A.R.E. sample students were more assertive in their solutions to

the problems presented (Kerr-Halls, 1986). There was no indication of evaluation of behavioural skills nor of a follow-up assessment of the C.A.R.E. program. In summary, this controlled study lacked statistical analysis. Evaluation focused on information only since no assessment was done of behavioural skills. There was no follow-up or longitudinal assessment of the program.

The Winnipeg School Division No. 1 (1983)

The Winnipeg School Division No. 1 (Madak, Preyma, & Anderson, 1983) initiated a school sexual abuse prevention program with Actors' Showcase Theatre for Young People in Winnipeg. There were parent and teacher workshops, and two presentations given to the students. The program was modelled after the "Feeling Yes, Feeling No: A Child Sexual Abuse Prevention Project" in Vancouver, B.C. (La Torre, 1982). The "Feeling Yes, Feeling No" program was developed by the Green Thumb Theater for Young People and TRACY (Taking Responsible Action for Children and Youth). The theatrical performance informed and educated children about sexual abuse. The adult actors and actresses role modelled potentially abusive interactions between child and adult. There were two one-hour sessions with the performers. These sessions integrated theatrical presentation, discussions and audience participation. The teachers followed up the Actors Showcase presentations with a

variety of activities within their own classrooms. The teachers composed a feeling chart to help children identify feelings; the music teacher taught the students the song "My Body's Mine". The classroom session incorporated more student participation and discussion and was better suited to the smaller groups of 20 to 30 children.

To provide feedback regarding the Personal Safety project, three surveys with open-ended questions were distributed to obtain information regarding the parent workshop, teacher workshop, and the two presentations given to the students. The parents' and teachers' responses to the questions were favourable and supportive of the program. It was suggested by the researchers that there should be a follow-up to the program. This would involve classroom discussion and activities. The teachers suggested the program should be repeated every year or every other year particularly since there was a high migrancy rate at the school.

All data collected were based on subjective judgements. Parents and teachers stated they learned "a lot and felt better able to handle a sexual abuse situation" (Madak, Preyma, & Anderson, 1983, p. 24). In summary, there were no direct assessments of knowledge or behaviour. No control group was included, no pre-post design was utilized to assess the effects of the program, and no statistical analyses were implemented. No follow-up study was

implemented to examine retention of information.

Winnipeg School Division No. 1, (1985)

In 1985, the Winnipeg School Division implemented another project which corrected some of the limitations of the previous study. This study included a pretest and posttest design for student, teacher and parent questionnaires. There were three schools in the experimental group and three schools in the control group. Students at the grade 2, 3 and 5 levels were selected to be included in the study. A random sampling of schools was not possible since the majority of schools already had the programs. Two schools were selected from low, medium, and high socio-economic areas respectively. One school from each of the three categories was randomly assigned as a control school and the other as an experimental school.

The pretest and posttest assessments consisted of two stories which were read to the students by a research assistant. The first story presented to all three grade levels involved a child being approached by a stranger. Grades 2 and 3 heard the same story and grade 5 students listened to a story modified slightly to make it age appropriate. After the class heard the story, ten questions were read to the students. The responses were either "Yes" or "No" and the child was required to circle the appropriate answer. The second story concerned a child

who was tickled by a babysitter. The same story was read to the grade 2, 3 and 5 children. Five questions were asked concerning the child's behaviour and feelings. After the sheets were completed, both stories ended by describing the appropriate behaviours for the children.

The pretest took place two days prior to the teaching of the "Feeling Yes, Feeling No" program and the posttest was administered two days after the program had been completed. The time interval between pretest and posttest was two weeks. Students in the control schools were given the same pre- and post-assessment within a two week period but did not receive the "Feeling Yes, Feeling No" program.

From pretest to posttest, there was an increase in the number of grade 2 students who reported they would tell a trusted adult what happened when approached by a stranger or when tickled by a babysitter. These results were the same for the experimental and control groups. At the posttest, there was an increase in the number of grade 3 students in the experimental group (compared to the control group) who would tell the babysitter "to stop" tickling them. However, more students reported that they would be afraid to say "stop". The results indicated that the grade 5 students were more likely to say "No" and to tell a trusted adult than the grade 2 students.

It is difficult to draw any conclusions about the program effectiveness because there were no statistical

analyses of the student assessment. Questionnaires were given to teachers and parents one week after the program was completed. Staff and parents were given two weeks to complete the questionnaires. The teachers were requested to respond to queries about how many times during the elementary school years (grades 1-6) the children should be presented with the program, and whether they were planning to do any follow-up activities with the students in the classroom that were related to the program.

The open-ended staff questionnaire almost unanimously supported the program (97.9%). The overall return rate of staff questionnaires was 75% with the range from 66.6% to 81%. The teachers felt that the children should be given the program twice during their elementary years. The teachers felt comfortable teaching the program and felt the children benefitted from it. The parent questionnaires (n=188) were sent home with the students and, because there were a number of non-English speaking parents (n=50), the questionnaire was translated into Portuguese and Vietnamese by aides at the school. Overall, 27.1% of the parents returned the questionnaire with the range from 20.8% to 39.2% across grades. The poor parental response was too low to be meaningful.

In summary, the evaluation of this second Winnipeg "Feeling Yes, Feeling No" program had several limitations. First, no statistical analyses were reported. The

researchers presented 45 tables to indicate the percentage of children in the experimental and control groups who answered affirmatively or negatively to 45 dichotomously scored questions. Second, the evaluation examined only immediate effects with no follow-up assessment. Third, the evaluation consisted of only paper and pencil assessments based on the two stories given to the children. There was no assessment of the children's behavioural skills. It was noted that "it is impossible to test the students in order to ascertain if they have learned the behaviour you are trying to teach them. That is, it is unethical to have a stranger, or an adult they know, approach them in an abusive manner in order to test their reactions" (Winnipeg School Board Division, No. 1, 1985, p. 26). However, other research (Ages & Ferguson, 1990; Fryer, Kerns Kraizer, & Miyoshi, 1987) has shown that behavioural skills can be assessed in sexual abuse prevention programs through role play simulation.

A fourth limitation noted in the study was that the control students were given the correct response at the end of the pretest. It was suggested that it was "unethical to leave students without the proper information at the end of the pretest" (Winnipeg School Board Division, No. 1, 1985, p. 26). The researchers note that since the experimental students were to be given the program shortly after the assessment, it was not necessary to give the correct

response to these children. The same evaluation questionnaire was not administered to the experimental and control subjects. Several questions were altered. Any differences between the experimental and control groups may be due to the differences in the questionnaires administered and/or the debriefing of the control group and not the effectiveness of the safety program per se.

Lennox and Addington County Board of Education Sexual
Assault Prevention Pilot Study

In 1984, the National Film Board of Canada developed four educational video tapes based on the original program of "Feeling Yes, Feeling No" which had been performed by the Green Thumb Theatre for Young People in Vancouver, B.C. (see Winnipeg School Board Division No. 1, 1983, 1985). The introductory video used by professionals, teachers, and parents, gave an overview of the nature and scope of child sexual abuse and excerpts from the children's videos. The other three videos were geared to the children. The goals of the program were to teach children to become responsible for their personal safety and to teach skills that would reinforce this goal. One of the objectives of the program was to enable the children to identify and communicate their feelings. There was a discussion of the different kinds of touches between people and the "Yes" and "No" feelings associated with them. The terms "personal

safety" and "personal safety skills" were defined. "What if" situations were presented and the children were asked what they might do if caught in such situations. Children practised communicating their feelings in situations that gave them the "Yes" or "No" feeling. Another objective of the program was to teach children to recognize sexual assault and to assess potentially dangerous situations. A third objective of the program was to help children develop and practise skills in telling someone they need help and to evaluate the kind of help they received. Subsequently several evaluations were done of this program (Lennox & Addington, 1987; Sigurdson, Strang, & Doig, 1986) and these are reviewed below.

The Lennox and Addington County Board of Education in Ontario implemented a Sexual Assault Prevention Pilot Program Study in 1986. The program used the video materials supplied by the National Film Board of Canada, "Feeling Yes, Feeling No". The project was piloted in 26 classrooms across the county. Primarily, Grades 2 and 3 were the target group. The program ran for approximately 3 weeks. Classroom teachers were trained during two professional development days. Parents were provided with orientation evenings. The teachers received handouts and during classroom discussions taught the children (1) personal safety and responsibility for their own health and welfare, (2) to say "No" and "Yes" assertively, (3) who to

go to for help, and (4) how to handle secrets. Teachers were given a questionnaire prior to, during, and after the Pilot Study and student questionnaires were administered prior to and after the Pilot Study. The program questionnaire for the students consisted of nine questions. Most of the questions were followed by the response alternatives "Yes", "No", "Don't Know". The postprogram questionnaire consisted of 13 questions, e.g., Who is a stranger? Is it ever safe to go with a stranger? Should you keep secrets from your parents? If you think the situation is not right, what would you do?

There are several concerns about the student questionnaires. The researchers noted that many children were not familiar with answering multiple choice questions and much time was needed to explain the procedure. Also they may not have understood the questions. This may have interfered with the accuracy of the questionnaire assessment.

Although the children responded more appropriately in the post program questionnaires, no statistical analyses were performed. The evaluation noted that a significant change was arbitrarily determined by noting a 5% or greater improvement per question from pre to post assessment. In summary, there was no control group so changes could not be attributed to the program rather than the assessment. There was no follow-up assessment of information retained

over time. There was no method of determining the children's assertive skills and whether or not they could implement the information obtained. As a result of the Lennox and Addington Board evaluation, it was noted that assertive skill training was to be added to the program (Lennox and Addington County Board of Education, 1986).

Sigurdson, Strang, Doig Evaluation of "Feeling Yes Feeling No" Program

Sigurdson, Strang and Doig (1986) evaluated a group of students' knowledge on sexual assault before they were taught the "Feeling Yes, Feeling No" program. The students participated in the structured-video, classroom preventive program and subsequently a posttest measure of change was taken. The training program took 4 weeks to complete and each class received approximately 9 hours of exercises in the program.

Two classes in each of grades 4, 5, and 6 (ages 9-13) participated in the project. A total of 137 children took part in the evaluation, 73 females and 64 males. A research assistant administered the pretest and posttest assessments and taught the "Feeling Yes, Feeling No" program. The pretest and posttest evaluations consisted of 16 questions pertaining to age, sex, grade, location of home, and family makeup of the participants. Twenty-nine situational/attitudinal questions provided a measure of

knowledge and attitudes related to self-protection. The questions were read aloud to the class by the research assistant and instructions were clarified to ensure the children's comprehension. After reading each question, the children had to circle "Yes" if they got the "Yes" or "Okay" feeling, "No" if they got the "No" or "Not Okay" feeling, or "Don't Know" if they felt confused. Examples and definitions of the "Yes" and "No" feelings were given. The pretest and posttest responses were analyzed using McNemars test (paired X^2) for each set of responses.

Eight of the 29 questions revealed significant change from pre to post assessments ($p < .01$ or $p < .05$). The children were also asked six questions about the program, e.g. (1) Did you like the program? (2) What part did you like the best? (3) What personal safety skills did you learn? etc.

The study indicated that the program was effective "in increasing knowledge and skills central to the prevention of child sexual abuse" (Sigurdson, Strang, & Doig, 1986, p. 8). This conclusion was based only on questionnaire assessment of information and concepts learned by the children. However, verbal responses do not necessarily reflect the occurrence of actual behavioural responses (Stilwell, Lutzer, & Greene, 1988). It is important to know if children have acquired the necessary behavioural skills and if they have retained the information and behavioural skills over time. "Children must be able to

try on techniques, to fit them to their own individual style and abilities. These skills are what children will ultimately use when prevention strategies are needed. Without this practice, children may understand what they should do without being able to actually do it when they need to" (Kerns Kraizer, 1986, p. 12). Training for children which does not include practice, role playing, and feedback is only a conceptual program. Programs which fail to give children opportunities to learn behavioural skills through active role play participation (Kerns Kraizer, 1986) or programs which do not evaluate behavioural skills (Ages & Ferguson, 1990) may fail to teach children the particular skills which have the potential to protect them.

There were a number of children in grade 3 whose answers did not change on the posttest. The authors conclude that some children remained at risk following the program. They suggested that other formats may be more effective with some children.

In summary, although they used a pre-posttest design with statistical comparisons, Sigurdson, Strang, and Doig (1986) did not have a control group. As noted above, there was no measure of behavioural skills per se and no follow-up assessment over time.

Talking about Touching

Talking About Touching, a personal safety curriculum,

was developed in Seattle Washington (Harms & James, 1984). It targeted kindergarten to grade 6 children. The curriculum consisted of four basic units:

- (1) personal safety and decision making
- (2) touching
- (3) assertiveness
- (4) community support systems.

There was a "Take Home Sheet" with each unit to keep parents informed about the progression of the safety program and to encourage family discussion. Each lesson consisted of a photograph with objectives, notes to the teacher, a story and discussion questions. Each lesson had key definitions for teachers to incorporate into their discussions, e.g., child molester - a person who tries to touch children on their private parts or forces children to touch that person's private parts; takes advantage of children like a bully does. Daily lessons required 15-20 minutes to teach and approximately 10-15 days were necessary to complete the program.

Downer (1984) evaluated the "Talking About Touching" program. The pretest and posttest assessments consisted of a 20-item multiple choice questionnaire administered by the classroom teachers. There were 70 subjects in the experimental group and 15 in the control group for the questionnaire. Downer found that there was a significant increase in knowledge of personal safety ($p < .001$) and

problem solving ability ($p < .05$) only. There was no change in the children's comprehension of assertiveness concepts as measured on the questionnaire.

For the behavioural evaluation, Downer utilized puppets and incomplete stories to gather information on the students' knowledge of personal safety, problem-solving ability and assertiveness skills. A pretest and posttest 24-item interview of 20 minutes duration was conducted by trained evaluators with the experimental and control groups. A recorder noted all the verbal comments on a sheet and evaluated the child's assertive skills based on observations. The behavioural evaluations were based on a single observation as the child and interviewer manipulated puppets. Interview teams were unaware of the experimental or control status of each student. The puppet role plays evaluation demonstrated the increase in personal safety knowledge ($p < .01$), assertiveness ($p < .05$), and problem solving ($p < .05$). Downer (1984, p. 67) noted that "assertiveness skills are better tested by means other than pencil and paper knowledge tests....choice items are less effective measures of assertiveness than role play and observation".

In Downer's experimental design, there were several simultaneous demands on the interviewer and recorder during the behavioural evaluation. The interviewer read the script and enacted the role for each interaction with a

student. The recorder noted all the child's verbal comments verbatim. At the same time the recorder and interviewer had to evaluate the child's tone of voice, body language and verbal message on an assertiveness scale. An inter-rater reliability coefficient (.98) was computed for the interview based on scores from three independent judges on ten interviews. But the findings of the three independent judges were based on the efficiency of the recorder to note all verbal comments. The multiple demands on the recorder may have limited his/her ability to adequately assess the child's behavioural assertive skills.

In summary, Downer's study demonstrated improved evaluation design. The pre-post assessment utilized a control group and statistical analysis (t-test, two-way ANOVA) to demonstrate effectiveness of the program. The questionnaire demonstrated significant increase in personal safety information and problem solving ability. The behavioural role play evaluation demonstrated the increase in personal safety, assertiveness and problem solving. The possible limitations of the behavioural assessment have been noted above. There was no follow-up assessment of knowledge or behavioural role play.

Bridgework Theatre's Education for the Prevention of Sexual Abuse Project

Plummer (1984) evaluated a curriculum of Bridgework Theatre's Education for the Prevention of Sexual Abuse Project. The program consisted of 3 hours of instruction over a 3-day period with fifth graders in a small southern Michigan town. The first part of the curriculum, developed by Cordelia Anderson of Illusion Theatre, focused on touch. Discussion of good, bad and confusing touches were introduced. Role plays reinforced the concepts. The second part of the program focused on the fact that anyone could be a victim or offender. Potentially dangerous situations were role played by student volunteers. The third part of the program reviewed the previous two sessions and role plays focused on assertive behaviours.

The evaluation of 69 pupils within the program did not include a control group since schools would not grant access to students without the program. The questionnaire evaluation included a pretest, posttest, 2-month and 8-month follow-up. There was significant increase in the group's information from pretest to posttest ($p < .05$). However, within 8 months and sometimes even 2 months, many of the concepts were forgotten by the fifth graders. This indicated the need to consider ways to help in the retention of information over intervals of time. There appeared to be a need for some kind of sessions to

facilitate or reinstate the information previously learned. In summary, the strength of this study was in its follow-up at 2 and 8 months. While statistical analyses were implemented to demonstrate the efficacy of the program, there was no control group in the experimental design, nor was there an assessment of behavioural skill.

My Very Own Book About Me

Ray (1984) evaluated the effectiveness of My Very Own Book About Me, a child sexual abuse prevention workbook. The workbook introduced the concepts of private parts, and examined good and bad touch. It stressed that children have a right to say "No" to unwanted touch and to report to a trusted adult. The workbook was marketed nationally. Presentations to third graders consisted of the workbook, a slide show about touch, and the movie "Who Do You Tell". Ray employed trained volunteers to teach the program. After the initial presentation, a booster session (review session) was given 2 weeks later. A personal safety questionnaire was completed immediately after the presentation and 4 weeks after the initial presentation. This was a 12-item close-ended questionnaire with "Yes" and "No" responses. Ray found that the intervention was successful in teaching the child abuse prevention concepts ($p < .01$). Furthermore, the booster program demonstrated a significant increase of information ($p < .01$). Those

children who received the booster review learned more than those students who did not. Students retained the concepts for at least a month irrespective of whether or not they received a booster review.

In summary, Ray utilized a control group in her study and used statistical analyses to determine the effects of the booster review. Information only was assessed since there was no behavioural evaluation. A one month follow-up was implemented.

Cook County Child Sexual Abuse Prevention Program

The Cook County Sheriff's Office developed a child sexual abuse prevention program in 1980 for young children (4 and 5 years), school age children (6 to 10 years), and teenagers. Trained deputy sheriffs taught the curriculum. The program taught children personal safety awareness, assertiveness training, and self-protection skills (e.g., where it is safe to walk in the city). The program was presented on 3 consecutive days for 1 hour each day. The terms "OK" and "NOT-OK" touching were used. Children discussed how they feel about being touched. Through role playing, children practiced ways of saying "No" to adults. Conte, Rosen, Saperstein, and Shermack (1985) evaluated this program. The children were randomly assigned to a training and a wait-list control group so that younger children and school age children and male and

female children were equally represented in both the training and wait-listed groups. The major concepts of the evaluation questionnaire included: names for parts of the body, when is it "OK" and "Not OK" to tell a secret, support systems, appropriate responses to abuse (e.g., keep telling until someone believes you), and the differences between affectionate and not affectionate touching. Pretest and posttest interviews were audiotaped to determine inter-interviewer reliability. The results indicated that participation in the training group was successful in increasing children's knowledge about prevention concepts ($p < .01$). Pretest data for both young and school age children showed that prior to training, children knew only about 28% of the concepts and after-training these same children had increased their knowledge and knew slightly more than 50% of the concepts. School-age children (6-10 years) learned more than young children (4 and 5 years). Conte, Rosen, Saperstein, and Shermack (1985) noted that further research was needed to determine the optimal number of sessions, the intersession intervals associated with best retention and the identification of those components which were most critical in increasing children's comprehension of prevention concepts. For instance, young school age children found it easier to learn prevention concepts that were specific and concrete rather than abstract. This finding was further

corroborated in a recent evaluation of a school-based prevention program (Ages & Ferguson, 1990) where the term "confusing touch" was a difficult concept to comprehend for grades 1 and 2. In this study, initially 97% of the children did not know the correct response when asked to name a confusing touch. After the program 44% remained unable to give the "appropriate" response to naming a confusing touch.

In summary, the evaluation of this program utilized a control group and statistical analyses to determine effects of the program. There was no behavioural evaluation of skills. There was no follow-up assessment.

Red Flag, Green Flag Prevention Program Evaluation 1

The efficacy of a commercially available program used by parents to teach their children personal safety skills also has been evaluated (Miltenberger & Thiesse-Duffy, 1988) with 24 children aged 4 to 7 years in a controlled design. The Red Flag, Green Flag Prevention Book (Rape and Abuse Crisis Centre, 1987) is a 28-page coloring book. There are captions that explain the difference between good touch and inappropriate types of touch through pictures and simple descriptions. Ten different potentially dangerous situations that could lead to sexual abuse or abduction are illustrated.

The experimental procedure involved three groups. One

group of children were read the Red Flag Green Flag Prevention Book by their parents on an individual basis. Another group of children were also read the book. However these parents received specific written instructions which emphasized important points to verbally rehearse. The parents were instructed to review each dangerous scene and to have the child state what he/she would do. Parents prompted and praised correct responses. A third group of children were not exposed to the Red Flag Green Flag book.

All children participated in a one-to-one behavioural training program, either following baseline or following training with the prevention book. At each child's home, the experimenter and research assistant instructed the child on the three prevention responses: to say no to the perpetrator, to leave the situation and to tell a parent. Instructions, rehearsal, modeling, feedback and praise were used to teach the children the appropriate responses. If the child did not respond correctly further training was conducted one day to one week later. A 2-month follow-up assessment evaluated the children's responses in a potentially abusive situation. A stranger attempted to bribe the child when he/she was alone (in the yard, in a store, etc.) to leave with him. The child's verbal and motor responses were recorded by the research assistant and a second unobtrusive assistant.

The Red Flag Green Flag Program, when taught by only

parents to 4-7 year olds, did not demonstrate learning in personal safety knowledge and behavioural skills. However, the at home behaviour skills training program with the experimenter did produce an increase in the acquisition of both knowledge and skills. At the 2-month follow-up only, the 6 and 7 year olds achieved the criterion measure in behavioural skills and therefore demonstrated maintenance of skills. The 4 and 5 year olds did not demonstrate this maintenance over the 2 month interval. The researchers concluded that active rehearsal and reinforcement by trained personnel was important.

In summary, the evaluation used a multidimensional assessment with a control group. Information was assessed using pictures and verbal scenarios with responses recorded. The role plays evaluated the children's behavioural responses. Graphs demonstrated the changes in assessment. However, no statistical analyses were indicated. It was suggested by the researchers that a behavioural assessment prior to training with the Red Flag Green Flag Prevention Program would have strengthened the results.

Red Flag, Green Flag Prevention Program Evaluation 2

A school evaluation of the Red Flag/Green Flag People Program was conducted with only grade 3 children, teachers and parents (Kolko, Moser, & Hughes, 1989). There were 296

children from six schools in the training group and 41 children from one school in the control group. This study included an assessment at pre, post and 6-months. The content of the prevention skills training curriculum consisted of the Red Flag/Green Flag Colouring Book and the film "Better Safe Than Sorry II" (Film Fair Communications, 1979). Classroom training was done by a volunteer teacher using the first half of the colouring book. A week later, there was a presentation of the film, discussion of personal experiences and training in prevention skills (say no, get away quickly, tell adult immediately) and instruction on the second half of the colouring book. Post-training assessment was conducted 2 weeks after the training sessions. There were different questionnaires for the children, teachers and parents. The children's knowledge and skill acquisition was assessed using a 25-item questionnaire and four specific questions on inappropriate touching.

According to the researchers, trained children exhibited both short-term gains ($p < .01$ and $p < .05$) and long term gains ($p < .01$ and $p < .05$) in knowledge and skills respectively compared to their control group counterparts. These authors suggested extensive teacher and parent involvement in prevention programs to bolster the long-term effectiveness of instruction.

In summary, program efficacy was statistically

demonstrated in this controlled study of short-term and 6-month gains. The researchers note that the training group reported more correct preventive responses (ie., say "No", leave situation, tell a significant person) to the hypothetical situations in the questionnaires ($p < .05$). However there were no role play evaluations to demonstrate behavioural skills

Children Need to Know Personal Safety Program

The "Children Need to Know Personal Safety Training Program" focused on rules for personal safety to follow when not with caretaking adults. Children were encouraged to meet and interact with strangers when in the presence of caretaking adults. The rules consisted of:

- (1) stay an arm's reach away
- (2) don't talk or answer questions
- (3) don't take anything
- (4) don't go anywhere.

The eight session classroom program provided extensive opportunities for the children to role play.

In an evaluation of the "Children Need to Know Personal Safety Training Program", there were multi-dimensional assessments in this pre-post design (Fryer, Kerns Kraizer, & Miyoshi, 1987a). This evaluation included the observation and measurement of behavioural change of children in simulated situations and the relationship of

the behavioural response with knowledge of prevention and safety and self-esteem.

Forty-four kindergarten, first, and second grade children of a midtown Denver elementary school took part in the study. The experimental group children participated in an 8-day block of child abuse prevention instruction consisting of 20-minute presentations each day. The control group children received no instruction.

The Peabody Picture Vocabulary Test (Dunn & Dunn, 1981), a non-verbal, multiple choice examination was administered before the classes, as a screening device for children with limited expressive vocabulary or for children who were verbally inhibited in a testing environment. The students were administered the Pictorial Scale of Perceived Competence and Acceptance for Young Children (Harter & Pike, 1981) measuring self-esteem, and a 20-item questionnaire on the children's cognitive awareness and understanding of issues.

A simulated situation was enacted in which a research assistant posed as a stranger and met the child in an isolated setting in the school. The research assistant then requested the child's assistance in the performance of a task which entailed their leaving the school building together. "Acquiescence would clearly create the potential for an act of abuse" and these children were considered vulnerable to abuse or "at risk" (Fryer, Kerns Kraizer, &

Miyoshi, 1987a, p. 175). In the pretest scenario, the stranger asked the child to accompany him to his car to help bring treats in for his son's birthday party. In the posttest, the child was asked to bring in puppets to be used in a puppet show. If the child agreed, he/she was told that the stranger would come back later for his/her help. The children were unaware that they were being tested and were not informed after the assessment. Teachers fabricated an excuse to have the child leave the classroom alone and move to the designated area for the meeting with the stranger. Office staff, classroom teachers, and school nurses collaborated to insure that no person was present in the hallway where the simulation occurred.

The criterion of risk to the children's becoming victimized was their compliance or non-compliance with the stranger's request. The prevention program had taught the children the safety rules and not to interact if approached by a stranger when by themselves and not in the presence of a trusted caregiver. There was a hidden camera and wireless microphone for an audiovisual record of the encounter. There was a dichotomous rating of pass or fail based on the children's performance during the simulation. Inter-rater reliability was 1.0. There was no disagreement about any children's expression of willingness to leave the school building with the stranger.

The researchers found significantly fewer children in the experimental group agreed to accompany the stranger as compared to the control group that received no instruction ($p < .05$). For the experimental group the improvement from pretest to posttest simulation was also significant. The researchers also found that pretest scores on each of the tests administered were not predictive of performance in the role play simulation. Thus in the absence of intervention, self-esteem and knowledge of concepts were not useful in determining risk as measured in the response to the simulation. However, among the experimental group members, those who passed the second simulation at posttest scored significantly higher than others in that group on both the self-esteem test and the post-intervention knowledge-attitude test ($p < .05$). It appeared that high-self-esteem was a desirable precondition to the intervention enabling assimilation of the information presented as measured on a knowledge-attitude test and simulated role play assessment.

Six months later, 30 of the 44 children were evaluated again on a simulation task similar to the one 6-months earlier (Fryer, Kerns Kraizer, & Miyoshi, 1987). All of the experimental group children who had performed successfully in the simulation were again successful 6-months later in resisting the invitation of a stranger to leave their school. The authors noted that further

research to assess retention for a period longer than 6-months was warranted. Also, it was noted the children who failed the 6-month post simulation assessment also had failed the earlier simulation. After a second block of instruction of the experimental children as well as the control children, a couple of children still failed the simulation test. The authors noted that there may be a small percentage of children who do not profit even from repeated exposure to prevention programming and individual attention to their specific needs is warranted (Fryer, Kerns Kraizer, & Miyoshi, 1987).

In summary, this study contained a number of improvements over most previous program evaluations. There was a multi-dimensional assessment of information and behavioural skills. Statistical analyses were employed to examine the pretest and posttest results and the differences between the experimental and control groups. However, as noted by the researchers, the number of children in the first study ($n = 44$) and in the 6-month follow-up ($n = 30$) was small. Further research with a larger sample size was suggested.

Ottawa Board of Education Personal Safety Program

The Ottawa Board of Education (1986) designed and implemented a sexual abuse prevention program for children in the primary grades 1 to 4. The program was compatible

with suggested guidelines (Brassard, Tyler, & Kehle, 1983) and was taught by homeroom teachers. Teachers were trained at in-service workshops conducted by the Board's Social Services Department. Parent information sessions were held at each of the schools. The school social worker discussed the meaning of child sexual abuse, the prevalent statistics and the potential consequences of abuse. The personal safety curriculum was presented to the parents. The researcher (S.M.A.) outlined the evaluation of the program.

The personal safety program contained six lessons covering personal safety awareness, strategies and skills to help children recognize and avoid sexual abuse. Each lesson was approximately 30 minutes and group discussions and stories helped the children to practise the skills. Personal safety was the topic of lesson 1. It informed them of their right and responsibility to keep their bodies safe. A review of the human body also was presented. In lesson 2 students learned to identify good, bad, and confusing types of touches and to describe their feelings associated with each kind of touch. Students were given simulated experiences through the use of "trigger" stories. They were also required to describe their own experiences with different types of touches. Lesson 3 focused on sexual assault and the No-Go-Tell safety rule. The concepts of secrets, tricks, and bribery were taught.

Students also learned the meaning of a stranger and were taught when and how to apply the No-Go-Tell safety rule. Lesson 4 focused on how and when to say "No" assertively and how to practise this skill. They also learned safety rules about answering the telephone. Lesson 5 taught the children to tell trusted adults about their touching problems. It focused on how to ask for help and how to know if requests were being answered. It reinforced the importance of telling about touching problems until someone listened. Lesson 6 involved a review of the personal safety rules and skills learned.

An evaluation of the efficacy of this school-based personal safety program (Ages & Ferguson, 1990) included a total of 121 children in grades 1 and 2 in six schools. Sixty-three children participated in the program of six 30-minute lessons. Fifty-eight control children were not knowingly exposed to any parts of the program. A 24-item questionnaire was verbally administered to each child and one-on-one role playing was videotaped to assess factual knowledge and behavioural skills in a pretest and posttest design. Both of the assessments relied on the verbal ability of the children. Language spoken at home was recorded and treated as an independent variable.

The results of the evaluation demonstrated the personal safety program was successful in imparting safety information to the children ($p < .01$). Role playing of

behavioural skills also changed in the expected direction ($p < .05$). There was a significant increase in the assertive skills of the children ($p < .01$). Children whose home language was English scored significantly higher on the questionnaire at both pretest and posttest assessments. Children whose home language was not English showed the same rate of learning from pre-assessment to post-assessment as the children whose home language was English. It was recommended that future personal safety programs must focus on skill acquisition and behavioural assertiveness as well as teaching basic information.

This study contained a number of design improvements over most previous program evaluations. These comprised the inclusion of a control group in a pre-post test design, evaluation of behavioural skills, and appropriate statistics. However, no follow-up assessment was implemented.

Summary of Shortcomings of Child Sexual Abuse Prevention

Program Evaluations

Evaluation of child sexual abuse prevention programs indicates that it is feasible to teach children the relevant information necessary for self-protection. Programs generally focus on instructing children on the proper terminology for their private body parts, the different kinds of touches, sensitivity to their own

feelings, where to go for help and how to ask for help, etc. The literature reviewed here also has emphasized that behavioural skill acquisition is an equally important concept which must be evaluated separately from knowledge acquisition (Ages & Ferguson, 1990; Leventhal, 1987; Miltenberger & Thiesse-Duffy, 1988; Wurtele, Mars-Scott, & Miller-Perrin, 1987).

Behavioural skills training has been demonstrated using role plays to teach preventive responses (Pinder & McNeil, 1987; Downer, 1984; Miltenberger & Thiesse-Duffy, 1988; Plummer, 1984; Saslawsky & Wurtele, 1986; Wurtele, Mars-Scott, & Miller-Perrin, 1987). Videotaped role play (Ages & Ferguson, 1990) and stranger abduction simulations have been developed to evaluate behavioural responses (Fryer, Kerns Kraizer, & Miyoshi, 1978a).

However, the caliber of evaluation research must improve (Fink, 1990; Whisman, 1990). For example, some research lacks control groups (Lennox and Addington County Board of Education, 1987; Sigurdson, Strang, & Doig, 1986; Winnipeg School Board Division, No. 1, 1983). The lack of appropriate comparison groups seriously undermines the internal validity of the conclusions that measured changes (pre vs. post) are specific to the programs themselves.

Evaluation studies have not given much attention to the psychometric properties of their assessment instruments. Future research will have to develop measures of

information and behaviour which have been shown to be reliable across time and examiners.

There is little research on the long-term retention of knowledge and skills acquired in sexual abuse prevention programs. Most programs have focused on information learned upon completion of the program (Ages & Ferguson, 1990; Downer, 1984; Lennox and Addington County Board of Education, 1987; Winnipeg School Division, No. 1, 1983). As noted in Plummer's study (1984) with fifth grade pupils, many concepts were forgotten after 2-months. The Denver study (Fryer, Kerns Kraizer, & Miyoshi, 1987), noted earlier, demonstrated that the children who had resisted the invitation of a stranger to leave the school continued to show this resistance at a 6-month follow-up. There is a need to assess retention over a longer period of time. There is a need to examine what kind of learning sessions are necessary to reinforce or maintain concepts and skills that the program has taught (Ray, 1984).

Some children may not learn the necessary concepts and skills at the initial phase of the program and additional learning or booster sessions are essential if the concepts and skills are to be acquired and understood by the children. For some children, the repetition of the program is essential in order for them to achieve the goals of the program. Thus it has been noted that programs should be designed to monitor performance and to include structured

booster sessions conducted by adults who are part of the child's day-to-day experience (National Committee for Prevention of Child Abuse, 1986). Greater attention to follow-up is warranted if we are to satisfactorily evaluate the durability and usefulness of training programs.

Planning for maintenance in the training and learning program (Rathjen, 1984) will affect the durability of treatment gains (Osberg, 1982). In Gresham's review (Gresham, 1985) of thirty-three studies of children utilizing cognitive behavioural social skills, nineteen studies demonstrated maintenance across time with a median follow-up interval of 4 weeks. Three studies demonstrated maintenance of changes 1 year after termination of the training program (Oden & Asher, 1977; Sarason & Sarason, 1981; Spivack & Shure, 1982). Oden and Asher (1977), in their study of socially isolated third and fourth grade children, found that coaching was effective in increasing peer acceptance even at 1 year follow-up. Sarason and Sarason (1981), in their study of teaching cognitive social skills to low achieving high school students, found lower rates of tardiness and fewer absences and behaviour referrals at 1 year follow-up. Spivack and Shure (1982), in their approach to dealing with interpersonal behaviour problems with children, maintained positive effects in thinking and behaviour 1 year later.

Verduyn, Lord, and Forrest (1990), in their study of

social skills training of 10 to 13 year olds, found booster sessions to promote long term gains at 6-month follow-up. Similar positive effects of booster sessions were found with socially withdrawn elementary school children (Paine et al., 1982) following social skills training.

Thus, long-term maintenance of behaviour changes has been demonstrated in a related area of research, social skill training. It is essential that sexual abuse prevention programs be attentive to the lessons learned regarding durability of effects and appropriate training for maintenance, and incorporate the essential features of such research, e.g., active participation, repeated role playing by the child and implementation of booster programs. Since there are no guidelines in these areas for what is considered "long-term" maintenance, the present study chose the arbitrary intervals of 6 and 12-months as representing "long-term" retention by children in Grade 1.

Present Study

The long-term effectiveness of the Ottawa Board of Education's Personal Safety Program in imparting factual knowledge and behavioural strategies was evaluated. Specifically, the efficacy of booster sessions (review sessions by classroom teachers) was examined as well as the effects of presenting such booster sessions at two intervals at 6 and 12-months. Immediate, 6-month and 12-month follow-up

assessment was implemented in this repeated measures evaluation design.

The initial role plays of the children with a male role player examined whether the behavioural strategies had been learned in the Personal Safety Program. The effects of incorporating child model videotapes and the children's observation and rating of their own videotaped behaviour as a role play intervention was also examined. The effects of the role play intervention on the acquisition of behavioural skills were examined in the second study where one group of children received the role play intervention and another group of children were not exposed to any role play intervention.

Ethical concerns pose a major problem in doing research utilizing simulation techniques. There are risks in a measurement strategy in which children are approached in potentially abuse associated ways to see how they respond. We may be desensitizing "children to the very behaviour most programs seek to sensitize children to" (Conte, 1987, p. 4). To attempt to address such concerns, the following strategy was adopted in the present study. First, in the role play simulation the child was initially and specifically told that it was a pretend situation. Second, during the posttest, 6-month and 12-month videotaped assessments, the children were given immediate visual feedback on a video monitor. Third, they were then shown two child role model videotapes of the same simulation.

In both tapes a same sex child model practised the

"No-Go-Tell" rules of the program in the same simulation. However, in one tape the child model performed assertively (direct eye contact, strong voice, etc.) and in the other tape the child model performed passively (no eye contact, weak voice, fidgety, etc.). Each child was required to state which of these two taped simulations was most similar to his/her own. The appropriate assertive responses were then taught by the experimenter. The experimenter taught and reinforced the "No-Go-Tell" rules and the behavioural skills.

Home language effects were noted by Ages and Ferguson (1990) in their controlled pre-post design (see p. 43). Children whose home language was English scored significantly higher on the questionnaire at both pretest and posttest assessments. However, the children whose home language was not English showed the same rate of learning from pre-assessment to post-assessment as the children whose home language was English. The present study examined the longitudinal effects of the home language variable. In addition, as some children were in the English stream and others in the French immersion program, school language effects were examined.

Generally, the focus of research on learners of non-English backgrounds has centered on their limited English proficiency and has concentrated on children in ESL (English as a second language) classes (Collier, 1987; Swan, 1988).

The focus of such research has been to increase the children's English proficiency so that their grade level norms reach the same level of the children of English speaking home backgrounds (Cray, 1988; Derksen & Goodman, 1988; Sangwine, 1988).

The children of non-English home background in the present study were not in special ESL classes. They were deemed proficient in English and were in regular class programs. Although these language variables have not been studied in similar research, our earlier finding (Ages & Ferguson, 1990) of a home language effect led us to continue to examine possible language effects.

Fryer, Kerns Kraizer, and Miyoshi (1987a) found higher scores on the pretest self-esteem examination and higher scores on the posttest knowledge-attitude examination were predictive of a reduction in vulnerability to abuse and abduction as measured by a refusal to go with a stranger in the simulation. These findings were based on a small number of children ($n = 44$). The present study examined self-esteem and vulnerability to sexual abuse, as measured by the response in a simulated role play, with a larger group of children.

The present research was designed to study and enhance the durability of changes documented in an earlier study (Ages & Ferguson, 1990). The following specific hypotheses are advanced.

(1) The inclusion of booster sessions will produce improved retention of information and behavioural skills. There will be a direct relationship between the amount of booster exposure and retention.

(2) The inclusion of a role play intervention where children observe and rate their own role plays and observe videotaped role model children will produce improved behavioural skills.

(3) Self-esteem will be an important variable in predicting the acquisition of desired behavioural skills.

(4) Children whose home language (first language) is other than English will have lower levels of initial knowledge and more difficulty acquiring the information in the program.

EXPERIMENT I

Method

Subjects

Initially, a total of 139 children in grade 1 from four elementary schools in the Ottawa Board of Education, were the subjects in this repeated measures evaluation study. The children were 6 or 7 years of age. Due to students moving or because of missing data, 116 children were included in the 12-month study. There were 66 females and 50 males. Parental consents were obtained for the children to participate in the research (see Appendix A). There were no exclusionary criteria. However, children who did not have parental permission were not included in the study. The nine classes of children were randomly divided into four groups with approximately 28-31 children in each group. Class units were not divided between groups.

Procedure

All children in the four groups received individual pre-program assessments which consisted of three components: (1) the personal safety questionnaire (see Appendix B); (2) a simulated role play and behavioural skill evaluation (see Appendix D); and (3) the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981) (see Appendix G).

The Ottawa Board Personal Safety Program of six 30-minute lessons was taught to all the children by their

classroom teachers (see p. 41). This program was completed within a 6-8 week interval. The children received the post-program assessment after the Personal Safety Program was taught. The individual posttest assessment included (1) the personal safety questionnaire; (2) a second simulated role play and behavioural skill evaluation. The 6-month assessment consisted of (1) the personal safety questionnaire; (2) a third simulated role play and behavioural skill evaluation. The 12-month assessment included (1) the personal safety questionnaire, (2) a fourth simulated role play and behavioural skill evaluation; and (3) the Pictorial Scale of Perceived Competence and Acceptance of Young Children (Harter & Pike, 1981) (see Figure 1). At all postprogram assessments

Insert Figure 1 about here

(posttest, 6-month posttest, and 12-month posttest), videotaped feedback was demonstrated to the children after the role play and behavioural skill evaluation as part of a role play intervention.

In the role play simulation the child was initially and specifically told that it was a pretend situation. The adult male pretended to be a friend of the child's family and to be a visitor at his/her house. The child and adult played a game. The game changed in each of the simulations

Figure 1. Research Design for Experiment 1

	Group 1	Group 2	Group 3	Group 4
Pre-program assessment	X	X	X	X
Personal Safety Program	X	X	X	X
Post-program assessment	X	X	X	X
6th Month Booster			X	
6th Month Assessment	X		X	X
12th Month Booster			X	X
12th Month Assessment	X	X	X	X

over the 4 assessment times. The children played Snakes and Ladders at pre-assessment, Checkers at post-assessment, Connect Four at 6-month assessment and Visual Memory at 12-month assessment. For example, the purpose of the visual memory game was to match two pictures that were alike. However, there was a special rule to the game in the role play simulation. The child was required to take off his/her shirt when they had matched two pictures. At the end of the simulation, the adult asked the child if he/she would keep the rules of the game a secret. A similar procedure was followed in the other three games.

The simulated behavioural assessment was followed (at posttest, 6-months, and 12-months) by a role play intervention. The video camera recorded the role play simulation, then each child's taped role play was replayed for himself/herself. Two role model video tapes of the same role play simulation with a same sex child model were shown to each child. These were two minute tapes which depicted a male adult playing the same game (e.g., Snakes and Ladders, Checkers) with a child model. One role model videotape displayed a child model demonstrating assertive behavioural skills - Saying "No" using a strong audible voice, standing up and stating he/she would tell someone about the funny rules to the game. The child model behaved self-confidently with his/her head up and maintained eye contact with the male role player. The other role model

videotape was of a same sex child model who displayed passive behavioural skills - saying "No" meekly, having no eye contact with the male role player, and displaying fidgety behaviour. After seeing both role model tapes, the child participating in the experiment had to state which role play response was more like his/her own performance (see Appendix F). The experimenter recorded either the assertive role play response, the passive role play response, or whether the child stated "I don't know". The experimenter and male role player directly coached each child on the "No-Go-Tell" rules and the assertive behavioural skills (direct eye contact, strong audible voice, etc.). The children were able to ask any questions about the program and the role playing. They were reminded that it was a pretend situation and that they were practising what to do if in a difficult situation.

The role play simulation had to be carefully orchestrated because we did not want to reinforce behaviours that were inappropriate. First, as mentioned above, the child was informed that it was a pretend situation. Second, in each role play simulation, although the child was coaxed to remove his/her shirt, the child was not able to follow through with this activity. Because of ethical concerns, if the child attempted to remove his/her shirt, he/she was told, "I can see you are going to remove your shirt, but I don't want you to do that".

The booster program was designed to review the concepts taught in the Personal Safety Program. It consisted of four lessons. The classroom teacher reviewed the parts of the body, the concepts of touching and feeling, the No-Go-Tell rule, "what if" situations, telling the children role played their responses, and were encouraged to behave assertively.

Design

The design of the study was a between-group repeated measures evaluation design. In addition to the pretest and posttest evaluations noted above, Group 1 received a 6-month posttest evaluation of information, role play, and behavioural skills and a similar evaluation at 12-months. Group 2 received a 12-month posttest evaluation of information, role play and behavioural skills. Group 3 received 6-month and 12-month booster programs and 6-month and 12-month posttest evaluations of information, role play, and behavioural skills. Group 4 received a 6-month posttest evaluation, a 12-month booster program and a 12-month posttest evaluation (see Figure 1 for design schematic).

There were several contrast groups to test the first hypothesis which stated that the inclusion of booster sessions will produce improved retention of information and behavioural skills and that there will be a direct relationship between the amount of booster exposure and

retention. To control for one booster at 6-months, Groups 1, 4 were contrasted with Group 3 at the 6-month assessment. To control for one booster at 12-months, Group 1 was contrasted with Group 4 at the 12-month assessment. To control for the two boosters at 6-months and 12-months, Group 1 was contrasted with Group 3 at the 12-month assessment. To test the effects of two boosters vs. one booster, Group 3 was contrasted with Group 4.

Instruments

A 24-item questionnaire (Ages & Ferguson, 1990) (see Appendix B) was developed by evaluating the responses of teachers to a list of potentially suitable questions to determine what the children had learned in the Personal Safety Program. The pool of questions was derived from a number of previous studies and from original questions designed to assess specific components of the Ottawa Board of Education program. A primary education consultant at the Ottawa Board of Education provided further advice on the comprehensibility of the questions to primary school children. The questions focused on items taught in the Personal Safety Program (eg., What would you do if a friendly person asked you to go in their car with you? What do you do if an adult is touching you and you do not like it?). Individual items were scored from 1 to 4 points, depending on the complexity of the answer (see Appendix C). The questionnaire had a maximum score of 50 points.

To test for internal consistency of the questionnaire, Cronbach's Alpha was performed on the questionnaire data gathered from an earlier study (Ages & Ferguson, 1990). Because the control group was not taught the Personal Safety Program, data from the questionnaires at pretest and posttest were analyzed. Cronbach's Alpha indicated consistent standardized alpha results at pretest and posttest respectively (alpha pre = .80; alpha post = .81). A Pearson Product Moment Correlation between pretest and posttest scores yielded $r = .78$ ($p = .000$), an acceptable level of test-retest reliability.

At each assessment session, individual children were videotaped during a role play simulation (see Appendix D). A set script was followed (see Appendix E). There were four assessment scores of the videotaped role playing. Assessment #1: The researcher's evaluation of the role play response per se (ie., attempts to take off shirt spontaneously - 0 points; attempts to take off shirt with coaxing - 1 point; does not attempt to take off shirt - 2 points); Assessment #2: The researcher's qualitative evaluation of role play behaviour (referred to as behavioural evaluation). There was 1 point designated for each of the following - says "No" firmly, ignores pressure to conform, uses a strong audible voice, appears self-assured and self-confident. Assessment #3: The child's response to the question of whether or not they would keep

the rules of the game a secret. If child stated he/she would tell the secret of the rules, he/she received 1 point; if the child would give no response or keep the rules a secret 0 points were designated. Assessment #4: The child's own evaluation of their videotaped response. After each simulation role play at posttest, 6-months, and 12-months, the child was required to state which child model videotape on the television monitor was most like his/hers (2 points for the assertive evaluation and 1 point for the passive evaluation, and 0 points if the child did not know (see Appendix F). This evaluation tested the accuracy of his/her correctly identifying his/her own response.

No test-retest data exists to examine the reliability of the role play assessment. The role play of the previous study (Ages & Ferguson, 1990) was somewhat different and therefore its test-retest data would not be appropriate. In the present study there was no control group without intervention to assess the reliability per se.

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981) was individually administered at the pre-program and 12-month assessment (see Appendix G). Cronbach's Alpha, an index of internal consistency, was .87 (Harter & Pike, 1984). This 24-item pictorial questionnaire contained four subscales. The first subscale examined the child's self-perception of

cognitive competence - "good at numbers, knows a lot in school, can read alone, can write words, good at spelling, good at adding". The second subscale examined the child's self-perception of physical competence - "good at singing, good at climbing, good at bouncing ball, good at skipping, good at running, good at jump rope". The third subscale examined the child's self-perception of peer acceptance - "has lots of friends, others share their toys, has friends to play with, has friends on playground, gets asked to play with others, others sit next to you". The fourth subscale examined the child's self-perception of maternal acceptance - "mom lets you eat at friends, mom takes you places you like, mom cooks favourite foods, mom reads to you, mom plays with you, and mom talks to you".

Inter-rater Reliability

Inter-rater reliability was examined at pretest, posttest, 6-months and 12-months. The questionnaires and videotaped role plays were assessed by an evaluator blind to group membership.

Results

Four-way analyses of variance (using the Repeated Measures Manova Design in SPSSX) were employed to analyze the between and within subject variables. The between subject variables were (1) primary language spoken at home - English vs. any other language - (Home Language), (2)

primary language spoken in the school classroom - English vs. French - (School Language), and (3) experimental treatment group - Groups 1 to 4 - (Groups), (4) gender of each subject - female vs. male - (Gender). The within subject variable was measurement time - pre, post, 6-months, and 12-months - (Times). The dependent variables were (1) the score on the 24-item questionnaire, (2) the response measure from the videotaped role play, (3) the score from the behavioural evaluation of the role play, (4) the self-evaluation on the videotaped role play, and (5) the four subscale esteem scores on the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981). Separate analyses using repeated measures Anovas were done for each of these dependent variables. A multivariate Manova was used for the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981).

The design of this study necessitated the use of an unusual strategy to test all the effects while interpreting the minimum number of significant tests. Treatment Groups 1, 3 and 4 were assessed at pre-program, post-program, 6-months, and 12-months. Treatment Group 2 was assessed at only three intervals - pre-program, post-program and 12-months (see Figure 1). Since this experiment focused on Group effects across Time, two four-way analyses of variance were employed to examine the four Treatment Groups

and the four assessment Times.

Analysis A compared all Groups (1, 2, 3, 4) across three Times (pre, post 12-months). Analysis B compared three Groups (1, 3, 4) across four Times (pre, post, 6-months, 12-months). Separate analyses were done for the between subject variables of Home Language and School Language. Where effects were the same in both analyses, only Analysis A was interpreted. Analysis B was interpreted if effects were significant only in this analysis.

Questionnaire Data

The 24-item questionnaire was scored out of 50 points (see Appendix B). The minimum and maximum scores obtained were 3 and 50 points respectively.

Home Language

There was a significant Home Language x Times interaction ($p < .01$) (see Table 1). Simple effects analyses indicated that at pre-assessment there was a

Insert Table 1 about here

significant difference between the mean score on the questionnaire for children who spoke English at home ($M = 20.65$, $SD = 6.38$) and those that spoke another language at home ($M = 14.00$, $SD = 5.02$) ($p < .001$) (see Table 2 and Figure 2). There were no significant differences in the

Table 1. Anova Table for Effects of Home Language, Treatment Groups, Gender, and Times for the Questionnaire Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
Home Language	1	9.78	.001**	1	6.81	.011*
Treatment Groups	3	7.63	.000***	2	11.29	.000***
Gender	1	.12	N.S.	1	.02	N.S.
Home Language x Treatment						
Groups	3	0.41	N.S.	2	0.17	N.S.
Home Language x Gender	1	.22	N.S.	1	.00	N.S.
Treatment Groups x Gender	3	.27	N.S.	2	.57	N.S.
Home Language x Treatment						
Groups x Gender	3	1.24	N.S.	2	2.13	N.S.
Error Term	100			75		
Times	2	474.78	.000***	3	325.96	.000***
Home Language x Times	2	5.05	.007**	3	4.32	.006**
Treatment Groups x Times	6	13.23	.000***	6	15.91	.000***
Gender x Times	2	1.42	N.S.	3	1.26	N.S.
Home Language x Treatment						
Groups x Times	6	1.20	N.S.	6	1.76	N.S.
Home Language x Gender						
x Times	2	1.01	N.S.	3	.49	N.S.
Treatment Groups x Gender						
x Times	6	.43	N.S.	6	.98	N.S.
Home Language x Treatment						
Groups x Gender x Times	6	.83	N.S.	6	.91	N.S.
Error Term	200			225		

* $p < .05$; ** $p < .01$; *** $p < .001$

questionnaire means between these two groups at the post-test, 6-month or 12-month assessments although the mean scores were greater for the children who spoke English at home than for the children who spoke another language at

Insert Table 2 and Figure 2 about here

home. Simple effects analyses also indicated that for the children who spoke English at home, there was a significant difference on the questionnaire scores across times ($p < .001$). Similarly, the children who spoke another language at home displayed significant differences on the questionnaire scores across times ($p < .001$). These differences reflect the significant training effects of the Personal Safety Program.

There was a significant Treatment Groups x Times interaction ($p < .001$) (see Table 1). Simple effects analyses for Analysis B only (Groups 1, 3 and 4) indicated that at post assessment there was a significant difference between treatment groups ($p < .05$) (see Table 3). Both Groups 3 ($M = 39.07$, $SD = 5.85$) and 4 ($M = 39.86$, $SD = 5.14$) had significantly greater values than Group 1 ($M = 35.75$, $SD = 7.87$). However, there were no significant differences for Analysis A (Groups 1, 2, 3, 4) at post assessment.

Insert Table 3 about here

Simple effects analysis for Analysis B indicated that at the

Table 2. Simple Effects Analysis for Home Language x Times Interaction for the Questionnaire Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
Home Language at Pre-						
assessment	1	20.85	.000***	1	15.09	.000***
Home Language at Post-						
assessment	1	0.96	N.S.	1	0.22	N.S.
Error Term	114			85		
Home Language at 6 month						
assessment				1	3.03	N.S.
Error Term				86		
Home Language at 12 month						
assessment	1	1.92	N.S.	1	1.52	N.S.
Error Term	114			85		
Times at English Home						
Language	2	458.62	.000***	3	280.57	.000***
Error Term	186			204		
Times at Other Home						
Language	2	122.53	.000***	3	74.63	.000***
Error Term	42			51		

* p < .05

** p < .01

***p < .001

Figure 2. Home language X Times Interaction for Questionnaire Data

Table 3. Simple Effects Analysis for Treatment Groups x Times Interaction for the Questionnaire Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
Treatment Groups at Pre-						
assessment Times	3	1.65	N.S.	2	1.28	N.S.
Treatment Groups at Post	3	2.43	N.S.	2	3.30	.04*
Error Term	112			84		
Treatment Groups at 6						
months				2	27.00	.000***
Error Term				84		
Treatment Groups at 12						
months	3	49.33	.000***	2	56.93	.000***
Error Term	112			84		
Times at Treatment						
Group 1	3	91.31	.000***	3	91.31	.000***
Error Term	81					
Times at Treatment						
Group 2	2	257.16	.000***			
Error Term	56					
Times at Treatment						
Group 3	3	255.22	.000***	3	255.22	.000***
Error Term	90					
Times at Treatment						
Group 4	3	164.07	.000***	3	164.07	.000***
Error Term	81					

* $p < .05$; ** $p < .01$; *** $p < .001$

6-month assessment, there was a significant difference between the means of Group 1 ($\bar{M} = 31.68$, $SD = 7.64$), Group 3 ($\bar{M} = 43.26$, $SD = 4.73$) and Group 4 ($\bar{M} = 36.00$, $SD = 5.81$, $p < .001$) (see Figure 3).

Insert Figure 3 about here

A Newman-Keuls analysis at the 6-month assessment revealed that the mean for Group 3 was significantly greater than the means of Groups 1 and 4 ($p < .05$). As well, the mean for Group 4 was significantly larger than the mean for Group 1 ($p < .05$). Group 3 received booster training prior to the 6-month assessment. It appears that this booster was successful in significantly increasing the questionnaire scores. Thus, the information retained by these children, at the 6-month assessment, was significantly greater than for the children in Groups 1 and 4 who did not receive any "booster" training. These results demonstrated significant booster effects.

Simple effects analysis for Analysis A also revealed that at the 12-month assessment, there was a significant difference on the questionnaire scores between the four groups ($p < .001$). A Newman-Keuls analysis revealed that

Insert Figure 4 about here

Group 3 ($\bar{M} = 45.65$, $SD = 3.16$) differed significantly from Group 1 ($\bar{M} = 32.36$, $SD = 6.65$), Group 2 ($\bar{M} = 32.59$, $SD =$

Figure 3. Treatment Groups X Times Interaction for Questionnaire Data

Figure 4. School Language X Times Interaction for Questionnaire Data

5.99), and Group 4 ($M = 42.00$, $SD = 4.41$) ($p < .05$) respectively. Since Group 3 had received boosters at 6-months and at 12-months prior to their assessments, these children retained more information on the Personal Safety Program than the children who had not been exposed to the information for 12-months (Group 2). Group 3 performed better than those children who were only assessed at 6-months (Group 1) and received no booster. Group 3 did better than the children who had received booster sessions only prior to the 12-month assessment (Group 4). Group 4 performed significantly better than Groups 1 and 2 ($p < .05$) respectively. Simple effects analyses indicated that there was a significant difference across times for Groups 1, 2, 3, 4 ($p < .001$) respectively.

There were significant main effects for Home Language ($p < .01$), Treatment Groups ($p < .001$), and Times ($p < .001$) respectively. Since there were significant two-way interactions between Home Language and Times, and between Treatment Groups and Times, the main effects were not interpreted.

School Language

There was a significant Treatment Groups x Times interaction ($p < .001$) (see Table 4). Simple effects

Insert Table 4 about here

analyses were the same as described above (see p. 66).

Table 4. Anova Table for Effects of School Language, Treatment Groups, Gender, and Times for the Questionnaire Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
School Language	1	.22	N.S.	1	0.07	N.S.
Treatment Groups	3	6.16	.000***	2	10.63	.000***
Gender	1	2.96	N.S.	1	1.36	N.S.
School Language x						
Treatment Groups	1	.21	N.S.	0	-	-
School Language x Gender	1	3.42	N.S.	1	2.32	N.S.
Treatment Groups x Gender	3	1.67	N.S.	2	.33	N.S.
School Language x Treatment						
Groups x Gender	1	3.04	N.S.	0	-	-
Error Term	104			79		
Times	2	189.49	.000***	3	182.33	.000***
School Language x Times	2	0.46	N.S.	3	3.50	.016*
Treatment Groups x Times	6	10.83	.000***	6	14.89	.000***
Gender x Times	2	1.00	N.S.	3	.17	N.S.
School Language x Treatment						
Groups x Times	2	0.62	N.S.	0	-	-
School Language x Gender						
x Times	2	0.28	N.S.	3	1.30	N.S.
Treatment Groups x Gender						
x Times	6	0.60	N.S.	6	.86	N.S.
School Language x Treatment						
Groups x Gender x Times	2	0.94	N.S.	0	-	-
Error Term	208			237		

* $p < .05$; ** $p < .01$; *** $p < .001$

Analysis B indicated a significant School Language x Times interaction ($p < .05$) (see Table 4). Simple effects at each of the four assessment intervals revealed that at post assessment, English ($M = 39.20$, $SD = 5.44$), French ($M = 33.73$, $SD = 9.29$) ($p < .01$), at 6-months, English ($M = 38.13$, $SD = 7.40$), French ($M = 32.73$, $SD = 8.22$) ($p < .01$), and at 12-months English ($M = 41.81$, $SD = 6.50$), French ($M = 32.47$, $SD = 6.89$) ($p < .001$), the means for the English stream children were significantly higher than the means for the French stream children (see Table 5 and Figure 5).

Insert Table 5 and Figure 5 about here

Simple effects revealed that for the English stream children and for the French stream children there were significant changes across times ($p < .001$).

There were significant main effects for Treatment Groups and Times ($p < .001$) respectively. However, because there were significant interactions, the main effects were not interpreted.

No significant gender effects were found in the questionnaire data.

Role Play Data

The videotaped role play which displayed the child's interaction with the male actor was scored 0, 1 or 2 points. The minimum score obtained was 0 points and the maximum was 2 points. The children received 2 points if they did not

Table 5. Simple Effects Analysis for School Language x Times Interaction for the Questionnaire Data

Source of Variation	Analysis B		
	df	F	P
School Language at Pre-assessment Time	1	0.46	N.S.
School Language at Post-assessment Time	1	9.52	.003**
Error Term	85		
School Language at 6-months	1	6.35	.01**
Error Term	85		
School Language at 12-months	1	25.11	.000***
Error Term	85		
Times at English School Language	3	322.14	.000***
Error Term	213		
Times at French School Language	3	44.77	.000***
Error Term	42		

*** p < .05**

**** p < .01**

*****p < .001**

Figure 5. Home Language X Times Interaction for Role Play Data

attempt to take off their shirt; they received 1 point if they attempted to take off their shirt after being coaxed by the male actor; they received 0 points if they spontaneously attempted to take off their shirt (see Appendix D). At no time were the children permitted to remove their shirts. As noted earlier in the method section, this would only reinforce behaviour contrary to the program values.

Home Language

There was a significant Home Language x Times interaction ($p < .05$) (see Table 6). Simple effects indicated that at

Insert Table 6 about here

the pre-assessment, the children who spoke English at home ($M = 1.20$, $SD = .90$) tended to perform better on the role play than the children who spoke another language at home ($M = .67$, $SD = .77$, $p < .05$) (see Table 7). After the Personal

Insert Table 7 about here

Safety Program, both the children who spoke English at home and the children who spoke another language at home, improved their role playing such that at the 12-month assessment, the means of the two groups were identical (see Figure 6). Simple effects indicated a significant improvement in role play

Insert Figure 6 about here

across times for children who spoke English at home and for

Table 6. Anova Table for Effects of Home Language, Treatment Groups, Gender, and Times for the Role Play Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
Home Language	1	5.39	.023*	1	5.38	.024*
Treatment Groups	3	1.59	N.S.	2	1.74	N.S.
Gender	1	1.25	N.S.	1	3.41	N.S.
Home Language x Treatment						
Groups	3	1.14	N.S.	2	1.87	N.S.
Home Language x Gender	1	0.50	N.S.	1	0.25	N.S.
Treatment Groups x Gender	3	0.48	N.S.	2	1.79	N.S.
Home Language x Treatment						
Groups x Gender	3	1.76	N.S.	2	3.98	N.S.
Error Term	136			155		
Times	2	50.39	.000***	3	20.89	.000***
Home Language x Times	2	2.93	.05	3	1.13	N.S.
Treatment Groups x Times	6	1.28	N.S.	6	.82	N.S.
Gender x Times	2	2.28	N.S.	3	.92	.433
Home Language x Treatment						
Group x Times	6	0.62	N.S.	6	0.97	N.S.
Home Language x Gender						
x Times	2	0.21	N.S.	3	0.73	N.S.
Treatment Groups x Gender						
x Times	6	0.54	N.S.	6	0.77	N.S.
Home Language x Treatment						
Groups x Gender x Times	6	1.18	N.S.	6	1.96	N.S.
Error Term	136			168		

* $p < .05$; ** $p < .01$; *** $p < .001$

2

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS
STANDARD REFERENCE MATERIAL 1010a
(ANSI and ISO TEST CHART No. 2)

Table 7. Simple Effects Analysis for Home Language x Times Interaction for the Role Play Data

Source of Variation	Analysis A		
	df	F	P
Home Language at Pre-assessment	1	5.22	.03*
Error Term	82		
Home Language at Post-assessment	1	3.05	N.S.
Error Term	82		
Home Language at 12-months	1		
Error Term	82		
Times at English Home Language	2	36.76	.000***
Error Term	130		
Times at Other Home Language	2	23.80	.000***
Error Term			

* p < .05

** p < .01

***p < .001

Figure 6. School Language X Times for Role Play Data

children who spoke another language at home ($p < .001$).

There were significant main effects for Home Language and Times ($p < .05$ and $p < .001$) respectively (see Table 6). However, because there were significant interactions the main effects were not interpreted.

School Language

There was a significant School Language x Times interaction (Analysis A, $p < .05$) (see Table 8). Simple

Insert Table 8 about here

effects indicated that for both English and French stream children, there were significant changes across times ($p < .001$ and $p < .05$) respectively (see Table 9 and Figure 7).

Insert Table 9 and Figure 7 about here

The difference between English and French streams approached significance ($p = .08$) at the pre-assessment but not at post or 12-months which probably accounts for the significant interaction. There were no other significant simple effects. There was a significant main effect for Times ($p < .001$) (see Table 8). However because there was a significant interaction, the main effect was not interpreted.

No significant gender effects were found in the role play data.

Table 8. Anova Table for Effects of School Language, Treatment Groups, Gender, and Times for the Role Play Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
School Language	1	0.67	N.S.	1	0.37	N.S.
Treatment Groups	3	0.79	N.S.	2	0.97	N.S.
Gender	1	0.50	N.S.	1	0.01	N.S.
School Language x						
Treatment Groups	1	0.19	N.S.	0	-	-
School Language x Gender	1	0.01	N.S.	1	1.18	N.S.
Treatment Groups x Gender	3	0.13	N.S.	2	0.95	N.S.
School Language x Treatment						
Groups x Gender	1	0.19	N.S.	0	-	-
Error Term	72			56		
Times	2	4.69	.001***	3	6.45	.000***
School Language x Times	2	3.49	.033*	3	0.24	N.S.
Treatment Groups x Times	6	1.12	N.S.	6	0.56	N.S.
Gender x Times	2	0.35	N.S.	3	0.91	N.S.
School Language x Treatment						
Groups x Times	2	0.09	N.S.	0	-	-
School Language x Gender						
x Times	2	0.00	N.S.	3	0.73	N.S.
Treatment Groups x Gender						
x Times	6	0.47	N.S.	6	0.84	N.S.
School Language x Treatment						
Groups x Gender x Times	2	0.28	N.S.	0	-	-
Error Term	156			168		

* $p < .05$; ** $p < .01$; *** $p < .001$

**Table 9. Simple Effects Analysis for School Language x
Times Interaction for the Role Play Data**

Source of Variation	Analysis A		
	df	F	P
School Language at Pre-assessment	1	3.18	N.S.
Error Term	82		
School Language at Post-assessment	1	0.006	N.S.
Error Term	82		
School Language at 12 months	1	-	
Error Term	82		
Times at English School Language	2	58.96	.000***
Error Term	134		
Times at French School Language	2	3.33	.05*
Error Term	30		

* $p < .05$

** $p < .01$

*** $p < .001$

Figure 7. Home Language X Times Interaction for Behaviour Evaluation Data

Behaviour Evaluation Data

The behaviour evaluation of the role playing was scored out of 4 points. The minimum and maximum scores obtained were 0 and 4 respectively. Individual points were designated if the child said No (1 point), if the child used a strong audible voice (1 point), if the child ignored pressures to conform (1 point) and if the child appeared self-assured and self-confident...head erect, eye contact, etc., no fidgety behaviour (1 point) (see Appendix D).

Home Language

There was a significant Home Language x Times interaction ($p < .05$) (see Table 10). Simple effects

Insert Table 10 about here

revealed that at pre-assessment the children who spoke English at home ($M = 2.40$, $SD = 1.24$) performed more assertively than the children who spoke another language at home ($M = 1.74$, $SD = .87$) ($p < .05$) but there were no differences at other intervals (see Table 11 and Figure 8).

Insert Table 11 and Figure 8 about here

Simple effects revealed that for the children who spoke English at home and for the children who spoke another language at home, there were significant changes across times ($p < .001$) respectively. The children increased their learning of assertive skills across times.

Table 10. Anova Table for Effects of Home Language, Treatment Groups, Gender, and Times for the Behaviour Evaluation Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
Home Language	1	0.29	N.S.	1	1.10	N.S.
Treatment Groups	3	0.14	N.S.	2	0.20	N.S.
Gender	1	0.74	N.S.	1	0.01	N.S.
Home Language x Treatment						
Groups	3	0.12	N.S.	2	0.08	N.S.
Home Language x Gender	1	0.20	N.S.	1	0.04	N.S.
Treatment Groups x Gender	3	0.46	N.S.	2	0.61	N.S.
Home Language x Treatment						
Groups x Gender	3	0.38	N.S.	2	0.63	N.S.
Error Term	69			52		
Times	2	32.33	.000***	3	26.60	.000***
Home Language x Times	2	4.19	.017*	3	1.81	N.S.
Treatment Groups x Times	6	0.68	N.S.	6	0.37	N.S.
Gender x Times	2	0.44	N.S.	3	0.58	N.S.
Home Language x Treatment						
Group x Times	6	0.48	N.S.	6	0.72	N.S.
Home Language x Gender						
x Times	2	0.49	N.S.	3	0.23	N.S.
Treatment Group x Gender						
x Times	6	0.27	N.S.	6	1.35	N.S.
Home Language x Treatment						
Groups x Gender x Times	6	0.62	N.S.	6	1.65	N.S.
Error Term	154			174		

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 11. Simple Effects Analysis for Home Language x Times Interaction for the Behaviour Evaluation Data

Source of Variation	Analysis A		
	df	F	P
Home Language at Pre-assessment	1	4.66	.03*
Error Term	83		
Home Language at Post-assessment	1	0.82	N.S.
Error Term	83		
Home Language at 6 months			
Error Term			
Home Language at 12 months	1	2.46	N.S.
Error Term	83		
Times at English Home Language	2	28.92	.000***
Error Term	130		
Times at Other Home Language	2	23.81	.000***
Error Term	36		

* $p < .05$

** $p < .01$

*** $p < .001$

Figure 8. Esteem X Times Interaction for Self Esteem Data

There was a significant main effect for Times ($p < .001$). However, because there was a significant interaction, the main effect for Times was not interpreted.

School Language

There was a significant main effect for Times ($p < .001$) (see Table 12). Special contrast analyses revealed

Insert Table 12 about here

significant differences between several assessment times (see Table 13). Pre-assessment was significantly different

Insert Table 13 about here

from post-assessment, 6-month assessment and 12-month assessments ($p < .001$) respectively. The post-assessment was significantly different from 12-month assessment ($p < .001$). The 6-month assessment was significantly different from the 12-month assessment ($p < .05$). The children increased their assertive skills across times (see Table 13).

No significant gender effects were found in the behaviour evaluation data.

Keep the Secret Data

At the conclusion of the videotaped role play, the male role player asked each child if he/she would keep the rules of the game a secret and not to tell anyone. The child's

Table 12. Anova Table for the Effects of School Language, Treatment Groups, Gender, and Times for the Behaviour Evaluation Data

Source of Variation	Analysis A			Analysis B		
	df	F	P	df	F	P
School Language	1	0.34	N.S.	1	0.09	N.S.
Treatment Groups	3	0.33	N.S.	2	0.08	N.S.
Gender	1	0.05	N.S.	1	3.37	N.S.
School Language x Treatment						
Groups	1	0.25	N.S.	0	-	-
School Language x Gender	1	0.02	N.S.	1	2.01	N.S.
Treatment Groups x Gender	3	0.67	N.S.	2	1.80	N.S.
School Language x Treatment						
Groups x Gender	1	0.86	N.S.	0	-	-
Error Term	73			56		
Times	2	11.66	.000***	3	9.46	.000***
School Language x Times	2	0.54	N.S.	3	0.54	N.S.
Treatment Groups x Times	6	0.91	N.S.	6	0.32	N.S.
Gender x Times	2	2.01	N.S.	3	0.39	N.S.
School Language x Treatment						
Group x Times	2	0.73	N.S.	0	-	-
School Language x Gender						
x Times	2	2.09	N.S.	3	0.57	N.S.
Treatment Groups x Gender						
x Times	6	0.66	N.S.	6	0.65	N.S.
School Language x Treatment						
Groups x Gender x Times	2	0.26	N.S.	0	-	-
Error Term	146			168		

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 13. Composite Table of Anova Results for Contrasts of Behaviour Evaluation Data

	Pre	Post	6 Month	12 Month
Pre		42.07	36.16	88.85
		.000	.000	.000
		***	***	***
Post			1.26	16.75
			.266	.000
			N.S.	***
6-Month				4.94
				.030
				*

Note: Top value represents F

Middle value exact probability

Bottom value: *p < .05; **p < .01; *p < .001**

response was scored dichotomously. One point was allotted if the child said they would tell the secret and 0 points if the child gave no response or said they would keep the secret.

Cochran's Nonparametric Q test was done with the four groups across the four intervals: pre-assessment, post-assessment, 6-months and 12-months. There was a significant increase across times in the number of children who would tell the secret of the rules of the game ($Q(3, N = 68) = 80.58, p < .01$).

In order to determine which group or groups were responsible for the increase, further analyses were done. A Cochran's Q on the individual Groups revealed significant changes across Times for each Group: Group 1 ($Q(2, N=21) = 11.09, p < .01$); Group 2 ($Q(2, N=21) = 21.57, p < .01$); Group 3 ($Q(3, N=24) = 26.12, p < .01$); Group 4 ($Q(3, N=25) = 33.00, p < .01$).

At pre-assessment 25% of the children said they would tell the rules of the game. At post-assessment close to 49% would tell the rules of the game. At 6-month assessment 79% of the children said they would tell the rules of the game. At the 12-month assessment, 91% of the children would tell the secret of the game. Examination of Group 3 that received the 6-month and 12-month boosters indicated that 93% would tell the game rules at 6-months and 94% at 12-months.

Role Play Self-Evaluation Data

At posttest, 6-months, and 12-months, after each child participated in the simulation with the male role player, he/she observed his/her performance on the videotape role play. Subsequently, the child viewed two tapes of a child role model of the same sex and age interacting with the male role player in an identical situation. In one tape the child model behaved assertively and in the other tape the child model behaved passively (see p. 55). The child participating in the experiment had to state which role play response was more like his/her own performance (see Appendix F). The experimenter recorded either the assertive role play response, the passive role play response or whether the child stated "I don't know". For analysis purposes, the evaluation responses were then dichotomized so that all assertive ratings were placed in one category and all passive ratings or "I don't know" responses were placed in the other category. This made the statistical analysis more conservative.

Analysis of the four groups of children's self-assessments at post, 6-months and 12-months indicated a significant change across time in their perception of their performance ($Q(2, N = 85) = 19.87, p < .01$). At the post-assessment, 55.06% of the children rated themselves as assertive. Six months later, 47.06% felt they were assertive. At 12-months, 75.29% of the children rated

themselves as assertive. Because some children had received one booster prior to assessment, others had received two boosters, and still others had no booster, a separate analysis was done of each group. Analysis of each of the four groups' self-assessments at post, 6-months and 12-months indicated a significant change in their perception of their performance across times for Group 3 only ($Q(2, N=31) = 11.68, p < .01$). Further analysis indicated the significant differences were between the post and 12-month evaluations ($Q(1, N=31) = 7.14, p < .01$) and between the 6 and 12-month evaluations ($Q(1, N=31) = 9.31, p < .01$). In Group 3 only, at the post, 6-month, and 12-month assessments there were 51.61%, 48.39% and 83.87% of the children respectively who perceived themselves as behaving assertively.

The experimenter observed the videotapes, and rated the children's performances as assertive or passive. A score of 4 points on the behaviour evaluation was the criterion for the assertive rating. A score of less than 4 points on the behaviour evaluation was the criterion for the passive rating (see Appendix D). Cochran's Nonparametric Q-test analysis of the experimenter's ratings and of the children's self-ratings indicated whether or not there was consistency between these two evaluations at the three different assessment times. Lack of significant differences at the post-assessment ($Q(1, N = 110) = .00, p = 1.00$), indicated agreement of the children's and experimenter's ratings. Both the experimenter

and children rated the behaviours as assertive in 54.55% of the cases. At the 6-month assessment, there was a significant difference between the experimenter's and children's ratings ($Q(1, N = 94) = 6.75, p < .01$). Only 45.74% of the children evaluated their role plays as assertive whereas the experimenter rated 64.89% as assertive. At the 12-month evaluation, there was no significant difference between the ratings of the experimenter and the children ($Q(1, N = 115) = 1.13, p = .29$). The experimenter and the children rated 70.44% and 65.22% respectively of the role plays as assertive.

Order Effect

Chi-square analyses examined the effect of order of viewing assertive and passive child model videotapes and the children's self-ratings of their behavioural skills. There was no significant order effect at post-assessment, ($\chi^2(2, N=126) = 3.62, p = .16$); at 6-month assessment ($\chi^2(2, N=94) = 5.28, p = .07$); and at 12-month assessment ($\chi^2(2, N=115) = 3.63, p = .16$). At the post-assessment, 54% of the children viewed the assertive tape last and 61.76% rated themselves as assertive; 46% saw the passive tape last and 56.9% rated themselves as passive. At the 6-month assessment, 41.5% viewed the assertive tape last and 56.41% rated themselves as assertive; 58.5% viewed the passive tape last and 61.82% rated themselves passive. At the 12-month evaluation 45.2% saw the assertive tape last

and 65.38% rated themselves as assertive; 54.8% saw the passive tape last and 34.9% rated themselves as passive. Thus, the order of presentation of the child model tapes did not affect the children's self-ratings of their behavioural skills.

Children's Self-Perception Data

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981) was individually administered at pre and 12-month assessments (see Appendix G). This 24-item pictorial questionnaire contained four subscales. The first subscale examined the child's self-perception of cognitive competence with minimum and maximum scores of 1.33 and 4.00 respectively. The second subscale examined the child's self-perception of physical competence with minimum and maximum scores of 1.67 and 4.00 respectively. The third subscale examined the child's self-perception of peer acceptance with minimum and maximum scores obtained were 1.33 and 4.00 respectively. The fourth subscale examined the child's self-perception of maternal acceptance with minimum and maximum scores of 1.17 and 4.00 respectively.

Two four-way Anovas (Times (2) x Esteem (4) x Groups (4) x Language (2)) were employed to separately examine the two language variables - Home Language - primary language spoken at home (English vs. any other language) and School

Language - primary language spoken in the school classroom (English vs. French). Esteem refers to the four different subscale measurements and was a within subject variable.

Since there were different within-subject measures of self-esteem, Bartlett's test of sphericity was listed in the tables where applicable. The univariate statistical tests were interpreted in analyses where Bartlett's was not significant. If Bartlett's was significant, the multivariate results were interpreted (Norusis, 1985).

Home Language

The first four-way Anova compared the four treatment groups with the home language variable. There was a significant Esteem x Times interaction ($p < .001$) (see Table 14). There were significant main effects for Times and Esteem ($p < .05$ and $p < .001$) respectively. However,

Insert Table 14 about here

because there was a significant interaction, the main effects were not interpreted.

Simple effects analyses indicated a significant difference for Esteem at pre-assessment and at 12-month assessment ($p < .001$) (see Table 15). Simple effects analysis also indicated a significant decrease for self-

Insert Table 15 about here

perception of physical competence ($p < .001$), a significant

Table 14. Manova Table for Effects of Home Language, Treatment Groups and Times for the Self-Esteem Data

Source of Variation	df	Univariate F	P	df error	Multi- variate F	P	Bartlett's P
Home Language	1	0.09	NS				
Treatment Groups	3	1.79	NS				
Home Language x Treatment Groups	3	1.00	NS				
Error Term	108						
Times	1	4.63	.034*				
Home Language x Times	1	1.17	NS				
Treatment Groups x Times	3	2.18	NS				
Home Language x Treatment Groups x Times	3	0.84	NS				
Error Term	108						
Esteem	3	68.69	.000***	3	50.09	.000***	NS
Home Language x Esteem	3	2.10	NS	3	1.50	NS	
Treatment Groups x Esteem Measurements	9	1.64	NS	9	1.68	NS	
Home Language x Treatment Groups x Esteem	9	0.71	NS	9	0.60	NS	
Error Term	324						
Esteem x Times	3	27.19	.000***	3	16.50	.000***	.000
Home Language x Esteem x Times	3	0.66	NS	3	1.12	NS	
Treatment Groups x Esteem x Times	9	1.56	NS	9	1.48	NS	
Home Language x Treatment groups x Esteem x Times	9	1.19	NS	9	0.94	NS	
Error Term	324						

*p < .05; **p < .01; ***p < .001

Table 15. Simple Effects Analysis for Esteem x Times Interaction for the Self-Esteem Data

Source of Variation	df error	Univariate F	P	df error	Multi- variate F	P	Bartlett's P
Esteem at Pre-Assessment	3	66.45	.000***	3	113	58.85	.000
Error Term	345						.007
Esteem at 12 Month Assessment	3	86.03	.000***	3	113	69.96	.000
Error Term	345						NS
Times at Cognitive Competence	1	0.11	NS				
Times at Physical Competence	1	68.33	.000***				
Times at Peer Acceptance	1	34.41	.000***				
Times at Maternal Acceptance	1	4.65	.033*				
Error Term	115						

*p < .05; **p < .01; ***p < .001

increase for self-perception of peer acceptance ($p < .001$), and a significant decrease in self-perception of maternal acceptance ($p < .05$) from pre to 12-months respectively (see Figure 8).

Insert Figure 9 about here

School Language

The second four-way Anova compared the four treatment groups with the school language variable. There were significant Groups x Times interaction ($p < .05$), School Language x Esteem interaction ($p < .05$) and Esteem x Times interaction ($p < .001$) (see Table 16). There were

Insert Table 16 about here

significant main effects for Times ($p < .05$) and for Esteem ($p < .001$). These were not interpreted because of the significant interactions.

Simple effects analysis of the interaction of Groups x Times revealed that for Treatment Group 1 only there was a significant change across times ($p < .05$). The mean esteem scores for Group 1 decreased across times. There were no other significant effects (see Table 17 and Figure 10).

Insert Table 17 and Figure 10 about here

Since there was a significant interaction of School Language x Esteem, simple effects revealed a significant

Figure 9. Treatment Groups x Times Interaction for Self Esteem Data

Table 16. Manova Table for Effects of School Language, Treatment Groups and Times for the Self-Esteem Data

	df	Univariate F	P	df error	Multi- variate F	P	Bartlett's P
School Language	1	1.24	NS				
Treatment Groups	3	1.47	NS				
School Language x Treatment Groups	1	0.35	NS				
Error Term	110						
Times	1	4.43	.038*				
School Language x Times	1	0.32	NS				
Treatment Groups x Times	3	2.94	.036*				
School Language x Treatment Groups x Times	1	2.97	NS				
Error Term	110						
Esteem	3	24.43	.000***	3	108	0.36	.000*** NS
School Language x Esteem	3	2.98	.032*	3	108	2.50	NS
Treatment Groups x Esteem	9	1.22	NS	9	330	1.76	NS
School Language x Treatment Groups x Esteem	3	0.37	NS	3	108	0.45	NS
Error Term	330						
Esteem x Times	3	15.63	.000***	3	108	0.201	.000*** .000
School Language x Esteem x Times	3	0.40	NS	3	108	0.015	NS
Treatment Groups x Esteem x Times	9	1.27	NS	9	330	0.103	NS
School Language x Treatment Groups x Esteem x Times	3	.10	NS	3	108	0.002	NS
Error Term	330						

*p < .05; **p < .01; ***p < .001

Table 17. Simple Effects Analysis for Treatment Groups x Times Interaction for the Self-Esteem Data

<u>Source of Variation</u>	<u>df</u>	<u>Univariate</u>	
		<u>F</u>	<u>P</u>
Treatment Groups at Pre-assessment	3	2.19	N.S.
Error Term	112		
Treatment Groups at 12 months	3	.45	N.S.
Error Term	112		
Times at Treatment Group 1	1	6.39	.018*
Error Term	27		
Times at Treatment Group 2	1	0.055	N.S.
Error Term	28		
Times at Treatment Group 3	1	0.079	N.S.
Error Term	30		
Times at Treatment Group 4	1	1.33	N.S.
Error Term	27		

* p < .05

** p < .01

*** p < .001

Figure 10. School Language X Esteem Interaction for Self Esteem Data

difference for school language at cognitive competence ($p < .001$) (see Table 18). The English stream children had a

Insert Table 18 about here

higher self-perception of their cognitive competence than the French stream children (see Figure 11). Simple effects

Insert Figure 11 about here

also revealed that for the English stream there was a difference between the different measures of esteem ($p < .001$). The same respective findings occurred with the French stream children ($p < .001$).

The simple effects for the significant interaction of Esteem x Times was previously discussed (see page 91 - Home Language)

Vulnerability to Sexual Abuse Data

Discriminant analyses done at post-assessment ($p = .29$) and at 12-months assessment ($p = .08$) using the pretest Harter self-esteem scores and the posttest questionnaire scores as predictor variables did not correctly classify the children who had passed or failed the role play simulation. Thus these two variables - self-esteem and knowledge - were not found to be predictive of vulnerability to abuse as measured by the role play outcome. These criteria for prediction of vulnerability to sexual abuse were the same as those used by Fryer, Kerns

Table 18. Simple Effects Analysis for School Language x Esteem Interaction for the Self-Esteem Data

Source of Variation	df error	Univariate F	P	df error	Multi- variate F	P	Bartlett's p
School Language at Cognitive Competence	1	14.89	.000**				
School Language at Physical Competence	1	0.48	NS				
School Language at Peer Acceptance	1	0.32	NS				
School Language at Maternal Acceptance	1	1.48	NS				
Error Term	114						
Esteem at English School Language	3	89.45	.000***	3	71.56	.000***	NS
Error Term	252			3	16.13	.000***	NS
Esteem at French School Language	3	17.49	.000***				
Error Term	90						

*p < .05; **p < .01; ***p < .001

Figure 11. Mean Esteem Scores for the Four Subscales across School Language

Kraizer, and Miyoshi (1987a). These researchers found that higher self-esteem before instruction and higher knowledge/attitude scores after instruction were found to be predictive of a reduction in vulnerability as measured on a simulated role play.

Interrater Reliability for Experiment 1

To assess reliability of scoring in Experiment 1, 45 children were randomly chosen at pre, post and 12-months and 30 children at 6-months. However some children had moved away and therefore their scores were not used for the reliability coefficient. Therefore the n values may be slightly lower. Unfortunately due to video equipment failure, the 6-month role play data was lost prior to the reliability research.

In Experiment 1 the inter-rater reliability for the questionnaire data, the role play data and the behavioural evaluation data respectively was estimated using the Pearson's Product Moment Correlation between the scores recorded by the two raters. Statistical tests for the questionnaire data at pre-assessment ($r = .97$, $n = 44$, $p < .001$), at post-assessment ($r = .99$, $n = 39$, $p < .001$), and at 6-month assessment ($r = .99$, $n = 29$, $p < .001$), and at 12-month assessment ($r = .99$, $n = 44$, $p < .001$) revealed significant correlations at each of these intervals. Statistical tests for the role play data at pre-assessment ($r = 1.00$, $n = 43$, $p < .001$), at post-assessment ($r = 1.00$,

$n = 39$, $p < .001$), and at 12-month assessment ($\underline{r} = 1.00$, $n = 45$, $p < .001$) revealed perfect correlations at each of these intervals. Statistical tests for the behavioural evaluation data at pre-assessment ($\underline{r} = .61$, $n = 43$, $p < .001$), at post-assessment ($\underline{r} = .83$, $n = 39$, $p < .001$), and at 12-month assessment ($\underline{r} = .81$, $n = 45$, $p < .001$) revealed significant correlations at each of these intervals. Overall, these values represent acceptable reliability. The single exception is the behavioural evaluation at pretest only ($\underline{r} = .61$). There is no obvious reason for the relatively low value in this instance. At pre-assessment in 67% of the behavioural evaluation comparisons there was a disagreement between the two raters. The experimenter rated the children's behavioural skills as more assertive.

Reliability was also assessed using percent agreement data. Overall reliability ranged from 77% to 96%.

EXPERIMENT 2

Method

Subjects

A total of 55 children in grade 1 from two elementary schools in the Ottawa Board of Education were the subjects in this study. The children were 6 or 7 years of age. Due to students moving or because of missing data, 49 children completed the 6-month study. There were 17 females and 32 males. There were a disproportionately larger number of males in one of the classrooms. This accounted for the larger number of males than females in the study. Parental consents were obtained for the children to participate in the research (see Appendix A). Some modifications were made to the letter sent to parents of children in Experiment 1. There were no exclusionary criteria. However, children who did not have parental permission were not included in the study. The four classes of children were randomly divided into two groups with 24 and 25 children in each group respectively. Class units were not divided between groups.

Procedure

The children received an individual pre-program assessment which consisted of two components: (1) the personal safety questionnaire (see Appendix B); and (2) the Pictorial Scale of Perceived Competence and Social Acceptance of Young Children (Harter & Pike, 1981) (see

Appendix G).

The Ottawa Board Personal Safety Program of six 30-minute lessons was taught to the children by their classroom teachers (see p. 41). This program was completed within a 6-8 week interval. The children received the posttest assessment after the Personal Safety Program was taught. The individual post-program assessment included (1) the personal safety questionnaire (Groups 5 and 6); and (2) a simulated role play and behavioural skill evaluation for only one group of the children (Group 6) (see Appendix D). The 6-month assessment consisted of (1) the personal safety questionnaire and (2) a different simulated role-play behavioural skill evaluation for both Groups 5 and 6. The same method was employed for the role play and behaviour evaluation as in Experiment 1 (see p. 55).

Design

The design for this study was a between-groups repeated measures evaluation design. Because the purpose of this study was to assess the effects of the videotaped role play intervention in the Personal Safety Program, the evaluations for Groups 5 and 6 were not the same for all assessment times as noted above (see Figure 12). At pre-program, the questionnaire and the

Insert Figure 12 about here

Pictorial Scale of Perceived Competence and Social

Figure 12. Research Design for Experiment 2

	Group 5	Group 6
Pre-Program assessment	Questionnaire Pictorial Scale of Perceived Competence and Acceptance for Young Children	Questionnaire Pictorial Scale of Perceived Competence and Acceptance for Young Children
Personal Safety Program	X	X
Post-Program assessment	Questionnaire	Questionnaire Videotaped Role Play Intervention
6th Month assessment	Questionnaire Videotaped Role Play Intervention	Questionnaire Videotaped Role Play Intervention

Acceptance for Young Children (Harter & Pike, 1981) were individually administered to Groups 5 and 6. After the evaluations were completed, the classroom teachers taught the Ottawa Board of Education Personal Safety Program. At post-program, Groups 5 and 6 were given the questionnaire. Only Group 6 received the videotaped role play intervention. At 6 months, Groups 5 and 6 were administered the questionnaire and role play intervention.

Instruments

The same 24-item questionnaire described in Experiment 1 was given to the children in Groups 5 and 6 (see p. 57). At post-assessment, Group 6 had the same simulated role play as performed at post-assessment in Experiment 1 (see p. 49). Similarly at 6-month assessment Groups 5 and 6 had the same simulated role play as performed at the 6-month assessment in Experiment 1 (see p. 55).

At each assessment session, a set script was followed as in Experiment 1 (see Appendix E). There were four assessment scores of the videotaped role playing (see Experiment 1, p. 58). Assessment #1: The researcher's evaluation of the role play response per se. Assessment #2: The researcher's qualitative evaluation of the role play behaviour (referred to as behavioural evaluation). Assessment #3: The child's response to the question of whether or not they would keep the rules of the game a

secret. Assessment #4: The child's own evaluation of their videotaped response. The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981) was individually administered before the program as in Experiment 1.

Inter-rater Reliability

Inter-rater reliability was examined at pretest, posttest and 6-months. The questionnaires and videotaped role plays were assessed by an evaluator blind to group membership.

Results

Results

Three-way analysis of variance (using the Repeated Measures Manova Design in SPSSX) was employed to analyze the between and within subject variables. The between subject variables were (1) primary language spoken at home - English vs. other language - (Home Language), (2) experimental treatment group - Groups 5 and 6 - (Groups), (3) gender of each subject - female vs. male - (Gender). The within subject variable was measurement time - pretest, posttest, 6-months - (Times). The dependent variables were (1) the score on the 24-item questionnaire, (2) the response measure from the videotaped role play, (3) the score from the behavioural evaluation of the role play, (4) the self-evaluation on the videotaped role play, and (5)

the four subscale esteem scores on the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981). Separate analyses were done for each of these dependent variables with a multivariate MANOVA being used for the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981).

Questionnaire Data

The 24-item questionnaire was worth 50 points. The minimum and maximum scores obtained were 10 and 48 points respectively.

There was a significant main effect for Times ($p < .001$) (see Table 19). There were no other significant main

Insert Table 19 about here

effects or interactions. A Special Contrast indicated significant differences between pretest and posttest ($F(1, 48) = 298.33, p < .001$) and pretest and 6-months ($F(1, 48) = 286.45, p < .001$). There were no significant differences between posttest and 6-months.

There were no significant gender effects in the questionnaire data.

Role Play Data

The videotaped role play which displayed the child's interaction with the male role player was scored as described in Experiment 1 (see p. 73). The minimum score

**Table 19. Anova Table for Effects of Home Language,
Treatment Groups, Gender, and Times for the Questionnaire
Data**

Source of Variation	df	F	P
Home Language	1	0.03	N.S.
Treatment Groups	1	1.80	N.S.
Gender	1	0.26	N.S.
Home Language x Treatment Groups	1	0.46	N.S.
Home Language x Gender	1	0.79	N.S.
Treatment Groups x Gender	1	0.97	N.S.
Home Language x Treatment Groups x Gender	0	-	-
Error Term	42		
Times	2	35.35	.000***
Home Language x Times	2	0.75	N.S.
Treatment Groups x Times	2	0.20	N.S.
Gender x Times	2	0.09	N.S.
Home Language x Treatment Groups x Times	2	0.75	N.S.
Home Language x Gender x Times	2	0.19	N.S.
Treatment Groups x Gender x Times	2	2.12	N.S.
Home Language x Treatment Group x Gender x Times	0	-	-
Error Term	84		

* p < .05

** p < .01

***p < .001

obtained was 0 points and the maximum was 2 points. As noted earlier, Group 6 was videotaped at the post and the 6-month assessments. Group 5 was videotaped only at the 6-month assessment. Therefore a 2(Home language) x 2 (Times) repeated measures Anova design was used in the analysis of role play data for Group 6. The results indicated there was a significant Home Language x Times interaction ($p < .05$) (see Table 20).

Insert Table 20 about here

Simple effects analysis indicated that at post-assessment the English home language children performed better on the role play than the other home language children ($p < .05$) (see Table 21). At the 6-month interval

Insert Table 21 about here

there was no difference between these two home language groups (see Figure 13). Simple effects did not indicate a

Insert Figure 13 about here

significant change across times for the English home language children. It was not possible to do simple effects across times on the "other home language" children because there was no variability of the role play variables at the two assessment times. There was a significant main effect for Times ($p < .01$) (see Table 20). However,

**Table 20. Anova Table for Effects of Home Language,
Gender, and Times for the Role Play Data for Group 6**

Source of Variation	df	F	P
Home Language	1	1.38	N.S.
Gender	1	0.65	N.S.
Home Language x Gender	0	-	-
Home Language x Gender x Times	0	-	-
Error Term	21		
Times	1	8.77	.007**
Home Language x Times	1	5.80	.025*
Gender x Times	1	0.00	N.S.
Error Term	21		

*** p < .05**

****p < .01**

Table 21. Simple Effects Analysis for Home Language x Times Interaction for the Role Play Data for Group 6

<u>Source of Variation</u>	<u>df</u>	<u>F</u>	<u>P</u>
Home Language at Post-Assessment	1	5.77	.03*
Home Language at 6 Months	1	.14	N.S.
Error Term	22		
Times at English Home Language	1	1.30	N.S.
Error Term	20		
Times at Other Home Language	1	-	-
Error Term	2		

* $p < .05$

** $p < .01$

Figure 13. Mean Role Play Scores for Home Language across Assessment Times

because there was a significant interaction, the main effect was not interpreted.

At 6-month assessment, a t-test between Groups 5 and 6 revealed a significant difference in the role play ($t(47) = -3.96, p < .001$). Group 6 performed significantly better than Group 5.

There were no significant gender effects in the role play data.

Behaviour Evaluation Data

The behaviour evaluation of the role-playing was scored as described in Experiment 1 (see p. 81). The minimum and maximum scores obtained were 1 and 4 respectively. For the Group 6 analysis there was a significant Home Language x Times interaction ($p < .05$) (see Table 22).

Insert Table 22 about here

Simple effects analyses indicated that at the post-assessment, there was a significant difference between the two home language groups ($p < .05$) (see Table 23). The English home language children performed more assertively

Insert Table 23 about here

than the other home language children. At the 6-month interval there was no difference between these two home language groups (see Figure 12). Simple effects indicated

Table 22. Anova Table for Effects of Home Language, Gender, and Times for the Behaviour Evaluation Data for Group 6

Source of Variation	df	F	P
Home Language	1	2.46	N.S.
Gender	1	0.05	N.S.
Home Language x Gender	0	-	-
Error Term	21		
Times	1	14.08	.001***
Home Language x Times	1	4.74	.041*
Gender x Times	1	0.06	N.S.
Home Language x Gender x Times	0	-	-
Error Term	21		

*** p < .05**

**** p < .01**

*****p < .001**

Table 23. Simple Effects Analysis for Home Language x Times Interaction for the Behaviour Evaluation Data for Group 6

Source of Variation	df	F	P
Home Language at Post-Assessment	1	6.75	.02*
Home Language at 6-months	1	.30	N.S.
Error Term	22		
Times at English Home Language	1	7.81	.01**
Error Term	20		
Times at Other Home Language	1	64.00	.02*
Error Term	2		

* $p < .05$

** $p < .01$

that there were significant changes across times for the

Insert Figure 14 about here

children who spoke English at home ($p < .01$) and for the children who spoke another language at home ($p < .05$) (see Table 23). Thus, as expected, there was a significant improvement in the children's behavioural skills in both language groups across times. There was a significant main effect for Times ($p < .001$), but it was not interpreted due to the significant interaction.

A t-test between Groups 5 and 6 at the 6-month assessment revealed a significant difference in the behavioural evaluation ($t(47) = -4.16, p < .001$). Group 6 performed more assertively than Group 5.

There were no significant gender effects in the behaviour evaluation data.

Keep the Secret Data

At the conclusion of the videotaped role play, the male role player asked each child if he/she would keep the rules of the game a secret and not to tell anyone. The child's response was scored dichotomously as described in Experiment 1 (see p. 89). As noted, Group 6 had the role play intervention at both post and 6-month assessments. Group 5 had the role play intervention only at 6-months. Cochran's Nonparametric Q Test analyzed the data over the

Figure 14. Mean Behaviour Evaluation Scores for Home Language across Assessment Times

two intervals - post and 6-month assessments for Group 6. There was a significant increase in the number of children who would tell the secret of the rules of the game ($Q(1) = 14.0, p < .001$). At post-assessment, 38% of the children would tell the rules of the game. At 6-month assessment 96% of the children stated they would tell the rules of the game. At the 6-month assessment, significantly more children in Group 6, compared to Group 5, stated they would reveal the secret ($\chi^2(1, N = 49) = 9.93, p < .01$). That is, 96% of Group 6 and only 52% of Group 5 stated they would tell the secret rules of the game.

Role Play Self-Evaluation Data

After each child participated in the simulation with the male role player, he/she observed his/her performance on the videotape. The format was identical to Experiment 1 (see p. 56).

Cochran's Nonparametric Q-test analyzed the data over the two intervals. For Group 6, analysis of the children's self-perception of their performance at post and at 6-months did not indicate any significant increase across times. At post-assessment, 7 of the 24 children or 29.17% rated themselves as assertive. Six months later, 11 of the 24 children or 45.83% rated themselves as assertive. At 6-month assessment there was no significant difference between Groups 5 and 6 in the self ratings of the children,

$(\chi^2(1, N = 49) = .17, p = .19)$.

The experimenter observed the videotapes and rated the children's performance as assertive or passive. The experimenter's behavioural evaluation of the role playing was scored as described in Experiment 1 (see p. 81). Cochran's Nonparametric Q-test analysis of the experimenter's ratings and of the children's self-ratings indicated whether or not there was consistency between these two evaluations at the two assessment times. Lack of significant differences at the post-assessment ($Q(1, N = 28) = .82, p = .37$) indicated fairly close agreement of the children's and experimenter's ratings. The experimenter rated the children's behaviour as assertive in 21.43% of the cases. The children's self-ratings were assertive in 32.14% of the cases. At the 6-month assessment there was no significant difference between the experimenter's and children's ratings ($Q(1, N = 49) = .06, p = .81$). The experimenter rated 36.74% of the children as assertive and the children rated 34.69% of themselves as assertive.

Order Effect

Chi-square analyses examined the effect of order of viewing assertive and passive child model videotapes and the children's self-ratings of their behavioural skills. There was no significant order effect at post-assessment ($\chi^2(2, N=28) = 1.34, p = .51$) and at 6-months assessment

($X^2(2, N=49) = .28, p = .87$). At the post-assessment, 46.4% of the children saw the assertive tape last and 23.07% of these rated themselves as assertive. There were 53.6% that saw the passive tape last, and 33.3% of these rated themselves as passive. At the 6 month assessment, 49% of the children saw the assertive tape last and 33.33% of these rated themselves as behaving assertively. There were 51% that saw the passive tape last and 52% of these rated themselves as passive. Thus the order of presentation of the child model tapes did not effect the children's self-ratings of their behavioural skills.

Children's Self-Perception Data

The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981) was individually administered at the pre-assessment only (see Appendix G). This assessment is discussed in Experiment 1 (see p. 94). In the first subscale, cognitive competence, the minimum and maximum scores were 2.33 and 4.00 respectively. In the second subscale, physical competence, the minimum and maximum scores were 2.17 and 4.00 respectively. In the third subscale, peer acceptance, the minimum and maximum scores were 2.33 and 4.00 respectively. In the fourth subscale, maternal acceptance, the minimum and maximum scores were 1.67 and 4.00 respectively.

One three-way Manova (Esteem (4) x Groups (2) x Home

Language (2)) was employed to examine the two treatment groups with the home language variable (English and other). Esteem refers to the four different subscale measurements and was the multiple dependent variable. There was a significant main effect for Esteem, ($F(3, 49) = 12.44, p < .001$).

Vulnerability to Sexual Abuse Data

Discriminant analysis with Group 6 only done at post-assessment ($p = .53$) using the pretest Harter self-esteem score and the posttest questionnaire score as predictor variables did not correctly classify the children who had passed or failed the first role play simulation. Thus these two variables---self-esteem score and questionnaire score - were not found to be predictive of vulnerability to abuse as measured by the role play outcome. As noted in Experiment 1, these criteria for prediction of vulnerability to sexual abuse were the same as Fryer, Kerns Kraizer and Miyoshi (1987a).

Inter-rater Reliability for Experiment 2

To assess reliability of scoring in Experiment 2, 20 children were randomly chosen at pre, post and 6-months. Unfortunately due to video equipment failure, the post-assessment role play data (Group 6 only) was lost prior to the reliability research. In Experiment 2, the inter-rater

reliability for the questionnaire data, the role play data and the behavioural evaluation data respectively was estimated using the Pearson's Product Moment Correlation. Statistical tests for the questionnaire data at pre-assessment ($r = .99$, $n = 20$, $p < .001$), at post-assessment ($r = .99$, $n = 20$, $p < .001$) and at 6-month assessment ($r = .98$, $n = 20$, $p < .001$) yielded significant correlations at each of these intervals. Statistical tests for the role play data at 6 month assessment ($r = .95$, $n = 20$, $p < .001$) yielded significant correlations. Statistical tests for the behavioural evaluation data at 6-month assessment ($r = .91$, $n = 20$, $p < .001$) yielded significant results. These values represent excellent reliability.

Reliability was also assessed using percent agreement data. Again overall reliability was excellent ranging from 83% to 96%.

Summary of Results

Experiment 1

There were no gender differences found in the study.

Booster Program and Information

(1) At the 6-month assessment, Group 3 (with one booster) scored higher on the questionnaire than Group 4 (with no booster) and Group 1 (with no booster).

(2) At 12-months, Group 3 (with two boosters) obtained higher questionnaire scores than Group 4 (with one booster) which was superior to Groups 1 and 2 (with no boosters).

Booster Program and Behavioural Skills

(1) There were no group differences in role play performance. That is, whether or not a group received two boosters, or one booster, or no booster, there was no effect in role play.

(2) There were no group differences in behaviour evaluation. That is, the behaviour evaluation was not affected by the booster program.

Keep the Secret Data

(1) There was a significant increase across times in the number of children in each group who would tell the secret of the rules of the game but no differences between groups. There were 25% at pre-assessment, 49% at post-assessment, 79% at 6-month assessment, and 91% at 12-month assessment that said they would tell the rules of the game.

Role Play Self Evaluation Data

(1) In Group 3 only, there was a significant increase in the children's self-perception of their assertive skills. This significant increase was between the 6 and 12-month evaluations. At 6-months, 48.39% of the children rated themselves as assertive. At 12-months, their self-rating increased to 83.87%.

(2) The experimenter's ratings of the children's behavioural skills in the role plays and the children's self-ratings indicated agreement at post-assessment and 12-month assessment. At 6-month assessment there was a significant difference in the ratings. The experimenter evaluated 20% more of the children as assertive in comparison to the children's self-ratings.

(3) The order of presentation of the child model videotapes did not affect the children's self-ratings of their behavioural skills.

Children's Self-Perception Data

(1) For both pre-assessment and 12-month assessment, there were significant differences across the four domains of self-esteem for all children.

(2) Over the 12-month interval, there was a decrease in the children's ratings of their physical competence and maternal acceptance, an increase in their ratings of peer acceptance, and no change in their ratings of cognitive competence.

(3) There were no differences between the children who spoke English at home and the children who spoke another language at home.

(4) The English stream children rated their cognitive competence higher than the French stream children.

(5) The pre-program self-esteem score and the post-program questionnaire score were not found to be predictive of vulnerability to abuse as measured by the role play outcome.

Home Language and Information

(1) At the pre-program assessment, the children who spoke English at home achieved better mean questionnaire scores than the children who spoke another language at home. At the posttest, 6-month and 12-month assessments, this difference was in the same direction but no longer significant.

Home Language and Behavioural Skills

(1) At pre-assessment, the children who spoke English at home performed better on the role play than the children who spoke another language at home. At the posttest and the 6-month assessments, this difference was in the same direction but no longer significant. At the 12-month assessment the performances were the same.

(2) At pre-assessment, the children who spoke English

at home performed more assertively than the children who spoke another language at home. At posttest and 6-month assessments the difference was in the same direction but no longer significant. At 12-month assessment the other home language children had higher scores but this difference was not significant.

School Language and Information

(1) At post-assessment, at 6-months and at 12-months, the questionnaire means for the English stream children were significantly higher than the questionnaire means for the French immersion children.

School Language and Behavioural Skills

(1) There was no significant difference in role play performance of the English and French stream children on the role plays at any assessment time.

(2) There were no differences between the English and French stream children on their behavioural skills. Both these groups of children increased their assertive skills across times.

Inter-rater Reliability Data

The values for inter-rater reliability for the questionnaire role play and behaviour evaluation data at the different time intervals represent acceptable reliability.

Summary of Results

Experiment II

There were no gender differences found in the study.

Role Play Intervention

(1) At the 6-month assessment, Group 6 performed significantly better on the role play than Group 5. In Group 6, 96% of the children did not attempt to remove any clothing whereas, 48% of the Group 5 children did not attempt to remove any clothing.

(2) At post-assessment the English home language children performed better on the role play than the other home language children. This difference disappeared by 6-months.

Keep the Secret Data

(1) There was a significant increase over times in the number of children (Group 6) who would tell the secret of the rules of the game. At post-assessment, 38% of the children would tell the rules of game but at 6-month assessment 96% of the children stated they would tell.

(2) At the 6 month assessment significantly more children in Group 6 (96%) compared to Group 5 (52%) stated they would reveal the secret and tell the rules of the game.

Role Play Self-Evaluation Data

(1) There was no significant increase across times in the children's self-perceptions of their assertive skills.

(2) There was fairly close agreement between the

experimenter's ratings and the children's ratings of the videotaped role play behaviour.

(3) The order of presentation of the child model videotapes did not affect the children's self-ratings of their behavioural skills.

Children's Self-Perception Data

(1) There were significant differences across the four domains of self-esteem for all children.

(2) The pre-program self-esteem score and the post program questionnaire score were not found to be predictive of vulnerability to abuse as measured by the role play outcome.

Role Play Intervention and Home Language

(1) At post-assessment, the English home language children performed better on the role play than the other home language children. No such differences were noted at 6-month evaluation.

(2) At post-assessment, the English home language children performed more assertively than the other home language children. No such differences were noted at 6-month evaluation.

The Inter-rater Reliability Data

The inter-rater reliability for the questionnaire, role plays and behaviour evaluation data yielded significant correlations at each of the time intervals. These associations reflected high levels of reliability.

Discussion

This study included a two-fold assessment of the Personal Safety Program: (1) a questionnaire evaluation of the information learned by the children and (2) a videotaped role play evaluation of the behavioural strategies acquired by the children. Examination of the pre-program and post-program assessments in Experiment 1 indicates that most children successfully learned the factual information and behavioural skills.

Effects of Booster Sessions

There is also strong evidence to support the success of the one and two booster sessions with respect to the questionnaire results. Children who receive one booster perform significantly better than the children who receive no boosters prior to their assessment. Children who receive two boosters retain significantly more information than the children who receive one booster prior to their assessment or receive no boosters prior to their assessment. Children who receive one booster do better than children who receive no boosters. There appears to be a cumulative effect of the two booster sessions since a booster at 12-months just prior to the assessment is not sufficient for the children to acquire the same gains as the children who receive boosters at both 6-months and at 12-months.

On the other hand, there appears to be no evidence to

support the efficacy of the booster program vis-a-vis the behavioural skills as measured by the role plays. Children who learn the Personal Safety Program, receive booster sessions, and the role play intervention perform at the same level as children who learn the Personal Safety Program and receive the role play intervention only. The basic tenet of the booster sessions taught by the teacher is to review the Personal Safety Program. There was no monitoring of the booster sessions and it is not known precisely how they were conducted or how much role playing was included. Thus the effect of role playing in the booster sessions cannot be determined. The lack of monitoring of booster sessions makes it impossible to determine which aspects of the booster program caused the improved retention of information. Since this was a first study of booster programs, the goal was to establish generally whether they were effective in maintaining such changes in information and behaviour. Moreover, when prevention programs are instituted, they are taught in different classes or schools by different teachers. Overall, we are looking for effects that can be replicated from school to school, or system to system. Thus, the lack of specificity adds to the generalizability of this research. Different teachers taught the program to their classes, and some of the predicted effects were noted in this quasi-experiment.

Future research might monitor specific aspects of programs and booster sessions. In this way, the value of role playing and other components to producing desired changes can be

explored.

Effects of Role Play Intervention

In Experiment 2, children who learn the Personal Safety Program and also receive the role play intervention (Group 6) performed significantly better on the role play evaluation than children who only learn the Personal Safety Program (Group 5). These children (ie., Group 6) were more likely to display the appropriate response and behavioural skills to protect themselves. This demonstrates the efficacy of the role play intervention. Combining the data from the two experiments, it appears that the important factor is participation in the role play intervention. One exposure to this procedure at the post-assessment produces better performance at the six-month assessment. On the other hand, if such exposure is available then one or two classroom booster programs do not lead to differences in role play performance.

The experimenter's role play assessment is both an evaluation and teaching intervention. At three evaluation times (Experiment 1), post, 6-months and 12-months, the videotaped role plays served a dual function: (1) to assess whether or not the children attempt to conform to the role player's request; and (2) to teach the behavioural strategies of the Personal Safety Programs using the child role model tape as a teaching instrument. At pre-assessment, the children are not instructed or coached on their role playing. At the three other assessments, post, 6-months and 12-months, the children are able to view themselves on the video camera replay screen

and to evaluate their responses in comparison to two child role model videotapes displayed on a television screen. They are then coached by the experimenter on the "No", "Go", "Tell" rules and the assertive behavioural skills (direct eye contact, strong audible voice, etc.). The children are able to ask any questions about the program and the role playing. They are reminded that it is a pretend situation and that they are practising what to do should they be in a difficult situation. The video teaching is direct and simple and appears to be most effective with regard to the acquisition of behavioural skills.

In Experiment 2, at the 6-month assessment, only 52% of the children who had not received any previous role play intervention (Group 5), state they would tell the secret of the game. However, 96% of the children who had previous training in the role play intervention (Group 6) state they would tell the secret. During the role play intervention the children are coached to tell the secret of the rules of the game. This data suggests that the role play intervention is an effective instructional technique with regard to disclosure. The present data indicate that direct role play teaching produces large increases in rates of simulated disclosure. It is important to note that long-term follow-up outcome research will be necessary to determine whether such programs lead to increases in real disclosures of sexual abuse.

Behavioural Skills

There is a significant increase over time in the number of children who would tell the secret of the game rules. In

Experiment 1, regardless of whether or not the children receive the booster programs and/or extra role play interventions, significantly more children state they would tell the secret of the game rules. This suggests that personal safety programs such as the one taught in this study may raise the likelihood of children reporting unusual or undesirable adult behaviour. During the experimental interval, the children are 6 and 12-months older, depending on the time of assessment. There may be a maturational factor such that the children may be better able to discern what adults want them to do.

Results of the children's role play self-evaluations indicate a significant increase over time in their self-perception of assertive behaviour, but only for the children who had both the booster programs and videotaped role play interventions at 6 and 12-months (Group 3). This suggests that maturational development alone or exposure to the video intervention alone does not account for this increase in their self perception of assertive behaviour. Thus, the combination of classroom booster program and videotaped role play intervention are effective in increasing the children's self-perceptions of their assertive behaviour. Perhaps this is a matter of their learning the concept of assertiveness through the repeated exposures of booster programs and assessments.

Home Language Effects

In Experiment 1, it is noted that at the pre-program assessment the children who spoke English at home perform significantly better on the questionnaire, the role plays (did

not attempt to remove their shirt), and the behaviour evaluations (direct eye contact, strong audible voice, etc.) than the children who spoke another language at home. After the teaching of the Personal Safety Program, assessments at post, 6-months, and 12-months indicate no significant differences between these two groups in the questionnaire and role plays and behavioural evaluations. The children whose home language was other than English make and maintain similar gains as the children who spoke English at home vis a vis the information, role plays and behavioural skills. These results do not corroborate the previous research by Ages and Ferguson (1990) where English home language children scored significantly higher on the questionnaire at both pretest and posttest. The different cultural groups in the two samples may have contributed to this difference. The present study had 50% more oriental ethnic representations. As well, there may have been a difference in socio economic levels between the studies. The children whose home language was other than English in the present study appeared to be of a higher socio economic level.

In Experiment 2, the children who spoke English at home perform significantly better in the role play and behaviour evaluations at post-assessment only. In this latter experiment, there was no role play intervention at pre-assessment as there was in Experiment 1. This difference between the two groups is not noted with the questionnaire scores. That is, there were no significant differences on the

mean questionnaire scores at the pre-assessment, post-assessment and 6-month assessment between the English and non-English home language groups. This may be due to the smaller number of children in the second study.

Generally, the mean scores are greater for the children who spoke English at home than for the children who spoke another language at home. It is hypothesized that the initial differences between these two groups may be due to cultural elements and/or differences in verbal and comprehension skills which are important factors in the assessments. The cultures were not coded separately so it is difficult to comment on the possible effects. It is also possible that English speaking parents may have read stories or books about personal safety and thus informed their children of the safety precautions and rules. Further research may be warranted to determine the reasons for these differences. However, it is important to stress that both of these groups of children benefit from the Personal Safety Program. In addition, when programs are implemented special consideration might be given to monitoring children whose home language differs from the language of instruction.

School Language Effects

In Experiment 1, the English stream children have significantly higher scores on the questionnaire information than the French stream children at the post, 6-month and 12-month assessments. At the pre-assessment there is no difference between the children's scores from

the English and French streams. Several factors may explain the significantly better acquisition and retention of information by English stream when compared to the French stream children. The Personal Safety Program is written and taught in English only. All the English stream teachers taught the Personal Safety Program. The French immersion teachers (in this study) chose not to teach the program to the children since they were not as comfortable teaching the program in English to their students as their English speaking colleagues. In one case, the school principal taught the program since her mother tongue was English. Generally the lessons were of 30 minutes duration but the teachers in the English stream may have had a greater opportunity to integrate the Personal Safety Program with the daily curriculum of art, journal writing, etc. Such integration was not possible by the French immersion teachers because of their lack of direct involvement in the program. As well, only English stream children received the one (Group 4) and two booster (Group 3) sessions and therefore this may contribute to the differences between the streams. Since there is strong evidence to support the success of the booster program vis-a-vis the questionnaire, it is likely that the effects of the booster sessions play a major role in the difference between English and French streams at 6-months and 12-months. However, this factor cannot have contributed to the difference at post-assessment.

Other Issues

The results of the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (Harter & Pike, 1981) reveal a decrease in the children's perception of their physical competence and in their perception of maternal acceptance but an increase in their self-perception of peer acceptance. It is difficult to determine whether the changes are due to effects of the program, or are due to normal maturational effects. A more understandable finding is that the English stream children appear to have a higher self perception of their cognitive competence than the French stream children. The French stream children are being taught a new language and new vocabulary, and perhaps they do not perceive themselves as "knowing a lot in school", or "being able to read alone" or "being good at spelling". Since this study examined these children only over a one year period, it is possible that as the children become more comfortable with their new language that their self perceptions of their cognitive ability would increase. Further research is suggested to examine these issues and the present results must be interpreted with caution until they are replicated since they may also represent spurious findings.

Fryer, Kerns Kraizer, and Miyoshi (1987(a)) found that all the children who were instructed in the Children Need to Know Personal Safety Training Program and who passed the

simulation immediately after instruction, passed the 6-month assessment. Unlike the present study, Fryer, Kerns Kraizer, and Miyoshi found that none of the children who participated in the program went from pass to fail at 6-months. Retention of skills was total in their study. The authors note the "remarkable retention of skills and protection derived from a single intense exponential intervention" (Fryer, Kerns Kraizer, & Miyoshi, 1987a, p. 184). Fryer, Kerns Kraizer, and Miyoshi (1987a) found that there were several children who failed the simulation after having participated in the training program. Six months later, they failed a second simulation. They then received a second block of instruction and training and failed again. Fryer, Kerns Kraizer, and Miyoshi (1987) noted that there may be a small percentage of children who do not profit significantly from repeated exposure to prevention programming. Their study examined 44 children in kindergarten and grades 1 and 2 for a 6-month period. In the present study 116 children in grade 1 were tested over a 12-month interval. Over that period, some children who had passed the simulation subsequently failed but by the final assessment no child was willing to remove any clothing. Thus, the data gathered here demonstrate that with training and maturational development, all children can pass a role play simulation.

It is also important to note that the different role play simulations and interventions of these two studies may have produced the different results. Fryer, Kerns Kraizer and Miyoshi (1987) used a hidden camera and the children

were not briefed after the simulation. No video replay was shown to the children. No appropriate role model behaviours were demonstrated. It appears that in the present study the role play interventions were beneficial to the children and over time produced better performance than was seen in the Fryer, Kerns Kraizer and Miyoshi (1987) study.

The present study did not corroborate the findings of Fryer, Kerns Kraizer and Miyoshi (1987a). That is, lower self-esteem and lower information scores were not predictive of vulnerability to abuse as measured by the role play outcome. While there are important differences between the role play simulations in the present study and Fryer, Kerns Kraizer and Miyoshi study (1987), there are no obvious reasons for the lack of an interaction with self-esteem in the present research if their finding was valid.

Lack of Gender Effects

No gender effects were found in this study. While this may be counter to intuitive expectations, it corroborates earlier research (Ages & Ferguson, 1990) where there were no differences between males and females in learning the personal safety information and skills. Generally, research on the evaluation of sexual abuse prevention programs has not considered gender effects (Conte & Fogarty, 1990; Downer, 1984; Fryer, Kerns Kraizer, & Miyoshi, 1987; Miltenberger & Thiesse-Duffy, 1988;

Stilwell, Lutzer, & Greene, 1988). The evaluations focus on what has been learned by the children in general.

There are several possible reasons for the lack of gender effect. The Personal Safety Program is not gender specific. The program illustrations have both male and female children in potentially abusive situations. Role play scenarios depict males and females in potentially threatening situations. The program focuses on children in children rather than specifically oriented to one gender. Therefore both males and females learned the information and behavioural skills at equally satisfactory levels. The role play intervention, a teaching technique, consists of two role models - one male and the other female. Each child was shown the role model tape of the same sex child. The assessment instruments are not gender specific. The questionnaire focuses on information taught in the program. The role play evaluation is geared to skills taught in the program. Given the nature of the program and assessment, it is not surprising that there were no gender effects.

Limitations to the Interpretation of the Data

The role play interventions are not very flexible from one session to the next. The simulations are fairly consistent. The children are always informed that it is a pretend situation. The male role player pretends to be either a neighbor or a friend of the family. Four different games are played at the four different assessments. What would happen if the children were

approached in the local playground? Would they behave appropriately in this new setting? The constraint on the role playing in this study, that each child be informed of the pretend nature of the situation, was dictated by ethical considerations. As noted earlier this is important because we do not want to frighten the children nor do we want to desensitize the "children to the very behaviour most programs seek to sensitize children to" (Conte, 1987, p. 4). Decidedly there are risks in any measurement strategy in which children are approached in abuse-associated ways to determine how they respond. In this study, we chose to ensure the comfort and safety of the children and trade off any increment in validity that might have been gained by a more "realistic scenario" where the children were not informed of the pretend role play. This will affect the external validity, that is the ability to generalize to other situations. This research focused on whether or not the children learned the behaviour skills taught in the program. The simulation situations were useful in determining the skills acquired by the children. The fact that the children were successful does not necessarily imply they would be able to generalize the other abuse-like situations. This is a limitation on the interpretation of the research findings to actual real-life abusing situations.

Conclusions

There is a proliferation of programs concerned with the prevention of child sexual abuse. Some of the programs are attractively packaged and sold commercially. Slick videos starring popular television personalities are widely sold. Advertising has focused on the home and school markets with hundreds of thousands of dollars spent on materials and professional time. California has implemented the largest and most comprehensive classroom-based program on the continent. The state grants \$10.4 million annually for instruction covering pre-school, kindergartern, elementary and high school classes (Gilbert, 1988). In Canada, more than a quarter of a million children have been exposed to programs (Gentles & Cassidy, 1988). Unfortunately, little controlled research has been done to demonstrate the efficacy of the programs. What are the children learning? What information and behavioural skills have they acquired? What aspects of programs are necessary and sufficient to effect learning? What do they remember over a 6-month or 12-month period of time? These are the important questions which adequate evaluation research must address.

The present study evaluated the maintenance of changes in knowledge and behaviour effected by a school-based Personal Safety Program for the primary grades which has been previously evaluated (Ages & Ferguson, 1990). This

study focused on the efficacy of "booster" sessions and the effects of varying intervals of time between booster sessions. The study also examined the usefulness of a videotaped role play intervention and instruction.

The overall efficacy of the program was empirically documented. It is strongly recommended that both information and behavioural skills be evaluated to understand fully the effectiveness of any Personal Safety Program. Traditional instruments, which elicit verbal responses to questions, are important in assessing the children's information about potential abuse situations. However, some children who responded verbally to the questionnaire that they would not undress if promised a treat, subsequently attempted to take off their clothes in a videotape role play simulation. Thus, both information and behavioural skills must be assessed to determine precisely what children have and have not learned.

It bears repeating that "children must be able to try on techniques, to fit them to their own individual style and abilities. These skills are what children will ultimately use when prevention strategies are needed. Without this practice, children may understand what they should do without being able to actually do it when they need to" (Kerns Kraizer, 1986, p. 12). Modelling and rehearsal strategies are important in the acquisition of behavioural strategies (Conte & Fogarty, 1990).

Based on the present study, it appears that 6 lessons are an adequate number of sessions to teach the Personal Safety Program to most children. Role playing or behavioural practise is important to produce desired behavioural changes. The efficacy of role playing is demonstrated in the increase in the children's assertive behavioural skills and an increase in their disclosure of the secret rules of the game. Videotaped role play intervention may increase disclosure by the children. Videotaped role play intervention appears to increase the children's self perception of their assertive skills. In addition, booster sessions every 6-months are recommended in terms of increasing the durability of desired knowledge over time. Further research is needed to determine whether the systematic inclusion of role playing or videotaped role play in booster sessions will produce "booster" effects on behavioural skills.

There is no data extant to suggest that Personal Safety Programs decrease the prevalence of sexual abuse. Adult abusers are powerful, manipulative and usually experienced. Critics of sexual abuse prevention programs argue that young children may not be able to redress this unfavourable balance. Because children have succeeded in a prevention program does not necessarily imply that they will be successful in any potential abuse situation. However, if such programs precipitate disclosure and thus

result in earlier intervention, then the programs will have been successful.

Anecdotal evidence does suggest that prevention programs have been instrumental in identifying children who are currently being abused. In a small town in Northern Ontario, an OPP officer noted that there was a 27% increase in disclosures (Durocher, Personal communication, 1988). The Social Services Department of the Ottawa Board of Education noted that following the teaching of the program there was a significant increase in both the number of disclosures and the nature of the disclosures (Wiseman, Personal communication, 1990). This is attributed to the overall awareness and support in both the community and schools. Unfortunately, few evaluations have systematically assessed this goal (Conte & Fogarty, 1990). There is a need for systematic recording of disclosures prior to, during, and following prevention programs by children involved in the programs. This will help to assess the success of this goal of prevention. Research is warranted on the percentage of children who disclose, the types of disclosures, and how these disclosures vary according to program and age of the children.

The possibility of false allegations of sexual abuse must also be addressed. Yuille (1991) reports that overall false disclosures are made by children less than 10% of the time but that custody and access disputes may cause this

figure to increase to 30%. An adult may convince a child into falsely believing that sexual abuse has occurred because a bitter custody dispute or pathology in the adult. A poorly-trained interviewer may contribute to the rate of false allegations. However, past rates of false allegations have not taken into account the presentation of programs such as the one incorporated in this study. Only careful follow-up of programs such as this in the future will allow determination of whether such allegations will be an undesired effect of these programs.

For child sexual abuse to occur requires interest, motivation, intent and disinhibition on the part of the perpetrator, who must have access to children who are vulnerable - i.e., lacking knowledge, self-esteem, social skills, and close adult support. Programs to decrease child sexual abuse must be aimed at one or more of these components. Programs must be addressed to current or potential abusers in an effort to provide education about the inherent wrongfulness of child sexual abuse. There is a need for adult programs aimed at reorienting interest/motivation or increasing the social controls inhibiting sexual abuse of children.

In Canada there are one million children from single-parent families (Gentles & Cassidy, 1991). There are 350,000 single mothers of whom 50% live below the poverty line. These women and children are vulnerable to abuse. Many reports identify stepfathers, boyfriends and common-law husbands as being disproportionately represented in the statistics on

perpetrators. Some men establish relationships with women to get access to their children. Making adults responsible for adult behaviour is an important issue of primary prevention. Perhaps the most effective primary prevention strategy would be to focus efforts on increasing parental awareness of the problem and to help parents develop strategies for lowering risk and increasing disclosure. In addition, we must increase our efforts to educate adolescents and adults about the wrongfulness and unacceptability of child sexual abuse. Primary prevention focused solely on children will not be effective in reducing child sexual abuse.

Finally, it is recommended that future research address other agenda:

(1) The need for continued refinement of measures of knowledge and behavioural skills must be emphasized (Kolko, Moser & Huges, 1989; Wurtele, 1987). Evaluation of prevention programs must be taken as seriously as formulating these programs or we cannot determine whether we are successful in our goal of educating all children concerning protective skills. The development and evaluation of prevention programs is a challenging task that requires both methodical sophistication and ethical consideration.

(2) There is a need to examine the failure of some children to acquire prevention skills and knowledge. It is important to modify programs and use remedial booster procedures to teach these children.

(3) Prevention programs should be regularly reviewed and updated to keep abreast of the changes in information about child sexual abuse prevention and knowledge regarding effecting behavioural change in children.

(4) More research is warranted concerning the process utilized by adults to identify, to recruit and to maintain the compliance of their child victims. Some attempt has been made to indicate how offenders try to desensitize children to touch through progressing from nonsexual touch (eg., touch on the back) to sexual touch through a gradual development of a relationship with the child (Budin & Johnson, 1989; Contes, Wolf, & Smith, 1989). Children must be taught that they can withdraw consent or that consenting to one touch is not necessarily consenting to another.

(5) There is an important need for parents to be educated about sexual abuse prevention. Prevention programs may be more efficacious if parents could reinforce the program concepts.

(6) Prevention programs need to be developed in Canada for the physically handicapped, the learning disabled, and the developmentally delayed. Several programs exist in the United States but this researcher did not come across a current Canadian program.

(7) There is a community need for fundamental approaches to socialization of male and female children, adolescents and adults in terms of equity and mutual

respect (team sports, parenting courses in high school).

(8) Working exclusively with children is working with the weakest link. Children are inherently vulnerable to attack by adults given their size and lack of power (Conte & Fogarty, 1990). By targeting children only, society is promoting denial that sexual abuse of children is a complex societal problem in need of major societal change (Tharinger Kriwacska & Laye-McDonough, 1988). Prevention programs must focus on the education of adolescent and adult males regarding sexuality, the importance of developing, caring, and nurturing relationships and the ramifications and unacceptability of child sexual abuse in our society. The message to be incorporated into these prevention programs is that sexual abuse of a child is wrong and that the harmful effects can be devastating to the short and long term mental health and psycho-sexual adjustment of the child.

(9) The education of medical and legal professionals concerning child sexual abuse is warranted. Once children have disclosed their abuse, it is essential that they be treated appropriately. Otherwise we continue to abuse them by insensitive medical and legal practices.

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS
STANDARD REFERENCE MATERIAL 1010a
(ANSI and ISO TEST CHART No. 2)

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Appendix A
Letter for Parental Permission for Experiment 1

research for action

File no: 453
March, 1988

Dear Parents:

In 1986, Sandy Ages, M.A., participated in an evaluation of our Personal Safety Programme. Her recommendations were implemented in the revised programme which will be taught to all primary school children. Sandy Ages is interested in continuing her research. In particular, she will examine the maintenance of changes in knowledge and behaviour brought about by this programme over a one year period. This study will help determine any further modifications that might be necessary to ensure success. The study has been approved by the Advisory Research Committee of the Ottawa Board of Education.

Participating children will respond to two individually administered questionnaires before and after they have completed the programme. This will require approximately 20 minutes time. The questions concern the children's self-confidence and their knowledge about personal safety. In addition, one roleplaying situation will be videotaped before and after completion of the programme. This will require approximately 10 minutes. The purpose of the role play is to see if children will appropriately refuse to take part in a game in which their personal safety might be at risk. The videotaping will allow a study of any changes in behavioural skills the children acquire from the programme. Individually, the children will see themselves on the videotape and, if necessary, the appropriate behavioural skills will be taught by Mrs. Ages. To determine how effective the program is in maintaining changes in knowledge and behaviour in the children, the children may participate three or four times in a twelve month period.

The interview and role-playing will be done in a relaxed atmosphere within the school setting. All responses to the questionnaire and videotaped role-playing will be kept confidential. Any child who does not wish to participate is free to stop at any time. In the recent pilot study, on the Personal Safety Programme, the feedback from the children and teachers was very positive.

We would very much appreciate your permission for your child to participate in the evaluation of our programme. Please sign the bottom of this letter and have your child return it to school. If you have any questions, feel free to contact Sandy Ages at 238-1333 (office) or 321-0672 (home), or you are free to call me at 239-2408.

Sincerely,

Michael Parkin, Ph.D.,
DIRECTOR OF RESEARCH

MP/mca

I have read and understood the request for my child to participate in a study of the Ottawa Board of Education Personal Safety Programme.

- ☐ I give permission for my child to participate
- ☐ I do not give permission for my child to participate

Child's name - please print
(Last name first please)

Parent or Guardian's signature

Date: _____

research centre / centre de recherches
The Ottawa Board of Education / Le Conseil scolaire d'Ottawa
location: 667 Lyon St. E., K1S 3Z2, tel. 238-2408 Mailing address: 339 Gilmour St., K2P 0P9

Appendix B
Questionnaire

School _____

Sex _____

Child's Name _____

Language Spoken at Home

Age _____

Time of evaluation: _____

(1) What does personal safety mean?

2

(2) Who can you tell if something is bothering you?
Who else can you tell?

2

(3) If you make a promise to keep a secret and later feel
that it is a bad secret do you have to keep the secret?

1

(4) What would you do if someone touched you in places you
do not want to be touched?

3

(5) What would you do if someone touched you in places you
do not want to be touched and the person you told did not believe
you? Would you do anything else?

2

(6) What would you do if a friendly person asked you to go in their car with them?

3

(7) What would you do if a babysitter tells you to do something that you think is wrong?

2

(8) What would you do if a person you know really well touches you in a way that gave you a bad feeling? Would you do anything else?

3

(9) Name one safety rule about answering the telephone?

1

(10) How does a good touch make you feel?

1

(11) Name a good touch.

1

(12) What do you do if you tell an adult about a touching problem and the adult does not help you? Would you do anything else?

2

(13) How does a bad touch make you feel?

1

(14) Name a bad touch.

1

(15) How does a confusing touch make you feel?

1

(16) Name a confusing touch.

1

(17) What do you do if an adult is touching you and you do not like it?

3

(18) What do you do if you ask someone for help and they do not help you? Would you do anything else?

2

(19) Name the parts of the body in this picture when I point to them. (Show picture and point to these parts) head, neck, chest, breasts, arm, vagina, penis, leg, buttocks, foot.

4

(20) Point to the private parts of the body in the picture (Penis, Vagina, buttocks, breasts)
Are there any more private parts?

4

(21) If an adult touches a child's breasts, penis, vagina or behind, is it the child's fault?

1

(22) What would you do if someone touched your penis, vagina, behind or breasts?

3

(23) What should a child do if someone touches the child's penis or vagina and promises never to do it again?

3

(24) What would you do if someone you know promises to give you a treat if you undress for them.

Appendix C
Examples of Scoring for Questionnaire

Question: What would you do if someone touched you in places you do not want to be touched?

#4

Response: A response that included saying No, Going away from the scene and Telling someone what happened received a maximum score of 3 points (No-Go-Tell). A response that included Saying No, and Going away received 2 points and a response that included Saying No only or just Going away only received 1 point.

Question: What would you do if someone touched you in places you do not want to be touched and the person you told did not believe you? Would you do anything else?

#5

Response: A response that included Tell someone else and keep Telling until someone believed me received a maximum score of 2 points. A response that included Tell someone else only, received 1 point.

Question: If you make a promise to keep a secret and later feel that it is a bad secret do you have to keep the secret?

#3

Response: A No response received 1 point
A Yes response received 0 points

Question: What do you do if you ask someone for help and they do not help you? Would you do anything else?

#18

Response: A response that included Go to someone else to ask for help and to keep asking for help until someone listened received 2 points. A response that included Go to someone else only received 1 point.

Appendix D
Videotaped Role Play and Behaviour Evaluation

School _____

Child's Name _____

Time of Evaluation _____

Role Play - Adult bribes child to undress.

What does child do? Response:

Takes off shirt
spontaneously

Takes off shirt
with coaxing

Does not take off
shirt

0

1

2

Behaviour evaluation:

Points:

0 1 says no

0 1 ignores pressures to conform

0 1 uses a strong audible voice

0 1 appears self-assured and self-confident (head-up,
eye contact, does not display fidgety behaviour)

Does child keep secret:

Response:

Keeps secret or
gives no response

Tells secret

0

1

Appendix E
Videotaped Role Play Script.

Experimenter: I want to introduce you to Gary. He is going to play a pretend game with you. Gary will pretend he is a neighbour who lives up the street. He is going to pretend that he is over at your house and he is going to play memory with you. (Experimenter leaves room.)

Role Player: We are going to pretend that I am a friend of the family. I am over at your house and we are going to play the game memory. The purpose of this game is to match two pictures that are like. Try to remember where you have seen the same pictures.

There is a special rule to this game that I forgot to tell you. When you match two pictures that are the same, you get to take off your clothes. Kids love to play this game with me.....It is fun. Go ahead. Take off your shirt.

If child attempts to take off shirt, state "I can see that you are going to take off your shirt. I don't want you to catch a cold, so keep it on".

If child attempts to take off shoes or socks, just say, "Leave your shoes (or socks) on. Just take your shirt off".

At the end of the simulation the role players asks the child: Would you keep the rules of the game a secret? Don't tell anyone that I asked you to take off your clothes. Keep it a secret between you and me.

Appendix F

Child's Self-evaluation of his/her Role Play

School _____ Time of evaluation: _____

Child's Name _____

Video Replay Evaluation:

_____ child see his/her videotape

Assertive or passive tape is randomly selected as first comparison tape.

According to child, assertive (2 points) or passive tape (1 point) is the same as his/her tape.

Child does not know which tape is most similar to his/her tape (0 points).

Appendix G

**The Pictorial Scale of Perceived Competence and
Social Acceptance of Young Children
(Harter & Pike, 1983)**

**The Pictorial Scale of Perceived Competence
and Social Acceptance for Young Children***
Individual Recording and Scoring Sheet, Form 1-2

Child's Name _____ Age _____ Gender: M F
Class/Grade _____ Teacher _____ Testing Date _____

Item Order and Description	Cognitive Competence	Peer Acceptance	Physical Competence	Maternal Acceptance
1. Good at numbers	1 _____			
2. Friends to play with		2 _____		
3. Good at swinging			3 _____	
4. Eats at friends				4 _____
5. Knows alot in school	5 _____			
6. Others share		6 _____		
7. Good at climbing			7 _____	
8. Mom takes you places				8 _____
9. Can read alone	9 _____			
10. Friends to play games with		10 _____		
11. Good at bouncing ball			11 _____	
12. Mom cooks favorite foods				12 _____
13. Good at writing words	13 _____			
14. Has friends on playground		14 _____		
15. Good at skipping			15 _____	
16. Mom reads to you				16 _____
17. Good at spelling	17 _____			
18. Gets asked to play by others		18 _____		
19. Good at running			19 _____	
20. Stays overnight at friends				20 _____
21. Good at adding	21 _____			
22. Others sit next to you		22 _____		
23. Good at jumping rope			23 _____	
24. Mom talks to you				24 _____

Column (Subscale) Total:

Column (Subscale) Mean:
(Total Divided by 6)

Comments:

*Susan Harter and Robin Pike, University of Denver, 1983

Appendix H

**An Evaluation of a School-Based Personal
Safety Program for the Primary Grades**

**AN EVALUATION OF A SCHOOL-BASED PERSONAL
SAFETY PROGRAM FOR THE PRIMARY GRADES**

Key words: Prevention, child sexual abuse, school programs,
evaluation.

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ABSTRACT

This study evaluated the efficacy of a school-based personal safety program in the primary grades. A total of 121 children in grades one and two were involved. Sixty-three participated in the program of six 30-minute lessons. Fifty-eight control children were not knowingly exposed to any parts of the program. A 24-item questionnaire was administered orally to each child individually and one-on-one role playing was videotaped to assess factual knowledge and behavioural skills in a pre/post design. The personal safety program was successful in imparting safety information to the children. Role playing of behavioural strategies resulted in change on the dependent measures in the expected direction.

Child sexual abuse is a term that refers to the sexual exploitation and/or coercion of a child by an adult or older adolescent (Finkelhor, 1979). Five years is the minimal age gap between child and perpetrator (Finkelhor, 1979). Sexual abuse may involve a continuum of behaviour ranging from verbal non-physical abuse to forcible or non-forcible touching offenses. Sexual abuse may refer to acts of pedophilia, exhibitionism, rape, fondling and manipulation of the child's genitalia, or exposure to pornographic material. The duration of abuse can range from a single encounter with an exhibitionist, to occasional fondling by a casual family acquaintance, to years of continuous abuse by a nuclear family member.

Statistical evidence of the incidence of sexual abuse is varied. Finkelhor (1979) suggested that one out of every five females and one out of every eleven males may have been sexually victimized as children. Russell (1983) found that one out of every four female children had been victimized before the age of 14 years and one out of every three females before the age of 18 years. The Badgley Report (1984) noted that approximately fifteen percent of girls and eight percent of boys may have been sexually abused.

In such efforts to establish prevalence estimates, the difficulties of validity and reliability of method of report, and of obtaining a representative sample, are rivalled by the lack of consensus regarding what acts constitute sexual abuse. Obviously the nature of the sample, reporting method, and definition of abuse will influence empirical estimates. These problems are underlined by the disparity in rates presented in the above three reports.

While as yet there are no widely accepted rates, clinical experience and public response has made it evident that child sexual abuse is perceived to be a serious problem (De Young, 1982; Herman, 1981; James, Womack & Strauss, 1978; Maisch, 1972; McKittrick, 1981; Meiselman, 1978). Education, treatment

and prevention programs for child sexual abuse have been key concerns of national centers established in both Canada and the United States (National Clearinghouse on Family Violence, National Center on Child Abuse and Neglect).

A similarity that does emerge from both the Finkelhor (1979) and Russell (1983) studies, is that sexual abuse is more likely to occur at a younger age (prior to 13 years) than at an older age. In Finkelhor's study, 89% of the abuse began prior to age 13 with 25% of all abuse occurring before age seven. In Russell's study, 74% of abuse began prior to 14 years of age.

The vulnerability of young children is due partly to their lack of information and lack of behavioural self-protective skills. Children are strategically coerced by threats of violence to them or their loved ones or withdrawal of money, affection, or food (Burgess, Groth & Holmstrom, 1978).

Contrary to public belief, most offenders are known to the child. DeFrancis (1969) reported that 75% of the offenders were known to the victims and were either members of the victim's household, relatives, neighbours, or friends of the victims. Corsini (1982) found that in 84% of the cases, the victim knew the offender. Physical violence is reported in less than 10% of child sexual abuse cases. Age, size, experience and intellect contribute to the discrepancy of power between child victim and abuser. Oftentimes, the offender perceives the passive child as a willing participant in the sexual encounter. What evidence there is suggests that most offenders will stop and find a more timid child if there is resistance or a confrontation (Gagnon, 1965).

In attempting to address this problem, the Ottawa Board of Education designed and implemented a sexual abuse prevention program for children in

the primary (1-4) grades.¹ The program was compatible with suggested guidelines (Brassard, Tyler, & Kehle, 1983) and was taught by homeroom teachers. Teachers were trained in in-service workshops conducted by the Board's Social Services Department.² The purpose of the present research was to evaluate independently the effectiveness of this program in imparting factual knowledge and behavioural strategies to the children.

Most research in prevention programs has assessed only knowledge and not skill acquisition (Herndon, 1984; Kerr-Halls, 1986; Sigurdson, Strang & Doig, 1986; Swan, Press & Briggs, 1985; Wolf, MacPherson, Blount & Wolf, 1986). However, the success of prevention programs may be assessed more directly by measuring the children's abilities to perform prevention behaviours (Conte, Rosen & Saperstein, 1985; Leventhal, 1987; Wolf et al., 1986). In fact, recent evidence suggests that traditional cognitive measures of knowledge and understanding of prevention concepts may be poor predictors of children's behaviour in risk situations (Fryer, Kerns Kraizer & Miyoshi, 1987). This paper presents a study in which the program was evaluated by both verbal responses to a questionnaire as well as behavioural responses in role play situations.

A number of recent papers have discussed the potential negative side effects of evaluation procedures such as the video-taped role plays (Leventhal, 1987; Conte, 1987). While the development and administration of such simulated risk situations needs to be done with the utmost care, at this time their use seems justified since it is essential that we learn how to evaluate

¹ Program is available from Bob Zacour, Ottawa Board of Education, 330 Gilmour Ave., Ottawa, Ontario, K2P 0P9.

² The Program curriculum is available from Dan Wiseman, Ottawa Board of Education, 330 Gilmour Ave., Ottawa, Ontario, K2P 0P9.

the success or failure of various aspects of abuse prevention programs for children.

METHOD

Subjects

A total of 121 children (aged 6-8 years), 63 males and 58 females, in grades one and two from six elementary schools in the Ottawa Board of Education were used as subjects. The role playing strategies used in the prevention programs evaluation were described to teachers and parents. Consent letters were sent home. Parents were also given direct access to the researcher. Before and after each session, the children were informed by the experimenter of the pretend nature of the role playing and thanked for their participation.

The 63 children in the experimental group participated in the Ottawa Board's Personal Safety Program. The 58 control group children were not knowingly exposed to any parts of the personal safety program.

The Ottawa Board of Education serves a mainly Caucasian middle-class, urban area in which both English and French are spoken. However, the schools in this study were from the English system within the Board. The two schools presenting the Personal Safety Program (experimental group) contained children from low to middle socio-economic backgrounds. Since the classroom teachers were trained to teach the program, children could not be randomly assigned to groups. The control group was taken from four different schools to avoid modelling effects. These schools were selected by Board administrative personnel to match the socio-demographic characteristics of the experimental group. Despite this matching process there were still

considerable differences in the proportion of children in the two groups for whom languages other than English (i.e., French, Spanish, Chinese) were spoken at home (experimental - 32%; control - 41%). However, since the study involved pre-post program comparisons, any such differences between groups were unlikely to bias the results.

The Ottawa Board Personal Safety Program: The personal safety program contained six lessons covering personal safety awareness and strategies and skills to help children recognize and avoid sexual abuse. Each lesson was approximately 30 minutes and group discussions and stories helped the children to practise the personal safety skills. Personal safety was the topic of lesson one. It informed children of their right and responsibility to keep their bodies safe. Lesson two identified touches that felt good, bad or confusing. The children learned to describe feelings associated with each kind of touch. Students were given simulated experiences through the use of "trigger" stories. They were also required to describe their own experiences with different types of touches. Lesson three focused on sexual assault and the No-Go-Tell Safety Rule. The concepts of secrets, tricks and bribery were taught. Students learned about sexual assault. Students also learned what a stranger was and were taught when and how to apply the No-Go-Tell safety rule. Lesson four focused on how and when to say "no" assertively. Children were required to practise this skill. They also learned safety rules about answering the telephone. Lesson five taught the children to tell trusted adults about sexual assault. It focused on how to ask for help repeatedly if necessary. Lesson six involved a review of the personal safety rules and skills learned.

Instruments: A 24-item questionnaire³ was developed by evaluating the responses of teachers to a hand-out of potentially suitable questions framed to determine what the children had learned in the Personal Safety Program. These teachers had participated in a training program for preventing sexual abuse. The initial pool of questions was derived from a number of previous studies and from original questions. The final instrument consisted of 24 questions chosen to assess specific components of the six-lesson program outlined above. In the questionnaire, separate items addressed knowledge of body parts (2 items), personal safety (2 items), good, bad and confusing types of touches and the corresponding feelings to these touches (6 items), the NO-GO-TELL Safety Rule (7 items), secrets and bribery (2 items), telling trusted adults about touching problem and to keep telling until someone helped (3 items), whether or not it was the child's fault if an adult touched their private parts (1 item) (See Table I). A primary consultant at the Ottawa Board of Education provided further advice on the comprehensibility of the questions to primary school children. The questionnaire had a maximum score of 50 points. Individual items were scored from one to four points, depending on the complexity of the question. Consult Table II for examples of questions and scoring.

(INSERT TABLES I & II HERE)

Prior to the role playing situations, each child was told that they would take part in two "pretend games" with the interviewer. In the first game the child was to pretend that she/he was playing outdoors and the interviewer would pretend that she was a stranger who had lost her puppy and needed

³ Questionnaire, role play scripts and role play scoring protocols are available from Sandy E. Mendelson-Ages.

help to find it. In the second game, the interviewer pretended that she was a babysitter and was at the child's house. The pretend babysitter attempted to bribe the child to undress and then requested the child keep it a secret. It should be noted that at no time was a child allowed to undress. In both these situations it was clearly emphasized to the child that it was a pretend game.

Each child's responses were videotaped. The female interviewer (SMA) followed a script in each scene. The children had to act out what they would do and what they would say in response to these three requests.

The evaluation of the videotaped role playing produced two scores. The first score (maximum of 6 points) evaluated the type of role play response. In the first role play, if the child would follow the stranger to find the puppy, the child was given 0 points whereas if the child would not follow the stranger the child was given 1 point. Similarly, in the second role play, if the babysitter succeeded in bribing the child to undress, that is, to begin to take off his/her shirt the child received 0 points; if the child took off his/her shoes and socks only he/she received 1 point; if the shoes only were removed the child received 2 points and if no clothes were removed, the child received 3 points. In the second role play, if the child kept the secret that the babysitter asked him/her to undress or gave no response, when queried if they would keep the secret, the child received 0 points. If the child told the secret, then 1 point was given and if the secret was told to a significant person 2 points were given.

The second score (maximum of 11 points) was based on an evaluation of the child's behavioural/responses during the two role plays. Videotapes were scored to indicate whether or not the child said No (1 pt) or Yes (0 pts) firmly; whether the child ignored pressure to conform (1 pt) or conformed

(0 pts); whether the child used a strong audible voice (1 pt) or was weak-voiced (0 pts); and whether the child appeared self-assured (1 pt) or lacked confidence (0 pts). The two parts to the babysitting role play were evaluated separately. In one part the babysitter bribed and pressured the child to get undressed. In the other part the babysitter told the child to keep it a secret but there was no pressure to conform to keep the secret.

Each child was administered the questionnaire individually and participated in the role play situation in a half-hour session prior to the initiation of the personal safety program. After the curriculum was completed, within an interval of six to ten weeks, the children in both experimental and control groups were re-evaluated using the same questionnaire and role playing situations. The interval between the pre- and post-test was similar in both groups. This interval range was to accomodate teachers' schedule plans as well as the spring break and professional development days.

The questionnaire protocols and the videotaped role playing sessions were evaluated independently by the investigator (SMA) and another evaluator blind to group membership to obtain baseline and post-program scores of the children's knowledge and behavioural skills about personal safety.

RESULTS

To assess reliability of scoring, a total of 45 children were chosen randomly at pre- and post-test. The 24-item questionnaire yielded a total of 1080 questions. There was rater disagreement on 17 questions. Therefore, there was $1063/1080 \times 100 = 98\%$ agreement. The inter-rater reliability for the role playing response evaluation was 100%. There were 11 behavioural evaluations per child which yielded 495 (11 x 45) evaluations. There was rater

disagreement in 86 cases which resulted in $409/495 \times 100 = 83\%$ agreement. In all cases, the data analyzed were the scores provided by the investigator (SMA).

Repeated analyses of variance were performed with three between-group variables: home language (English and any other language), sex, and school. The six dependent variables were the pre- and post-test scores on the questionnaire and the pre- and post-test scores on role playing (this score evaluates what the child did in videotaped role playing situations -- if child did or did not follow stranger, did or did not attempt to remove clothing, did or did not keep secret) and the pre- and post-test scores on behaviour evaluation.

Language used at home was significant for the pre-test questionnaire [$F(1,94) = 11.09, p = .0012$] and the post-test questionnaire [$F(1,94) = 12.10, p = .0008$] scores. The main effect of school was significant for the pre-test questionnaire [$F(6,94) = 3.2, p = .0066$], for the post-test questionnaire [$F(6,94) = 23.51, p = .0000$] and post-test role play score [$F(6,94) = 3.25, p = .0060$]. There were no significant interactions.

The efficacy of the program was evaluated directly by comparing experimental and control groups in t-tests using pre-test difference scores on the three dependent variables (See Table III). In the case of the test questionnaire difference scores, the Levene's W test (Dixon, 1985) indicated that the group variances were unequal; therefore, the t-ratio using "separate" variance estimates was used (with $df = 108,2$) (SPSSX, 1988). For the test questionnaire score, the mean experimental group difference (-15.65) was significantly larger than the mean control group difference score (-2.57) ($t = -14.63, df = 108,2, p = .0000$). For the role play score the mean

experimental group difference (-.70) was larger than the mean control group (-.17) ($t = -2.38$, $df = 119$, $p = .019$). Also the change in mean behaviour evaluation score was larger for the experimental group (-2.78) than the control group (-1.16) ($t = -3.30$, $df = 119$, $p = .0013$).

(INSERT TABLE III HERE)

DISCUSSION

The purpose of this study was to examine the effectiveness of a personal safety program taught in elementary school in imparting factual knowledge and behavioural strategies to the children. The data demonstrate marked improvements in factual knowledge regarding personal safety. However, the relative improvements in behavioural skills, although significant, are not as large.

Children whose home language was English scored significantly higher on the questionnaire at both pre- and post-testing. This was expected considering that the questionnaire relied heavily on verbal language skills and the role playing and behaviour evaluation did not. However, it is important to note that children in the experimental group whose home language was not English showed the same rate of learning from pre- to post-test as the children whose home language was English. There was an effect of schools on both the pre- and post-questionnaire measures. The schools had slightly different compositions of students (e.g., home language, SES levels) and, therefore, such differences were not surprising. These school differences did not interact with the effects of the program, i.e., there was significant improvement on the questionnaire for all schools in the experimental group as compared to the control group. Since the language and school variables did not interact with

the effects of the program in imparting knowledge to the children, these variables could not have biased the present results. However, these data indicate clearly the need to consider such factors in designing programs which will reach effectively all children within the targeted school system.

The fact that the relative differences in the role play evaluation were not as large as the questionnaire results may be due to three factors. First, it is possible that the measurement instrument was not sufficiently sensitive. However, similar evaluation methods were implemented in a study (Downer, 1984) where an increase in the children's assertiveness with a puppet was reported. The key differences between that study and the present one is that role playing with a puppet in front of an observer may produce very different results from role playing with an adult before a video camera. A second possibility is that the role play evaluation required generalization of behaviour which is difficult to demonstrate (Drabman, Hammer & Rosenbaum, 1979). The role plays used in teaching the program were different from the evaluation role plays for this study. The third factor is that assertive role playing was not an integral part of the program and, in fact, teachers varied in how much they incorporated role playing. Giving children the information to answer questions of a "what if" nature will not necessarily result in their carrying out appropriately these supposed situations in real life.

It is important that children have adequate training in behavioural strategies so that they feel and appear confident; otherwise under pressure they may be easily persuaded. It is recommended that all personal safety programs include behavioural role play training with adults to teach these essential skills.

Finally, it should be noted that the role play interviewer was female as were all the classroom teachers in the experimental group. In addition, by the post-test session, the interviewer was familiar to the children. Therefore, it is possible that the sex and familiarity of the interviewer influenced the children's responding to the role play requests. Future research should attempt to control these factors.

An important caveat must be emphasized when considering personal safety programs for use in schools. Educators need to be cautious in using sexual abuse prevention curricula simply because they have been published. It is important to establish what information and skills children learn from the program. Conte (1987, p.4) noted that "pre/post testing ought to be part of every program so that kids who aren't learning can be identified and receive some kind of tutorial." School psychologists have a clear role in the evaluation of such programs. In addition, school psychologists can assist both in the development of age-appropriate curriculum materials and in preparing teachers to receive the inevitable disclosures that such programs elicit. Psychologists, as part of the schools' mental health team, can do much to advocate for good programs to be properly delivered in the context of adequate system supports.

Contact with the principal and teachers indicated that the pretend role plays did not cause the children any distress. This study evaluated a pilot personal safety program at the Ottawa Board of Education. Recommendations for changes to the program, based on this study, have been implemented. Current research, which implements role play modelling, is examining the maintenance of knowledge and behavioural changes over a one year period.

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TABLE I

<u>Component Examined</u>	<u>Specific Question</u>
(1) knowledge of body parts	19, 20
(2) personal safety	1, 2
(3) good, bad, confusing touches	11, 14, 16
(4) feelings related to good, bad, confusing touches	10, 13, 15
(5) No-Go-Tell Safety Rule	4, 6, 8, 17, 22, 23, 24
(6) Secrets and Bribery	3, 24
(7) Persistence in telling touching problem	5, 12, 18
(8) It is the adult's fault	21

TABLE II

Question: What would you do if someone touched you in places you do not want to be touched?

Response: A response that included saying No, Going away from the scene and Telling someone what happened received a maximum score of 3 points (No-Go-Tell). A response that included Saying No, and Going away received 2 points and a response that included Saying No only or just Going away only received 1 point.

Question: What would you do if someone touched you in places you do not want to be touched and the person you told did not believe you? Would you do anything else?

Response: A response that included Tell someone else and Keep Telling until someone believed child received a maximum score of 2 points. A response that included Tell someone else only, received 1 point.

Question: If you make a promise to keep a secret and later feel that it is a bad secret do you have to keep the secret?

Response: A No response received 1 point. A Yes response received 0 points.

Question: What would you do if you ask someone for help and they do not help you? Would you do anything else?

Response: A response that included Go to someone else to ask for help and to keep asking for help until someone listened received 2 points. A response that included Go to someone else only received 1 point.

TABLE III
TABLE OF MEANS AND STANDARD DEVIATIONS FOR
EXPERIMENTAL & CONTROL GROUPS

	Pre-test			Post-test		
	Questionnaire	Roleplay	Behaviour Evaluation	Questionnaire	Roleplay	Behaviour Evaluation
E X P E R I M E N T A L	$\bar{X}$ 20.59 S.D. (6.95)	4.83 (1.41)	5.48 (2.88)	36.24 (5.55)	5.52 (0.86)	8.25 (2.16)
C O N T R O L	$\bar{X}$ 20.67 S.D. (6.51)	4.93 (1.47)	7.36 (2.73)	23.24 (6.30)	5.10 (1.39)	8.52 (1.73)

APPENDIX A

	Score
What does personal safety mean?	2
Who can you tell if something is bothering you? Who else can you tell?	2
If you make a promise to keep a secret and later feel that it is a bad secret do you have to keep the secret?	1
What would you do if someone touched you in places you do not want to be touched?	3
What would you do if someone touched you in places you do not want to be touched and the person you told did not believe you? Would you do anything else?	2
What would you do if a friendly person asked you to go in their car with them?	3
What would you do if a babysitter tells you to do something that you think is wrong?	2
Name one safety rule about answering the telephone?	1
How does a good touch make you feel?	1
Name a good touch.	1
How does a bad touch make you feel?	1
Name a bad touch.	1
How does a confusing touch make you feel?	1
Name a confusing touch.	1

Name the parts of the body in this picture when I point to them. (Show picture and point to these parts) head, neck, chest, breasts, arm, vagina, penis, leg, buttocks, foot.

4

If an adult touches a child's breasts, penis, vagina or behind, is it the child's fault?

1

What would you do if someone touched your penis, vagina, behind or breasts?

3

What should a child do if someone touches the child's penis or vagina and promises to never do it again?

3

What would you do if someone you know promises to give you a treat if you undress for them?

3

END

28.02.92

FIN