Teaching Adult Sexual Offenders with Intellectual Disabilities to Discriminate Between Pictures of Safe and Dangerous Situations

by

Stuart Berl Toews

A Thesis submitted to the Faculty of Graduate Studies of The University of Manitoba in partial fulfilment of the requirements of the degree of

Doctor of Philosophy

Department of Psychology
University of Manitoba
Winnipeg, Manitoba, Canada

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A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of Manitoba in partial fulfillment of the requirement of the degree

Of

Doctor of Philosophy

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ABSTRACT

Sexual offending is a common problem in adult males with intellectual disabilities. In my research, I evaluated a behavioral training package to teach sexual offenders with mild intellectual disabilities to discriminate between pictures of situations in which they were likely to reoffend (dangerous situations) and situations in which they were unlikely to reoffend (safe situations). Four adult males with mild intellectual disabilities were screened to identify relevant target victim categories and settings. Two target victim categories (e.g., grade school females and adolescent females) and three settings (bus interior, bus stop, and recreation centre) were depicted for each participant. Participants pressed buttons on a response box to indicate whether the situation presented in a slide was safe or dangerous for them. Slides of dangerous situations showed a target victim alone or with another target victim. Slides of safe situations showed a target victim accompanied by a non-target individual (an adult male). Each participant responded to 144 slides in pre-tests, post-tests, and follow-up tests. Discrimination training included the use of discriminative stimuli, rule training, and consequences. The generalization programming components included the use of multiple exemplars and a rule. Participants learned to discriminate between pictures of safe and dangerous situations and generalized to pictures with new target victims; their skills were maintained at 1 month follow-up. Further research is needed to extend this training program to include teaching appropriate responses to dangerous situations and testing for generalization in natural environments.
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Stuart Berl Toews
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>ii</td>
</tr>
<tr>
<td>Copyrights</td>
<td>iii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iv</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>v</td>
</tr>
<tr>
<td>List of Tables</td>
<td>vi</td>
</tr>
<tr>
<td>List of Figures</td>
<td>vii</td>
</tr>
<tr>
<td>Introduction: Relapse Prevention</td>
<td>1</td>
</tr>
<tr>
<td>Discrimination Training</td>
<td>2</td>
</tr>
<tr>
<td>Present Study</td>
<td>5</td>
</tr>
<tr>
<td>Method: Participants</td>
<td>11</td>
</tr>
<tr>
<td>Apparatus</td>
<td>11</td>
</tr>
<tr>
<td>Pictures</td>
<td>15</td>
</tr>
<tr>
<td>Equipment</td>
<td>16</td>
</tr>
<tr>
<td>Procedure</td>
<td>18</td>
</tr>
<tr>
<td>Procedural Flowchart</td>
<td>19</td>
</tr>
<tr>
<td>Reinforcement Procedure</td>
<td>20</td>
</tr>
<tr>
<td>Orientation</td>
<td>21</td>
</tr>
<tr>
<td>Pre-tests</td>
<td>22</td>
</tr>
<tr>
<td>Discrimination Training</td>
<td>23</td>
</tr>
<tr>
<td>Generalization Testing</td>
<td>25</td>
</tr>
<tr>
<td>Extended Training</td>
<td>26</td>
</tr>
<tr>
<td>Post-tests</td>
<td>26</td>
</tr>
<tr>
<td>Follow-up</td>
<td>26</td>
</tr>
<tr>
<td>Social Validity and Debriefing</td>
<td>26</td>
</tr>
<tr>
<td>Procedural Reliability</td>
<td>27</td>
</tr>
<tr>
<td>Results: Participant 1</td>
<td>27</td>
</tr>
<tr>
<td>Participant 2</td>
<td>28</td>
</tr>
<tr>
<td>Participant 3</td>
<td>29</td>
</tr>
<tr>
<td>Participant 4</td>
<td>31</td>
</tr>
<tr>
<td>Summary of Pre-test, Post-test, and Follow-up Performance</td>
<td>37</td>
</tr>
<tr>
<td>Social Validity and Debriefing</td>
<td>38</td>
</tr>
<tr>
<td>Discussion</td>
<td>39</td>
</tr>
<tr>
<td>References</td>
<td>50</td>
</tr>
<tr>
<td>Appendix A: Tables 2 – 6</td>
<td>62</td>
</tr>
<tr>
<td>Appendix B: Project Description and Consent Forms</td>
<td>67</td>
</tr>
<tr>
<td>Appendix C: Session Instructions</td>
<td>74</td>
</tr>
<tr>
<td>Appendix D: Procedural Reliability Checklist</td>
<td>78</td>
</tr>
<tr>
<td>Appendix E: Social Validity Questionnaire for Participant</td>
<td>80</td>
</tr>
<tr>
<td>Appendix F: Follow-up Study</td>
<td>82</td>
</tr>
<tr>
<td>Appendix G: Follow-up Project Description and Consent Forms</td>
<td>88</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Participant Characteristics</td>
</tr>
<tr>
<td>2</td>
<td>Description of Models in Pictures for Participant 3</td>
</tr>
<tr>
<td>3</td>
<td>Practice Pictures to Train Participants How to Operate the Computer Program and Response Box</td>
</tr>
<tr>
<td>4</td>
<td>Number of Correct Responses to Pictures of Dangerous and Safe Situations (Participants 1, 2, &amp; 3)</td>
</tr>
<tr>
<td>5</td>
<td>Number of Correct Responses to Pictures of Dangerous and Safe Situations (Participant 4)</td>
</tr>
<tr>
<td>6</td>
<td>Participant Responses to Social Validity Questionnaire</td>
</tr>
<tr>
<td>7</td>
<td>Number of Correct Responses in Follow-up Study Testing and Training</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>A picture of the training environment showing participants' chair (on left) in front of response box and an example of a pre-test slide</td>
</tr>
<tr>
<td>2</td>
<td>Stages of testing and discrimination training</td>
</tr>
<tr>
<td>3</td>
<td>Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 1</td>
</tr>
<tr>
<td>4</td>
<td>Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 2</td>
</tr>
<tr>
<td>5</td>
<td>Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 3</td>
</tr>
<tr>
<td>6</td>
<td>Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 4</td>
</tr>
</tbody>
</table>
Teaching Adult Sexual Offenders with Intellectual Disabilities
to Discriminate Between Pictures of Safe and Dangerous Situations

Persons with intellectual disabilities are over-represented in their rate of criminal activity, including sexual offenses (Holland, Clare, & Mukhopadhyay, 2002). Sexual offenses committed by persons with intellectual disabilities account for up to 46% of convictions received by persons with mental retardation (Day, 1997). Given these statistics, treatment for sexual offenders with intellectual disabilities is a significant concern.

Persons with intellectual disabilities who have committed sexual offenses are poorly understood and are often overlooked in research and practice (Haaven, 2005; Nezu, Nezu, & Dudeck, 1998; Swanson & Garwick, 1990; Ward, Trigler, & Pfeiffer, 2001). Day and Berney (2001) characterize sexual offenders with intellectual disabilities as persons suffering from psychosocial deprivation, exhibiting a diversity of problem behaviors during childhood and adolescence, and spending a great deal of time in residential programs. According to Day (2001), offending behavior of persons with intellectual disabilities “usually occurs in the context of undersocialization, poor internal controls, and faulty social learning compounded by educational underachievement, lack of social and occupational skills, and poor self-image” (p. 361). Inappropriate social skills, poor judgement, inability to recognize dangerous situations, inability to communicate details of situations, and inability to avoid or escape from high-risk situations places members of this population at risk of engaging repeatedly in sexual offenses. To make matters worse, the current level of services for this population has been described as “virtually nonexistent, overly restrictive, or fragmented” (Ward et al., 2001, p. 12). Less than one
quarter of social-care staff supporting sexual offenders with intellectual disabilities has received any specific training in assessment and treatment of sexual offending behaviors (McKenzie et al., 2001).

Further, compounding the problem is the fact that there is little research on treatment of sexual offenders with intellectual disabilities (Haaven, 2005; Haaven & Schlank, 2001; Sgroi, 1989; Wilcox, 2004). Barron, Hassiotis, and Banes (2002) conducted a literature search for clinical trials or case studies of interventions for offenders with intellectual disabilities and found no published clinical trials. Foxx, Bittle, Bechtel, and Livesay (1986) critically reviewed 13 research reports on the behavioral treatment of maladaptive sexual behavior with sexual offenders with intellectual disabilities and concluded that, although treatment success was often reported, most studies did not employ rigorous research designs. Day (2001) as well as Day and Berney (2001) noted that offense-specific interventions for sexual offenders with intellectual disabilities, including behavioral programs, group therapy, and social-skills training, "are still in their infancy" (p. 369). Moreover, they have been adopted from programs used with sexual offenders without intellectual disabilities and they have not been evaluated for use specifically with persons with intellectual disabilities.

Relapse Prevention

According to a survey of 1461 sex-offender treatment programs in the United States (Knopp, Freeman-Longo, & Stevenson, 1992), relapse prevention is a common treatment modality used in 89% of cognitive-behavioral programs and 86% of all treatment programs. The relapse prevention model was developed by Marlatt and Gordon (1985) to deal with substance addictions, and subsequently was adapted to
address sexual offending (MacDonald & Pithers, 1989; Pithers, Beal, Armstrong, & Petty, 1989). According to the relapse prevention model, sexual abuse occurs as part of a behavioral chain, is not committed on impulse, and is not related to a psychiatric condition. Relapse prevention treatment of offenders who may or may not have intellectual disabilities involves: (a) identifying high-risk situations for an offender and then having the offender learn to identify their occurrence; (b) having the offender identify decisions that the offender makes that lead closer to a relapse; and (c) teaching the offender to cope with high-risk situations to prevent the occurrence of a relapse.

Abel and Osborn (1996) report that relapse prevention provides a promising framework of behavioral and cognitive interventions, as part of comprehensive treatment for sexual offenders. A comprehensive treatment package would include establishing empathic client-therapist relationships, sex education, sexual dysfunction therapy, skills training, decreasing deviant arousal, increasing nondeviant arousal, and correcting cognitive distortions (Abel, Becker, & Skinner, 1986). Hanson and Harris (2000) suggest the need to attend to dynamic predictors (anger, subjective distress, tolerance to sexual abuse, poor self-management, or poor social supports) that emerge in sexual offenders prior to a sexual offence.

The relapse prevention model has been modified and used to treat sexual offenders with intellectual disabilities (e.g., Coleman & Haaven, 1998; Day & Berney, 2001; Griffiths, Quinsey, & Hingsburger, 1989; Murphy, Coleman, & Abel, 1983; Murphy, Coleman, & Haynes, 1983; Rose, Jenkins, O’Connor, Jones, & Felce, 2002; Swanson & Garwick, 1990). Cox-Lindenbaum (2001) used a modified relapse prevention method to teach their clients with intellectual disabilities to review patterns of sexually offensive
behaviors and then to create and establish new coping strategies to avoid relapse.

Haaven and Coleman's (2000) relapse prevention goal was to have their clients with intellectual disabilities specify a target identity ("new me"), learn to identify and to label their problematic thoughts, feelings, and actions ("setups"), and to replace "setups" with appropriate coping strategies ("what-to-dos"). Horton and Frugoli's (2001) teaching manual presents examples of negative thoughts, negative feelings, and environmental circumstances to train offenders with intellectual disabilities to identify and to respond appropriately to dangerous situations in which they are likely to reoffend.

According to Haaven and Schlank (2001), clients with intellectual disabilities should demonstrate the ability to identify dangerous situations, such as encountering unsupervised children, and should demonstrate consistency of avoidance or escape practices before supervision is reduced. To accomplish these goals, persons with intellectual disabilities require intermediary training that can connect what is learned in clinical and residential settings with what is experienced in community settings, which may involve employing training procedures and materials that match situations in the community. Components of relapse prevention related to training, transitional planning, and maintenance of desirable behaviors for offenders with intellectual disabilities entering the community are reasonable and appear to be necessary (Coleman & Haaven, 1998).

Several authors have reported treatment success, but their measure of success has been based on the recurrence of sexual offending behaviors (Cox-Lindenbaum, 2001; Cox-Lindenbaum & Lindenbaum, 1994; Griffiths et al., 1989; Haaven, Little, & Petre-Miller, 1990; Haaven & Schlank, 2001; Knopp, 1984; Lund, 1992; Swanson & Garwick,
Recidivism as a measure of success is limited for at least three reasons: (a) offenders need to be released from security or supervision to use the measure, (b) the measure does not indicate if specific responses in the relapse prevention chain were acquired, and (c) the measure refers to offenses that have been detected, not to actual offenses committed. Abel and Osborn (1996) comment that outcomes are nearly impossible to determine because, among other things, recidivism usually is the outcome measure, baseline rates vary between sexual offender types affecting appropriateness of comparison groups, investigators often employ varying multi-treatment components, and treatment control groups cannot be included for ethical reasons.

Although clinicians differ in their use of specific treatment procedures, they remain optimistic that relapse prevention training is useful for treatment of sexual offenders with intellectual disabilities. According to Haaven (2005), there is a paucity of treatment research for sexual offenders with intellectual disabilities and the need for experimental research addressing relapse prevention strategies for sexual offenders with intellectual disabilities remains. The present study examined one step in relapse prevention training; namely discriminating dangerous situations where reoffending would be likely to occur from safe situations where reoffending would be unlikely to occur.

**Discrimination Training**

Training sexual offenders with intellectual disabilities to discriminate between situations in which they are likely to reoffend (dangerous situations) and situations in which they are unlikely to reoffend (safe situations) requires strengthening the stimulus control of relevant stimuli over the correct verbal labeling response (safe or dangerous). In the natural environment, an individual encounters complex situations that contain
multiple stimuli. Persons and settings, for instance, vary across multiple dimensions. Children at a playground will vary in their gender, race, size, shape, and color of clothing. A situation may be dangerous, if there is a young girl alone at the playground, but safe, if there is a young girl with an adult. The offender must learn to respond appropriately to the relevant stimuli in a given situation, such as age and gender of person in the setting, and be unaffected by irrelevant stimuli, such as clothing and play objects. Researchers have shown that, without specialized training, persons with intellectual disabilities have difficulty learning discriminations involving multi-component stimuli because they often incorrectly attend to single components of such stimuli thereby exhibiting overselective stimulus control (Bell & Espie, 2000; Day, Sparrow, Shinkfield, & Zerman, 1997; Dickson, Wang, Lombard, & Dube, 2006; Koegel & Wilhelm, 1973; Lovaas, Koegel, & Schreibman, 1980).

There is extensive empirical evidence, however, showing that persons with intellectual disabilities can be taught complex stimulus discriminations; for example, to discriminate between: (a) facial expressions of emotion (McAlpine, Singh, Ellis, Kendall, & Hampton, 1992); (b) two and three-digit numbers (Repp, Karsh, & Lenz, 1990); (c) geometric stimuli (De Rose, McIlvane, Dube, Galpin, & Stoddard, 1988; Dube & McIlvane, 1989; Dube & McIlvane, 2002; Dube, Moniz, & Gomes, 1995); and (d) Greek letters (Rodgers & Iwata, 1991). They have been taught to select age-appropriate clothing, accessories, and leisure items (Haring, Breen, & Laitinen, 1989), to match pictures and printed words to corresponding dictated names (Sidman, 1971), and to make relevant word distinctions (e.g., learning to identify the name “Jacob” when presented together with “Jack”) (Laarhoven, Johnson, Repp, Karsh, & Lenz, 2003). This
research suggests that behavioral training programs could be used to teach sexual
offenders with intellectual disabilities to discriminate between safe and dangerous
situations.

General case programming (Horner & Albin, 1988; Horner, McDonnell, & Bellamy,
1986; Horner, Sprague, & Wilcox, 1982) has been found to be both effective and
efficient for establishing generalized responding in learners with intellectual disabilities
(Giangreco, 1983; Sarber & Cuvo, 1983; Sarber, Halaxz, Messmer, Beckett, & Lutzker,
1983; Thompson, Braam, & Fuqua, 1982; van den Pol et al., 1981; Walters, Holborn, &
Ediger, 2006). The aim of general case programming is to establish functional behaviors
to be performed as generalized responses; that is, responses that occur reliably across
appropriate stimulus conditions within a universe of varying stimuli (Horner et al., 1982).
The technology of general case programming was originally developed for teaching
math, reading, and language skills (Becker, Engelmann, & Thomas, 1975) and was
used for selecting and sequencing multiple teaching examples that sampled a range of
relevant stimulus variation.

General case programming involves several steps (Horner & Albin, 1988; Horner,
McDonnell, & Bellamy, 1986; Horner, Sprague, & Wilcox, 1982). The first step is to
operationally define a set of stimulus conditions across which new skills will be
performed (i.e., instructional universe). The second step is to select teaching and testing
examples that sample the range of relevant stimulus and response variation. Engelmann
and Carnine (1982) recommend that teaching examples meet the following criteria: (a)
be similar for relevant stimuli while varying all other irrelevant stimuli, (b) sample the
range of stimulus variation across which the learner is expected to respond, (c) include
negative examples (where a response is expected not to occur) that are similar to positive examples, (d) include some examples that are exceptions or unusual situations, and (e) be logistically feasible in terms of cost, time, and location. The third step in applying general case programming is to sequence the teaching examples. The fourth step is to incorporate behavioral training strategies that could assist in training the new skills. The fifth step is to test the learners with a new set of examples to evaluate whether they generalized their skills.

General case programming has been used to teach generalized skills, such as street crossing (Horner, Jones, & Williams, 1985), grocery purchasing (McDonnell, Horner, & Williams, 1984), making and receiving telephone calls (Horner, Williams, & Steveley, 1987), grocery item selection (Horner, Albin, & Ralph, 1986; McDonnell & Horner, 1985), table bussing (Horner, Eberhand, & Sheehan, 1986), and compliance to instruction (Walters, Holborn, & Ediger, 2006). For example, Sprague and Horner (1984) used general case programming to teach vending machine use to six high school students with intellectual disabilities. The instructional universe was defined by determining what behavior was desired (or expected) for the learners and where and when the behavior was to be performed. Teaching examples were developed on the basis of what discriminative stimuli were relevant, and the possible stimulus characteristics and possible responses. The instructional universe, in this case included all possible vending machines in the students' home town. The expected skill was to have students produce varying amounts of money and activation responses (push, pull, and slide) to different features of vending machines (where and how money was to be inserted). Three students were trained first with single-instance training and then with three general case
machines (with adequate range of variation). Three other students were trained with a single machine, then with four multiple-instance machines (similar machines without adequate range of variation), and then with four general case machines. Students were tested using 10 untrained machines that sampled the range of machines in the students' home town. Results showed that only students trained with multiple machines that sampled the range of relevant stimulus variation demonstrated generalized skills across the 10 untrained machines.

Present Study

In my research, I set out to develop and evaluate a behavioral training package to teach adult sexual offenders with mild intellectual disabilities to discriminate between pictures of safe and dangerous situations. Discrimination training included components from general case programming to facilitate generalization and behavioral strategies for programming maintenance of learning.

Dangerous situations showed potential victims alone or with other potential victims. Safe situations showed potential victims accompanied by an adult male. Participants were taught this discrimination separately with three sets of pictures, which differed in the setting depicted in the picture (bus stop, bus interior, and recreation centre). Participants were clients of a residential support and treatment program in Winnipeg, Manitoba. Program staff observations and therapist evaluations indicated that clients had limited skills in identifying dangerous situations, and that this placed them at risk of reoffending.

Screening provided information about target victim categories and was used for defining and generating an assortment of teaching examples. The examples were
devised on the basis of what target victim categories were most at risk. Each stimulus class contained pictures of four or five target victims with variation in clothing, props, activities, and backgrounds. Positive (dangerous) examples and negative (safe) examples were included. Examples included target victims alone in a situation, with another target victim, with an adult female, and with an adult male. Models were situated near and far in the picture examples; they were sitting, standing, or walking, facing forwards, backwards, or sideways, and they were dressed for winter, spring, or summer. A training block consisted of a 16-picture set of slides presented consecutively. Teaching examples within each training block were presented in random order using a computer program.

The behavioral training package included strategies to promote learning of the discrimination and to program for maintenance and generalization. The discrimination training involved the presentation of safe and dangerous situations (discriminative stimuli), differential consequences for responding to these stimuli, instructions, rule training, and rule review and correction. Rule training was included because, as Skinner (1969) points out, a rule can function as a discriminative stimulus or cue that emitting a behavior specified by the rule under certain circumstances will lead to reinforcing consequences. Rules have been shown to be useful when rapid behavior change is necessary, when the consequences are unlikely, negligible, and delayed, or when the undesirable behavior may lead to immediate and severe punishing consequences (Baldwin & Baldwin, 1998; Skinner, 1969; Skinner 1974). Maintenance of learning was promoted by rule training, stimulus control with pictures from the participants’ natural environment, and reinforcement (Martin & Pear, 2007). The rule provided a common
stimulus between pictures used in discrimination training and later tests of maintenance. To program for generalization, training used multiple exemplars (Stokes & Baer, 1977), rule training, and reinforcement. The rule provided a common stimulus between pictures used in discrimination training and generalization test pictures showing new target victims (Stokes & Osnes, 1988). Computer programming presented participants with instructions, visual and auditory presentation of a rule, picture stimuli during testing and training, and performance feedback. As facilitator, I presented praise and snacks for attending and participating, and praise and tokens for completing a task and achieving criterion performance.

An AB design with generalization probes and follow-up, was replicated across 4 participants. Pre-testing constituted the A phase and post-testing constituted the B phase. The intervention between pre- and post-testing consisted of discrimination training plus programming for generalization. It was hypothesized that as a result of the training program, participants would improve their performance from pre-testing to post-testing and maintain their performance to 1 month follow-up test.

Method

Participants

Four adult males served as participants (see Table 1 for participant characteristics). They had been referred to the treatment program for committing at least one sexual offense and for presenting with an intellectual disability. Participants 2 and 3 were arrested for an offense and Participants 1 and 4 were arrested and convicted of an offense. The participants were in a residential support program, where three participants were currently receiving individualized therapy and the fourth participant had received it
in the past. All four participants engaged in weekly group activities, under staff direction and supervision. The group activities included educational training, physical exercise, socialization, problem-solving exercises, and entertainment. In addition to the regular group activities, the participants engaged in weekly activities (e.g., grocery shopping) involving independent bus transportation.

Table 1

**Participant Characteristics**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Age</th>
<th>Mental Health</th>
<th>Target Victim Categories</th>
<th>Arrests or Convictions</th>
<th>Trained Target Victim Categories</th>
<th>Unsupervised Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>49</td>
<td>Mild MR</td>
<td>YF, YM, ADF, ADM, AF</td>
<td>Against AF</td>
<td>YF and ADF</td>
<td>Bus Stops On the Bus Recreation Centre</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>Mild MR</td>
<td>YF, YM, ADF, ADM, AF</td>
<td>Against ADF</td>
<td>YF and ADF</td>
<td>Bus Stops On the Bus Recreation Centre</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
<td>Mild MR</td>
<td>YF, YM, ADF, ADM, AF</td>
<td>Against YM</td>
<td>YF and YM</td>
<td>Bus Stops On the Bus Recreation Centre</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
<td>Mild MR</td>
<td>ADF, AF</td>
<td>Against AF</td>
<td>ADF and AF</td>
<td>Bus Stops On the Bus Recreation Centre</td>
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</tbody>
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Note: FSIQ = Full Scale Intelligence Quotient, YF = Young Female, YM = Young Male, ADF = Adolescent Female, ADM = Adolescent Male, AF = Adult Female.

Participants' intellectual skills were assessed using the Weschler Adult Intelligence Scale – Third Edition (Wechsler, 1997). The results placed all four participants in the Mild Mental Retardation range. Participant 4 was being treated with antipsychotic medication (Haldol) for schizophrenia.
Sexual offenders vary in their offense histories and in the situations in which they are likely to reoffend; consequently, treatment needs to be sensitive to these differences (Abel & Rouleau, 1990; Andrews & Bonta, 2006). Pretreatment screening was carried out to identify relevant target victim categories for each participant. As part of pretreatment screening, I reviewed each participant’s case file for relevant information, such as reports by professionals and official police and court documents; consulted with professionals and support workers who had direct experience with the individual; and assessed the individual’s sexual interests using the Abel-Blasingame Assessment System for Individuals with Intellectual Disabilities (ABID) (Abel Screening, Inc., 2006). The ABID data was transmitted to Abel Screening, Inc. for processing and a report was subsequently received for each participant. It included a sexual interest graph showing the results of the visual reaction time measure. Strong sexual interest for a particular target victim category (based on age, gender, and race) was indicated by bars on the graph that exceeded the Z-score cutoff line derived from the individual’s mean score for all categories.

The ABID consists of two parts, a computer administered self-report questionnaire read aloud by the test administrator and a computer administered interactive exercise consisting of 160 pictures, which was designed to measure sexual interest using visual reaction times and a 3-point self-rating scale. For the self-rating scale, a participant is instructed to “think about how sexy it would be to do sex touching with the person in the picture” and to press a green button “if doing sex touching with the person would be sexy” to him, to press a yellow button “if doing sex touching may be sexy” to him, and to press a red button “if doing sex touching is not sexy” to him (Abel Screening, Inc., 2006,
The ABID is suited for individuals in the mild mental retardation range and does not require them to read or write. The visual reaction time identifies sexual interests across 16 categories, defined by whether the stimulus is: (a) Caucasian or African-American, (b) preschool, grade school, adolescent, or adult, and (c) male or female.

A target victim category for a participant was defined as one for which responding exceeded the cut-off on the sexual interest measure and agreed with file information and staff reports. If the sources of information identified different target victim categories or multiple categories, target victim categories were selected primarily through evaluation of inappropriate sexual interest scores obtained with the visual reaction time measure and file information about past offending. Multiple target victim categories were identified for each participant (see Table 1). Two of these target victim categories were selected for training, as shown in Table 1. Young females (grade school ages) and adolescent females (high school ages) were selected for Participants 1 and 2; young females and young males were selected for Participant 3, and adolescent females and adult females were selected for Participant 4. Adult males were not found to be a target victim category for any of the participants.

The participants were at risk of reoffending during periods when they were not supervised. To identify these periods, I met with two staff members who were familiar with the participants’ case files and their routines, to review the weekly schedules of the participants. Although most residential clients spend a large portion of their time under supervision and in situations where sexual reoffending behavior would be unlikely or impossible, the participants had several hours each week in which they were not directly supervised or were more likely to encounter target victims. Although some settings
differed across participants, three settings common to all four participants were selected for convenience. These settings were riding on a bus, waiting at bus stops, and attending a recreational centre.

Apparatus

Pictures. Forty-eight pictures were prepared for each of the three settings (bus interior, bus stop, and recreation centre) for each participant. The selection of models for the pictures was consistent with each participant's target victim categories. Prior to photographing the models, the adult models and the parents of the child and adolescent models read a summary of the key features of the study and signed a consent form permitting the photos to be taken and used for the study (see Appendix B for consent forms). Female child models ranged in age from 7 to 13 years \( (n = 6, M = 10) \), male child models from 8 to 11 years \( (n = 6, M = 10) \), female adolescent models from 15 to 17 years \( (n = 6, M = 16) \), female adult models from 38 to 58 years \( (n = 10, M = 41) \), and male adult models from 37 to 67 years \( (n = 10, M = 46) \). The pictures were prepared by photographing the models in neutral settings, using a Canon Power Shot A560 digital camera to produce pictures that were 1600 x 1200 pixels. The images of the models from these photographs were then cropped into photographs of the three settings using Adobe Photoshop Elements 5.0 (Adobe Systems, Inc., 2006). The activities of the models (e.g., sitting, reading, standing), their clothing (e.g., shirt, pants, jacket), and their props (e.g., magazine, drink, bag) varied across pictures. In addition, the location (picture backgrounds) of the models in the settings varied across pictures.

The pictures for each participant included 6 target victims from each of their 2 target victim categories (e.g., 6 grade school girls and 6 grade school boys). Four of the 12
target victim individuals (2 from each category) were used in each of 3 sets of 16 pictures (Picture Sets A, B, and C) for each of the three settings. A description of models in pictures for Participant 3 can be seen in Table 2, Appendix A. Each set of 16 pictures included 8 safe and 8 dangerous situations. The pictures of dangerous situations contained a target victim alone, with another target victim, or with an adult female, as adult females were a target victim category for all participants. The pictures of safe situations contained a target victim together with an adult male. Adult males were not a high-risk category for any of the participants. The following combinations were arranged for each set of 16 pictures: (a) each of the four target victims alone (4 pictures of dangerous situations), (b) a pair of target victims (2 pictures of dangerous situations), (c) a target victim with an adult female (2 pictures of dangerous situations), and (d) each target victim paired with an adult male (8 pictures of safe situations).

Equipment. The pre-tests, discrimination training, generalization tests, post-tests, follow-up testing, and follow-up study were carried out in a program room of approximately 42 square meters. This room (see Figure 1) was equipped with a metal cart, a desktop computer, a keyboard and mouse, a speaker system, a multimedia projector, a response box, an audio recorder, a clipboard with instructions and data sheets, tokens, and an assortment of edible reinforcers. The desktop computer was a Hewlett Packard Media Center with a Pentium 4 Intel and Microsoft Windows XP operating software. The sound was projected with an Altec Lansing speaker system that included a left and right channel, a center channel, and a subwoofer. Pictures were displayed using an EP747 DLP Optima multimedia projector. Sessions were audio recorded using an 810 Sony Ericsson Walkman cell phone. The computer program used
to run the testing and training exercises and to record the participants' responses was E-Prime (Psychology Software Tools, Inc., 2001). The pictures were displayed on the training room wall and were approximately 2.5 m wide X 1.8 m high.

![Figure 1. A picture of the training environment showing participants' chair (on left) in front of response box and an example of a pretest slide.](image)

Participants sat approximately 5 m from the display wall and responded by pressing buttons on a response box situated on the metal cart. The response box was designed by Psychology Software Tools, Inc. and was 20 cm X 17 cm X 4 cm with 5 pushbutton switches spaced 2 cm apart, in a row, on top of the box. A green button with the letter S on it was located at the end of the row to the participant’s left, a red button with the letter D on it was located at the end of the row to the participant’s right, and a yellow button with the letter N on it was the center button. The other two buttons were white and
inactive. The S and D buttons were in the same position for all participants (i.e., position was not counterbalanced across participants) in order to simplify E-Prime programming and avoid the need to rearrange cues on the response box for different participants.

Procedure

An AB design with generalization probes and follow-up replicated across participants was used to assess the effects of the behavioral training package. Pre-testing constituted the A phase and post-testing the B phase. The procedure consisted of the following stages: (a) orientation, (b) screening, (c) pre-testing, (d) discrimination training for the first setting and generalization testing, (e) discrimination training for the second setting and generalization testing, (f) discrimination training for the third setting and generalization testing, (g) post-testing, (h) follow-up testing, and (i) a follow-up study. An overview of the procedures is shown in the flowchart in Figure 2.
Figure 2. Stages of testing and discrimination training. ("Yes" means criterion was reached and "No" means criterion was not reached. If criterion was not met following the generalization test with Picture Set C, training continued with Picture Sets A and B.)
Reinforcement procedure. Praise and tokens (poker chips) were given for completing the screening test, pre-tests, generalization tests, post-tests, follow-up tests, and follow-up study tests. The participant also received descriptive praise and tokens for achieving criterion performance in training sessions and the follow-up study training sessions (if necessary). A statement of praise might be for example, “You worked hard today and you got every picture correct. You earned three tokens today and did good enough to go on to the next set of pictures!” The tokens were distributed during the session in which they were earned. I stored the participants’ tokens in a locked area between sessions. Each token had a $1.00 value and the tokens could be exchanged for backup reinforcers after post-testing was complete. Delay of the backup reinforcers allowed the participants opportunity to earn more tokens and exchange them for more expensive rewards or a larger sum of money. Tokens could be traded for items such as, a jacket, a backpack, a gift certificate, or money. As well, each participant who completed the study received a personally engraved trophy. A sample trophy was on display in the training room during the sessions. A participant received a snack (e.g., chips, candy bar, or drink) of his choice during each session and these were delivered independently of performance. Participants occasionally received a snack more than once in a session, depending on the length of the session and the number of trial blocks attempted in the session. Participants who failed to earn tokens in a session were praised for their attendance and effort and were encouraged to improve their performance the next time. A statement of praise might be for example, “It was great that you came today and worked hard. Good job!”
Orientation. I met for approximately 45 minutes with each participant. First, I described the purpose and procedures of the study, explained the participant’s responsibilities and the benefits of participating, and obtained written consent (see Appendix B). The consent forms were read to the participants. While doing so, I provided participants with additional clarification and opportunities to ask questions.

Next, I explained the reinforcement procedures. Then in preparation for the testing and training, participants were read instructions on how to use the response box (see Appendix C). Participants completed a 10-picture practice exercise to help them become familiar with the picture presentation method and responses. The practice exercise pictures were unrelated to sexual offense risk and included, for example, a picture of a gun for “dangerous” or a picture of a chair for “safe” (see Table 4, Appendix A). The computer program presented the instructions at the beginning of the exercise, presented the pictures one at time, and provided feedback for responses. The computer generated an auditory recording of the instructions and simultaneously displayed them in print on the wall of the training room. The first slide of instructions read, “Welcome. In this exercise, you will be asked whether it would SAFE or DANGEROUS for you to go into this situation. The keys are: S for a SAFE situation, D for a DANGEROUS situation, and N to go to the NEXT slide. Press N to continue.” The second slide of instructions read, “When you see the picture: Press S if it is SAFE for you to go into the situation or Press D if it is DANGEROUS for you to go into the situation. If you have any questions, ask the instructor at this time. Press N to continue.” If a participant responded correctly, the program provided an auditory statement and visually displayed, “Good choice, you are correct”. I then initiated the next trial. If a participant was incorrect, the program provided
an auditory statement and visually displayed, “Bad choice, you are wrong”. A brief set of instructions was presented via computer during the presentation of each picture. The auditory message was, “Press S if it is SAFE for you to go into this situation or D if it is DANGEROUS.” Then, the picture and printed instructions “Press S or D” remained on the screen until the participant pressed either the S or the D button on the response box. A participant continued practicing until he made 10 consecutive correct responses.

Pre-tests. I read the pre-test instructions to participants (see Appendix C) and then started the computer program. The computer generated an auditory recording of the instructions and simultaneously displayed them in print on the wall of the training room. The two instruction slides were the same as those used in the practice exercise.

Pre-testing involved three or more sessions, with each session consisting of a single presentation of the 48 pictures for one of the three settings. Each setting was presented once in the first three pre-test sessions. The order of presentation of the settings was different for each participant. One half of the pictures in each 48-picture pre-test depicted “safe” situations and the other half depicted “dangerous” situations. The pictures were presented in a random order generated by the computer program.

A brief set of instructions was presented via computer during the presentation of each picture. The auditory message was, “Press S if it SAFE for you to go into this situation or D if it is DANGEROUS.” Then, the picture and printed instructions “Press S or D” remained on the screen until the participant pressed either the S or the D button on the response box, at which time the projector advanced to the next slide. The next slide contained the printed instructions, “Press N to continue” which was also presented as an auditory recording. A participant would then press the N button to display the next
picture. No consequences followed S and D responses during pre-tests, and no feedback about specific responses or overall performance was provided.

Discrimination Training. In the first discrimination training session, participants learned a rule defining safe and dangerous situations. The computer program used to carry out the rule training procedure contained 12 slides, with 6 slides providing visual and auditory prompting of the rule and 6 slides not providing prompting. I began the session by reading the rule training instructions to participants (see Appendix C) and then started the computer program. The computer presented a brief set of instructions, and then introduced the rule. The instructions were, "Welcome. In this exercise, you will practice saying a rule. Press N to continue." In the first part of the exercise the rule was displayed in print on slides with yellow backgrounds and the computer program provided an auditory statement of the rule. For instance, the computer displayed the text "SAFE is GIRL or BOY with MAN. DANGEROUS is GIRL or BOY not with MAN. Say this rule to the instructor." and announced, "The rule is: a situation is safe for me if a girl or boy is with a man. A situation is dangerous for me if a girl or boy is not with a man. Say this rule to the instructor." Then the participant attempted to repeat the rule to me. Six trials were given to the participant. The second part of the rule training exercise consisted of six trials on which the participant was presented with a slide containing black horizontal lines on a light blue background and an auditory message that stated, "Say the rule to the instructor". If the participant was able to say the rule on three or more consecutive trials, he proceeded to discrimination training with pictures; otherwise, he returned to the first part of rule training.
Immediately following rule training, in the same session, the participants began discrimination training with the picture set for one of the three settings. Each participant received training with the same sequence of settings used in the first three pre-tests. I read the discrimination training instructions out loud (see Appendix C) and then started the computer program. The computer presented two slides of instructions (as in pre-tests) followed by a slide presenting the participant-specific rule. For example, Participant 3's slide read, "When you see the picture remember the RULE: SAFE is GIRL or BOY with MAN. DANGEROUS is GIRL or BOY not with MAN. Press N to continue." The auditory recording of the rule accompanying this slide was, "When you see the picture, remember the rule: a situation is safe for me if a girl or boy is with a man, a situation is dangerous for me if a girl or boy is not with a man. Press N to continue".

Discrimination training began with a set of 16 pictures (Picture Set A) containing 8 pictures of safe situations and 8 pictures of dangerous situations. The computer presentation of pictures and response recording methods were the same as those used during pre-tests. The discrimination training program, however, provided feedback and corrective measures following participant responses. The feedback slide, which appeared immediately following the participant's response, displayed the picture in approximately 50% of the size previously presented, and the textual feedback was displayed on the remaining portion of the screen. The trial number and the percentage correct for pictures completed in the 16-trial training block were displayed in the bottom corner of the screen. If a participant responded correctly, the program provided an auditory statement and visually displayed, "Good choice, you are correct". I then initiated
the next trial. If a participant responded incorrectly, the program provided an auditory statement and visually displayed, "Bad choice, you are wrong". As well, following incorrect responses, the feedback slide stated and showed the rule and the participant was asked by the computer to, "Say the rule to the instructor". I initiated the next trial after the participant repeated the rule.

Performance was reviewed after completion of each 16-trial training block and verbal feedback about performance and token reinforcements were given. If a participant achieved criterion performance of 15 or 16 correct responses in a 16-trial training block (94% or 100% correct), he was given a generalization test. Otherwise he continued training by repeating the training block until he either achieved criterion or used up the session time. In the former case he advanced to the generalization test in the same session or in the next session, and in the latter case he resumed training in the next session.

Generalization Testing. After a participant reached discrimination training criterion on Picture Set A, a test of generalization to new target individuals was conducted using Picture Set B. A description of the picture sets used in generalization testing with Participant 3 is provided in Table 2 (Appendix A). I began by reading the generalization test instructions (see Appendix C) and then started the computer program. The computer delivered the same instructions as those given during pre-test sessions. As in the pre-tests, no response feedback was provided. The generalization test consisted of 16 trials, with one half of the pictures showing safe situations and one half showing dangerous situations. Each of the 16 pictures was presented once in a randomized order generated by the computer program. Following the generalization test, participants
were told whether they had achieved criterion. If a participant responded correctly on 15 or 16 trials (94% or 100% correct), he had completed training with pictures of that setting. If less than 15 trials were correct, the participant was given extended training.

*Extended Training.* Extended training followed a failed generalization test. Extended training used the same procedures and performance criteria as regular training, employing the 16 pictures presented in the previous generalization test (Picture Set B). A participant continued extended training until he achieved criterion performance. Then a generalization test was given using the third set of pictures for the setting (Picture Set C). If the participant successfully completed this generalization test, he had completed training with pictures of that setting. If he was not successful, he continued training with both Picture Sets A and B. After reaching criterion on both pictures sets, he was given another generalization test with Picture Set C.

*Post-tests.* Post-tests were conducted using the same instructions and procedures as in pre-tests. Post-tests were conducted approximately 1 week after the last training session.

*Follow-up.* Follow-up tests were conducted using the same instructions and procedures as the post-tests. Follow-up tests were conducted approximately 1 month after post-testing.

*Social Validity and Debriefing*

Upon completion of the follow-up tests, the participants met individually with me to complete a social validity questionnaire (see Appendix E) and to discuss the study. I read the items to the participants, and they stated whether they agreed or disagreed with the item. The questionnaire consisted of 26 yes-no questions, with 7 of the items
prompting for additional qualitative information. I reviewed the events of the study, asked the participants about their experiences throughout the study, responded to their questions or concerns, and presented the participants with their awards.

**Procedural Reliability**

A sound recording was made of each session, and these recordings were reviewed after data collection had been completed using a checklist (see Appendix D) to assess procedural reliability. The percentage of procedural steps correctly administered was 98% for Participants 1 and 2, and 100% for Participants 3 and 4. The procedural error for Participants 1 and 2 was that I failed to read the training instructions on one occasion for each participant when the training block immediately followed a generalization test in the same session.

**Results**

The number of correct responses in each 48-trial pre-test, post-test, and follow-up test was converted to a percentage \( \left( \frac{\text{number correct}}{48} \right) \times 100 \). Similarly for each 16-trial block of training trials and generalization tests, percentage correct was calculated using the formula \( \left( \frac{\text{number correct}}{16} \right) \times 100 \). In addition, percentage of correct responses to pictures of safe and dangerous situations was calculated separately for each pre-test, post-test, and follow-up test \( \left( \frac{\text{number correct}}{24} \right) \times 100 \) and each block of training trials and generalization test \( \left( \frac{\text{number correct}}{8} \right) \times 100 \). Figures 3 to 6 show the percentage correct scores on pre-tests, post-tests, and follow-up tests for Participants 1 to 4, with scores for pictures of safe and dangerous situations plotted separately. Tables 4 and 5 (Appendix A) list each participant's numbers of correct responses for safe and dangerous situations for all blocks of training trials and
Teaching Safe and Dangerous

In the following sections, each participant's performance during training is described prior to his results for pre-testing, post-testing, and follow-up testing.

**Participant 1.** Testing and training used the following sequence of settings: (a) on the bus (Setting 1), (b) at the bus stop (Setting 2), and (c) at the recreation centre (Setting 3). In the first session following pre-testing, Participant 1 was given rule training and two blocks of discrimination training trials. He completed the requirements of rule training in six trials with visual and auditory prompts and six trials without visual and auditory prompts. He achieved criterion performance of 100% correct in the second block of training trials with Picture Set A. In the next session, he was given a generalization test with Picture Set B, during which he correctly responded to all 16 pictures. In this session he also commenced training with Setting 2 pictures and achieved 100% correct on the first block of training trials. In the third training session, he was given a generalization test and scored 100% correct. In this session he also began training on Setting 3 pictures. Participant 1 again obtained 100% correct on the first block of training trials. In Session 4, he was given a generalization test and scored 100% correct.

Participant 1 obtained scores of 58%, 54%, and 52% correct in the three pre-tests. As shown in Figure 3, Participant 1 had higher percentage correct scores for pictures of dangerous situations than for pictures of safe situations in each pre-test session. The three post-tests were conducted in one session, as were the three follow-up tests. Participant 1 scored 98%, 100%, and 100% correct in the post-tests and 98%, 100%, and 100% correct in the follow-up tests. Inspection of the error in the post-tests and the
error in the follow-up tests indicated that Participant 1 made an incorrect response to the same picture of a safe situation. This picture contained a young female and an adult male. When asked about the picture, Participant 1 stated that he thought the male model in the picture resembled a child.

![Graph showing percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 1.]

**Figure 3.** Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 1.

**Participant 2.** Testing and training used the following sequence of settings: (a) at the recreation centre (Setting 3), (b) at the bus stop (Setting 2), and (c) on the bus (Setting 1). In the first training session following pre-testing, Participant 2 was given rule training and one block of discrimination training trials. He completed the requirements of rule training in six trials with visual and auditory prompts and six trials without prompts. In the next session, Participant 2 completed two blocks of training trials with Picture Set A, and met criterion with a score of 94% correct in the second block. Then, he was given a generalization test with Picture Set B, during which he scored 100% correct. At the
beginning of the third training session, the generalization test was repeated, and he met criterion with a score of 94% correct. In this session, he also began training on Setting 2 pictures. He obtained 100% correct in his first block of training trials. In his fourth training session, he was given a generalization test with Setting 2 pictures, and scored 100% correct. In this session he began training on Setting 1 pictures and scored 100% correct in the first block of training trials. In the next session, he was given a generalization test with Setting 1 pictures, and scored 100% correct. 

Participant 2 obtained scores of 67%, 54%, and 63% correct in the first three pre-tests. In addition, Participant 2 was given a second pre-test with Setting 1 pictures in order to assess the effects of a second exposure to a pre-test picture set. This retest was carried out because Participant 3 was incorrectly selecting the S and D buttons (see below) and needed to be retested with Setting 2 and Setting 1 pictures. It was then decided that Participant 2 would also undergo retesting with Setting 1 pictures to assess the effects of a second exposure to a pre-test picture set. As can be seen in Figure 4, Participant 2 had higher percentage correct scores for pictures of dangerous situations than for pictures of safe situations in the first two pre-tests, but not in the third pre-test. The three post-tests were conducted in one session, as were the three follow-up tests. Participant 2 scored 100% correct on all three post-tests and on all three follow-up tests.
Figure 4. Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 2.

Participant 3. Testing and training used the following sequence of settings: (a) at the bus stop (Setting 2), (b) on the bus (Setting 1), and (c) at the recreation centre (Setting 3). A modified procedure (see pre-testing below) was adopted for Participant 3 during pre-testing and continued during training. In the first training session, Participant 3 was given rule training and one block of discrimination training trials. He completed the requirements of rule training in 18 trials with visual and auditory prompts and 18 trials without prompts. He reached criterion on the first block of training trials (using Picture Set A) with a score of 100% correct. In the next session, he was given a generalization test with Picture Set B and met criterion with a score of 94% correct. He then reached criterion on the first block of training trials with Setting 1 pictures. In the third training session, he was given a generalization test and met criterion with a score of 100%
correct. In this session, he also began training on Setting 3 pictures. He obtained 100% correct in his first block of training trials. In the fourth training session, he was given a generalization test and scored 100% correct.

Participant 3 scored 88% correct on the pre-test with Setting 2 pictures followed by a score of 63% correct on the pre-test with Setting 1 pictures. During this second pre-test, Participant 3 appeared to be confused about the “S” and “D” response keys. On several trials, he stated that a picture was “safe” and then pressed the “D” button or stated that the picture was “dangerous” and then pressed the “S” button or asked if it was the button for “dangerous”. In the next pre-test session, to assist Participant 3 to make the button pressing response that was consistent with his safe or dangerous label for the picture, a picture of a chair was pasted beside the “S” button and a picture of a gun was pasted beside the “D” button to provide additional visual prompts. In addition, Participant 3 was instructed to decide whether a situation was “safe” or “dangerous” and then say “safe” or “dangerous” to me before making a selection. If he failed to say “safe” or “dangerous”, I told Participant 3 to “say the word”. After Participant 3 said “safe” or “dangerous”, I said, “S is for safe, D is for dangerous. This one is S for safe” (pointing to the S button) and “this one is D for dangerous” (pointing to the D button). As Participant 3 became more consistent in his verbal responses and button selections, Participant 3 would say safe or dangerous, point to the button, and I would nod my head to confirm that the choice of the button correctly matched his verbal response.

Following these changes in procedure, Participant 3 was pre-tested with the Setting 3 pictures and then retested with Setting 2 pictures. In the fourth session, he was retested with Setting 1 pictures. Participant 3 scored 90%, 92%, and 90% correct on
these three pre-tests. As can be seen in Figure 5, Participant 3 had somewhat higher percentage correct scores for pictures of safe situations than for pictures of dangerous situations in the three pre-tests.

![Figure 5](image-url)

*Figure 5. Percentage correct scores for safe and dangerous pictures on pre-tests, post-tests, and follow-up tests for Participant 3.*

The three post-tests were conducted in one session, as were the three follow-up tests. Participant 3 obtained scores of 92%, 100%, and 100% correct in the three post-tests and 96%, 100%, and 100% correct in the three follow-up tests. He showed some improvement in correctly labeling pictures of dangerous situations. Inspection of the errors indicated that three of the four incorrect responses in the post-test were on safe situation pictures of a child (male or female) with an adult male. The fourth incorrect response was for a dangerous situation picture of a female child with a female adult.
Further, two of the four pictures with incorrect responses in the post-test generated incorrect responses in the follow-up test.

Participant 4. Testing and training used the following sequence of settings: (a) at the bus stop (Setting 2), (b) at the recreation centre (Setting 3), and (c) on the bus (Setting 1). Unlike the other participants, Participant 4 required a large number of blocks of training trials. In the first training session, he completed the requirements of rule training in 12 trials with visual and auditory prompts and 12 trials without prompts. He was then given two blocks of training trials with Picture Set A from the Setting 2 pictures, and scored 50% correct on both. In the second training session, his performance improved to 73% correct over four blocks of training trials. In the third training session, Participant 4 met criterion when he scored 100% correct in the second of two blocks of training trials. Consequently, in the fourth training session, he was given a generalization test with Picture Set B but scored only 56% correct. He was given four blocks of extended training trials in the same session with Picture Set B, meeting criterion on the fourth block with 100% correct. In the fifth training session, he was given a generalization test with the Picture Set C, but his score of 88% correct did not meet criterion. In the same session, he received two blocks of training trials with Picture Set A and then two blocks of training trials with Picture Set B. He met criterion with scores of 94% correct on both sets. In the same session, he was given a generalization test with Picture Set C and met criterion with a score of 94% correct. In the sixth training session, the generalization test with Picture Set C was repeated and he met criterion with 94% correct, successfully completing training and generalization testing on Setting 2 pictures.
Participant 4 began training with Setting 3 pictures in the sixth training session. He was given two blocks of training trials with Picture Set A, and reached criterion performance on the second block (94%). Consequently, in this session he was given a generalization test with Picture Set B, but he scored only 69% correct. At the beginning of the seventh training session, he was given the generalization test again and scored 75% correct. Then he was given three blocks of extended training trials, meeting criterion in the third block. Then, he was given a generalization test, during which he scored 88% correct.

In the eighth training session, the generalization test with Picture Set C was repeated, and he again scored below criterion performance with 82% correct. Next he was given three blocks of training trials with Picture Set A and three blocks of extended training trials with Picture Set B. He achieved criterion on the third block of each with scores of 94% and 100%, respectively. Then he was given a generalization test with Picture Set B, scoring 82% correct and a generalization test with Picture Set C, scoring 94% correct. In this session, he was given another block of extended training trials with Picture Set B, on which he scored 100% correct. He was then given a generalization test with Picture Set C and scored 94% correct. In the ninth training session, the generalization test with Picture Set C was repeated and he scored only 75% correct. In this session, Participant 4 was given an additional block of extended training trials with Picture Set B, and obtained 94% correct. Considering that he had met criterion during the generalization test in the previous session, training on Setting 3 pictures was discontinued.
Participant 4 began training with Setting 1 pictures in his ninth training session. He reached criterion on the second block of training trials with Picture Set A. He was given a generalization test with Picture Set B and scored 94% correct. Due to his slow improvements with Setting 2 and 3 pictures, he was then given a block of extended training trials with Picture Set B and scored 94% correct. In the same session, he was given a second generalization test with Picture Set C, and he scored below criterion (88% correct). In the 10th training session, Participant 4 was given a generalization test with Picture Set B and Picture Set C. He scored 88% correct on both. These scores were slightly below criterion level (two incorrect responses instead of one), but it was decided that Participant 4 should proceed with the post-tests given the stability in his performance at close to criterion level.

Participant 4 obtained scores of 52%, 48%, and 52% correct in the three pre-tests. As shown in Figure 6, Participant 4 had much higher percentage correct scores for pictures of dangerous situations than for pictures of safe situations in each pre-test session. The three post-tests were conducted in one session, as were the three follow-up tests. Participant 4 scored 90%, 92%, and 92% correct in the three post-tests and 96%, 90%, and 90% correct in the three follow-up tests. Participant 4 greatly improved his performance from pre-testing to post-testing for pictures of safe situations.
Summary of Pre-test, Post-test, and Follow-up Performance

All participants showed increases in their performance from pre-testing to post-testing and to follow-up. Participant 1 improved his performance from a mean of 55% correct in the three pre-tests to a mean of 99% correct in the three post-tests and the three follow-up tests. Participant 2 improved his performance from a mean of 60% correct in his four pre-tests to a mean of 100% correct in the three post-tests and the three follow-up tests. Participant 3 improved his performance from a mean of 90% in his three pre-tests (84% including his second pre-test) to a mean of 97% correct in the three post-tests and a mean of 99% correct in the follow-up tests. Participant 4 improved his
Teaching Safe and Dangerous

performance from a mean of 51% correct in his three pre-tests to a mean of 91% correct in the three post-tests and a mean of 92% correct in the three follow-up tests.

Social Validity and Debriefing

Four areas of evaluation were assessed in the social validity questionnaire; namely, enjoyment of the study, perceived helpfulness of the study, ease in following procedures, and recommendations for future practice. The participants' responses (see Table 6, Appendix A) indicated that they enjoyed the computer training and liked working with me, liked the prizes and snacks, thought that the training was worthwhile and did not want to quit, believed they had learned about safe and dangerous situations, thought the computer training would be helpful for other clients, believed the computer training helped them to identify safe and dangerous situations in the community, and remembered the rule when they were in a training setting. Participants 1 and 4 reported that they sometimes found the computer training instructions difficult to understand and Participants 1, 3, and 4 reported that they found the computer training difficult at the beginning of the study. Somewhat unsure of his response, Participant 3 said that other clients would "probably" understand and be helped by the computer training instructions.

Each participant received an engraved trophy that read, "Opportunities for Independence, Inc. Presents This Award of Achievement to (participant's name) for Success in the Behavioral Training Program". Participant 1 received a University of Manitoba backpack, which he requested in exchange for his tokens. Participants 2, 3, and 4 requested and received money in exchange for their tokens.
Discussion

The present study represented one step in relapse prevention training; namely, discriminating dangerous situations where reoffending would be likely to occur from safe situations where reoffending would be unlikely to occur. A behavioral training package to teach adult sexual offenders with mild intellectual disabilities to discriminate between pictures of safe and dangerous situations was developed and evaluated empirically. General case programming (Horner et al., 1982; Horner et al., 1986) was employed in the design of this training program to facilitate generalization to pictures of new target victims in the same setting.

All participants learned to discriminate between pictures of safe and dangerous situations. Participants 1, 2, and 3 met criterion early in discrimination training with pictures of their first setting, and maintained their performance above criterion through subsequent training sessions with pictures of the other two settings. Participant 3’s pre-test performance was near criterion. Consequently, Participant 3 required only a small increase in performance during training to reach criterion; his improvement was for pictures of dangerous situations. Participant 3’s target victim categories were young boys and young girls, and he made no errors during pre-tests with pictures that contained only children. These pre-test results suggest that he may have been attempting to follow a rule he had learned prior to the study that was similar to the rule he was taught in the study, such as “stay away from unsupervised children”. Participant 3 made errors during pre-tests when responding to pictures with children accompanied by either an adult female or an adult male. These errors occurred for the same models from setting to setting, suggesting that he had difficulty categorizing particular adult
models, and may have perceived them as children. During training, Participant 3 improved his performance for pictures with female adults and male adults.

Participant 4 required many more blocks of training trials to complete the study than the other participants. He did, however, show a reduction in the number of blocks of training trials across settings. He required 16 blocks of training trials with Setting 2 pictures, 13 blocks of training trials with Setting 3 pictures, and 3 blocks of training trials with Setting 1 pictures. There were several factors that may have impaired his performance. Participant 4 had been diagnosed with schizophrenia and was receiving pharmacological treatment at the time of the study. His psychiatric condition or medication may have adversely impacted his rate of learning via symptoms such as confusion, anxiety, or depressive reactions (Canadian Pharmacological Association, 1997). During some training sessions, when Participant 4 made repeated errors to the same pictures, he stated that he had problems remembering things and was disappointed by his performance. Participant 4 appeared to struggle with daily problems or stressors. For instance, Participant 4 reported that he was dissatisfied with his current lifestyle, was experiencing financial problems, was thinking about "quitting" the residential program, and was feeling depressed and unmotivated. On several occasions, he requested $20 for a portion of the tokens that he had earned. The participants were expected to exchange their tokens for money or prizes after the completion of the study, but given Participant 4's depressed moods and lengthy training process, he was permitted to exchange some of his tokens in three sessions during training. Upon receiving the money, Participant 4 showed immediate improvements in his depressed mood and desire to proceed with the session.
In addition, Participant 4 had difficulty discriminating between adolescent female models and adult female models in the pictures. If Participant 4 was following his rule correctly, which stated that a situation was safe for him if a teenage girl or an adult women was with a man and a situation was dangerous for him if a teenage girl or an adult women was not with a man, this confusion should not have affected his performance. However, early in training Participant 4 showed that he did not follow the rule correctly. This problem was detected by asking him when he made an error, "Who is in the picture?" If Participant 4 was incorrect in his verbal response, he was provided with the correct label (e.g., "That is an adult female"). Then, Participant 4 was asked, "What does that make it, safe or dangerous?" and whether the picture was like the first part of the rule (displayed in the first sentence of the slide) or the second part (displayed in the second sentence of the slide). Thus, Participant 4 required improvements in his use of the rule and in his accuracy at classifying models in the pictures before he was able to perform at or near criterion levels during discrimination learning and generalization testing.

Tests of generalization showed that all participants generalized their discrimination learning to pictures containing new target victims. Participants 1, 2, and 3 achieved criterion performance on all generalization tests. Participant 4 achieved criterion on the generalization test with Setting 2 pictures following extended training. He achieved criterion on the generalization test following extended training with Setting 3 pictures when tested in the same session as the last block of training trials. He achieved criterion on the generalization test following training with Setting 1 pictures when tested in the same session as the last block of training trials.
Analysis of pre-test responses to pictures of safe and dangerous situations indicated that Participants 1, 2, and 4 pressed the dangerous button more often than they pressed the safe button, resulting in more correct responses to pictures of dangerous situations than to pictures of safe situations. Consequently during discrimination training, greater improvements occurred for pictures of safe situations than for pictures of dangerous situations, especially for Participant 4. Their pre-test performance may have been the result of previous training to avoid children, responding cautiously to complicated situations, or a bias to press the button on the right-hand side of the response box. It should be noted that more incorrect responses to pictures of safe situations than to pictures of dangerous situations is not as problematic socially or legally as the reverse.

In summary, all participants achieved criterion performance for discrimination learning in all three settings, and generalized to pictures with untrained target victims. In addition, all participants showed improvements in their performance from pre-tests to post-tests, and maintained their performance at 1 month follow-up. These results are consistent with the conclusion that the behavioral training package using general case programming was effective for teaching adult sexual offenders with mild intellectual disabilities to discriminate between pictures of safe and dangerous situations and to generalize correct responding across models.

Generalization across settings was not assessed. Participant 1, 2, and 3 exhibited rapid learning in the first setting trained and maintained their high level of performance when presented with pictures of the other two settings. These results suggest that generalization of the discrimination to other settings may have occurred following rule training and discrimination training on pictures of the first setting. It would be useful to
Teaching Safe and Dangerous

examine this possibility by testing for generalization to other settings on each generalization test.

General case programming uses multiple teaching examples with adequate variation presented consecutively within a session to promote generalization to untrained examples (Horner et al., 1982; Horner et al., 1986). The procedure involves selecting teaching and testing examples that sample the range of relevant stimulus and response variation. The examples were devised on the basis of what target victim categories were most at risk and in what settings the participants were most likely to be unsupervised and to encounter the target victim categories. Three unsupervised settings were identified as high-risk for each participant. Future research could sample a broader range of settings (supervised and unsupervised), train simultaneously using pictures of several of these settings, and test for generalization to other settings.

The participants were taught a rule which described a conditional discrimination; namely, a situation was safe for the participant if target victims were accompanied by an adult male but dangerous, if they were not accompanied by an adult male. Participants' high level of performance following training can be interpreted as consistent with their acquisition of this conditional discrimination. Alternatively, participants could perform correctly if their choice responses were controlled entirely by the presence or absence of an adult male in the pictures; that is, a situation was safe if an adult male was present but dangerous if an adult male was not present. In other words, the presence of target victims might not have been relevant to participants' choice responses.

The follow-up study was conducted to examine whether participants' responses were controlled by the presence or absence of the adult male model rather than by the
Teaching Safe and Dangerous

combination of types of models in the picture (see Appendix F). This study was carried out approximately 20 months after post-testing. Participants were tested on a set of 36 pictures that included 9 pictures with no models in the setting and 9 pictures with only an adult male model in the setting. If the dangerous response was controlled by the absence of an adult male in the picture, participants would be expected to select the dangerous button when shown pictures of the settings with no models. The results were inconsistent with this hypothesis. Participant 1 chose the safe response for 7 of the 9 pictures without models (see Table 6, Appendix F). Participants 2, 3, and 4 chose the safe response for all 9 pictures without models. For pictures with only an adult male in the setting, Participant 3 chose the safe response for 8 of the 9 pictures and Participants 1, 2, and 4 chose the safe response for all 9 pictures. In summary of the follow-up study, participants' responses were controlled by the combination of models in the pictures rather than by the mere presence or absence of an adult male model.

Due to safety and ethical concerns, training examples were limited to pictorial situations consisting of “common stimuli” (Stokes & Baer, 1977) found in naturalistic environments. Simulations, such as these, provided a method to capture natural situations in the community and to administer training with those situations in a safe and controlled environment (Horner et al., 1986). For the participants and their offending behaviors, training in the natural environment would have been unavailable, unethical, and unsuitable. Simulations provided a method to present the participant with a large range of stimuli during training, capitalizing on the essential features of general case programming and saving time and money that would otherwise be required for training in the community. The use of simulations provided increased control over selecting and
sequencing the teaching examples. Consequently, complex stimulus situations were generated, infrequent or unavailable teaching examples were presented, and potential dangers in the community were avoided.

Rule training was included in the present training package to facilitate both generalization and maintenance (Overton & Newman, 1982; Stokes & Osnes, 1988). Stokes and Baer (1977) argue that language, a common human mediator, can greatly assist the generalization process and help establish a learned response that is likely to be utilized in other situations. Lehman, O'Neill, and Proctor (1996) showed that both rule training and general case programming were effective strategies for producing generalized performance and maintenance of table setting activities with "higher performing learners" with mild to moderate mental retardation. They did find, however, that only general case programming resulted in maintenance of generalization with "lower performing learners". In the present study, learning the rule was a component of the training package that likely contributed to rapid improvement in performance by Participants 1, 2, and 3, as well as their high level of performance on generalization tests and maintenance of skills. Participant 4 required ongoing rule training, which he received from the feedback slide during discrimination training. Although it was not implemented during the study, returning to the rule-training program in later sessions might have facilitated his performance.

The training package included a variety of motivational strategies. Participants received praise and snacks of their choice during each session, which were contingent on attendance, but not performance. Praise and tokens were given for completing the screening test, pre-tests, generalization tests, post-tests, follow-up tests, and follow-up
study tests. The participants reported that they enjoyed receiving these snacks and sometimes asked for a second snack in the same session. Giving snacks was an inexpensive and useful strategy for maintaining satisfactory levels of attendance and participation. Displaying a trophy during sessions was beneficial, as it fostered verbal interactions. In general, participant responses to the Social Validity Questionnaire were positive. However, it should be noted that 21 of the 26 items were stated in a positive format and subject to a "yes" bias. As well, I read the questionnaire to the participants making them subject to researcher demand effects (Orne & Whitehouse, 2004). Based on uncertainty of several responses (i.e., 3 items for Participant 3), it may be that several items were difficult to understand and did not provide the best representation of the participants' experience. In future research, improvements could be made to the language used in the questionnaires and consent forms that would make them more consistent with the intellectual limitations of the participants (Blasingame, 2005).

The computer program provided auditory and visual feedback after each response. Correct responses were followed by praise feedback, which may have been a conditioned reinforcer for correct responses. Incorrect responses were followed by a reprimand, which may have been a conditioned punisher for incorrect responses. Praise and tokens were given for achieving criterion in a training session. The participants were pleased with the amount of money they earned, $50 in the case of Participants 1, 2, and 3 and $90 in the case of Participant 4. Participant 4's training and testing process was lengthy, and he exchanged 20 tokens for money ($20) on three occasions prior to the end of the study. Token exchanges offered periodically throughout training may be useful for participants with slower rates of progress.
The computer-mediated approach used in this study had several ethical and methodological advantages. First, the participants were tested and trained in a safe environment with no realistic threat of reoffending in the community. Second, the computer-mediated application provided a systematic and controlled presentation of the instructions and pictures, generated immediate feedback to the participant, and supplied a summary of performance. Third, many relevant examples could be presented in a single teaching session. Although initial construction of the picture sets was time consuming, future development to the computer program and expansion of the picture library will take progressively less time and effort. As well, as software upgrades become available, video clips can be incorporated into training materials for increased ecological validity.

Two target victim categories were used in training for each participant and these were carefully identified through reviewing case files, consulting with treatment workers, and administering the ABID. However, screening information indicated that the participants had more than two target victim categories. This finding is consistent with other research, which indicates that sexual offenders with intellectual disabilities vary more in their target victim categories than do offenders without intellectual disabilities (Day & Berney, 2001). In future research on the training package, I might attempt to follow-up training of two target victim categories with training of a third or fourth target victim category, or to expand the block of training trials to include exemplars of three or more categories.

From the perspective of relapse prevention, it is important to ensure that appropriate responses occur in dangerous situations. To address this issue, a training program
using a multiple-choice discrimination procedure could be used to train appropriate responses (e.g., walking away from a dangerous situation) to pictures of dangerous situations. A greater challenge would be to address the ecological validity of the present training program. This might be examined using behavioral skills training program that uses picture simulations supplemented with in situ training (Himle, Miltenberger, Flessner, & Gatheridge, 2004; Lumley & Miltenberger, 1997; McDonnell et al., 1984). To investigate generalization of skills to the natural environment, safe and ethical procedures would need to be developed and likely carried out with low-risk individuals. For instance, participants could observe a dangerous situation from a distance while being closely supervised by staff, verbalize a rule to the staff, and then make an appropriate response. Staff could provide prompting as needed at different points in the response chain and then fade out their prompting over time. This intervention might be carried out with persons who already spend time unsupervised in the community and who could benefit from elements of training in the natural setting, bringing them one step closer to community integration.

In summary, a behavioral training package (which also included general case programming) was developed to teach sexual offenders with mild intellectual disabilities to discriminate between pictures of situations in which they were likely to reoffend (dangerous situations) and situations in which they were unlikely to reoffend (safe situations). The participants belonged to a residential support program, and they needed relapse prevention training to enable them to achieve greater independence. Results showed that all participants learned to discriminate between pictures of safe and dangerous situations in all three settings, generalized to pictures with untrained target
victims, and maintained their responses at 1 month follow-up. Further research is needed to extend this training program to include teaching appropriate responses to dangerous situations and testing for generalization in natural environments.
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## Appendix A

### Table 2

**Description of Models in Pictures for Participant 3**

<table>
<thead>
<tr>
<th>Training: Picture Set A</th>
<th>Generalization Test: Picture Set B</th>
<th>Extended Training: Picture Set B (if necessary)</th>
<th>Generalization Test: Picture Set C (if necessary)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pictures of Dangerous Situations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YF1</td>
<td>YF3</td>
<td>YF3</td>
<td>YF5</td>
</tr>
<tr>
<td>YF2</td>
<td>YF4</td>
<td>YF4</td>
<td>YF6</td>
</tr>
<tr>
<td>YM1</td>
<td>YM3</td>
<td>YM3</td>
<td>YM5</td>
</tr>
<tr>
<td>YM2</td>
<td>YM4</td>
<td>YM4</td>
<td>YM6</td>
</tr>
<tr>
<td>YF1 &amp; YF2</td>
<td>YF3 &amp; YF4</td>
<td>YF3 &amp; YF4</td>
<td>YF5 &amp; YF6</td>
</tr>
<tr>
<td>YF2 &amp; AF1</td>
<td>YF4 &amp; AF3</td>
<td>YF4 &amp; AF3</td>
<td>YF6 &amp; AF5</td>
</tr>
<tr>
<td>YM1 &amp; YM2</td>
<td>YM3 &amp; YM4</td>
<td>YM3 &amp; YM4</td>
<td>YM5 &amp; YM6</td>
</tr>
<tr>
<td>YM2 &amp; AF2</td>
<td>YM4 &amp; AF4</td>
<td>YM4 &amp; AF4</td>
<td>YM6 &amp; AF6</td>
</tr>
<tr>
<td><strong>Pictures of Safe Situations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YF1 &amp; AM1</td>
<td>YF3 &amp; AM5</td>
<td>YF3 &amp; AM5</td>
<td>YF5 &amp; AM9</td>
</tr>
<tr>
<td>YF2 &amp; AM2</td>
<td>YF4 &amp; AM6</td>
<td>YF4 &amp; AM6</td>
<td>YF6 &amp; AM10</td>
</tr>
<tr>
<td>YM1 &amp; AM3</td>
<td>YM3 &amp; AM7</td>
<td>YM3 &amp; AM7</td>
<td>YM5 &amp; AM11</td>
</tr>
<tr>
<td>YM2 &amp; AM4</td>
<td>YM4 &amp; AM8</td>
<td>YM4 &amp; AM8</td>
<td>YM6 &amp; AM12</td>
</tr>
<tr>
<td>YF1 &amp; AM1</td>
<td>YF3 &amp; AM5</td>
<td>YF3 &amp; AM5</td>
<td>YF5 &amp; AM9</td>
</tr>
<tr>
<td>YF2 &amp; AM2</td>
<td>YF4 &amp; AM6</td>
<td>YF4 &amp; AM6</td>
<td>YF6 &amp; AM10</td>
</tr>
<tr>
<td>YM1 &amp; AM3</td>
<td>YM3 &amp; AM7</td>
<td>YM3 &amp; AM7</td>
<td>YM5 &amp; AM11</td>
</tr>
<tr>
<td>YM2 &amp; AM4</td>
<td>YM4 &amp; AM8</td>
<td>YM4 &amp; AM8</td>
<td>YM6 &amp; AM12</td>
</tr>
</tbody>
</table>

*Note:* YF = young female, YM = young male, AF = adult female, and AM = adult male. YF, YM, and AF = target victim categories. The number associated with the target and adult victim categories identifies the models within that category.
Table 3

*Practice Pictures to Train Participants How to Operate the Computer Program and Response Box*

<table>
<thead>
<tr>
<th>Picture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dangerous</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>High voltage DANGER sign on a fence around a hydro station</td>
</tr>
<tr>
<td>2</td>
<td>Hunting rifle and ammo resting on the floor</td>
</tr>
<tr>
<td>3</td>
<td>Electrician at work on a hydro pole</td>
</tr>
<tr>
<td>4</td>
<td>Moving train passing over intersection with flashing lights</td>
</tr>
<tr>
<td>5</td>
<td>Carpenters at work standing on house rafters</td>
</tr>
<tr>
<td><strong>Safe</strong></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Billiards table and balls in game room</td>
</tr>
<tr>
<td>7</td>
<td>Cushion chair in recreation room</td>
</tr>
<tr>
<td>8</td>
<td>Deck furniture on wooden deck</td>
</tr>
<tr>
<td>9</td>
<td>Playing cards on kitchen table</td>
</tr>
<tr>
<td>10</td>
<td>Park benches along walking path</td>
</tr>
</tbody>
</table>
### Table 4

*Number of Correct Responses to Pictures of Dangerous and Safe Situations (Participants 1, 2, & 3)*

<table>
<thead>
<tr>
<th>Phase</th>
<th>Participant 1</th>
<th>Participant 2</th>
<th>Participant 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>D</td>
<td>S</td>
</tr>
<tr>
<td>Pre-tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr1-1</td>
<td>17</td>
<td>11</td>
<td>Pr3-1</td>
</tr>
<tr>
<td>Pr2-2</td>
<td>15</td>
<td>11</td>
<td>Pr2-2</td>
</tr>
<tr>
<td>Pr3-3</td>
<td>18</td>
<td>7</td>
<td>Pr1-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training 1st Setting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T1-1</td>
<td>5</td>
<td>6</td>
<td>T3-1</td>
</tr>
<tr>
<td>T1-2</td>
<td>8</td>
<td>8</td>
<td>T1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training 2nd Setting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2-2</td>
<td>8</td>
<td>8</td>
<td>T2-3</td>
</tr>
<tr>
<td>G2-3</td>
<td>8</td>
<td>8</td>
<td>G2-4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training 3rd Setting</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>T3-3</td>
<td>8</td>
<td>8</td>
<td>T1-4</td>
</tr>
<tr>
<td>G3-4</td>
<td>8</td>
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<td>G1-5</td>
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<tr>
<td>Post-tests</td>
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<tr>
<td>Po1-1</td>
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<td>23</td>
<td>Po3-1</td>
</tr>
<tr>
<td>Po2-1</td>
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<td>24</td>
<td>Po2-1</td>
</tr>
<tr>
<td>Po3-1</td>
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<td>Po1-1</td>
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<td>Follow-up Tests</td>
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<td>FT1-2</td>
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<td>23</td>
<td>FT3-2</td>
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<tr>
<td>FT2-2</td>
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</tr>
<tr>
<td>FT3-2</td>
<td>24</td>
<td>24</td>
<td>FT1-2</td>
</tr>
</tbody>
</table>

*Note: C = condition, D = number of correct responses to dangerous pictures, and S = number of correct responses to safe pictures. Pr = Pre-test, T = Training, G = Generalization Test, Po = Post-test, and FT = Follow-up Test (numbers following these abbreviations identify the setting). Numbers after the hyphen identify the session.*
Table 5

Number of Correct Responses to Pictures of Dangerous and Safe Situations (Participant 4)

<table>
<thead>
<tr>
<th>Phase</th>
<th>Participant 4</th>
<th>Phase</th>
<th>Participant 4 (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>D</td>
<td>S</td>
</tr>
<tr>
<td>Pre-tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr2-1</td>
<td>19</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Pr3-2</td>
<td>19</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Pr1-3</td>
<td>21</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Training 1st Setting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2-1</td>
<td>7</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>T2-2</td>
<td>7</td>
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<tr>
<td>FT1-2</td>
<td>20</td>
<td>23</td>
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</tbody>
</table>

Note: C = condition, D = number of correct responses to dangerous pictures, and S = number of correct responses to safe pictures. Pr = Pre-test, T = Training, G = Generalization Test, ET = Extended Training, Po = Post-test, and FT = Follow-up Test (numbers following these abbreviations identify the setting). Numbers after the hyphen refer to the session. Scores for multiple blocks of training trials in the same session are shown in the sequence: top left, top right, bottom left, bottom right.
Table 6

Participant Responses to Social Validity Questionnaire

<table>
<thead>
<tr>
<th>Social Validity Questions</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Did you find the computer training fun?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you like working with me as your instructor?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you like the prizes that were offered to you?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you want to quit the computer training?</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Did you see pictures of situations that were safe for you?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you see pictures of situations that were dangerous for you?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you learn which situations were safe for you?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you learn which situations were dangerous for you?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Was the computer training boring?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you understand the instructions given by the computer?</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Would other clients understand the computer training instructions?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Were the training instructions confusing?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you enjoy getting the snacks?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did you enjoy earning prizes?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Would you like to do more computer training in the future?</td>
<td>Y</td>
<td>NO</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Was computer training a waste of your time?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Would this computer training be helpful for other clients?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did the computer training help you to see dangerous situations when you were at bus stops?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Did the computer training help you to see dangerous situations when you were at riding on buses?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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</tr>
<tr>
<td>Did you think about the rule when you were at the recreation center?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Can you remember the rule?</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Number of positive responses 26/26 25/26 25/26 25/26
Appendix B

University of Manitoba
Department of Psychology
190 Dysart Road
Winnipeg, Manitoba
Canada R3T 2N2

February 1, 2007

Project Description and Consent Form for Participant

Project Title: Teaching adult sexual offenders with intellectual disabilities to discriminate between pictures of safe and dangerous situations.

This research project will be carried out by Mr. Stuart Toews to meet his requirements at the University of Manitoba. His supervisor is Dr. John Whiteley. Mr. Toews is employed as a therapist at Opportunities for Independence Inc. This project has been approved by the University of Manitoba and Opportunities for Independence Inc.

What is the study about?
Other research suggests that relapse prevention is a helpful method of training people. However, some persons with intellectual disabilities have difficulty learning relapse prevention ideas. The purpose of this study is to help you learn to tell the difference between: (a) safe situations for you, where you are not likely to reoffend, and (b) dangerous situations for you, where you are likely to reoffend.

What will the project include, and how long will it last?
Participants in this study, such as yourself, are in the Residential Program at Opportunities for Independence Inc. Today, I will describe what you will do in the study. Then I will give you a practice exercise to show you how to view the pictures and make responses using the computer. At the end of our session today, I will ask you if you want to be a participant in this study. If you do, I will ask you to sign this consent form.

During this study, you will receive a snack (e.g., chips, bar, or drink) of your choice at the end of each session for being here and for doing the exercise. You will also receive tokens for passing each training phase. You can exchange the tokens you earn for a prize for prizes (such as a football, a jacket, a backpack, a gift at a restaurant, a gift certificate at a department store) or get $25 cash. As well, you will receive a personally engraved trophy for completing the study.
Before today, the researcher talked to the Residential Coordinator to find out who could be a participant and if you had a legal guardian who needs to be contacted. If you chose to participate the researcher will look at your client file for information, such as your age, your type of offense, and your abilities. If you participate, you will receive a schedule of days and times you will be asked to attend. The schedule will tell you when you will be doing testing exercises and doing training exercises. In the first session of the study, called the screening phase, the computer will ask questions and show you pictures. This session is for finding what situations are low-risk and what situations are high-risk for you. In the next session, you will be shown a set of pictures one at a time and asked to make a response on a computer. You will decide whether a picture is a "safe" situation or a "dangerous" situation, if you were to go into that situation. You will get a snack, such as a bag of chips or bar, for being at the meeting and doing the activity. In later sessions, you will respond to pictures when they are shown to you and the computer will tell you if you are correct. You will receive tokens for making the correct responses on the computer, which can be traded later for prizes or $25 cash. As well, you will get a trophy with your name on it when you finish the study. You will be tested during the study to see if your responses change. We will meet two or three times each week for about one hour. Your participation in the study will take about three months to finish.

**Is participation voluntary?**
Yes, it is your choice to be in the study or not be in the study. You may be required to attend program activities at Opportunities for Independence Inc., but you do not have to be in this study. If you chose to be in the study you can refuse to participate and/or quit the study at any time without changing any services that you are receiving or may receive in the future. As well, you can refuse to answer any question you do not want to answer.

**Will my personal information remain confidential?**
Yes, your personal information will remain confidential. All information about you, which is collected during the study, will be kept in a locked office. Your personal information will stay in your file, be seen by the researcher only, and will not be shared with other participants in the study. Your names will not be shown in any public situation. The research information about you will be added to your personal file, which is owned and kept safe by Opportunities for Independence Inc. The research information about you will be kept for five years after the study, but your name will not be shown on the research sheets. Your research file will be destroyed after five years. Although your personal information will be confidential, the researcher is required by law report to the police any information you tell him about hurting others in the past, that you have not told anyone before, or threats to hurt yourself or others now.

**Are there any risks to taking part in the study?**
The purpose of this research is to help clients to see the difference between 'safe' situations and 'dangerous' situations. To do this, you will be shown pictures on a wall and asked to select which picture is 'safe' and which picture is 'dangerous'. This activity of looking at pictures, or any other activity related to this research project, is your choice. When you look at the pictures, it is possible that some of the pictures will upset you or make you uncomfortable. If this happens, you should tell the instructor right away. The instructor will then ask you if you want to stop what you are doing. The instructor will then ask you if you want to leave the research area
and talk to a staff member of your choice. There are no risks of harm to the people in the community. Your participation in research studies and treatment program activities can help you manage your risk.

**Are there any benefits in taking part in the study?**
Yes, there are several benefits for participating in the study. The goal of the study is to teach about high- and low-risk situations. This training will help you learn about high-risk situations and stay away from them in the community.

**Will participating cost anything?**
No, your participation will not cost you anything.

**Is there any compensation for participating?**
You will receive a snack (e.g., chips, bar, or drink) of your choice at the end of each session for your being at the session and doing the activities. You will also receive tokens for passing each training activity. When you complete the study, you will trade your tokens for a prize, such as a football, a jacket, a backpack, a gift at a restaurant, a gift certificate at a department store, or $25 cash. As well, when you finish the study, you will get a trophy with your name on it.

**Who to call if any questions or concerns arise about the project?**
If you have any questions or concerns after today, please call Mr. Stuart Toews at Opportunities for Independence Inc. (957-5113[204]) or Dr. John Whiteley at U of M (474-9006). After the study is over, information about what happened in the study will be given to you (and your Substitute Decision Maker or Legal Guardian) and discussed with you. The results of the study are expected to be available in January, 2008.

**What should I do if I am interested?**
Talk about the details about the study with the researcher and sign the consent form (or have your Legal Guardian or Substitute Decision Maker see the details of the study and sign the consent form).

Thank you for your help.
Sincerely,

______________________________  ______________________________
Stuart Toews, MA, P. Cand.        John Whiteley, Ph. D.
Consent Form for Participant

A copy of this Project Description and Consent Form will be left with you for your information. It is only part of the consent process. It should give you an idea of what the research is about and what you will do if you choose to participate. If you would like more detail about something said here, or information that is not said here, please feel free to ask. Please take time to read (or have the researcher read) this carefully and to understand any information you are given.

Your signature on this form says that you have understood to your satisfaction the information about participation in the research project and agree to participate as a subject. In no way does this give up your legal rights nor free the researchers, sponsors, or institutions from their legal and professional responsibilities. If you chose to be in the study you can refuse to participate and/or quit the study at any time without changing any services that you are receiving or may receive in the future. As well, you can refuse to answer any question you do not want to answer. You should feel free to ask questions or ask for any new information throughout the study.

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>Stuart Toews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone #:</td>
<td>957-5113 (217)</td>
</tr>
<tr>
<td>Supervisor:</td>
<td>Dr. John Whiteley</td>
</tr>
<tr>
<td>Telephone #:</td>
<td>474-9006</td>
</tr>
</tbody>
</table>

This research has been approved by the University of Manitoba and Opportunities for Independence Inc. If you have any concerns or problems with this project you may tell any of the above-named persons or the Human Ethics Secretariat at 474-7122. A copy of this Project Description and Consent Form will be given to you for your own information.

I agree to allow the researcher to:

a. Look at your client records for selecting participants.
b. Test your intellectual ability, if information is not available.
c. Carry out a screening exercise with you to identify a high-risk person and place.
d. Use equipment (computer, multimedia projector, and response box) and treatment methods (discrimination training, feedback, and reinforcement).
e. Observe, record, and examine your responses during the training of low- and high-risk situations.
f. Report project outcomes in publications or presentations, while not letting others know personal information about you.

If you cannot give informed consent, because you have a Legal Guardian or Substitute Decision Maker who will respond on your behalf, please indicate who that is and what is his/her relationship to you.

<table>
<thead>
<tr>
<th>Printed Name</th>
<th>Participant Signature</th>
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Project Description and Consent Form for Adult Actors and Parents of Child Actors

Project Title: Teaching adult sexual offenders with intellectual disabilities to discriminate between pictures of safe and dangerous situations

This project will be conducted by Mr. Stuart Toews for his thesis research as part of the requirements for a Doctor of Philosophy degree in Psychology. His supervisor is Dr. John Whiteley with the Department of Psychology, University of Manitoba. Mr. Toews is employed as a therapist at Opportunities for Independence Inc. This project has been approved by, the University of Manitoba Psychology/Sociology Research Ethics Board and Opportunities for Independence Inc.

What is the study about?
Sexual offending is a common problem among adult males with intellectual disabilities. The limited clinical literature suggests that relapse prevention is the preferred method to reduce repeat offending; however, essential components of relapse prevention have not been investigated. Relapse prevention should teach clients to identify problematic situations and to respond appropriately to these situations. The purpose of the present study is to evaluate an applied behavioral analysis program to teach sexual offenders with intellectual disabilities to discriminate pictures of low- and high-risk situations (e.g., a child accompanied by an adult at a bus stop vs. a child alone at a bus stop), and have this skill generalize to pictures of untrained target children and be learned in three relevant settings.

In order to conduct this study, we need to prepare pictures for use as teaching materials. We are writing to you to request your assistance or the assistance of your child as an "actor" in these pictures. Each child actor will be present in approximately 40 pictures. Adult actors will be present in approximately half of these pictures. Between 12 and 20 of these pictures will be used for training. The pictures will be taken in three public settings chosen to include settings where the individual participants might reoffend. The settings could include: (a) a bus stop, (b) a city sidewalk, (c) a parking lot, (d) a city park, or (e) a school playground. Three picture-taking sessions will be scheduled, with each session being carried out in one of the three settings. Transportation to each setting will be provided by the researcher, unless a parent (or adult actor) makes prior arrangements to meet the researcher at the scheduled setting. Details about the
Teaching Safe and Dangerous

picture-taking dates, locations, and clothing options will be provided. Picture-taking sessions will be arranged over a two-week period, with each session lasting approximately 2 hours, depending on the travel distance. Child actors will need four clothing combinations and adults will need two clothing combinations per session. Props (e.g., backpack) for the pictures will be provided by the researcher.

**Is participation for the actors voluntary?**
Yes, participation as an actor in the pictures is voluntary. At any time, adult actors can decline to participate and/or withdraw themselves and parents of children can decline their children’s participation and/or withdraw their children from acting in the pictures or permitting the pictures from being used in the study.

**Will the participant’s personal information remain confidential?**
Yes, the identities of all actors will remain confidential. The researcher will take the digital pictures in public places with the actors located approximately 25 feet from the camera and their faces directed away from the camera. The pictures will be stored on computer and stored in a locked office at Opportunities for Independence Inc. The pictures will be used for research purposes only. Pictures will be destroyed (deleted from computer) within one year after completion of the dissertation project, unless actors sign an additional form to allow the pictures in which they appear to be used in further research or therapy, or as illustrative material in presentations.

**Are there any risks to taking part in the study?**
There are no risks involved in modeling for the pictures. The identities of actors in the pictures will not be disclosed to the participants or treatment staff, and the pictures will be used for research and training purposes. The pictures will not be printed or distributed to the participants, or be made available to the public.

**Are there any benefits in taking part in the study?**
Child actors will receive $25. Adult actors will not receive compensation.

**Who to call if any questions or concerns arise about the project?**
If you have any questions or concerns please call Mr. Stuart Toews at Opportunities for Independence Inc. (957-5113[217]) or Dr. John Whiteley at U of M (474-9006).

**What should I do if I am interested?**
Review the details about the study with the researcher, ask any questions that you might have, and sign the attached consent form.

Thank you for your assistance.

Sincerely,

Stuart Toews, MA, P. Cand.                                      John Whiteley, Ph. D.
Consent Form for Adult Actors and Parents of Child Actors

This project description and consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what the actor’s participation will involve. If you would like more detail about something mentioned here, or information not included here, please feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to assist with the pictures. In no way does this waive one’s legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. At any time, adult actors can decline to participate and/or withdraw themselves and parents of children can decline their children’s participation and/or withdraw their children from acting in the pictures or permitting the pictures from being used in the study.

Researcher:            Stuart Toews
Telephone #:           957-5113 (217)
Supervisor:            Dr. John Whiteley
Telephone #:           474-9006

This research has been approved by the University of Manitoba Psychology/Sociology Research Ethics Board and Opportunities for Independence Inc. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122 or e-mail Margaret_Bowman@umanitoba.ca. A copy of this project description and consent form has been given to you to keep for your records and reference.

I agree to allow the researcher to:

a. take digital pictures of myself and/or my child in public settings
b. use these pictures for training and testing in this research project.

<table>
<thead>
<tr>
<th>Printed Name</th>
<th>Participant’s Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Printed Name</th>
<th>Parent/Legal Guardian Signature</th>
<th>Date</th>
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<table>
<thead>
<tr>
<th>Printed Name</th>
<th>Researcher Signature</th>
<th>Date</th>
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Appendix C

Session Instructions

Orientation Instructions

Welcome here today. My name is Stuart and I will be carrying out the activities each session we meet. These activities are part of a research study I am conducting through the University of Manitoba. The study was developed to assist clients at Opportunities for Independence Inc. with identifying safe situations and dangerous situations. In the next several meetings, a computer and projector will present a picture and you will use a response box to make a selection. The computer and projector will present a picture on the wall and you will select whether it is "safe" or "dangerous" for you to enter the situation. When a picture is presented, you will press "S" on the response box if it is "safe" for you to go into the situation or press "D" if it is dangerous for you to go into the situation. Today, I will inform you of several important things that will take place over the next few weeks. First, for today, I will tell what you will be doing during future sessions. In future sessions, you will use the schedule I give you to determine when you need to be here. When you arrive, you will sit in this (pointing) chair behind the table. You will wait for me, as your instructor, to begin the computer program. You will be facing this (pointing) wall where the computer will display written instructions and a series of pictures. The computer will read the instructions so you can hear them. After the instructions have been read to you, you will be asked if you have any questions. If you have any questions, please ask them before you begin looking at the pictures. The pictures will be displayed one at a time and you will be asked a question about the picture. You will make your selection using the labeled keys on the response box. The computer will ask you, "Would it be 'SAFE' or 'DANGEROUS' for you to go into this situation? You will then press the 'S' key if the picture is 'safe' or press the 'D' key if the picture is 'dangerous'.

Second, in future sessions, your goal for each session is to make correct responses to computer pictures. In future sessions, you will have opportunities to earn tokens for answering questions correctly. These tokens can be collected and traded for money or prizes. For instance, if you have answered every question correctly, you will earn three tokens. You will want to work as hard as you can.

Third, you need to provide me with written consent that says you will participate in the study. To give consent, you must sign a form saying that you have been shown the details about the study and agree to participate in the study. I will read through the details of the study as they appear on the consent form and give you an opportunity to ask any questions. If you agree to the terms of the consent form, you will put your signature on the form before you leave today.

Lastly, in the near future, I will give you a schedule about the upcoming sessions. The times and dates have been prearranged using the information I got from your workers and/or yourself. If there is a problem with the schedule, please let me know and I will try to make the necessary changes. We will read through the schedule so that you understand what it means and agree to the dates and times. I will remind your case manager, support worker, and program staff to ensure that you can attend the dates and
Teaching Safe and Dangerous  75

times listed on the schedule. I would like to thank-you for attending our meeting today. Your participation in the study is very important and greatly appreciated. Of course, if you are uncomfortable with what happened today or with any part of the study in the future, you may withdraw from the study without penalty. If you chose to continue, I look forward to working with you through the exercises and doing whatever I can to make your experience pleasant.

Pre-test Session Instructions for Setting 1, 2, or 3

Practice Exercise Instructions

Welcome here. In the following practice exercise you will identify low-risk situations and high-risk situations. You will use this (pointing) response box to make choices about pictures. The computer will display a picture and you will decide whether it is “safe” or “dangerous” for you to go into the situation.

You will begin the session by sitting in this (pointing) chair behind the table facing the wall. You will wait for me, as your instructor, to begin the computer program. The computer will display written instructions and a series of pictures. The computer will read the instructions so you can hear them. After the instructions have been read to you, you will be asked if you have any questions. If you have any questions, please ask them before you begin looking at the pictures. The pictures will be displayed one at a time and you will be asked whether it would be ‘safe’ or ‘dangerous’ for you to go into this situation. You will make your selection on the response box, by pressing the ‘S’ key if the situation is ‘safe’ and pressing the ‘D’ key if the situation is ‘dangerous’. Please show me the ‘S’ key for ‘safe’. Please show me the ‘D’ key for ‘dangerous’. Please show me the ‘N’ key to advance to the next slide.

Please sit on the chair in front of the response box and I will begin the practice exercise. Try to get all 10 questions correct. You will be given a snack after you get all ten pictures correct.

Pre-test Instructions

For the next exercise, you will follow the same procedures as you did in the practice exercise. However, you will be presented with more pictures in this exercise than you were in the practice exercise. You will be presented with 48 pictures instead of 10. As well, the computer will not say “Good choice, you are correct” or “Bad choice, you are wrong”. You will view the pictures on the wall, answer questions about whether it is “safe” or “dangerous” for you to enter the situation, and use the keys on the response box to make your selection. Work at viewing the pictures and answering the questions now. Work as hard as you can without any help from me.

When we are done with the exercise today, you will get to choose a snack for attending and participating. Your participation in this study is very important and greatly appreciated. Your good work will earn you two tokens today, worth 200 points (200 x 3 pre-tests = 600). These can be traded for money or prizes at the end of the study. Let us begin.
Training Session Instructions for Setting 1, 2, or 3

Welcome here. Today, you will do an exercise that is similar to exercise in our last session. You will use this (pointing) response box to make choices about pictures. The computer will display a picture and you will decide whether it is “safe” or “dangerous” for you to go into the situation. You will begin the session by sitting in this (pointing) chair behind the table facing the wall. You will wait for me, as your instructor, to begin the computer program. The computer will display written instructions and a series of pictures. The computer will read the instructions so you can hear them. After the instructions have been read to you, you will be asked if you have any questions. If you have any questions, please ask them before you begin looking at the pictures. The pictures will be displayed one at a time and you will be asked whether it is ‘safe’ or ‘dangerous’ for you to go into the situation. You will make your selection on the response box, by pressing the ‘S’ key if the situation is ‘safe’ and pressing the ‘D’ key if the situation is ‘dangerous’.

Rule Training

Before we begin with the pictures, you will do an exercise to help you learn a rule. The rule that you will learn and the pictures you will see have been made to address your needs. In previous weeks, I collected information from your client file, consulted with staff members, and carried out a computer test with you. From the information I collected about you, I wrote a rule for you and I developed a program with pictures that can assist you with not offending in the community and managing your risk towards others.

You can use the rule to help you make the correct response to the pictures. The computer will tell you the rule and you will be asked to repeat the rule to me. When you show that you can repeat the rule correctly three times without help, you will begin the exercise with the pictures. Let’s begin the rule training now.

Safe and Dangerous Situation Training

Please sit on the chair in front of the response box and we will begin this exercise (if not already sitting in the chair). There are 16 pictures in this exercise. You will work at viewing the pictures and answering the questions now. In this exercise, the computer will say “Good choice, you are correct” or “Bad choice, you are wrong”. Try to get every picture correct. If you get every picture correct, or make only one mistake, you will earn tokens that can be traded for money or prizes in the future. If you make more than one mistake, you will repeat the exercise. Your goal for each exercise is to answer all questions correctly. Work as hard as you can. If you have any questions, ask them now. Let us begin.

(If the participant responds correctly for 15 or 16 items). Good work. You have succeeded at answering the questions correctly. Therefore, you win three tokens worth 300 points and advance to the next set of pictures.

(If the participant gets more than one mistake). Good try. However, you did not get enough pictures correct to win any tokens. Try the pictures again and see if you can
improve your choices. You can repeat this exercise until you win the tokens. If we run out of time today, you can repeat this exercise at our next session.

We are done with the exercise for today. I would like to thank-you for attending our meeting and working hard. You get to choose a snack for attending and working hard today. Your participation in this study is very important and greatly appreciated. I look forward to working with you in the future.

Generalization Test Session Instructions for Setting 1, 2, or 3
(or Generalization Tests that follow extended training)

For this exercise, you will follow the same procedures as you did in previous exercises. You will be presented with the same number of pictures, which will be 16. However, the computer will not say “Good choice, you are correct” or “Bad choice, you are wrong”. You will view the pictures on the wall, answer questions about whether it is “safe” or “dangerous” for you to enter the situation, and use the keys on the response box to make your selection. Work at viewing the pictures and answering the questions now. Try to get every picture correct. Your goal is to answer all the questions correctly. Work as hard as you can without any help from me. Once you have completed this exercise, I will tell you whether you did good enough to go on to the next exercise.

When we are done with the exercise today, you will get to choose a snack for attending and participating. Your participation in this study is very important and greatly appreciated. Your work in this exercise will earn you three tokens, worth 300 points. These can be traded for money or prizes at the end of the study. Let us begin.

Post-test Session Instructions for Setting 1, 2, or 3

For this exercise, you will follow the same procedures as you did in previous exercises. However, you will be presented with more pictures in this exercise than you were in the past several exercises. You will be presented with 48 pictures instead of 16. As well, the computer will not say “Good choice, you are correct” or “Bad choice, you are wrong”. You will view the pictures on the wall, answer questions about whether it is “safe” or “dangerous” for you to enter the situation, and use the keys on the response box to make your selection. Work at viewing the pictures and answering the questions correctly. Try to get every picture correct. Your goal is to answer as many questions as you can correctly. Work as hard as you can without any help from me.

When we are done with the exercise today, you will get to choose a snack for attending and participating. Your participation in this study is very important and greatly appreciated. Your good work has earned you two tokens today, worth 200 points (200 x 3 pre-tests = 600). These can be traded for money or prizes at the end of the study. I look forward to working with you in the future. Let us begin.
Appendix D

Procedural Reliability Checklist

A. Practice Training
   a. Instructions were read for practice training. Yes ___ No ___
   b. Snack was given for practice training. Yes ___ No ___
   c. Participant repeated practice training for mistakes. __/__/_
   d. Participant advanced for no mistakes. Yes ___ No ___

B. Pre-tests (3, 4, or 5)
   a. Instructions were read for how many pre-tests? __/__/_
   b. Snack was given for how many pre-tests? __/__/_
   c. Tokens were given for how many pre-tests? __/__/_

C. Training in 1st Setting
   1. Rule Training
      a. Instructions were read for rule training. Yes ___ No ___
      b. Snack was given for rule training. Yes ___ No ___
      c. Participant repeated rule training for mistakes. __/__/_
      d. Participant advanced for stating rule correctly. Yes ___ No ___
   2. Picture Training
      a. Instructions were read for training block. Yes ___ No ___
      b. Snack was given for training block. Yes ___ No ___
      c. Participant repeated training for mistakes. __/__/_
      d. Participant advanced for one mistake or less. Yes ___ No ___
      e. Tokens were given for training block. Yes ___ No ___

D. Generalization Testing in 1st Setting
   a. Instructions were read for generalization test. Yes ___ No ___
   b. Snack was given for generalization test. Yes ___ No ___
   c. Participant returned to training for mistakes. __/__/_
   d. Participant advanced for one mistake or less. Yes ___ No ___
   e. Tokens were given for generalization test. Yes ___ No ___

E. Training in 2nd Setting
   a. Instructions were read for training block. Yes ___ No ___
   b. Snack was given for training block. Yes ___ No ___
   c. Participant repeated training for mistakes. __/__/_
   d. Participant advanced for one mistake or less. Yes ___ No ___
   e. Tokens were given for training block. Yes ___ No ___

F. Generalization Testing in 2nd Setting
   a. Instructions were read for generalization test. Yes ___ No ___
   b. Snack was given for generalization test. Yes ___ No ___
   c. Participant returned to training for mistakes. __/__/_
d. Participant advanced for one mistake or less. Yes ___ No ___
e. Tokens were given for generalization test. Yes ___ No ___

G. Training in 3rd Setting
   a. Instructions were read for training block. Yes ___ No ___
   b. Snack was given for training block. Yes ___ No ___
   c. Participant repeated training for mistakes. Yes ___ No ___
   d. Participant advanced for one mistake or less. Yes ___ No ___
   e. Tokens were given for training block. Yes ___ No ___

H. Generalization Testing in 3rd Setting
   a. Instructions were read for generalization test. Yes ___ No ___
   b. Snack was given for generalization test. Yes ___ No ___
   c. Participant returned to training for mistakes. Yes ___ No ___
   d. Participant advanced for one mistake or less. Yes ___ No ___
   e. Tokens were given for generalization test. Yes ___ No ___

I. Post-test
   a. Instructions were read for post-test. Yes ___ No ___
   b. Snack was given for post-test. Yes ___ No ___
   c. Tokens were given for post-test. Yes ___ No ___

J. 1 Month Follow-up
   a. Instructions were read for follow-up test. Yes ___ No ___
   b. Snack was given for follow-up test. Yes ___ No ___
   c. Tokens were given for follow-up test. Yes ___ No ___

K. Extended Training in 1st, 2nd, or 3rd Setting (for unsuccessful generalization test)
   a. Instructions were read for extended training block. Yes ___ No ___
   b. Snack was given for extended training block. Yes ___ No ___
   c. Participant repeated extended training for mistakes. Yes ___ No ___
   d. Participant advanced for one mistake or less. Yes ___ No ___
   e. Tokens were given for extended training block. Yes ___ No ___

L. Extended Generalization Testing in 1st, 2nd, or 3rd Setting (for extended training)
   a. Instructions were read for generalization test. Yes ___ No ___
   b. Snack was given for generalization test. Yes ___ No ___
   c. Participant returned to training for mistakes. Yes ___ No ___
   d. Participant advanced for one mistake or less. Yes ___ No ___
   e. Tokens were given for generalization test. Yes ___ No ___
Appendix E

Social Validity Questionnaire for Participant

You have almost finished the research project. You have completed the computer training and other exercises. In this last session today, we will do several things:

1. I will ask you some questions about the study.
2. We will discuss the goals of the study and which goals you achieved.
3. You will have a chance to ask me any questions you have about the study.
4. I will give you the prizes you have earned.

Let's begin with my questions. This will only take a few minutes. Let's start with questions about the computer-training program that took place in the program room, where you saw the pictures on the wall and pressed buttons on the response box.

1. Did you find the computer training fun? Yes or no?
2. Did you like working with me as your instructor?
3. Did you like the prizes that were offered to you?
4. Did you want to quit the computer training?
5. Did you see pictures of situations that were safe for you?
6. Did you see pictures of situations that were dangerous for you?
7. Did you learn which situations were safe for you?
8. Did you learn which situations were dangerous for you?
9. Was the computer training boring?
10. Could you understand me during the computer training?
11. Did you understand the instructions given by the computer?
12. Would other clients understand the computer training instructions?
13. Were the training instructions confusing?
14. Was the computer training difficult to do?
   If so, what was difficult about it?
   a. _________________________________________________________
   b. _________________________________________________________
   c. _________________________________________________________

15. Did you enjoy getting the snacks?
   If so, what was your favorite snack?

16. Did you enjoy earning prizes?
   If so, what prizes did you like best (tokens, cash, trophy, or other)?
   a. ________________________
   b. ________________________

17. Would you like to do more computer training in the future?

18. Was computer training a waste of your time?

19. Would this computer training be helpful for other clients?

Next, I have a few questions about your experiences in the community. Since you have
gone through the computer training in the program room, you may have had different
experiences in other places.

20. Did the computer training help you to see dangerous situations when you were:
   a. At bus stops?
      If so, please give an example.
   ________________________
   b. Riding on buses?
      If so, please give an example.
   ________________________
   c. At the recreation center?
      If so, please give an example.
   ________________________

21. Did you think about the rule when you were:
   a. At bus stops?
   b. Riding on buses?
   c. At the recreation center?

22. Can you remember the rule?
   If so, what was the rule?
Appendix F

Follow-up Study

In the training program used in the present study, the participants were taught a rule which described a conditional discrimination; namely, a situation was safe for the participant if target victims were accompanied by an adult male but dangerous if they were not accompanied by an adult male. Participants’ high level of performance following training can be interpreted as consistent with their acquisition of this conditional discrimination. Alternatively, participants could perform correctly if their choice responses were controlled entirely by the presence or absence of an adult male in the pictures; that is, a situation is safe if an adult male is present but dangerous if an adult male is not present. In other words, the presence of target victims is not relevant to deciding whether a situation is safe or dangerous. In this follow-up study, participants were tested on a set of pictures with no models in the setting or pictures with only an adult male model in the setting. If the dangerous response were controlled by the absence of an adult male in the picture, participants would be expected to select the dangerous button when shown pictures of the settings with no models.

Method

The four participants from the previous study were included in the follow-up study, which was conducted approximately 20 months after the post-tests. Testing and discrimination training sessions were carried out in the same training environment and using the same equipment used for original training. Two or three sessions were conducted with each participant. In the first session, participants were each read the
Follow-up Project Description and Consent Form (see Appendix G), given an opportunity to ask questions, and then asked for their written consent.

In the second session, each participant completed the 10-picture practice exercise using the same pictures and procedures previously described in the thesis. Immediately following the practice exercise, participants received a follow-up study test using a set of 24 pictures. These pictures were selected from the discrimination training pictures used in their previous training; eight pictures were drawn from each of the three settings. Four of the eight pictures from each setting showed "safe" situations and the other four pictures showed "dangerous" situations. Each of the eight pictures included two pictures with a target individual alone in the picture, one picture with a target individual with another target individual, one picture with a target individual with an adult female, and four pictures with a target individual with an adult male. If a participant met criterion performance of 22 or more correct (92%) on this 24-picture follow-up study test, he was given a follow-up study generalization test in the same session using a 36-picture set.

If a participant scored less than criterion on the 24-picture follow-up study test, he was given rule training and discrimination training using the 24-picture follow-up study test set. Rule training and discrimination training were given with the same procedures used in the original training. Performance criterion was 22 or more correct (92%) for Participants 1, 2, and 3, and 20 (83%) or more correct for Participant 4. Participant 4's performance criterion was set lower than the other participants because he required substantially more training to reach criterion prior to the follow-up study. When a participant met criterion in training, he was given the follow-up study generalization test.
The generalization test consisted of a 36-picture set. The pictures with target models in them were selected from the generalization test pictures used previously in the original study. One-third of each set were selected from each of the settings. The generalization test was conducted using the same procedures and instructions used for previous generalization tests. The 36-picture set was presented in two blocks of 18 trials. The first 18 trials included 9 pictures with no models and the second 18 trials included 9 pictures with only an adult male in the setting. The 9 pictures of dangerous situations in each block of 18 trials consisted of 3 pictures with a target individual alone in the picture, 3 pictures showing a target individual with another target individual, and 3 pictures showing a target individual with an adult female. The second 18 trials included 9 "safe" pictures with only an adult male model and 9 "dangerous" pictures. The pictures were presented in random order within each 18-trial block.

Results

The results of the follow-up study are shown in Table 7. Participant 1 was given the practice test and scored 100% correct. He was then given the 24-picture follow-up study test and obtained 54% correct. In the same session, he was given a block of training trials and scored 79% correct. In the next session, he was given a second block of training trials and scored 100% correct. Then, in the same session, he was given the generalization test. He scored 89% correct in the first block of 18 pictures and 100% correct in the second block of 18 pictures. He made the correct safe response to 7 of the 9 pictures with no models in them and to all 9 of the pictures with only adult males in them. He was then given the first block of 18 trials again and scored 100% correct.
### Table 7

*Number of Correct Responses in Follow-up Study Testing and Training*

<table>
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<tr>
<th>Phase</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>24 – Picture Pre-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe</td>
<td>8</td>
<td>11</td>
<td>0</td>
<td>11</td>
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<tr>
<td>Dangerous</td>
<td>5</td>
<td>11</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>22</td>
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<td>19</td>
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<table>
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<tr>
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<th>P2</th>
<th>P3</th>
<th>P4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>24-Picture Training</strong></td>
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</tr>
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<td></td>
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<td>Safe</td>
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<td>11</td>
<td>12</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Total</td>
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<td>22</td>
</tr>
<tr>
<td>Block 2</td>
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<tr>
<td>Safe</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous</td>
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<td></td>
<td></td>
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<tr>
<td>Total</td>
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<th>P2</th>
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<td><strong>36-Picture Post-test</strong></td>
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<tr>
<td>Part 1 - 18 Pictures</td>
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<tr>
<td>Safe (no model)</td>
<td>7</td>
<td>9</td>
<td>9</td>
<td>9</td>
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<tr>
<td>Dangerous</td>
<td>9</td>
<td>7</td>
<td>9</td>
<td>8</td>
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<tr>
<td>Total</td>
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<td><strong>36-Picture Post-test</strong></td>
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<tr>
<td>Part 2 - 18 Pictures</td>
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<td></td>
</tr>
<tr>
<td>Safe (adult male)</td>
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<td>9</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Dangerous</td>
<td>9</td>
<td>7</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
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<td>16</td>
<td>17</td>
<td>18</td>
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</table>

*Note: P = Participant*

Participant 2 was given the practice test and obtained 100% on his second block of trails. He was then given the 24-picture follow-up study test and scored 92% correct. In the same session, he was given the 36-picture generalization test. He scored 89% on the first block of 18 pictures and 89% on the second block of 18 pictures. He made the correct safe response to all 9 pictures with no models in them and to all 9 of the pictures with only adult males in them. His incorrect responses were with pictures with an adolescent female and adult female in the first block of 18 pictures and with pictures with a young female and adult female in the second block of 18 pictures.
Participant 3 was given the practice test and scored 100% on his first attempt. He was then given the 24-picture follow-up study test and scored 46% correct. In the same session, he completed two blocks of rule training. He was then given picture training and scored 92% correct. In the same session, he was given the 36-picture generalization test. He scored 100% correct with the first block of 18 pictures and 94% correct with the second block of 18 pictures. He made the correct safe response to all 9 pictures with no models in them and to 8 of the 9 of the pictures with only adult males in them.

Participant 4 was given the practice test and scored 100% on his second attempt. He was then given the 24-picture follow-up study test and scored 79% correct. In the same session, he was given two blocks of rule training. He was then given one block of picture training and scored 92% correct. In the same session, he was given the 36-picture generalization test and scored 94% correct on the first block of 18 pictures and 100% correct on the second block of 18 pictures. He made the correct safe response to all 9 pictures with no models in them and to all 9 of the pictures with only adult males in them. His incorrect response in the first block of 18 pictures was with a picture of two adult females.

Discussion

Discrimination training was used to teach participants to discriminate safe situations, in which one or more target victims are accompanied by an adult male from dangerous situations, in which one or more target victims are not accompanied by an adult male. Investigation of incorrect responses to pictures with no one in them and pictures with an adult male only showed that Participant 1 made two incorrect responses to pictures with no one in them and Participant 3 made one incorrect response to a picture with an adult
male only. Participant 1 responded incorrectly on trial 7 and 8, which were the first two pictures with no one in them. After selecting dangerous on trial 8, he said, "There's no one there. I didn't know what to do". Then I said, "What is it?" and he said, "It's safe". Then I told him, "You pressed dangerous". He said "I know. I was a little confused." and "That confused me. It made me think". He then responded correctly on the remaining trials. Participant 3 responded incorrectly on trial 16 with an adult male only. Participant 3 said that he made an incorrect response because he thought the adult man was a child. Participant 1 chose the safe response for 7 of the 9 pictures without models. Participants 2, 3, and 4 chose the safe response for all 9 pictures without models. In summary, results from the follow-up investigation indicate that participants' responses were controlled by the combination of models in the pictures rather than by the mere presence or absence of an adult male model.
Follow-up Project Description and Consent Form for Participant

Previous Project Title: Teaching adult sexual offenders with intellectual disabilities to discriminate between pictures of safe and dangerous situations.

This follow-up project will be carried out by Mr. Stuart Toews to meet his requirements at the University of Manitoba. This project has been approved by the University of Manitoba and Opportunities for Independence Inc.

What is the study about?
The previous study helped you learn the difference between: (a) safe situations for you, where you are not likely to reoffend, and (b) dangerous situations for you, where you are likely to reoffend. This follow-up project will test your skills in this area. Some extra training will be given, if you need it.

What will the project include, and how long will it last?
You will participate in the same activities you did before. I will give you a practice exercise using 10 pictures to show you how to use the computer and make choices on the response box. Then, you will get tested with pictures the way you were tested in the past. That is to select S for a safe situation and D for a dangerous situation. The computer program may provide you with more training to help you learn about the pictures. Any additional training will be carried out the same way it was in the past. This follow-up project will last 1, 2, or 3 sessions and sessions will be approximately 1 hour in length. The session appointments will be arranged with you and scheduled in the next several weeks.

Is participation voluntary?
Yes, it is your choice whether to participate in the follow-up project or not. You can quit at any time without any penalties or loss of services. As well, you can refuse to answer any question you do not want to answer.
Will my personal information remain confidential?
Yes, your personal information will remain confidential as it did in the previous study. The research information about you will be added to your personal research file. All information about you will be kept in a locked office and seen by me only. This information will not be shared with other participants in the study or shown in any public situation.

Is there any compensation for participating?
As before, you will receive a snack of your choice during each session for participating in exercises. You will also receive tokens for passing each training activity. You can exchange the tokens you earn for cash after the follow-up project is complete.

Consent Form for Participant

A copy of this Follow-up Project Description and Consent Form will be left with you for your information. Your signature on this form says that you have understood the information about participation in this project and agree to participate. This does not give up your legal rights nor free the researchers, sponsors, or institutions from their legal and professional responsibilities. You can refuse to participate and/or quit this follow-up project at any time without changing any services that you are receiving or may receive in the future. As well, you can refuse to answer any question you do not want to answer. You should feel free to ask questions or ask for any new information throughout the project.

Researcher: Stuart Toews
Telephone #: 
Supervisor: Dr. John Whiteley
Telephone #: 

This research has been approved by the University of Manitoba and Opportunities for Independence Inc. If you have any concerns or problems with this project you may tell any of the above-named persons or the Human Ethics Secretariat at 474-7122. A copy of this Project Description and Consent Form will be given to you for your own information.

I agree to allow the researcher to:
   a. Use equipment (computer, multimedia projector, and response box) and treatment methods (discrimination training, feedback, and reinforcement).
   b. Observe, record, and examine your testing and/or training responses.
   c. Report project outcomes in publications or presentations, while not letting others know personal information about you.

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<th>Participant’s Signature</th>
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