DEVELOPMENT AND VALIDATION OF A BEHAVIORAL MEASURE OF DRUG REFUSAL

SKILLS IN SEVENTH AND EIGHTH GRADERS

by

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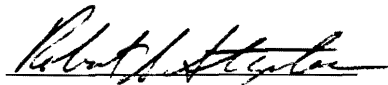
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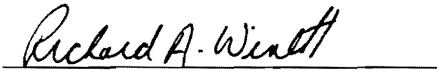
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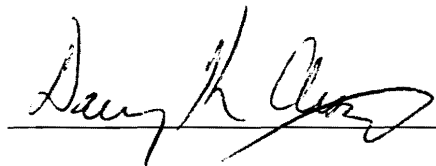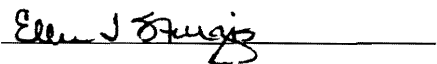
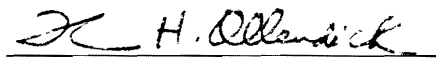Blacksburg, VA

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(ABSTRACT)

This series of studies created and validated a role-play measure of cigarette, alcohol, and drug refusal skills, the Behavioral Substance Refusal Test (BSRT) for seventh and eighth graders, which included a measure of self-efficacy and outcome expectancies, the Role-play Self-Efficacy and Outcome for Refusal Test (RSORT). A series of focus groups asked seventh and eighth graders to discuss specific situations involving peer pressure to use drugs. These discussions were used to create the scenes for the behavioral drug refusal measure, which was based on the Behavioral Assertiveness Test for Children - Revised (Ollendick, 1981) and included both verbal and nonverbal components of aggression. Two additional categories of assertive behavior, statement of consequences and verbal repertoire, inductively determined from previous research on behavioral measures of assertion (Weist & Ollendick, 1991), were added to enhance the measure. In the first study, a multi-trait multi-method matrix (MTMMM) examined the measure's internal consistency and construct validity. The BSRT demonstrated promising convergent validity, but it did show a large amount of method variance. This method variance indicated that role-play and self-report measures of drug refusal skills measure different constructs. Further studies must determine whether the behavioral or self-report measures of assertion are more valid. The MTMMM indicated that the relationships between the constructs assertion, aggression, and passiveness may be more complex than is indicated in previous research on assertion, and suggestions are made for future measures of these constructs. In the second study, peers rated the seventh and eighth graders' role-play

performances and confirmed that subjects who received high drug refusal scores on the BSRT were not

rejected by peers and were perceived as effective by their peers.

Dedication

Bob Stephens helped me develop my critical thinking skills, and Dick Winett nurtured my self-efficacy and optimism. I dedicate this dissertation to them and to my ultimate role model, Helen Kelley Cleaveland.

Acknowledgments

OVERVIEW

Adolescent substance use is prevalent and increasing. The 30-day prevalence among 8th graders for the use of cigarettes (16.7%) and marijuana (5.1%) increased significantly in 1993 from the previous year, while alcohol use (26.2%) remained about the same (University of Michigan, Institute for Social Research, 1994). In Montgomery County, Virginia, the site of the present studies, almost 7% of 8th graders had used alcohol three or more times in the past month, and by 10th grade that figure was 17% (Montgomery County Office on Youth, 1992). Similarly, 1.53% of 8th graders had used marijuana 1-2 times in the past month (none had used more than that), and by 10th grade 8.47% had used one or more times. Although the data is cross-sectional, similar patterns for national longitudinal data suggest that experimentation often begins in middle school (University of Michigan Institute for Social Research, 1991). The accidents, health problems, and decreased productivity resulting from such high levels of use over the adolescent and adult years accrue high levels of cost to society (US Department of Health and Human Services, 1991). Therefore, an increasing focus among researchers, funding agencies, and educators has been on adolescent substance abuse prevention.

There are various empirically established risk factors for substance abuse, including parental and sibling drug use, availability, and perceived norms for use (Jessor & Jessor, 1977). Because of the variety of risk factors, approaches to adolescent substance abuse prevention other than refusal skills training are common. These other approaches include the teaching of other interpersonal skills (e.g., Botvin, 1983), normative education, values clarification, and discussion of drug effects (Bangert-Drowns, 1988), family problem solving training (Robin, Kent, O'Leary, Foster, & Prinz, 1977) and modifications of parental discipline and parental modeling (Johnson, 1991). Drug refusal skill training is the component of adolescent substance abuse prevention programs that has received the most attention in recent years after meta-analyses showed support for skills-based interventions (Bangert-Drowns, 1988).

The field has evolved from implementing some prevention programs which actually increased substance use (Bangert-Drowns, 1988; Tobler, 1986) to the current state-of-the-art generation of programs which are generally effective in delaying increases in substance use among adolescents for up to five years (Pentz, et al., 1990). Most such programs intervene in 7th or 8th grade because cigarette, alcohol, and marijuana use are typically initiated in later middle school or early high school and maintained into adulthood. Those who do not initiate drug use during 7th and 8th grade are unlikely to develop problem use as adults.

Most successful adolescent substance abuse prevention programs are based in part on social learning theory. That is, the programs are skills-based; they teach competencies through goal-setting, modeling, corrective feedback, and reinforcement. Skills taught often include: normative education (misperceptions of the prevalence of peer use are corrected), outcome expectancy education (negative and/or positive outcomes for use are discussed), drug knowledge (physiological action and drug dangers are discussed), alternatives (opportunities for behavior incompatible with substance use are provided), and assertiveness and drug refusal skills. Weissberg, Caplan, & Harwood (1991), in a review of health promotion programs for children and adolescents, note that the most successful programs are those which teach both general assertiveness and other social skills as well as specific drug refusal skills. Effective programs also tend to be very intense; they involve school curriculum and other aspects of the teens' environment, occur over several school years, and often include booster sessions.

The effort to develop prevention programs has been fruitful in creating large, effective drug prevention programs. However, large scale, multi-component programs do not reveal the active ingredients effective in changing behavior, nor do they discover the mediating variables hypothesized to link program content and process with changes in substance use. Flay (1985) emphasizes this point in relation to smoking prevention programs: "It seems that psychosocial approaches to smoking prevention, particularly the social influences approach . . . are effective, but at this time we know very little about why, for whom, or under what conditions" (p 449). MacKinnon and colleagues (MacKinnon, et al., 1989)

note that there is a "consensus among drug abuse prevention researchers . . . that research must now address these questions of how, [sic] and for whom school-based prevention programs work" (p. 127).

Ideally, micro-studies of individual components of drug prevention programs would compare drug use between experimental and control groups. However, because more intense programs are needed to change use, it is unlikely that any one single component will be very effective. One type of study which can be undertaken at this stage, however, tests the individual components of programs to see whether they actually improve the skills, competencies, and mediating variables they are hypothesized to change. This kind of study is particularly important, as effective components can be identified, and ineffective components can be dropped or improved.

The primary goal of this series of studies was to develop a behavioral measure of drug refusal skills which could be used in outcome research. Therefore, the primary objective was to establish the reliability and validity of the role-play drug refusal measure. A second goal was to develop parallel measures of self-efficacy and outcome expectancies that could be used to both (1) confirm the convergent and discriminant validity of the role-play measure and (2) provide measures of the cognitive constructs of self-efficacy and outcome expectancies which could be used in longitudinal studies to test for relative differences in the predictive validity of skills, self-efficacy, and outcome expectancies.

Social Learning Theory Variables & Drug Use Prevention

Drug refusal skills

Early efforts at drug prevention did not focus on skills but on values education, attempting to convince children of the negative effects of cigarette, alcohol, and drug use (Tobler, 1986). However, the approaches were found to be lacking, and other theories were explored to account for the lack of progress. Social learning theory, which explains how social behaviors are learned, is a natural match for conceptualizing the etiology and prevention of adolescent substance use and abuse. Drug refusal skills are

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particularly important, as teens report significant peer pressure and influence to use substances (Ellickson & Hays, 1991). Drug refusal skills are conceptualized as the ability to decline substance use without rejection from peers.

Bandura (1986) argues that skills are learned through enactive mastery (trying the behavior oneself) or through modeling (watching others perform it). Reinforcement and feedback on one's own (or the model's) performance are important determinants of whether the skill will be acquired and whether it will be performed. Unfortunately, drug refusal is only infrequently modeled for children in society, while drug acceptance and the positive social and physical effects of substance use are frequently modeled. Actual opportunities for teens to practice drug refusal skills are laden with peer pressure, so the opportunity to practice successful drug refusal may be infrequent.

Because poor social and assertiveness skills have been linked to drug use and abuse in adolescents (Abrams & Niaura, 1987; Block, Block, & Keyes, 1988), almost all prevention programs teach general assertiveness and drug refusal skills. Drug refusal skills are conceptualized as a specific type of assertiveness. Alberti & Emmons have defined assertiveness more generally, noting that assertive behavior ". . . promotes equality in human relationships, enabling us to act in our own best interests, to stand up for ourselves without undue anxiety, to express feelings honestly and comfortably, [and] to exercise personal rights without denying the rights of others" (1986, p. 26). Assertiveness is contrasted with aggression, in which one asserts one's own rights while violating the rights of others, and with passiveness, in which one does not assert one's own rights.

The theoretical relationships between these three constructs are important. Assertiveness is theoretically negatively related to passiveness; that is, these two constructs are opposite poles of the same continuum, rather than being independent. If the two constructs were independent, then one could theoretically be passive and assertive at the same time. The relationship between assertion and aggression is less clear, as assertion involves two components, one of which is positively related to aggression and one of which is negatively related to aggression. Those two components of assertion are (1) standing up

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for one's own rights while (2) not violating the rights of others. Aggression involves (1) standing up for one's own rights and (2) violating the rights of others. It is clear that one aspect of assertion is similar to aggression, and the second aspect, involving the other person's rights, is the polar opposite. Therefore, the direction and strength of theoretical relationships between assertion and aggression are unclear.

Assertiveness has been further categorized in two ways. Positive assertive behavior is giving compliments, asking for help, and other behavior which involves expressing one's positive opinion or asking for resources controlled by another person. In negative assertive behavior, one asserts one's rights when they have been, or might be, violated by an unreasonable request. Drug refusal skills are a subset of negative assertive skills.

Few reliable and valid measures exist which tap the skills and mediating variables of prevention program components. Behavioral (role-play) measures are important in programs based on social learning theory because the teaching of actual skills, rather than simply increasing drug knowledge, is hypothesized to be one of the primary active components. One can easily self-report having a skill but not actually be able to implement it. For example, Schwartz & Gottman (1976) found that non-assertive subjects knew the appropriate assertive responses but had trouble actually delivering them. Furthermore, nonassertive subjects had more negative expectancies than did assertive subjects. In this case, a behavioral measure of skills in conjunction with measures of self-efficacy and outcome expectancies detected that the problem was actually the negative thoughts, not a lack of skills.

Because social skills are comprised of a collection of subskills (such as eye contact, body orientation, and actual verbal content), people may not be able to accurately report their level of skill. In measuring assertiveness with a role-play, important questions arise as to what should be measured. Traditional conceptions of important behavioral components of assertiveness include: eye contact, body posture that faces the other person, distance from the other person, hand gestures, affect congruent with verbal content, voice tone, inflection, volume, fluency, latency, and response content (Alberti & Emmons, 1989). One study has determined other components of assertive behavior in an inductive manner, by

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systematically observing the behavior of popular versus rejected boys (Weist & Ollendick, 1991). These additional behaviors include body orientation, grammatical speech errors, statements of consequences, context-inappropriate behavior, and energy level.

Many have argued that behavioral measures of skills are superior to self-report measures because people do not accurately estimate their skill level. That inaccurate estimation, however, suggests that behavioral measures tap something different than do self-report measures. Bandura (1986) cites several studies in which both skill level and self-efficacy predict independent variance in performance. For example, among children with similar mathematical skill, children with higher self-efficacy demonstrated enhanced performance because they more readily discarded poor strategies and attempted more solutions (Collins, 1982, cf Bandura, 1986). Because the cognitive and skills measures tap different aspects of performance, it is possible that both cognitive measures (e.g., self-efficacy and outcome expectancies) and skills measures predict important variance in adolescent drug use. Furthermore, because behavioral versus cognitive measures of refusal skills might measure different aspects of refusal performance, their relative superiority in predicting actual behavior is an empirical question. Again, the goal of this series of studies was to measure both skills and related cognitive constructs in order to test the relative predictive performance of each in future longitudinal studies.

Self-efficacy

Bandura (1986) notes that "[t]he most stringent test of a theory provides evidence of dual linkage in the causal process -- changes in relevant external factors are linked to an independently measured indicant of the internal mediator, and it, in turn, is linked to changes in behavior". In the case of assertiveness skills, two variables, self-efficacy expectancies and outcome expectancies, are critical in the implementation and evaluation of a social-learning theory based program because they are hypothesized to mediate the implementation of drug refusal skills. Self-efficacy is the belief in one's own capabilities to execute a skill. It should be noted that a self-report measure of a skill does not measure the actual skill.

Only a behavioral measure can measure actual skill. A self-report measure of skill measures subjects' perceptions of their skill level. In effect, then, self-report of a skill is a measure of self-efficacy.

Self-efficacy is a potent predictor of behavior; people with high self-efficacy may persevere even with unsolvable problems, and self-efficacy has been shown to predict behavior better than past performance (Bandura, 1986). Self-efficacy is not independent of actual skill level. People with better skills are likely to have greater self-efficacy for implementing them. However, Bandura (1986) notes that when one's aim is unclear or when one's level of performance is not discernible, as in complex, socially-judged skills such as assertiveness, self-efficacy judgments may be inaccurate. Ellickson and Hays (1990-1991) found that measures of self-efficacy for alcohol and marijuana refusal taken during 8th grade were predictive of 9th grade use of those drugs after controlling for social influence and perceived peer use prevalence. Self-efficacy, therefore, may be an important mediating variable to measure in addition to drug refusal skills. Skills and cognitive variables may predict different variance.

Bandura (1986) argues that self-efficacy must be measured relative to a specific behavior in a specific situation. Therefore, the most predictive self-efficacy measure would be taken just prior to the implementation of behavior, and it would be measured in reference to the specific behavior about to be attempted. This is, however, rarely done. One of the only published accounts of a verbal self-efficacy measure in conjunction with a role play is that of Jones, McDonald, Fiore, Arrington, & Randall (1990). In a study with third graders, significant skills improvement occurred with treatment, but no significant self-efficacy differences between treatments were found. The lack of expected results in that study may have resulted from the lack of sensitivity of the three point scale used to measure self-efficacy.

<u>Outcome expectancies</u>

Outcome expectancies are the consequences one believes will occur if a behavior is performed. For example, one might expect rejection as a consequence of refusing a cigarette offered by a peer. Bandura (1986) contrasts self-efficacy with outcome expectancies: "Perceived self-efficacy is a judgment

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of one's capability to accomplish a certain level of performance, whereas an outcome expectation is a judgment of the likely consequence such behavior will produce" (p. 391). He makes a point to emphasize that outcome expectancies are not acts, but consequences of acts. Therefore, outcome expectancies, by providing a guide for what might occur if assertive versus aggressive or passive behavior is performed, should impact behavioral performance. For example, if a student believes that the outcome of refusing a cigarette from a friend leads to his/her rejection by the entire peer group, refusal is unlikely.

Bandura (1986) asserts that self-efficacy judgments predict which outcome expectancies are salient. If efficacy judgments are positive, outcome expectancies are hypothesized to be more positive, as well. Bandura's assertion is that self-efficacy influences outcome expectancies, but that outcome expectancies do not significantly influence self-efficacy. However, other authors (Kazdin, 1978; Maddux, 1991) argue that each variable influences the other. In 1989, Bandura revised his argument. When outcomes are highly contingent on performance, such as with drug refusal skills, self-efficacy should predict more of the variance in behavior. However, when outcomes are not very contingent on performance, such as the effects one expects from simply drinking alcohol, outcome expectancies should predict most of the variance in behavior. Regardless of the inconsistent relative predictive capability of the two variables (Greaves, 1993), some of which might be accounted for by the dependence of outcomes on skill performance, it is clear that self-efficacy and outcome expectancies are related and tend to predict behavior. Because outcomes are dependent on performance, self-efficacy and outcome expectancies are likely to be related, and outcome expectancies are likely to predict less variance in performance. However, outcome expectancies may provide some additional information about teens' motivation to use skills.

Self-efficacy and outcome expectancies are related to the implementation of skills (e. g., MacKinnon, et al., 1991; Ollendick & Schmidt, 1987) and to later drug use (Ellickson & Hays, 1991). Rohrbach and colleagues (1987) found that self-efficacy was significantly correlated (.70) with drug refusal skills. The concurrent measurement of these cognitive mediating variables along with behavioral measures of skills is particularly important in order to determine their reciprocal influences. Skills may

be possessed, for instance, but not used if self-efficacy or outcome expectancies are very negative. Additionally, the treatment and prevention implications may be different depending on whether skills are lacking, self-efficacy is low, or outcome expectancies are negative.

Previous behavioral measures of drug refusal skills

The purpose of this group of studies was to create and validate a measure of cigarette, alcohol, and marijuana refusal skills for use with 7th and 8th graders. Given the importance of assertiveness and drug refusal skills in drug prevention programs, a comprehensive, reliable, and valid behavioral and self-report package of measures is needed to be able to standardize measures across studies. The studies herein will focus on cigarette, alcohol, and marijuana refusal situations, as these "gateway" drugs (Kandel, 1978) are most salient to the 7th and 8th grade age group. This study will improve on existing measures of drug refusal skills by (1) using input from seventh and eighth graders in the creation of the role-play scenes (2) using peer raters to establish social validity (3) measuring drug refusal skills for a variety of drugs within one format (4) using same- and opposite-gender confederates (5) measuring a variety of verbal and non-verbal components of assertion using behaviorally defined scales (6) measuring and reporting interrater reliability, and (6) measuring self-efficacy and outcome expectancies immediately prior to the role-play.

Previous studies of measures of drug refusal skills highlight some of these necessary aspects of role-play measures. Because previous studies have demonstrated confederate gender effects on assertion (e.g., Ollendick, Hart, and Francis, 1985), confederates of both genders should be used in order to get an accurate sampling of assertiveness. Additionally, the role-play should include a variety of drugs, since drug refusal skills, self-efficacy, or outcome expectancies may differ across different drugs. For example, subjects may easily refuse crack but have a harder time refusing alcohol. Finally, any measure should include self-efficacy and outcome expectancies, measured immediately before the role-play, in order to disentangle mediating variables and motivation to use drug refusal skills.

Two groups of researchers have made good attempts at creating role-play measures of drug refusal. Rohrbach and her colleagues (Graham, Rohrbach, Hansen, Flay, & Johnson, 1989; Hansen, Graham, Wolkenstein, & Rohrbach, 1991; Rohrbach, et al., 1987) created a measure of alcohol refusal which used two confederate raters and two adult raters in addition to the subject's rating of his or her own performance. The measure looked at several components of assertion: eye-contact, loudness of voice, and posture. Because adults, peers, and the subject rated drug refusal performance, a variety of perspectives were measured. This range of raters lends social validity to the measure. Another strength of the measure was that the ratings were made immediately after each scene, rather than from a tape, so the procedure was relatively inexpensive in time and resources. Validity was demonstrated in that their drug refusal training led subjects to use techniques taught during the training, and subjects' self-efficacy for drug refusal was increased by training.

However, this measure may be improved in several ways. The researchers did not report how the scenes were created. Adults may have created what they thought were realistic scenes, but the drug refusal scenes may not be valid measures of what actually happens when teens are pressured to use alcohol. A second problem of validity is that only same-gender confederates were used. The measure, therefore, does not tap subjects' assertiveness skills in situations where the offerer is of the opposite gender. Next, only a few non-verbal components of assertion were measured (eye contact, loudness, and posture), and the verbal components included only a global measure of "drug refusal skill" and "intention to use". One problem with this global measure of skills, rather than a measure of the components of drug refusal skills, is that most subjects are likely to perform well. The authors did, in fact, report ceiling effects. All of these components were measured on Likert-type scales, but specific behavioral criteria were not associated with the scales, and interrater reliability was not reported, so the extent to which raters agreed on subjects' performance is unclear. Finally, a measure of self-efficacy was taken, but only after the role-play. It is likely, then, that actual performance impacted subjects' ratings of their self-efficacy. No measures of outcome expectancies were taken.

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Hops and colleagues (Hops, Weissman, Biglan, Thompson, Faller, & Severson, 1986) created a 26-item audiotaped cigarette refusal test which used both same- and opposite-gender teenage prompters. Measures included response content, response latency, and length of the response. The measure was created based on an interview study with teenage smokers and nonsmokers, so the situations were likely to be socially valid. The large number of situations is likely helpful in the generalizability (external validity) of the test. The measure demonstrated good internal consistency and interrater reliability . Subjects who had been previously trained in a cigarette refusal program had better quality refusal responses than did untrained subjects, demonstrating good validity. Additionally, subjects were left alone with the audiotaped situations and a recording tape recorder, so demand characteristics were probably less than in studies in which other people (e.g., prompters, confederates) are in the room at the time of the refusal. One shortcoming of the Hops measure includes measuring only cigarette refusal skills. Additionally, the measure is lacking the ability to include non-verbal aspects of refusal. Finally, scenes with a live, rather than a recorded, prompter may be more externally valid.

A more comprehensive, reliable, and valid measure is needed to study outcomes of skills-based drug prevention programs. The goal of the present series of studies was to create a measure which addressed previous measures' weaknesses in social validity, assertion, component behaviors, external validity, and the cognitive variables. Each of these improvements was kept in mind during the creation of the present behavioral drug refusal measure. Additionally, standard issues of reliability and validity were studied.

One kind of reliability important in behavioral measures is inter-rater reliability. Since behavioral tests require the coding of some behavior, it is important that the criteria be carefully operationalized so that the same score is obtained by various raters. Internal consistency is another form of reliability which determines whether various items intended to measure a single construct tend to covary. These forms of reliability are essential. Measures which do not assess the same construct each time they are administered cannot tap a meaningful construct.

There are several types of validity that should be established in measures of assertiveness and drug refusal. These include convergent, discriminant, criterion, and social validity. Convergent validity comprises two concepts: whether the construct is related to constructs to which it should be related and, second, whether the test measures the same construct as measured by a more established criterion (Cohen, Swerdlick, & Smith, 1992). The latter of these is criterion validity. In measuring drug refusal skills, convergent validity may be established by showing a positive correlation between drug refusal and negative assertiveness since drug refusal skills are a kind of assertiveness skill. On the other hand, discriminant validity is demonstrated if the measure can differentiate concepts which are theoretically different. In this context, measures of drug refusal skills should be able to discriminate assertive responses from aggressive responses.

This study also examined the theoretical relationships between behavioral drug refusal skills, self-efficacy, and outcome expectancies. Self-efficacy should be a strong predictor of skill performance. Therefore, it was hypothesized that self-efficacy for assertion and for drug refusal would be significantly positively correlated with both behavioral and self-report measures of assertiveness and drug refusal. Outcome expectancies were also expected to be positively correlated with those measures. However, the magnitude of the correlations will be smaller than for self-efficacy, since proficiency, rather than simply occurrance of the behavior, is important in determining whether outcomes are positive or negative.

A fourth necessary type of validity is social validity, which indicates whether responses scored as acceptable are also acceptable to people who interact with the subject in his or her natural environment (Wolf, 1978). For example, therapy clients who complete assertiveness training frequently report that people in their environment react negatively to their newfound assertiveness. Social validity studies attempt to measure the effects of an intervention on relevant people in the subject's environment. For example, after therapy with children, peers, parents, and teachers frequently interact with a child and, therefore, they may be asked (formally or informally) their perception of the effectiveness of the treatment and any negative side effects they have experiences as a result of the child's treatment. In the context of

drug refusal, it is important to ensure that the responses scored as assertive on the test do not lead to social rejection by peers. Social validity is frequently measured in reference to assertion (Ollendick, Hart, and Francis, 1985; Weist and Ollendick, 1991), but it has rarely been measured in drug refusal studies. Measuring social validity ensures that a measure encompasses behaviors which are effective and which are not punished in the teen's social environment. The following series of focus groups and objective studies of drug refusal skills were conducted with these goals in milnd.

FOCUS GROUPS

The purpose of the series of three focus groups was to create realistic, valid drug refusal scenarios for use in both role play and self-report drug refusal measures. Twelve 7th and 8th graders were recruited through flyers (Appendix 1, page 60) distributed in and around middle schools in a rural university town. All subjects who obtained parental consent and who were able to attend a scheduled focus group on a weekend afternoon were included. Upon receipt of the consent form, parents were contacted to schedule a 1-1/2 hour focus group time. Parents were responsible for transportation to and from the focus groups, which were conducted in a private room at the university student center. Care was taken to obtain honest and complete information by assuring confidentiality. Subjects were informed that confidentiality could only be breached if a subject indicated clear, immediate danger to self or others. Only three subjects who returned consent forms were unable to be scheduled. Subjects who called were sent a consent form (Appendix 2, page 61) and a pre-addressed envelope with postage. In the second and third focus groups, participants completed a demographic questionnaire (Appendix 3, page 62) and a drug use and risk factor questionnaire (Appendix 4, page 65) adapted from Goldstein et al., (1988). Table 1 (page 46) shows the demographic makeup and drug use history for those subjects who completed questionnaires. The eight focus group subjects who completed demographic data were 77% male with a mean age of 13.5. All focus group subjects were white, and 44.4% of the families were office and professional families, while 55.6%

worked in trades or manual labor. A total of nine subjects completed drug use questionnaires. Sixty-seven percent of the subjects had used cigarettes, 89% had used alcohol, and 22% had used marijuana.

Subjects were encouraged to discuss situations in which students might be pressured to use cigarettes, alcohol, or other drugs, but they were asked not to reveal personal information, instead discussing more general knowledge of such situations. The protocol for the focus group is provided in Appendix 5 (page 68). In the first and second focus groups, subjects were asked open-ended questions about where they had seen others using or where they had been pressured to use cigarettes, alcohol, marijuana, and other drugs. Responses in the first and second focus groups were very similar, and members of the research team created role-play scenarios based on these scenes. In the third focus group, investigators presented the situations to the subjects and received feedback. Based on this feedback, twelve role-play situations were created for the measure of drug refusal skills.

STUDY 1 (MTMMM AND INTER-RATER RELIABILITY)

Introduction

The purpose of Study 1 was to determine the inter-rater reliability and explore evidence relevant to the construct validity of the newly created behavioral and self-report measures of drug refusal, self-efficacy, and outcome expectancies.

Method

Subjects

Subjects were 7th and 8th graders recruited through flyers and classified advertisements in a variety of local newspapers. One hundred and twelve teens or parents called regarding the focus groups and this study combined. Seventy-seven consent forms were received for this study. Eighteen subjects were unable to be scheduled due to vacations or other schedule conflicts. A total of 59 subjects participated

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in the study. Procedures for obtaining demographic information and consents were similar to those used in the focus group study. All subjects were included who returned questionnaires and who were able to schedule a time to participate in the study. Forty-three subjects participated in the study at a psychology clinic off campus, while eight subjects did so in a private room at a middle school. One subject completed questionnaires but did not participate in the role-play because of illness. Role-play data for 7 subjects was lost due to taping problems or because of tape quality, leaving a final sample size of 51 subjects.

Procedures for consent were similar to those in the focus groups. Table 1 (page 46) shows the demographic characteristics of subjects in this study. Unlike the focus groups, which were predominantly male, 62 % of subjects in this study were female. Their average age was 13.39, and only 34% were in the 7th grade. Fifteen percent were minorities. Workers in trades and manual labor comprised 53.3% of the households, while households with office or professional adults accounted for 46.7%. Cigarette, alcohol, marijuana, and other drug use in the past 30 days was slightly less in this study than in the focus groups. In the past month, 24.0 % of subjects had used cigarettes, 34.0 % had used alcohol, 16.3 % had used marijuana, and no subjects had used other drugs. Table 1 (page 46) shows that, in this study, students had used an average of 3.01 cigarettes ($\underline{SD}$ = 14.10), 1.87 alcohol beverages ($\underline{SD}$ = 4.47), and they had used marijuana on 1.47 days ($\underline{SD}$ = 3.36) in the past month.

<u>Procedure</u>

Subjects were scheduled for a time during school (in the case of subjects recruited from and tested at the school) or on weekend days between ten AM and seven PM at the Psychological Services Center of the Department Psychology at Virginia Tech. Two different rooms were used in this clinic. Both were furnished similarly, with carpeting, windows, several couches and chairs, and one-way mirrors. Subjects were informed that no one was behind the mirror. A reminder call was made to parents the evening before the experiment. On the day of the experiment, subjects completed a self-report and behavioral test battery. The order of the self-report and behavioral tests was counterbalanced to control for order effects.

<div align="center">Measures</div>

Behavioral Skills

Based on the focus groups, twelve situations that involved cigarettes, alcohol, marijuana, and other drugs (three situations in each of these categories) were generated. The situations involve same-age and older peers in a variety of settings, such as in school, on the school bus, at home, and at the mall. This behavioral measure of drug refusal skills (BSRT; Appendix 6 , page 71) used administration and scoring modeled after the Revised Behavioral Assertiveness Test for Children (BAT-CR; Ollendick, 1981, Appendix 7, page 71). The six negative and six positive assertiveness scenes from the BAT-CR were also included in the role-play. Role-play prompters were undergraduate and graduate members of the research team who received six hours of role-play training and practice in the administration of the role-play measures. One male and one female prompter were present for each scene, and each scene was designated for prompter gender. The number of subjects prompted by the three male assistants was 7, 20, and 24, and the number of scenes prompted by the three female assistants was 5, 19, and 27. The assistant not serving as prompter on any one scene read the scene introduction. For example, one scene introduction read, "It's Friday night and you are at a party with some friends. One of them took some beer from their parent's fridge and offers you some." The designated prompter then delivered the first prompt: "Look what I have! Let's drink some of this beer!". Based on whether the subject responded assertively or non-assertively, the prompter then delivered another pressure line. For example, if the subject responded assertively, the prompter then delivered the line, "Come on, just a little won't hurt". The subject responded a second time, and, once again, the prompter delivered one of two prompts based on the subject's response. Finally, the subject responded a third time.

The measure was scored from videotapes of the scenes. The scoring criteria included: eye contact (subject looked toward the prompter at any point during the response), response latency (number of seconds from the end of the prompt to the first word in the subject's response), request for new behavior

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(subject suggested an alternative behavior), verbal compliance (subject complied with the prompter's request), length of reply (in number of words), and aggression (verbal content reflecting an aggressive response; e.g., "You're trying to get me in trouble. I'm going to trip you at recess"). In addition, categories from Weist & Ollendick (1991), which discriminated popular from unpopular boys in an assertiveness study using the BAT-CR, were added. Those categories included: smiles (corners of mouth upturned), body orientation (whether or not the subject faced the prompter), statement of consequences (a negative consequence of complying with the request was stated), grammatical speech errors (number of errors was recorded), appropriateness of behavior (inappropriate behavior included swearing, inappropriate facial expressions, or other inappropriate behavior), stammers (e.g., number of times the subject says "um"), energy level (scored on a five point scale from 1 = listless to 5 = energetic and effortful), and verbal repertoire (at least two responses each with at least three words of divergent verbal content). All measures were scored for occurrence or non-occurrence (yes = 1, no = 0) unless indicated otherwise. In a previous study, the mean inter-rater reliability for the Weist & Ollendick categories was 90.2% for the dichotomous measures and .95 (Pearson's r) for the continuous categories (Weist & Ollendick, 1991). Although not all of the scoring categories discriminated rejected from accepted boys in a known-groups design of 4th and 5th graders, all categories were included in this study on an exploratory basis. Additionally, several aspects of the scoring were clarified during training in the present study. For example, for the "energy" category, verbal anchors were added for each number on the 5-point scale, rather than only for the endpoints. The integrated scoring sheet is contained in (page 83). All categories were scored for each of the subject's three responses to the scene except energy and verbal repertoire, which were scored for the overall scene.

The role-play measure included six negative assertion scenes, six positive assertion scenes, and twelve drug refusal scenes. Positive assertion scenes (scenes 7-12 on the BAT - CR, page 71) require subjects to give or receive compliments or help (e.g., "It's your birthday and your friend gives you a really neat gift. He knows that it was something you wanted for a long time. He hands it to you and says he

hopes you like it."). Scenes 1 - 6 on the BAT - CR are negative assertion scenes, and they represent scenes in which subjects must stand up for their rights (e.g., "A girl in your class has borrowed your book but now you need it and you want it back.") Because positive assertion requires different behavior and is scored differently, and in order to reduce the number of variables in the present study, positive assertion scenes were not included in these analyses.

Interrater reliability.

Seven videotapes of subjects performing role-plays were coded by two raters in order to establish inter-rater reliability. Coders were the principal investigator and one undergraduate member of the research team trained initially for four hours in tape coding. Training consisted of didactic information on the coding scheme and practice in coding tapes (from a previous study) of teens in assertiveness and drug situations. In order to increase the reliability of coding, raters viewed tapes concurrently during training, compared their ratings, and discussed differences in coding. After initial reliability was established for two tapes, one-half of the scenes on five randomly chosen videotapes were also coded by both raters. All tapes were rated within a one-month period. Initial reliability statistics were similar to those presented here, which represent all seven tapes (14 % of the sample).

For purposes of reliability, the data were not aggregated. Instead, for each prompt within a scene, the two raters' ratings in each category were compared. Inter-rater reliability was computed for dichotomous categories (e.g., eye contact) by percent agreement. Because many of the rating variables have low frequency of responses in some categories, increasing the probability that agreement would occur by chance, Kappa statistics are also included, as Kappa adjusts for chance agreement. Pearson's r was computed for continuous categories. A total of 66 prompts were rated by both raters for the six negative assertion scenes in the measure, and a total of 155 prompts were rated by both raters for the 12 drug refusal situations. Verbal repertoire was rated for each scene rather than for each prompt, so the number of ratings for verbal repertoire was 1/3 of those sample sizes. The number of prompts rated for eye contact

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was also somewhat less, as tape quality prevented rating eye contact in many cases. These results are listed in Table 2, page 47. For **negative assertion** prompts, interrater reliability was adequate for compliance, request for new behavior, consequences, response latency, response length, verbal repertoire, and eye contact, ranging from Kappa of .45 to 1 for dichotomous measures (corresponding percent agreements are 72.3% to 100%) and Pearson's r of .58 to 1 for continuous measures. For **drug refusal** prompts, interrater reliability was also adequate for those same categories, ranging from Kappa of .32 to .87 for dichotomous measures (corresponding percent agreements are 88.4% to 97.3%) and Pearson's r of .74 to .95 for continuous measures. Reliability for energy and stammers, computed with assertion and drug refusal scenes together, was inadequate ($r = .28$, $r = .39$, respectively).

Table 3 (page 48) shows the mean response for each of the 51 subjects on the behavioral test variables. The low mean for aggression (.01) indicates that subjects responded aggressively in only one percent of prompts. Because of the low frequency of aggression, it is unlikely that significant relationships between aggressive responding would be found. Therefore, this category was dropped from further analysis, and the self-report measures of aggressive responding were used instead. In order to reduce the number of variables used and determine a single drug refusal score for each subject, a composite score including both verbal and nonverbal categories was created. Because some scales were dichotomous, while others were measured on a Likert-type scale, each response category was converted to a T-score so that scores were uniform. Next, a total score was created incorporating verbal and non-verbal response categories by averaging the scores. Variables were included which were on the BAT- CR measure of assertion or were included in the Weist and Ollendick (1991) study of assertion and which had adequate interrater reliability in this study. Those categories were: response length, response latency, verbal repertoire, compliance, request for new behavior, statement of consequences, and eye contact. The same procedure was used to create a composite score for the BAT-CR assertion measure. The Cronbach's alpha internal consistency for the drug refusal measure was .69 and for the BAT-CR measure of assertion was .73. A separate role-play measure of passive behavior was created using the categories:

response latency, eye contact (reverse-scored), and stammers, but the Cronbach's alpha of this scale was -.07. Therefore, this behavioral passiveness measure was dropped from further analyses.

Self-efficacy and Outcome Expectancies for Assertion and Drug Refusal.

The primary goal of this series of studies was to create a reliable and valid measure of drug refusal skills for use in outcome studies. A variety of self- and parent report measures were included against which to test the reliability and validity of the newly created behavioral measure. Measurement of each construct throught multiple methods was important for a test of convergent and discriminant validity (Cohen, Swerdlick, & Smith, 1992)

Questionnaire

A self-report measure of self-efficacy used the same situations used in the role-play. The introductions to the role play situations served as the scenarios for the question. Then, the actual question was worded, "How sure are you that you could say no?". Subjects circled a number on a scale of 1 ("no way") to 5 ("definitely"). A total was computed by summing the responses, so higher scores indicated greater confidence in one's drug refusal skills. This self-report measure of self-efficacy served as a self-report measure of drug refusal skills. Questions were added which also measured outcome expectancies for drug refusal. Together, this measure is called the Self-report Self-Efficacy and Outcome for Refusal Test (SSORT; see Appendix 10, page 105). The outcome expectancy stem read, "If you did say no, how well do you think the situation would turn out overall". Each item was rated on a scale of 1 ("awful") to 5 ("great"). Each outcome expectancy question was presented immediately after the self-efficacy question. Again, the items were summed to create a total scale on which higher scores indicated more positive outcome expectancies.

Role-play

In conjunction with the assertiveness and behavioral role-plays, immediate measures of self-efficacy and outcome expectancies were taken (RSORT, Appendix 10, page 105). One prompter explained the concept of self-efficacy and outcome expectancies to the student before the actual role-plays began. In a practice trial, the role-play director read a sample situation in which the level of self-efficacy and outcome expectancy was stated (e.g., you're pretty sure you can say no). Subjects were asked for self-efficacy and outcome expectancy ratings to confirm his or her understanding of the ratings. For each of the twelve assertion and twelve drug refusal role-play scenes the subject was asked to make self-efficacy and outcome-expectancy ratings. The role-play measures of self-efficacy and outcome expectancies used the same stems and rating scales used in the self-report measure. Questions were posted in front of the subject. Further instruction was given when necessary. Items were totaled, breaking down scores into the following: negative assertion self-efficacy, negative assertion outcome expectancies, drug refusal self-efficacy, and drug refusal outcome expectancies. Similar to the other scores, a sum of the items was created, with higher scores indicating greater self-efficacy and more positive outcome expectancies. Table 5 (page 50) shows that Cronbach's alpha internal consistency ranged from .47 to .94 for both the self-report and role-play measures of drug refusal and assertion self-efficacy and outcome expectancies. The only measure with internal consistency below .60 was the role-play measure of self-efficacy for negative assertion, which had an internal consistency of .47. Results using this measure must, therefore, be interpreted with caution.

Parent report measure

The Child Behavior Checklist is a widely used, normed measure with excellent reliability and validity (Achenbach, 1991). The CBCL parent form was obtained from parents who chose to wait in the waiting room (n = 18). All subjects completed CBCL youth report forms as a further measure of withdrawn and aggressive behavior. For each of form, T-scores standardized on normal populations were computed using the computerized scoring program (Arnold & Jacobowitz, 1993). The measure was used

as an alternate method (parent report, as opposed to behavioral or self-report) of withdrawn and aggressive behavior, against which behavioral measures of assertion and drug refusal could be compared. The measures of demographics and drug use used in the focus group study were also used in this study.

Assertiveness.

Standard self-report and behavioral measures of assertiveness were included to establish the criterion validity of the behavioral drug refusal measure. Two self-report measures of assertiveness were included because one (the Children's Action Tendency Scale; CATS, Deluty, 1977, Appendix 11, page 113) discriminates assertion from aggression and the other (the Children's Assertiveness Inventory; CAI, Ollendick, 1984) discriminates assertion from passiveness. The order of the two measures within the self-report measures was counterbalanced. However, the CAI measure did not have adequate internal consistency reliability and was dropped from analysis. The CATS used 13 conflict situations to measure negative assertion. For each situation, three pairs of responses are presented, and subjects must choose one response from each set of pairs: assertive-aggressive, assertive-passive, and passive-aggressive, thus minimizing social desirability (Deluty, 1984). However, because of this format, the measure is confusing. For that reason, subjects are likely to skip questions, and, in this study, sample sizes range from 35 to 46. Previous studies demonstrate adequate internal consistency (.70, .81, and .92 for negative assertion, submission, and aggression, respectively; Deluty, 1984). The CATS demonstrated good validity in that CATS scores were related to teacher and peer ratings of interpersonal behavior (Deluty, 1979). Test-retest reliability was moderate, at .44 - .70 in a variety of studies (Scanlon & Ollendick, 1980). The CATS was scored by summing the total number of assertive, aggressive and passive responses separately across the 39 choice pairs (13 questions times three pairs). The internal consistency in this study was .54 for the passive scale, .68 for the assertive scale, and .86 for the aggressive scale (n = 58). Since the CATS does not discriminate passive from assertive behavior and because the internal consistency of the passive scale is low, results using the CATS passive scale should be interpreted with caution.

Results

Three measures were being validated in this study. Those included the behavioral measure of drug refusal skills (BSRT) and role-play and self-report measures of self-efficacy and outcome expectancies for drug refusal (RSORT and SSORT), all created from the situations gleaned from the focus groups. All data were aggregated to the level of subject, so that the sample size was 51, unless otherwise indicated.

Prompter gender and subject gender effects on the role-play.

In order to determine whether prompter gender and subject gender affected performance on the role-plays, 2 (subject gender) x 2 (prompter gender) analyses of variance (ANOVAs) were performed separately for each role-play variable. Prompter gender was a within-subjects factor. There were no significant interactions between subject and prompter gender. Only one ANOVA demonstrated a main effect of subject gender. Female subjects had fewer grammatical errors than did male subjects ($F(1,49) = 12.64$, $p < .01$). There were also main effects of prompter gender. Subjects demonstrated more energy in scenes in which the prompter was female ($M = 3.19$, $SD = .82$) than in those which used a male prompter ($M = 3.09$, $SD = .81$; $F(1,50) = 7.90$, $p < .01$). Subjects made fewer grammatical errors with female prompters; $F(1,49) = 8.43$, $p < .01$. Subjects had longer responses in scenes in which the prompter was female ($M = 5.90$, $SD = 2.78$) than in those which used a male prompter ($M = 5.29$, $SD = 2.29$; $F(1,50) = 17.78$, $p < .001$). Subjects demonstrated a greater verbal repertoire in scenes in which the prompter was female ($M = .76$, $SD = .23$) than in those which used a male prompter ($M = .69$, $SD = .27$; $F(1,50) = 14.49$, $p < .001$). Because all subjects had an equal number of scenes with male and female prompters and because the only subject gender effect was for grammatical errors, a category not included in the final drug refusal score, analyses were not performed by gender.

Convergent validity.

Since the overall purpose was to create a new behavioral measure of drug refusal skills, and since no ultimate criterion (e.g., actual drug use) was available, the new measure was compared to established measures of assertion to establish convergent and discriminant validity. Table 4 presents the specific

hypotheses related to convergent validity. Behavioral drug refusal was expected to be strongly positively correlated with self-report drug refusal (see Hypothesis 1, Table 4, page 49). Hypothesis 2 was that assertion and drug refusal are similar constructs and should, therefore, be significantly positively correlated. This relationship should hold for all correlations involving these two constructs whether the construct was measured behaviorally or through self-report. A multi-trait, multi-method matrix (MTMMM; Campbell & Fiske, 1959, cf, Cohen, Swerdlick, and Smith, 1992) was constructed to accomplish this purpose. Drug refusal was expected to be positively related to assertion but negatively related to passiveness (Hypothesis 3). Finally, drug refusal was expected to be less strongly related to aggression in order to demonstrate discriminant validity (Hypothesis 4). Therefore, these constructs, as measured by well-validated behavioral and self-report measures, were included in the MTMMM. Traits measured included: drug refusal skills, negative assertion, aggression, and passivity. Methods included: the CATS measure of assertion, the parent and youth CBCL measures of withdrawal and aggression, and the behavioral measures of assertion and drug refusal. The MTMMM procedure included four separate kinds of comparisons. These were: the Cronbach's alpha reliability coefficient for each measure, validity coefficients for the same trait using different methods, correlations between different traits using the same methods, and correlations for different traits assessed by different methods. Coefficients for each of these four tests should be of decreasing magnitude in order to demonstrate good reliability and construct validity (Cohen, et al., 1992). It should be noted that sample sizes vary throughout the matrix for several reasons. First, the CBCL parent measure was obtained only from parents who waited in the waiting room during the role-plays (n = 20). Second, because the CATS assertiveness scale was confusing, many subjects did not have complete data.

Hypothesis 1 was that the behavioral and self-report measures would be strongly positively correlated, indicating convergent validity. However, cell 23 in the MTMMM (see Table 6, page 51) shows no correlation between the behavioral measure of drug refusal and the self-report measure of drug refusal ($r = .07$, $n = 47$). Similarly, the two methods of measuring assertion (behavioral and self-report)

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should be strongly correlated, but they were not (r = .19, cell 16, n = 35). Since drug refusal was hypothesized to be a component of negative assertion, measures of assertion and drug refusal should be positively correlated regardless of method (Hypothesis 2). Cell 28 of Table 5 shows a correlation of .51 (p < .005) between the behavioral drug refusal and behavioral assertion measures, and self-report drug refusal and self-report assertion were correlated .44 (cell 1, p < .005). However, the self-report versions of these measures did not show significant relationships with the behavioral versions (cells 17 and 22).

Passiveness.
         Another test of the construct validity of the role-play drug refusal measure is its ability to measure both drug refusal behavior and passive behavior. One cannot be simultaneously assertive and passive. Therefore, Hypothesis 3 stated that assertiveness and passiveness would be negatively correlated. In order to test this hypothesis, the behavioral and self-report **drug refusal** measures were compared to each measure of **passive** behavior, including: the CATS passive scale, the CBCL youth self-report measure of passive behavior, and the parent report measure of passive behavior. The self-report drug refusal measure was moderately and negatively correlated with the behavioral measure of passiveness, as predicted (r = -.30, cell 30, n = 49, p < .05). The **self-report** self-efficacy for drug refusal measure created in this study was not significantly correlated with the CBCL youth self-report of withdrawn behavior (cell 3, r = -.13, n = 46), with the CBCL parent report of withdrawn behavior (r = .03, cell 47, n = 19), or with the CATS passive scale (r = -.26, cell 5, n = 45).

<div align="center">Discriminant validity.</div>
Aggression.
         Another set of comparisons exploring discriminant validity explored the relationship between **drug refusal skills** and self- and parent-report measures of **aggression**. Correlations between drug refusal skills and aggression could be negative or positive, but they should be smaller than correlations between drug refusal skills and assertion in order to demonstrate discriminant validity (Hypothesis 4). A first set of comparisons explored the relationships of **behavioral** drug refusal to aggression, and a second set explored **self-report** drug refusal as compared to aggression. Cell 26 shows a non-significant negative

correlation between behavioral drug refusal and the CBCL youth report of aggressive behavior, and cell 63 shows no relationship with the CBCL parent report of aggressive behavior. Cell 27 shows a correlation of -.20 between the behavioral drug refusal measure and the CATS self-report aggression scale. Second, the **self-report** measure of drug refusal was significantly, although not strongly, negatively related to the CBCL youth self-report of aggression (cell 8, $\underline{n} = 45$, $\underline{r} = -.29$, p < .05) and to the CATS aggression scale ($\underline{r} = -.32$, cell 12, $\underline{n} = 46$, $\underline{p} < .05$). Parent reports of aggression (cell 57, $\underline{n} = 19$, $\underline{r} = -.09$), however, did not appear to be related to drug refusal. Since the behavioral aggression score was dropped due to infrequent occurrance, the correlation between self-report refusal and the CATS aggression scale ($\underline{r} = -.32$) was compared to the correlation between self-report refusal and the CATS assertion scale ($\underline{r} = .44$) in order to test discriminant validity. Using a test for differences among dependent correlations (Bruning & Kintz, 1987), these correlations were, in fact, significantly different, $\underline{t}$ (32)=2.54, $\underline{p} < .01$.

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Self-Efficacy and Outcome Expectancies.
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Self-efficacy and outcome expectancy measures were also subjected to an MTMMM procedure. Two questions were examined. First, did the self-report and role-play measures of self-efficacy and outcome expectancies have good convergent and discriminant validity? Second, were the measures of self-efficacy and outcome expectancies good predictors of actual role-play performance? The first question was answered with a separate MTMMM (see Table 7, page 52). The two methods included (1) the self-report questionnaire and (2) the ratings given just before each role-plays. The MTMMM explored the theoretical relationships between self-efficacy and outcome expectancies and their relation to assertiveness and drug refusal skills. In this correlation matrix, **drug refusal** and **assertiveness** skills were considered "similar traits" because they were expected to be correlated. However, **self-efficacy** and **outcome expectancies** were "different traits" because they are theoretically uncorrelated.

First, it was hypothesized that the **role-play** measures of drug refusal and assertion self-efficacy would be strongly positively related to the **self-report** measures of drug refusal and assertion self-efficacy.

This positive relationship among self-efficacy ratings would demonstrate convergent validity. Similarly, the behavioral measures of drug refusal and assertion **outcome expectancies** should be strongly and positively related to the self-report measures of drug refusal and assertion **outcome expectancies.** Convergent validity was supported. The average correlation in cells measuring the **same** trait (e.g., self-efficacy) by different methods was .62 (range = .44 - .83), and the average correlation in cells measuring a **similar** trait (e.g., self-efficacy for assertiveness correlated with self-efficacy for drug refusal) by the same method was .49 (range = .28 to .63).

Discriminant validity compares different traits: self-efficacy versus outcome expectancies. It was hypothesized that correlations involving different traits would be lower than the correlations between the same and similar traits. Measuring **different** traits by the **same** method yielded an average correlation of .20 (range = .05 to .34), and measuring **different** traits by **different** methods yielded an average correlation of .24 (range = .16 to .31). The correlations presented above represent averages of correlations within a category (e.g., same trait, different method). In order to test for statistical differences between correlations, several important comparisons were made for self-efficacy and outcome expectancies for drug refusal. A comparison was made between the correlation for self-efficacy for refusal as measured by different methods (r = .66) versus the correlation between self-efficacy and outcome expectancies using the same method (self-report, r = .29). It was hypothesized that the same trait as measured by different methods would show significantly stronger correlation that would different traits measured by the same method. The hypothesis was supported; $\underline{t}(45) = 2.73$, $\underline{p} < .005$. A similar comparison for drug refusal outcome expectancies was also significant; $\underline{t}(45) = 5.37$, $\underline{p} < .0005$, providing further support for the hypothesis. These comparisons indicate that the construct variance for both self-efficacy and outcome expectancies was stronger than the method variance. The overall pattern of the self-efficacy and outcome expectancy correlation matrix showed very little method variance and good convergent and discriminant validity of the behavioral and self-report self-efficacy and outcome expectancy measures.

In addition to looking at how measures of self-efficacy and outcome expectancies were interrelated, this study explored self-efficacy and outcome expectancies as they were related to behavioral and self-report drug refusal skills. Hypothesis 5 was that measures of self-efficacy were expected to be positively correlated with behavioral refusal skills. A matrix including the self-efficacy and outcome expectancy measures along with the variables in the drug refusal MTMMM yielded few significant correlations, indicating that the self-efficacy and outcome expectancy measures were not strongly related to measures of drug refusal performance on the behavioral measure (see Table 8, page 53). However, the role-play self-efficacy for drug refusal measure was correlated .46 with the CATS self-report assertiveness scale ($\underline{n}$ = 36; $\underline{p}$ < .005), and the self-report self-efficacy measure was also significantly correlated with the CATS assertiveness scale ($\underline{r}$ = .44; n = 35, p < .005), indicating some convergent validity. It was also hypothesized that the self-efficacy measure would be negatively related to passive behavior. In fact, the role-play self-efficacy measure for assertion was significantly negatively correlated with the CBCL youth-report of withdrawn behavior ($\underline{r}$ = -.31; $\underline{n}$= 47, $\underline{p}$ < .05) and with the CATS self-report of passiveness ($\underline{r}$ = -.32; $\underline{n}$ = 46; p < .05). In addition to exploring the relationship of self-efficacy to drug refusal, passive, and assertive behavior, similar comparisons were made with outcome expectancies (see Table 8, page 53). It was predicted that more positive outcome expectancies would be related to better drug refusal performance. However, there were no significant correlations between outcome expectancies and self-report or behavioral assertion or drug refusal measures.

Discussion.

The primary aim of the current study was to create a reliable and valid behavioral measure of drug refusal skills. A further goal was for the drug refusal measure to include cognitive variables, scenarios involving various drugs. Additionally, a goal was to include verbal and non-verbal behaviors from a standard behavioral assertion measure and other categories which had been inductively determined from previous research (Weist & Ollendick, 1991). In order to create and validate such a measure, the

refusal, self-efficacy, and outcome expectancy measures were compared to established measures of assertion, passiveness, and aggression. The newly created measures were expected to show correlations with these established measures which would provided evidence of convergent and discriminant validity.

This study showed that assertion and drug refusal are, in fact, similar traits. However, strong method variance indicated that drug refusal as measured by self-report methods is different from drug refusal as measured by behavioral methods. Additionally, contrary to expectations, the self-report and behavioral drug refusal measures were unrelated to measures of passive behavior. The self-report and behavioral drug refusal measures did, however, demonstrate the ability to discriminate aggressive from drug refusal behavior. The cognitive measures of self-efficacy and outcome expectancies for drug refusal showed good internal consistency, good convergent validity, and little method variance. However, neither self-efficacy nor outcome expectancies predicted role-play drug refusal performance.

A first step in identifying behaviors which are valid components of assertion involves establishing adequate interrater reliability. All of the categories previously used in the standard assertiveness measure (the BAT-CR) had adequate interrater reliability. Additionally, two of the inductively-determined categories (statement of consequences and verbal repertoire) showed adequate interrater reliability and were used in the behavioral measure. However, energy, smiles, and grammatical speech errors were excluded because adequate interrater reliability could not be obtained.

A second critical characteristic of a coding category is the ability to show adequate variance within the category. The BAT-CR category of aggression was dropped from analysis because very few incidences of aggressive behavior were exhibited in this study. Additionally, body orientation facing the offerer and inappropriate behavior, deductively-determined categories from the Weist and Ollendick (1991) study, were excluded because of the low frequency of behavior in this sample. However, the aggression category may be useful in populations which show more aggressive behavior (e.g., students identified as at-risk for delinquency or substance abuse).

There has been a great deal of discussion of which categories of behavior are important components of the construct "assertiveness" (Deluty, 1981). Because of this confusion over which components are important aspects of drug refusal, longitudinal studies are needed which relate behaviorally-measured components of assertion to naturalistic drug refusal behavior and to long-term drug use outcomes.

Subjects' responses to the role-play differed significantly based on the prompter's gender. With female prompters, subjects made fewer grammatical errors, had longer response latencies, demonstrated more energy, and demonstrated a greater verbal repertoire. In this study, male and female prompters were represented equally. However, data regarding whether males or females are more likely to offer drugs is unavailable. It may be that one gender is more likely to offer drugs. In that case, the behavioral refusal measure, which collapses responses across prompters of different genders, may not be as valid an indicator of the relevant skills as one based on single-gender prompters would be. Only longitudinal studies measuring skills both ways and relating them to actual drug use in the future can answer this question.

Tests of convergent validity explored whether assertion and drug refusal were positively related and whether both were negatively related to passivity. Regarding this first hypothesis, assertion and drug refusal were, in fact, positively correlated, but the correlational pattern suggested a great deal of method variance. That is, behavioral measures were highly correlated with other behavioral measures and self-report measures were highly correlated with other self-report measures. This finding does not necessarily indicate that the behavioral measure is not valid. Self-report measures are necessary for constructs which are not measurable by any other method (e.g., expectancies). Self-report of skills can measure variance completely independent of skills components, as people may not accurately estimate their ability to perform skills, especially when the skills are complex social skills such as assertiveness. In addition to unintentional misreporting, self-report measures are subject to intentional misreporting. Behavioral measures have the advantage of measuring actual skills rather than beliefs about the efficacy of skills.

However, in order to resolve the issue of whether the behavioral or the self-report measure is more predictive of future drug use, future studies must test how well the behavioral versus self-report measure, along with the self-efficacy and outcome expectancy measures, predicts actual skills as used in the natural environment and predicts later drug use.

Regarding whether assertion and drug refusal were negatively related to passiveness, the drug refusal measures were generally not significantly negatively correlated with measures of passive behavior. This ability to show significant negative correlations between assertive and passive behavior has been a problem in assertiveness research (Graham, Rohrbach, Hansen, Flay, & Johnson, 1989; Hansen, Graham, Wolkenstein, & Rohrbach, 1991; Rohrbach, et al., 1987) . However, part of this difficulty may be attributed to measures of passiveness which do not measure a single construct or are otherwise inadequate. A component of passiveness which might be negatively correlated with assertion is feeling that others have infringed upon one's rights. One aspect of passive behavior which is not typically measured but which may be a fruitful topic for future studies is the component of passive behavior which involves feelings of being taken advantage of. The addition of questions which not only measure the outcome of the situation, but also whether or not someone would have negative emotion as a result of not having stood up for one's rights, might add an important dimension to the measurement of passive behavior. This component of passiveness is not measured in the current measures, so future studies might explore this hypothesis.

However, one measure did show the expected negative relationship between passiveness and assertion. The self-report self-efficacy measure for assertion created in this series of studies showed negative correlations with passive behavior as measured by the CATS self-report of passiveness and the CBCL youth report of withdrawn behavior. These are, however, all self-report measures, again suggesting strong method variance. Ideally, measures of assertion and drug refusal would show negative correlations with passiveness regardless of method. Because only the self-report measures, but not the

behavioral measures, show the expected relationship between assertion and passiveness, it is unclear exactly what the consistent self-reports of passiveness mean.

In addition to tests of convergent validity, which should show that the measures are related to theoretically related constructs, the drug refusal measure should be able to discriminate drug refusal behavior from aggressive behavior. Negative or small non-significant correlations were expected between drug refusal and aggression, as aggression was conceptualized as an alternative to assertive behavior. Relationships between measures of aggression and assertion in this study were inconsistent, but the correlations were, as expected, smaller than the correlations between theoretically related constructs.

One difficulty with measuring aggression behaviorally is that demand characteristics within the situation probably inhibited the expression of aggression. Only a few subjects in a small percentage of role-play scenarios expressed aggression. However, this should not be interpreted to say that aggression would never be expressed in a role-play situation. For example, with a population identified as at-risk for delinquency or substance abuse, more aggression might be expressed.

In addition to creating a behavioral drug refusal measure, this series of studies created self-efficacy and outcome expectancy measures in self-report and role-play formats because these cognitive variables may account for additional variance in long-term drug use outcomes. The self-report and role-play self-efficacy and outcome expectancy measures showed good internal consistency and good convergent and discriminant validity with very little method variance. It was hypothesized that self-efficacy would be a good predictor of behavioral assertion and drug refusal skills. This hypothesis was not supported; subjects were not able to accurately report their level of skills. Bandura (1986) asserted that, for complex social skills, self-efficacy may not be a good predictor of skills. Although the self-efficacy measure did not predict behavioral performance, the self-efficacy measures were significantly correlated with other self-report measures of assertion.

The measure of how well a teen expected a situation to turn out if the drug was refused (outcome expectancies) showed good convergent and discriminant validity, but it did not predict subjects' use of

assertion or drug refusal skills. This is not surprising, since one's **ability** to refuse a drug and the outcomes expected are theoretically distinct. In this lab situation, however, demand characteristics may have induced subjects to refuse drugs frequently and to use their drug refusal skills to the full extent. Nevertheless, in a more naturalistic assertiveness situation, demand characteristics probably induce subjects to refuse **less** frequently, as the drug offerer (and other peer pressure) is likely to be highly salient. In that situation, teens may not want to refuse the substances. In the experimental situation, because of these demand characteristics, the role-play is likely to measure only whether subjects have the skills to refuse the substances and not whether they actually **would** do so. However, drug refusal in a naturalistic setting is affected by whether subjects **can** and **want to** refuse drugs. Because outcome expectancies provide a measure of subjects' motivation to refuse drugs, outcome expectancies are more likely to predict drug refusal in a naturalistic setting than in a laboratory situation. It is conceivable that subjects may have the skills to refuse a drug but not want to do so in a naturalistic environment. In those cases, outcome expectancies may be more predictive of outcomes than are drug refusal skills. Because of the limitations of the experimental situation, the measure of outcome expectancies should be tested in a more naturalistic environment, such as in the context of a longitudinal study relating behavioral drug refusal skills to future drug use.

STUDY 2 (SOCIAL VALIDITY STUDY)
Introduction

Exploring traditional kinds of reliability and validity for the newly created measure of drug refusal skills was accomplished in the previous study. However, the measure would not be useful if good refusal behavior led to peer rejection. The purpose of this study was to establish that scores indicating better drug refusal skills identified effective components of assertion which were also acceptable to peers. This was accomplished by having same-age peers rate the videotapes of the drug refusal interactions.

Hypotheses are listed in Table 9, page 54. A first set of hypotheses are made in order to test the convergent validity between the role-play test and peer ratings. First, peers were expected to rate assertive

role-play performance as effective. Second, peer ratings of low self-esteem were expected to be negatively related to behavioral drug refusal. Third, behavioral aggression was expected to be positively related to peer ratings of perceived offerer anger. The role-play drug refusal measure was expected to show social validity by demonstrating positive correlations with peer ratings of liking the target and target popularity. Finally, convergent validity among the peer ratings was expected; peer ratings of popularity, liking, and effectiveness were expected to be positively related to each other and were expected to be negatively related to perceived target low self-esteem and to offerer anger.

Method

Subjects

Subjects in this study were 104 7th and 8th grade students in six classrooms at William Byrd Middle School in Roanoke, Virginia. Subjects were given a consent form (Appendix 12, page 120) and a demographic questionnaire to take home. Subjects were 54% female with a mean age of 12.84, and they were 95% Caucasian. Office and professional families made up 60.5% of the sample, while labor or trade families were 39.5%. Drug use history was very similar to that of subjects in Study 1 (see Table 1, page 46).

Procedure

Targets.

Subjects in this study rated tapes of the role-played drug refusal scenes created in Study 1. Targets on the tapes were 18 subjects who participated in Study 1 and who agreed to have their tapes rated by teens in Roanoke. The target subjects signed a consent form at the time of their participation in Study 1 (Appendix 13, page 123). Because of delays in the human subjects application procedure, only about the last third of the subjects were asked to allow their tapes to be used as targets in the Study 2. Subjects and parents signed the consent form at the time of their consent for Study 1, and subjects were told that they could withdraw their consent after performing the role-play. Only one subject refused to allow her tape to be used as a target, and no subject withdrew consent after agreeing to allow his or her tape to be used. A smaller percentage of target (11.1%) subjects as opposed to non-target subjects from Study 1

(42.4%) had ever smoked cigarettes. Otherwise, there were no significant differences between targets and non-targets in age, gender, race, SES, alcohol use, marijuana use, or any behavioral or self-report drug refusal, assertion, self-efficacy, or outcome expectancy measure. Therefore, although the target subjects represent under half of the pool of subjects from Study 1, there is no reason to believe that the targets differed from non-targets due to refusal to participate.

In order to maximize the variety of drug refusal scenes and the variety of targets rated, three separate tapes were made so that each of three seventh grade classes would rate different scenes and each of three eighth-grade classes would rate different scenes, but 7th vs. 8th graders would rate the same scenes. Therefore, each target was rated in multiple scenes. Each video tape consisted of 18 targets' role-played scenes. Each of the twelve drug refusal scenes from Study 1 was represented at least once on each tape.

Measures

Subjects rated the targets in each scene and responses were recorded on an optical scanning sheet (Appendix 14, page 125). Variables rated included response effectiveness, target self-esteem, likeability, popularity, and how the response would be perceived by the person to whom it was directed. Effectiveness was measured using the question, "Realistically, would what the teen said be effective in helping him/her avoid use of the drug?" and was rated on a five-point scale ranging from 1 ("definitely wouldn't work") to 5 ("definitely would work"). The major determinant of passive behavior is a response which makes someone feel that their rights have been trampled and that they didn't "stand up" for their rights. Therefore, an indirect measure of passiveness asked how the target would feel about him or herself after the response and used the question, "Would the teen feel good or bad about him/herself after what she s/he said?" with responses ranging from 1 "feels bad about self" to 5 "feels good about self". The question, "How would the person offering the cigarettes, alcohol, or drug feel about what the teen said?" (1 "extremely upset or angry" to 5 "would really respect the person") served as an indirect measure of aggression when reverse-scored.

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The perceived effectiveness measure does not measure assertiveness directly, as the question asks for the outcome of the response rather than aspects of the target's behavior. However, presumably, responses rated by peers as more effective are more assertive responses. Similarly, the measure of how the offerer would feel after the target's response does not measure aggression directly. However, a more aggressive response is probably more likely to make the offerer feel angrier. Finally, the measure of how satisfied the target would feel after the response does not measure passiveness directly. However, it is hypothesized that a target would feel worse about him or herself after a more passive response. Therefore, these measures are considered indirect measures of assertion, aggression, and passiveness. When compared to the behavioral and self-report measures, these indirect measures provide a further test of convergent validity of the measures created in this study.

Measures of popularity and liking were also included to measure social validity. That is, subjects who performed well on the drug refusal role-play were expected to be popular and liked rather than rejected. Popularity was measured by the question, "How popular do you think the teen is?," and responses ranged from 1 "very unpopular" to 5 "very popular". Liking was measured by the question, "Did the manner in which the teen responded make you like or dislike him/her?", with responses rated on a scale of 1 "extremely disliked" to 5 "extremely liked". The 104 subjects watched a videotape with a variety of scenes. After each scene (not each prompt) the subject rated the target on each of the dimensions discussed above. Data were aggregated across subjects so that each of the 18 targets received one composite rating on each scale.

Results

Behavioral drug refusal measures.

The purpose of this study was to explore the social validity of the behavioral drug refusal test by identifying whether subjects who scored more assertively were perceived as effective and likable by their peers. Hypotheses are listed in Table 9 (page 54). First, it was important to determine whether ratings of assertive, aggressive, and passive behavior by peers vs. adults showed convergent validity. In addition, convergent and discriminant validity could be further established by looking at how the five different peer

ratings (effectiveness, perceived offerer anger, perceived target self-esteem, popularity, and liking) were related to each other.

An important hypothesis was that subjects who scored as assertive on the behavioral drug refusal test were also considered effective by their peers. Three kinds of relationships were explored. First, Hypothesis 1 (see Table 9, page 54) was that peer ratings of greater effectiveness would be associated with better drug refusal skills. Table 5 shows that peer ratings of effectiveness were, in fact, significantly positively correlated with behavioral drug refusal ($r = .62$, $n = 18$, $p < .005$, cell 74) and behavioral assertion skills as measured in Study 1 ($r = .51$, $n = 18$, $p < .05$, cell 73). Second, as expected (Hypothesis 2), peer ratings of perceived target low self-esteem were positively associated with behavioral passiveness ($r = .54$, $n = 18$, $p < .05$, cell = 87). However, contrary to Hypothesis 3, peer ratings of perceived offerer anger were non-significantly and inversely related to the behavioral measure of aggression ($r = -.20$, $n = 18$, cell = 101).

A remaining question was whether responses scored as assertive on the behavioral role-play test were responses acceptable to peers. Hypothesis 4 was that more positive peer ratings of popularity and liking were expected to be associated with more assertive scores on the behavioral drug refusal test. The behavioral measure of drug refusal skill was positively, but not significantly, related to peer ratings of liking the target ($r = .28$, $p = .13$, $n = 18$) and to peer ratings of perceived popularity ($r = .27$, $p = .14$, $n = 18$).

Hypothesis 5 explored the convergent and discriminant validity of the peer ratings by looking at how the five different peer ratings (assertion, aggression, passive behavior, popularity, and liking) were related to each other. As expected, higher peer ratings of effectiveness were significantly positively related to the peer measure of popularity ($r = .58$, $p < .01$) and the extent to which the subject liked the target ($r = .65$, $p < .01$), indicating that assertive teens were better liked. Perceived target low self-esteem and perceived target anger were expected to be negatively related to liking and popularity. Higher peer ratings of assertion were significantly negatively related to peer ratings of perceived target low self-esteem

($r = -.49$, $p < .05$). Unexpectedly, higher peer ratings of assertion were also associated with higher peer ratings of aggression ($r = .69$, $p < .01$). Within the teens' ratings it was possible for subjects to be perceived as effective, even though this response was judged to produce angrier reactions in the receiver of the message.

<u>Self-report drug refusal measures.</u>
A similar set of hypotheses was explored to test the social validity of the self-report measure of drug refusal. More positive peer ratings in terms of popularity and liking were expected to be associated with more assertive scores on the self-report drug refusal test. Contrary to predictions, neither peer ratings of liking the target or of the target's popularity were significantly related to self-report drug refusal. The second hypothesis explored discriminant validity by looking at peer ratings of passiveness. The self-report drug refusal measure was not significantly related to the peer ratings of passiveness ($r = -.16$, cell 80). The third hypothesis was that the self-report drug refusal measure was negatively related to peer-rated aggression. The correlation of .18 (cell 93, $n = 18$) indicates that this is not likely to be true.

Discussion

The purpose of the current study was to ensure that good refusal scores on the behavioral measure were not associated with peer rejection. The hypotheses, therefore, were that subjects who scored as effective on the role-play would also be rated as effective and accepted by their peers. Two types of social validity were explored. A first type of social validity might be termed convergent social validity. Behavioral and self-report measures of drug refusal, assertiveness, passiveness, and aggression were compared to peer ratings of similar constructs. Relationships in the expected directions would indicate convergent validity; that is, adult raters and teenagers have similar conceptions of assertiveness, passiveness, and aggression. It was hypothesized that the self-report and behavioral refusal measures would demonstrate convergent social validity. A second type of social validity indicated whether subjects could be simultaneously assertive and be accepted by their peers. It was hypothesized that the behavioral and self-report measures of drug refusal would be positively correlated with measures of popularity and liking.

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These social validity hypotheses were supported for the behavioral drug refusal measure. Behavioral assertion and peers' ratings of effectiveness were positively correlated, lending convergent and social validity to the role-play drug refusal measure. Also as expected, peer-rated effectiveness and perceived target low self-esteem were negatively related. In addition to demonstrating convergent validity, this study showed that passive targets were less likable and more assertive targets were more popular and likable, demonstrating good social validity.

The main purpose of the Social Validity study was to demonstrate that teens could use refusal skills (as measured by the behavioral measure) and still be accepted by peers. Therefore, peer ratings of popularity and liking were expected to be positively related to behavioral refusal skill performance in order to show that teens who used refusal skills were accepted by peers. This hypothesis was not supported. However, although the correlations were not significant, popularity and liking were positively, not negatively, related to behavioral refusal skill performance. This indicates that, although teens with effective refusal skills were not better liked or seen as more popular, they were not significantly more rejected, either. This lack of rejection is probably more important, and more realistic, than expecting assertive teens to be better liked.

Although convergent validity for **passive** and **drug refusal** behavior was supported, it is unclear in a drug refusal situation how **aggression** is actually related to both effectiveness of the drug refusal and to peers' perception of the drug refusal response. Because of the demand characteristics of the situation which did not allow aggression to emerge, it is unclear how aggression in a drug refusal situation is actually related to both effectiveness of the drug refusal and to the social validity of the drug refusal response. Given a wider range of aggressive responding, it is likely that a relationship, perhaps a curvilinear one, would be found between drug refusal and aggression. Although the results for the **behavioral** measure were consistent with predictions, scores on the **self-report** drug refusal measure were unrelated to peer ratings, indicating poor social validity.

SUMMARY

This series of studies created reliable and socially valid measures of drug refusal and self-efficacy and outcome expectancies for refusal. Such measures are necessary for studying the effectiveness of the skills-based drug prevention programs for adolescents. Without reliable, valid measures, the active components of skills-based drug prevention programs cannot be determined. A role-play measure of drug refusal skills, which included measures of self-efficacy and outcome expectancies taken just prior to each scene in the role-play, was also created in this series of studies. Additionally, a self-report self-efficacy measure of drug refusal skills and a self-report measure of outcome expectancies was created. Each of the measures created in this study showed good psychometric properties, with good interrater reliability (in the case of the role-play) and internal consistency reliability. Unlike some previous measures, this role-play measure used both male and female prompters. Significant differences were found in subjects' response latency and verbal repertoire with male versus female prompters. Until research determines whether drug offerers in this population are almost exclusively male or female, use of prompters of both genders is important so that analyses can be performed separately or together. Although there were prompter gender effects, there were no significant effects of subject gender on the role-play, indicating that the measure was equally valid for boys and girls. When role-play studies of assertiveness and refusal have tested for effects of subject gender on role-play variables, such effects are not frequently found (e.g., Hops, et al., 1988; Ollendick, 1983; Scanlon & Ollendick 1986). These results indicate that, although role-play measures should have prompters of both genders, it is likely that results are equally valid for male versus female subjects.

Subjects in the focus groups appeared to be different demographically than were subjects in the MTMMM and social validity studies. The focus groups had a smaller representation of girls and did not include minorities. Furthermore, cigarette, marijuana, and other drug use were more prevalent among focus group subjects. These differences raise the possibility that the situations gleaned from the focus groups may not be relevant in the target population of the other two studies. It is unclear why the focus

group subjects differed, as recruiting procedures for the focus groups and for Study 1 were similar. Future studies might add a question to the peer rating procedure which assesses the realism of the refusal situation, even if focus groups are used to create situations, in order to further establish social validity. In this study, it is fortunate that the drug use differences were such that focus group subjects were more likely to be users. These subjects probably had more experience with actual drug use situations, so the situations were more likely to be realistic than if focus group subjects were less likely to be users. Nevertheless, comparable focus group and MTMMM populations would have provided more confidence in the content validity of the refusal situations.

The situations in the drug refusal role-play test were created using the input of teenagers in 7th and 8th grades, lending social validity to the measure. Social validity is essential; a measure could be reliable and could show good internal consistency, interrater reliability, and convergent and discriminant validity, but if the situations were not a valid representation of actual situations, the measure would be useless. The behavioral refusal measure was created based on focus groups with semi-rural, Caucasian subjects. It is likely that, while some of the drug refusal scenarios are generalizable to other populations, some situations may not be. For example, the types of drugs and the settings in which drugs are offered is probably very different in inner-cities than in this semi-rural population. Therefore, the generalizability of the measure should be carefully considered before its use in other populations. One possibility in similar populations would be to test the refusal situations in the target population using focus groups to determine the applicability of the role-play scenes. In more dissimilar populations, the process used herein to create the measure could be replicated. That is, focus groups could guide the creation of realistic scenes and peer ratings could confirm the social validity of the new scenes. Scoring procedures for the behavioral measure could be used directly. This replication of the process, rather than the content, of the measure is important in populations which are likely to be dissimilar in demographics, including urbanicity, or in drug use history.

Previous studies have indicated that positive adult ratings are not always associated with positive peer ratings (Ollendick, Hart, and Francis, 1985). Evidence for the social validity of this behavioral measure was provided in the second study, in which teens rated subjects who were more assertive on the behavioral skills measure as mroe effective in refusing drugs. Additionally, ratings of liking and popularity were positively, although not significantly, related to behavioral drug refusal, suggesting that subjects could be effective and not be rejected by their peers. These results are consistent with previous studies. Ollendick, Hart, and Francis (1985) found that increased eye contact for boys and increased response length for girls were associated with subjects' increased sociometric status.

A particular goal of this series of studies was to create a behavioral, rather than a self-report, measure of drug refusal skills. Behavioral measures can tap actual skills, rather than a person's perception of skills, which may be inaccurate in the case of complex social skills with multiple components. In fact, in the multi-trait, multi-method matrix, the self-report and behavioral drug refusal and assertion measures showed significant method variance, indicating that behavioral measures and self-report measures were not measuring identical constructs, a common finding in comparisons of role-play and self-report measures (Ollendick, Hart, and Francis, 1985; Ollendick, Meador, and Villanis, 1987). Further studies must determine whether self-report versus behavioral measures are more predictive of future drug refusal behavior. One possible study would test whether the self-report or behavioral measure is more affected by assertiveness and drug-refusal training. Because self-reports of skills may improve with training, without the improvement of actual skills, a better study design would explore which measure predicts future drug use and abuse. Only this kind of study can resolve the issue of whether a self-report or a behavioral measure is a more valid indicator of skills, or if both are useful predictors.

Previous measures of assertion and drug refusal skills, especially self-report measures, often show a ceiling effect (Graham, Rohrbach, Hansen, Flay, & Johnson, 1989; Hansen, Graham, Wolkenstein, & Rohrbach, 1991; Rohrbach, et al., 1987). However, the current measure includes non-verbal categories and did not show a ceiling effect. That is, an adequate range of responding was achieved. Although most

subjects actually refused the substances in the role-play scenarios, subjects varied in their response latency, eye contact, and other verbal and non-verbal categories measured by the behavioral test.

The measure also uses a variety of drugs in the role-play, including cigarettes, alcohol, marijuana, and other drugs. Other measures have been limited in only including one category of drugs. This measure serves as a comprehensive measure of drug refusal skills. Furthermore, the addition of the self-efficacy and outcome expectancy measures is an important contribution (Deluty, 1981; Ollendick & Schmidt, 1987). Self-efficacy and outcome expectancy measures may provide additional information about why a particular teen may not use skills even if skills are adequate. For example, a teen may demonstrate excellent skills, but s/he may not believe that s/he could implement those skills. In that case, an intervention may be targeted at boosting self-efficacy, for example by giving the teen feedback from adults and other teens that her skills are good. In another scenario, a teen may have good skills and good self-efficacy but negative outcome expectancies. In that case, motivational, rather than skills, interventions may be more appropriate. This measure incorporated an important aspect of measuring self-efficacy and outcome expectancies; measurement immediately prior to behavioral performance. Bandura (1986) argues that self-efficacy and outcome expectancy measures are more valid in this case because more accurate information which helps people form those judgments is available just prior to performance.

Contrary to predictions, self-efficacy and outcome expectancies were not adequate predictors of behavioral skill. This may indicate, as discussed previously, that cognitive versus skill variables predict different aspects of performance but that both are valid predictors. In the case of self-efficacy, it is likely that, since the behavioral measure comprises very specific verbal and non-verbal components of skills, and since those skills are not obvious to the performer (e.g., eye contact, response latency), teens are not able to accurately predict their performance on these dimensions. A second reason for the lack of correspondence between behavioral refusal and self-efficacy is that the behavioral sub-component approach may not provide externally valid information about skills performance, whereas self-report could

be a more accurate representation of actual refusal behavior. The relationship of the behavioral performance to peer ratings of effectiveness, however, refutes that the behavioral measure does not tap a meaningful aspect of assertion. A second possible reason for the lack of correspondence between behavioral refusal and self-efficacy is that, prior to the role-play, teens have not been exposed to refusal situations and, therefore, cannot make accurate judgments of their performance. These two possibilities once again highlight that the true test of the importance of behavioral versus cognitive measures is an empirical test of their relative power to predict performance (e.g., actual drug use) in longitudinal studies.

Outcome expectancies also failed to predict behavioral skills. Outcome expectancies were expected to be relatively more independent of skills than were self-efficacy because outcome expectancies assume accurate performance (e.g., "if you were able to refuse, how would the situation turn out?"). Nevertheless, the use of skills should be related to outcome expectancies, since skills are not likely to be used if successful performance is expected to lead to negative outcomes. The lack of a significant relationship between outcome expectancies and refusal skills in this study is probably a result of demand characteristics . Social norms and the nature of the study (drug refusal skills) were likely to influence them to believe the experimenters expected substance refusal rather than substance acceptance. In the experimental situation, teens may have refused substances which, in a real situation, they may have accepted.

Given that the behavioral and self-report measures of drug refusal, self-efficacy, and outcome expectancies and the peer ratings of drug refusal behavior showed adequate psychometric properties, another question is which measure should actually be used (Deluty, 1981). Additional considerations include the resources, in both time and money, required to administer the measures. Measures should be chosen carefully based on the goal. For example, if a goal is to measure actual skill, then either the peer ratings or the full adult ratings of each verbal and non-verbal category would suffice. The adult ratings are much more time- and resource- intensive than the peer ratings. However, if specific feedback is needed for the purposes of training teens in drug refusal skills, the full ratings would be more useful. It is

unclear whether the self-report measures of drug refusal and assertion were a valid indicator of skills. Future studies must determine whether the self-report measures predict some objective criteria, such as performance in a naturalistic assertion situation or future drug use. Therefore, the self-report measure should be used with caution.

This study also helped to clarify the relationship between assertive, passive, and aggressive behavior. Although previous studies in the literature have described needing to show discriminant validity between assertion and passiveness (e.g., Ollendick, 1983; Deluty, 1981), it is evident that assertive and passive behavior are on opposite ends of a continuum.

Although the theoretical relationship between assertion and passiveness is relatively clear, the relationship between assertion (or drug refusal) and aggressive behavior is less clear. It may be that one aspect of aggression (standing up for one's rights) is positively correlated with assertion, while one aspect (not infringing on others' rights) is mutually exclusive with assertion and, therefore, should be negatively related to it. Because previous studies have demonstrated a strong positive relationship between aggressive behavior and rejected peer status (Newcomb, Bukowski, and Pattee, 1993), further exploration of how refusal, aggression, and peer status are related deserves further study. The measures created in this study provide the ability to explore these questions, along with the validity of self-report versus behavioral measures of drug refusal, in future studies.

Table 1. Demographics & Drug Use.

	Focus Groups	Study 1: MTMMM	Study 2: Social Validity - raters
Sample size	9	51	104
Percent female	33.3%	61.7%	56.3%
Age	13.50 (.76)	13.39 (.58)	12.84 (.70)
Percent in Grade 7	44.4%	34.0%	54.1%
Percent white	100%	83.3%	94.5%
Average Hollingshead	4.56 (2.24)	4.08 (1.79)	4.20 (1.49)
Ever used cigarettes?	66.7%	31.4%	39.2%
Alcohol	88.9%	60.8%	54.9%
Marijuana	22.2%	5.9%	7.8%
Other drugs	11.1%	0%	2.0%
Past month			
# Cigarettes	8.94 (12.53)[1]	3.01 (14.10)	.99 (4.14)
# Drinks	2.44 (3.36)	1.87 (4.47`)	.71 (3.17)
Days marijuana use	3.22 (4.35)	1.47 (3.36)	0

Note. [1] M (SD)

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Table 2. Behavioral assertion and drug refusal internal consistency and interrater reliability.

	n	Assertion			n	Refusal		
		Interrater correlation	Kappa	Percent agreement		Interrater correlation	Kappa	Percent agreement
Comply	66		1	100	145		.87	97.93
Request new behavior	66		.73	90.91	155		.32	92.90
Consequences	66		.45	72.27	155		.64	88.39
Eye contact	33		1	100	89		.38	84.27
Response length	66	.58**			155	.95**		
Verbal repertoire	22	1.00			52	.79**		
Response latency (sec.)	66	.69**			52	.74**		

Note. ** p < .000

Table 3. Mean behavioral assertiveness and drug refusal scores.

	Mean	SD	Min.	Max.
Response latency (seconds)	.43	.31	0	1.37
Length of response (# words)	5.60	2.50	1.26	14.11
# stammers	.23	.17	.01	.93
# grammatical errors	.02	.03	.00	.20
Energy	3.14	.80	1.22	4.92
Compliance with request *	.07	.12	.00	.59
Request for new behavior*	.10	.05	.00	.22
Inappropriate behavior*	.01	.02	.00	.14
Facing prompter*	.98	.04	.88	1.11
Verbal repertoire*	.73	.24	.00	1.04
Aggression*	.01	.03	.00	.14
Notes consequences of behavior*	.30	.12	.06	.59
Eye contact*	.56	.32	.00	.97

Note. n = 51   *Scored 0 = no, 1 = yes

Table 4. MTMMM hypotheses.

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1) Refusal measured by different methods was expected to be positively correlated

2) Assertion was expected to be positively correlated with drug refusal

3) Refusal and passiveness were expected to be negatively related

4) Aggression and refusal were expected to be less strongly related than assertion and refusal.

5) Measures of self-efficacy were expected to be related to skill performance.

Table 5. Internal consistency of the drug refusal and assertiveness self-efficacy and outcome expectancies.

	Role-play		Self-report	
	Self-efficacy	Outcome expectancies	Self-efficacy	Outcome expectancies
Drug refusal	.87 (n = 50)	.90 (n = 50)	.91 (n = 48)	.94 (n = 48)
Negative assertion	.47 (n = 47)	.76 (n = 51)	.63 (n = 48)	.79 (n = 48)

Table 6: Multi-Trait, Multi-Method Matrix.

	CATS assert	Self-report refusal (self-efficacy)	CBCL Youth report-w/draw	CATS submissive	CBCL youth aggression	CATS aggression	Behavioral Assertion	Behavioral Refusal	CBCL adult report w/drawn	CBCL adult report aggression	Peer report Assertion	Peer report Passiveness
Self-report refusal	.44** [1] (35)											
CBCL Youth report-w/drawn	-.23 [2] (35)	-.13 [3] (46)										
CATS submissive	-.46** [4] (35)	-.26 m [5] (45)	.14 [6] (44)									
CBCL youth aggression	-.35* [7] (35)	-.29* [8] (46)	.30* [9] (47)	-.14 [10] (44)								
CATS aggression	-.76** [11] (36)	-.32* [12] (46)	-.12 [13] (45)	-.18 [14] (46)	.34* [15] (45)							
Behavioral Assertion	.19 [16] (35)	.21 [17] (47)	-.22 [18] (45)	-.06 [19] (44)	.-.10 [20] (45)	-.10 [21] (45)						
Behavioral Refusal	.24 [22] (35)	.07 [23] (47)	-.02 [24] (45)	-.02 [25] (44)	-.13 [26] (45)	-.20 [27] (45)	.51** [28] (49)					
CBCL adult report w/drawn	-.43 [46] (16)	.03 [47] (19)	-.02 [48] (19)	.11 [49] (18)	-.07 [50] (19)	.41 m [51] (18)	.10 [52] (20)	-.17 [53] (20)				
CBCL adult report aggression	.08 [56] (16)	-.09 [57] (19)	-.03 [58] (19)	.02 [59] (18)	-.16 [60] (19)	-.06 [61] (18)	.08 [62] (20)	-.05 [63] (20)	.34 [66] (20)			
Peer report Assertion	.73** [67] (13)	.43 m [68] (18)	-.49* [69] (18)	-.11 [70] (15)	-.49* [71] (18)	-.29 [72] (16)	.51* [73] (18)	.62** [74] (18)	-.73 [77] (6)	-.59 [78] (6)		
Peer report passiveness	-.05 [79] (13)	-.16 [80] (18)	-.18 [81] (18)	-.03 [82] (15)	-.11 [83] (18)	.19 [84] (16)	-.00 [85] (18)	-.40 [86] (18)	.66 [89] (6)	.21 [90] (6)	-.49* [91] (18)	
Peer report aggression	.29 [92] (13)	.18 [93] (18)	-.41m [94] (18)	-.30 [95] (15)	-.25 [96] (18)	-.10 [97] (16)	.22 [98] (18)	.11 [99] (18)	.31 [72] (6)	-.39 [133] (6)	.18 [104] (18)	.34 [105] (18)

Note. *p < .05, **p < .005. m denotes p < .10 (marginal). Cell numbers are in the upper right corner of each cell.

51

Table 7. Self-efficacy and outcome expectancy correlation matrix.

			Refusal				Assertion			
			Self-report		Role-play		Self-report		Role-play	
			SE	OE	SE	OE	SE	OE	SE	OE
Refusal	Self-report	SE								
		OE	.29* (49)							
	Role-Play	SE	.66** (48)	.25 (48)						
		OE	.27 (48)	.83** (48)	.05 (50)					
Asser-tion	Self-report	SE	.23 (49)	.18 (49)	.21 (48)	.16 (48)				
		OE	.16 (49)	.63** (49)	.18 (48)	.55** (48)	.34* (49)			
	Role-Play	SE	.27 (49)	.26 (49)	.55** (50)	.09 (50)	.54** (49)	.26 (49)		
		OE	.31* (49)	.54** (49)	.13 (50)	.55** (50)	.19 (49)	.44** (49)	.34* (51)	

Note. SE = self-efficacy, OE = outcome expectancies. Sample sizes are in paretheses.

Note. * = p < .05, ** = p < .005

Table 8. Self-efficacy and outcome expectancies for refusal as mediating variables.

	Role-	play	Self-	report
	Self-efficacy	Outcome expectancies	Self-efficacy	Outcome expectancies
Behavioral assertion	.26 (48)	.04 (48)	.21 (47)	-.02 (47)
Behavioral refusal	.16 (48)	-.20 (48)	.07 (47)	-.23 (47)
CATS assertion	.46 (36) **	.18 (36)	.44 (35)*	.05 (35)
CATS aggression	-.22 (46)	-.12 (46)	-.32 (46)*	.01 (46)
CATS passiveness	-.31 (45)*	-.12 (45)	-.26 (45)	-.17 (45)
CBCL youth report withdrawn	-.07 (46)	-.27 (46)	-.13 (46)	-.17 (46)
CBCL parent report withdrawn	.07 (20)	.21 (20)	..03 (19)	.35 (19)

Note. Table figures represent Pearson's correlation and, in parentheses, sample size.

Note. * p < .05, ** p < .005

Table 9. Social Validity Hypotheses.

Convergent validity of peer ratings with behavioral ratings:

1)   Peers were expected to rate assertive performance on the behavioral refusal measure as

effective.

2)   Peer ratings of low self-esteem were expected to be negatively related to behavioral

assertion.

3)   Behavioral aggression was expected to be less strongly related to peer ratings of perceived

offerer anger.

Social validity:

4)   Behavioral assertion was expected to be positively related to peer ratings of liking and

popularity.

Convergent validity among peer ratings:

5)   Peer ratings of popularity, liking, and effectiveness were expected to be significantly

positively interrelated and were expected to be negatively correlated with perceived target

self-esteem and with perceived target anger.

REFERENCES

Abrams, D.B. & Niaura, R.S. (1987). Social learning theory. In H.T. Blane, & K.E. Leonard (Eds.),

   Psychological Theories of Drinking and Alcoholism (pp. 131-178). New York: Guilford.

Achenbach, T. M. (1989). Manual for the Child Behavior Checklist/4-18 and 1991 Profile. Burlington,

   VT: University of Vermont Department of Psychiatry.

Achenbach, T. M., & Edelbrock, C. (1979). The Child Behavior Profile: II. Boys aged 12-16 and girls

   aged 6-11 and 12-16. Journal of Consulting and Clinical Psychology, 47, 223-233.

Alberti, R. E., & Emmons, M. L., (1989). Your perfect right: A guide to assertive living. San Luis

   Obispo: Impact Publishers.

Arnold, J., & Jacobowitz, D. (1993). The cross-informant program for the CBCL/4-18, YSR, and TRF.

   Burlington, VT: University Associates in Psychiatry.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood

   Cliffs, NJ: Prentice-Hall.

Bangert-Drowns, R. L., (1988). The effects of school-based substance abuse education: A meta-analysis.

   Journal of Drug Education, 18, 243 - 263.

Bangert-Drowns, R.L. (1988). The effects of school-based substance abuse education: A meta-analysis.

   Journal of Drug Education, 18, 243-263.

Bornstein, M., Bellack, A. S., & Hersen, M. (1977). Social skills training for unassertive children: A

   multiple baseline analysis. Journal of Applied Behavior Analysis, 20, 183-195.

Botvin, G. J. (1983). Life skills training: Student guide, level I. New York: Smithfield Press.

Bruning, J. L., Kintz, B. L. (1987, 3rd Ed.). Computational handbook of statistics. New York: Scott,

   Foresman and Company.

Cohen, J. (1960). A coefficient of agreement for nominal scales. Educational and Psychological

   Measurement, 20, 37-46.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd Ed.). Hillsdale, NJ:

   Lawrence Erlbaum Associates.

Cohen, R. J., Swerdlik, M. E., & Smith, D. K. (1992). Psychological testing and assessment: An introduction to tests d measurement. Mountain View, CA: Mayfield Publishing Company.

Collins, J. L., (1982, March). Self-efficacy and ability in achievement behavior. Paper presented at the annual meeting of the American Educational Research Association, NY.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.

DeGiovanni, I. S., & Epstein, N. (1978). Unbinding assertion and aggression in research and clinical practice. Behavior Modification, 2, 173-192.

Deluty, R. H. (1981). Adaptiveness of aggressive, assertive, and submissive behavior for children. Journal of Clinical Child Psychology, Fall, 155-158.

Deluty, R. H. (1984). Behavioral validation of the Children's Action Tendency Scale. Journal of Behavioral Assessment, 6, 115-130.

Deluty, R. H., (1979). Children's Action Tendency Scale: A self-report measure of aggressiveness, assertiveness, and submissiveness in children. Journal of Consulting and Clinical Psychology, 47, 1061-1071.

Ellickson, P.L., & Hays, R.D. (1992). On becoming involved with drugs: Modeling adolescent drug use over time. Health Psychology, 11, 377-385.

Funder, D. C. (1989). Accuracy in personality judgment and the dancing bear. In D. M. Buss & N. Cantor (Eds.) Personality psychology: Recent trends and emerging directions (pp. 210-223). New York: Springer Verlag.

Goldstein, A. P., Reagles, K. W., & Amann, L. L. (1990). Refusal Skills: Preventing Drug Use in Adolescents. Champaign, ILL: Research Press.

Graham, J. W., Rohrbach, L. A., Hansen, W. B., Flay, B. R., & Johnson, C. A. (1989). Convergent and discriminant validity for assessment of skill in resisting a role play alcohol offer. Behavioral assessment, 11, 353-379.

Greaves, C. K. (1993). Outcome and efficacy expectancies in college student drinking. Unpublished manuscript, Virginia Tech, Department of Psychology, Blacksburg, VA.

Hansen, W. B., Graham, J.W., Wolkenstein, B. H., & Rohrbach, L. A. (1991). Program integrity as a moderator of prevention program effectiveness: Results for fifth-grade students in the adolescent alcohol prevention trial. Journal of Studies on Alcohol, 52, 568-579.

Hays, W. L. (1988). Statistics (4th ed). Holt, Rinehart, & Winston, Inc.: Fort Worth, TX.

Hollingshead, A. B., & Redlich, F. C. (1958). Social class and mental illness: A community study. New York: Wiley.

Hops, H., Weissman, W., Biglan, A., Thompson, R., Faller, C., & Severson, H. H. (1986). A taped situation test of cigarette refusal skill among adolescents. Behavioral Assessment. 8, 145 - 154.

Jessor, R. & Jessor, S. L. (1977). Problem behavior and psychosocial development: A longitudinal study of youth. New York: Academic Press.

Johnson, J. L. (1991). Preventive interventions for children at risk: Introduction. The International Journal of the Addictions, 25, 429 - 434.

Jones, R. T., McDonald, D. W., Fiore, M. F., Arrington, T., Randall, J. (1990). A primary approach to children's drug refusal behavior: The impact of rehearsal-plus. Journal of Pediatric Psychology, 15, 211-223.

Kandel, D.B. (1978). Convergences in prospective longitudinal surveys of drug use in normal populations. In D.B. Kandel (Ed.), Longitudinal research on drug use: Empirical findings and methodological issues (pp. 3-38). Washington, D.C.: Hemisphere-Wiley.

Kazdin, A. E. (1978). Conceptual and assessment issues raised by self-efficacy theory. Advances in Behavior Research and Therapy, 1, 177 - 185.

MacKinnon, D.P., Weber, M.D., & Pentz, M.A. (1989). How do school-based drug prevention programs work and for whom? Drugs and Society, 3 125-143.

Maddux, J. E. (1991). Personal efficacy. In J. Valerian, B. Derlega, A. Winstead, & W. Jones (Eds.), Personality: Contemporary Theory and Research (pp. 231-260). Chicago: Nelson-Hall Publishers.

Montgomery County Office on Youth (1992, December). A study of alcohol and other substance use among youth in Montgomery County, Virginia.

Newcomb, A. F., Bukowski, W. M., & Pattee, L. (1993). Children's peer relations: A meta-analytic

    review of popular, rejected, neglected, controversial, and average sociometric status.

    Psychological Bulletin, 113, 99-128.

Ollendick, T. H. (1981). Assessment of social interaction skills in school children. Behavioral

    Counseling Quarterly, 1, 227-243.

Ollendick, T. H. (1984). Development and validation of the Children's Assertiveness Inventory. Child

    and Family Behavior Therapy, 5, 1-15.

Ollendick, T. H., & Schmidt, C. R. (1987). Social learning constructs in the prediction of peer

    interaction. Journal of Clinical Child Psychology, 16, 80-87.

Ollendick, T. H., Hart, K. J., & Francis, G. (1985). Social validation of the revised behavioral

    assertiveness test for children (BAT-CR). Child and Family Behavior Therapy, 7, 17-33.

Ollendick, T. H., Meador, A. E., & Villanis, C. (1987). Relationship between the children's assertiveness

    inventory (CAI) and the Revised Behavioral Assertiveness Test for Children (BAT-CR). Child

    and Family Behavior Therapy, 8, 27-36.

Ollendick, T. H., Oswald, D., & Crowe, H. P. (1986, November). The development and validation of the

    self-efficacy scale for social skills in children. Paper presented at the Association for the

    Advancement of Behavior Therapy.

Ozer, D. J. (1989) In D. M. Buss & N. Cantor (Eds.) Personality psychology: Recent trends and

    emerging directions (pp. 224 - 234). New York: Springer Verlag

Pentz, M.A., Trebow, E., Hansen, W.B., MacKinnon, D.P., Dwyer, J.H., Johnson, C.A., Flay, B.R.,

    Daniels, S., Cormack, C. (1990). Effects of program implementation on adolescent drug use

    behavior. Evaluation Review, 14, 264-289.

Robin, A. L., Kent, R., O'Leary, D., Foster, S., & Prinz, R. (1977). An approach to teaching parents and

    adolescents problem-solving communication skills: A preliminary report. Behavior Therapy, 8,

    639 - 643.

Rohrbach, L. A., Graham, J. W., Hansen, W. B., Flay, B. R., & Johnson, C. A. (1987). Evaluation of
resistance skills training using multitrait-multimethod role play skill assessments. Health
Education Research, 2, 401-407.

Scanlon, E. M., & Ollendick, T. H. (1986). Children's assertive behavior: The reliability and validity of
three self-report measures. Child and Family Behavior Therapy, 7, 9-21.

Schwartz, R.M. & Gottman, J.M. (1976). Toward a task analysis of assertive behavior. Journal of
Consulting and Clinical Psychology, 44, 910-920.

Tobler, N.S. (1986). Meta-analysis of 143 adolescent drug prevention programs: Quantitative outcome
results of program participants compared to a control or comparison group. Journal of Drug
Issues, 16, 537-567.

U.S. Department of Health and Human Services (1991). Healthy people 2000: National health promotion
and disease prevention objectives.

University of Michigan, Institute for Social Research. Monitoring the future: A continuing study of the
lifestyles and values of youth. (1991, January).

University of Michigan, Institute for Social Research. Monitoring the future: A continuing study of the
lifestyles and values of youth. (1994, January 27 press release).

Weissberg, R.P., Caplan, M., & Harwood, R.L. (1991). Promoting competent young people in
competence-enhancing environments: A systems-based perspective on primary prevention.
Journal of Consulting and Clinical Psychology, 59, 830-841.

Weist, M. D., & Ollendick, T. H. (1991). Toward empirically valid target selection: The case of
assertiveness in children. Behavior Modification, 15, 213 - 227.
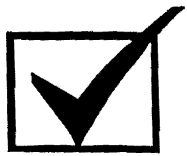
☑ Do you have a child in 7th or 8th grade?
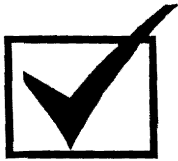
☑ Are you interested in drug prevention?

VIRGINIA TECH

TEEN PROJECT ONE

9 % of 8th graders nationwide have used marijuana. Although Project One is not a prevention project, it will create a role-play measure of drug refusal skills which could be used in prevention programs nationwide. Your child will fill out questionnaires and either be asked to participate in a group discussion of pressures to use cigarettes, alcohol, and other drugs. Your child is eligible whether or not he or she has used, and he or she will be paid $9 for approximately 1 to 2 hours of participation. Scheduling will be at a time and place convenient to you.

All information is confidential

Approved by Virginia Tech
Institutional Review Board

Call for more information: 231-7631
Leave your name, child's name & grade
& address & phone #

Appendix 2: Focus Group Informed Consent Form

Title: Focus group on cigarette, drug, & alcohol use

There are many drug prevention programs which teach teens to refuse drugs, but we often don't know whether teens actually learn the skills. One way to measure that is to role-play situations in which teens might be offered cigarettes, alcohol, or other drugs. But in order to measure teens' ability to refuse drugs in actual situations, the situations on the test must be similar to real-world situations.

_____ is invited to participate in a group which will discuss situations in which teens must confront cigarette, alcohol, and other drug use. The purpose is so that researchers can create realistic situations for a measure of refusal skills. Your teenager and four others will participate in a group discussion with two graduate students in clinical psychology. The group leader will ask about situations in which they might have been offered drugs and situations in which teens their age use cigarettes, alcohol, and drugs (each will be discussed separately). The process of the focus group will be one of openness and not confrontation, with a focus on non-evaluative information-giving. In order for them to feel free to discuss these situations, confidentiality will be maintained; that is, no information will be relayed to you or to anyone else unless there is evidence of clear and present danger to your teenager or to someone else. The session will be audio taped, but the tape will be erased within one week of the session, after a transcript (without any identifying information) is created.

It may be uncomfortable for your teenager to discuss these issues, but he or she will not be "called on" during the group. He or she may stop participating in the group at any time. He or she will be paid $9 for 1 and 1-2 hours of participation. The information from this research may be used for scientific or educational purposes. It may be presented at scientific meetings and/or published and reproduced in professional journals or books, or used for any other purpose that Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or research. However, any such presentation or publication will not include any information through which your teen could be identified.

This research project has been approved by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

I have read and understand the above description of the study. I have had an opportunity to ask questions and have had them all answered. I hereby acknowledge the above and give my voluntary consent for participation in this study. I understand that if I have any questions regarding this research and its conduct, I should contact any of the persons named below.

Bonnie L. Cleaveland, M.S., 552-0652 or 231-7631

Robert S. Stephens, Ph.D. 231-6304

R.J. Harvey, Ph.D., Chair, Human Subjects Committee 231-7030

Ernest Stout, Ph.D., Chair, Institutional Review Board, 231-6077

I have explained this consent form to my teenager, and he or she agrees to participate.

Parent's Signature: _____

Parent's name, printed: _____

I understand the procedure of the focus group and agree to participate.

Teen's Signature: _____ Teen's age _____

Teen's name, printed _____ Teen's grade _____

Appendix 3: General Information Questionnaire

Child's name: _____

Your name: _____

Your phone number(s): _____(home)   _____(work)

1. What is the gender of the child participating in our study?

     (1) Female   (2) Male

2. What is his/her date of birth? _____

3. What grade is he or she in? _____

4. Which adults live in the household? (Circle all that apply)

     Mother   Father   Step-mother   Step-father

     Other   (please specify) _____

5. How many OTHER children live in the home with this child? _____

6. What is the race of your child? (Circle any that apply)):

     (1) Black   (2) White   (5) Other (please specify)

     (3) Hispanic   (4) Asian   _____

7. What are the occupations of the adults living in the home?

     _____

     _____

     _____

What school does your 7th or 8th grader attend? _____

Where did your son or daughter find out about the study? (check one)

- Flyer in community

- Flyer at school

- Friend(s)

- Student assistance program

- Guidance

Office Use Only

　　　　Subj _____ Holl1 _____ Holl2 _____ Holl3 ____

Appendix 4: DUQ

Subj: _____

The following are questions about your use of alcohol, cigarettes, and other drugs. All the information is confidential: we will not share it with your parents or anyone else. It will not have your name on it.

1. Have you ever smoked a cigarette?   (0) No   (1) Yes

2. How many **days** have you smoked cigarettes in the past six months? (180 days) _____

3. Of those days listed in #2, about how many **days** of cigarette use have been in the past month?

   _____ days of cigarette use

4. On a typical day when you smoke, about how many cigarettes do you smoke?   _____ cigarettes

5. Have you ever had a drink of alcohol? (Beer, wine, or hard liquor)

   (0) No (1) Yes

6. About how many **drinks** have you had in the past six months ?

   (1 beer, 1 glass of wine, or 1-1/2 oz or a "shot" or "jigger" of liquor is equal to 1 drink)

   _____ drinks

7. Of those days listed in # 6 , How many of the **drinks** were in the past month?   _____ drinks

8. In the past month, what is the most number of **drinks** you have had at once?

   _____ drinks

9. Have you ever used marijuana? (0) No   (1) Yes

10. How many **days** have you use marijuana in the past six months? _____

11. Of those days listed in # 10 , How many of the **days** were in the past month?   _____ days

12. Have you ever used illegal drugs other than marijuana?

   (0) No   (1) Yes

13. How many **days** in the past 6 months (180 days) have you used illegal drugs other than marijuana?

   _____ days

14. Of those days listed in # 13 , How many of the **days** were in the past month?   _____ days

We are going to ask about how many of your FRIENDS use cigarettes, alcohol or drugs. There are two types of questions: some ask about REGULAR use, and some ask about OCCASIONAL use.

15. How many of your friends use alcohol **regularly**?

    (Circle the **percentage** which is CLOSEST)

    None   About half   All

    0 10% 20% 30%   40%   50%   60%   70%   80%   100%

16. How many of your friends use cigarettes **regularly**?

    (Circle the **percentage** which is CLOSEST)

    None   About half   All

    0 10% 20% 30%   40%   50%   60%   70%   80%   100%

17. How many of your friends use alcohol **occasionally**?

    (Circle the **percentage** which is CLOSEST)

    None   About half   All

    0   10%   20%   30%   40%   50%   60%   70%   80%   100%

18. How many of your friends use cigarettes **occasionally**?

    (Circle the **percentage** which is CLOSEST)

    None   About half   All

    0   10%   20%   30%   40%   50%   60%   70%   80%   100%

19. How many of your friends use marijuana **occasionally**?

(Circle the **percentage** which is CLOSEST)

None					About half				All
0	10%	20%	30%	40%	50%	60%	70%	80%	100%

20. How many of your friends use illegal drugs OTHER THAN marijuana **occasionally**?

(Circle the **percentage** which is CLOSEST)

None					About half				All
0	10%	20%	30%	40%	50%	60%	70%	80%	100%

21. How would your close friends feel about you using marijuana, alcohol, or other drugs **occasionally**?

1	2	3	4	5
Strongly				Strongly
Disapprove				Approve

.

---

22. Do either of your parents (or stepparents) drink alcohol?   Yes   No

23. Do either of your parents (or stepparents) smoke cigarettes?   Yes   No

Appendix 5: Focus Group Protocol

Preliminary confidentiality information & agreement:

- Remind that all is confidential from parents & others except in case of clear harm. Give examples.

- Tell subjects they don't need to discuss events in terms of personal knowledge

- Remind them they can quit participating at any time.

- We will discuss cigarette, alcohol, and other drug use. Because sensitive, we must all agree not to divulge the identity of other group members or the information discussed here. We will not use names.

- Answer any questions

- Obtain verbal consent from each subject

Questionnaires

Have each student fill out the drug use/risk factor questionnaire, separated and supervised to maintain confidentiality.

Focus group   .

- We'll discuss cigarette, alcohol, and other drug use, separately.

- Where are they used?

  Possible queries:

  - School?

  - Bathrooms?

  - People's homes

  - School events

- When are they used?

  Possible queries:

  - After school

  - Weekends

- What are the different drugs used FOR? What is the purpose?

Queries:

    - Socialization

    - Relaxation

- Are there certain groups of students who use certain drugs?

- Where do students "hang out"?

    Queries:

        - Mall?

        - At school activities

        - People's homes

- What do teens do for fun?

    Query:

        - Which of those include cigarettes, alcohol, or other drugs

- When do students start using the various drugs?

- How do people pressure others?

- What do students do to convince others to use?

- *What was your first exposure to drugs?*

    Query:

        - Peer pressure versus Peer influence

- Are there teens who don't use but hang out where/with whom those who do? How do they

    refuse?

- What are good reasons that someone might use to refuse, and would they work?

- How do you know if someone has a problem?

- What are the negative consequences of drug use?

Queries

- In trouble at school

- Lower grades

- Lose friends

Ask where might be good places to recruit other subjects

Later groups:

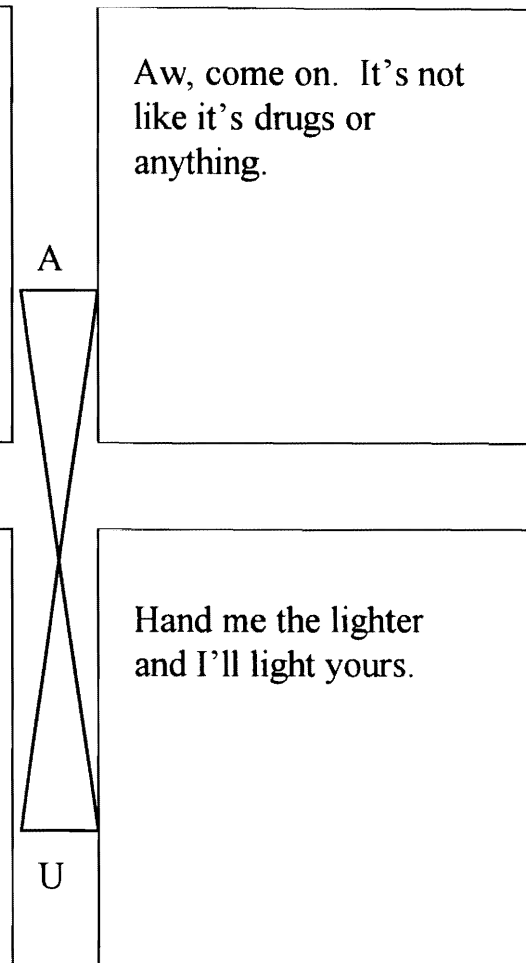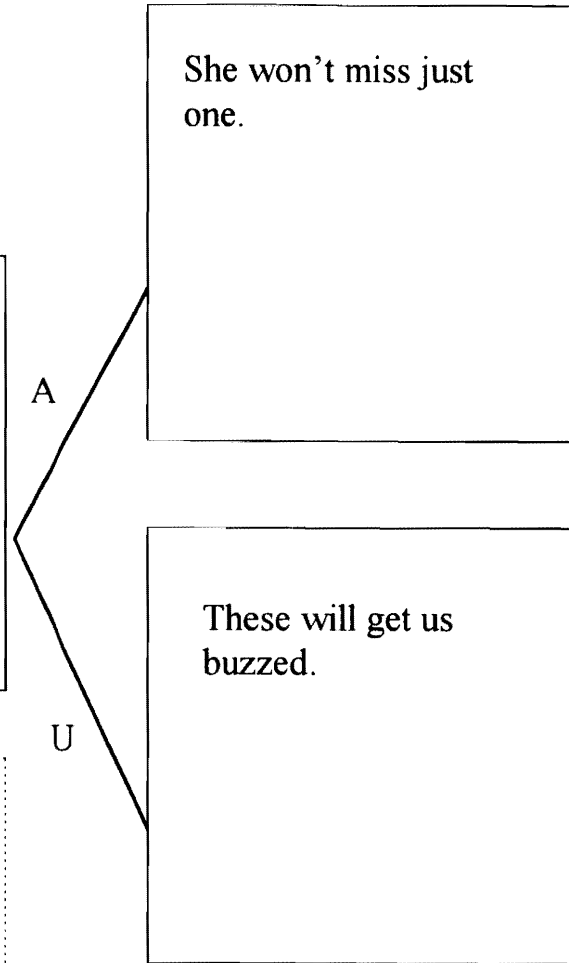Check scenarios obtained from previous groups.

Scene 1
Prompter Gender = F

71

Hey, let's smoke one.

A

U

Intro: You're home alone with a friend of yours. She sees your mom's cigarettes and suggests that you smoke one.

She won't miss just one.

These will get us buzzed.

A

U

Aw, come on. It's not like it's drugs or anything.

Hand me the lighter and I'll light yours.

Prompter Gender = M

If we put our money together we could buy a pack of cigarettes.

A

U

Intro: You and a friend are walking through a department store in the mall. You pass a cigarette machine and your friend asks if you want to buy a pack.

But we'd look really cool if we smoked.

Awesome, let's get smokes.

A

U

Almost everyone popular smokes. Let's just try it!

We would look more popular if we smoked.

Scene 3
Prompter Gender = **M**

Hey, <u>name,</u> let's have a cigarette on the way home.
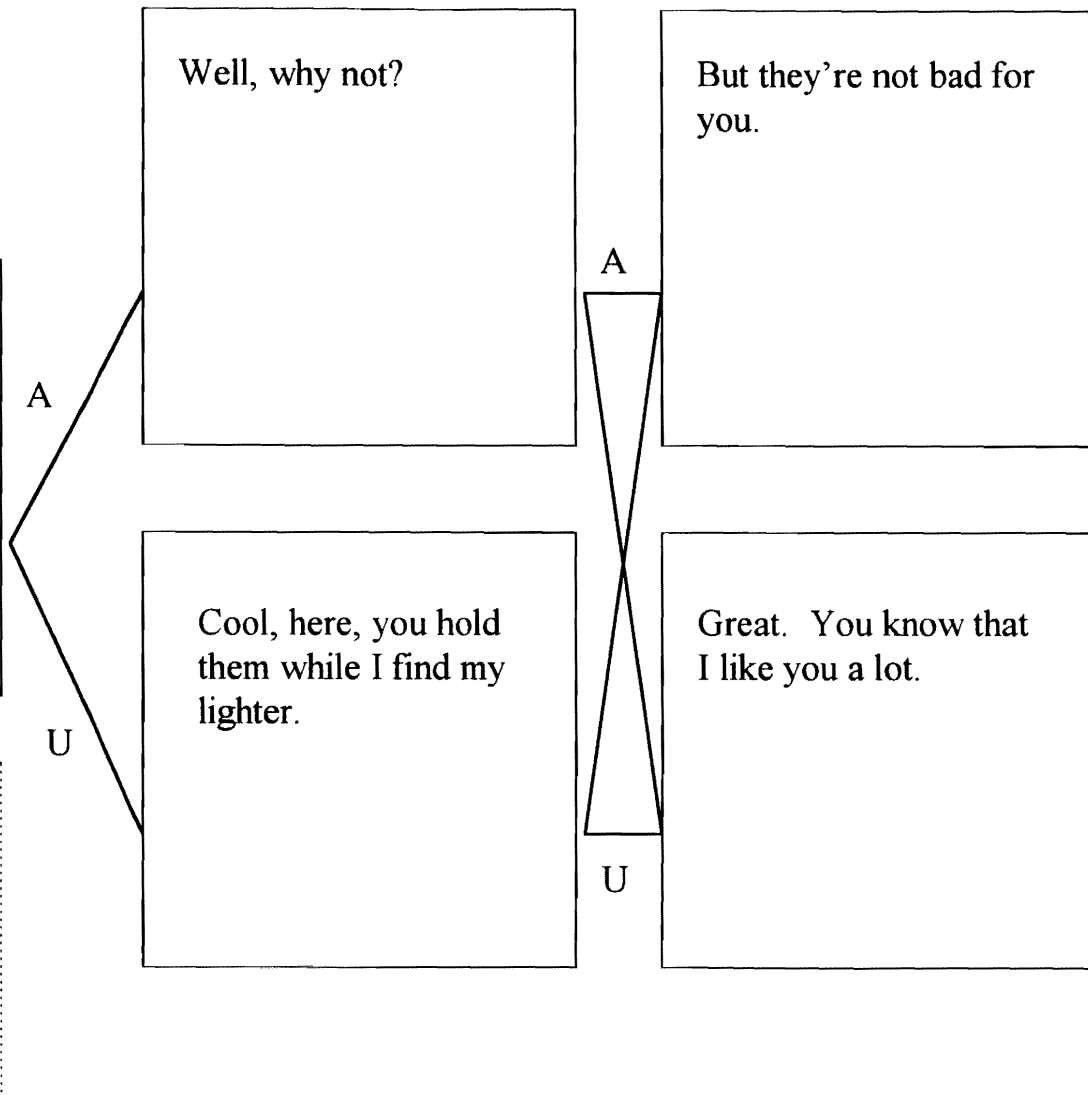
Intro: After school you get off the bus and the most popular person in your grade comes up to you and offers you a cigarette.

A

U

Well, why not?

Cool, here, you hold them while I find my lighter.

A

U

But they're not bad for you.

Great. You know that I like you a lot.

Scene 4
Prompter Gender = F

This is great, the
punch has alcohol.

Intro: You're at a school dance and
your friend notices that the punch
has been spiked with vodka.

A

Everyone else is gonna
be drunk soon, so you
might as well.

U

This is pretty cool
man, getting drunk at
school.

A

You're such a loser,
it's only vodka.

We fooled those
stupid chaperones.

U

Scene 5
Prompter Gender = M

We've got some stuff for your Coke that'll make it taste better. Coke that gives you a buzz.

A

C'mon, it's hot out, and it'll cool you off.

Relax - you're too uptight. It'll make you relax.

A

U

We'll just give you a little.

Cool, you're cool man.

U

Intro: On your way back from getting a drink at the football game you see some kids under the bleachers drinking and smoking. They call you over and offer you some vodka for your Coke.
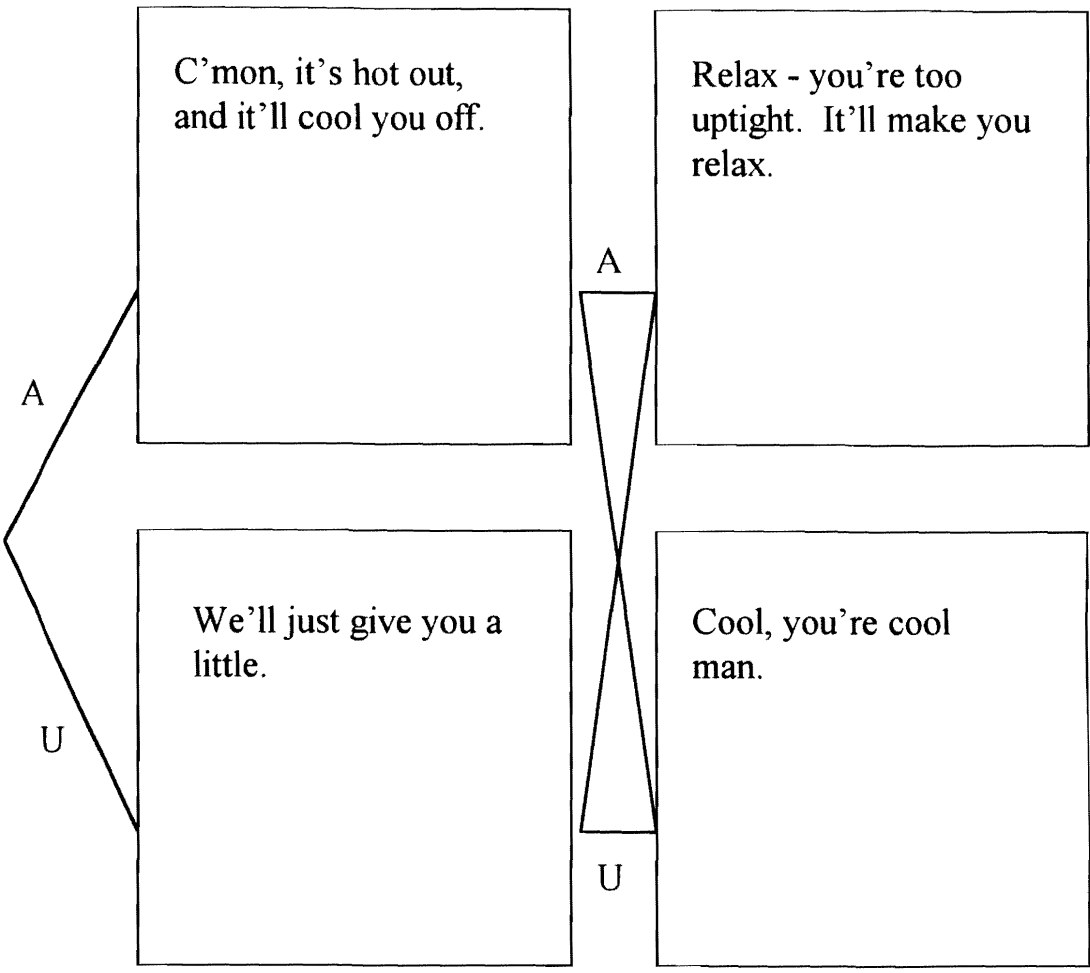
Scene 6
Prompter Gender = F

Look what I have!
Let's drink some of
this beer.

Intro: It's Friday night and
you are at a party with some
friends. One of them took
some beer from their parents'
fridge and offers you some.

A

U

Come on, just a little
won't hurt.

Beer is great, huh?

A

U

Why not? It'll be so
good; you'll get a
killer buzz.

It'll be so good.

Scene 7
Prompter Gender = M

77

Here.

Intro: You're going out with a friend you really like and want to impress. You go to a party and some kids are smoking pot. He takes a drag off a joint and then passes it to you.
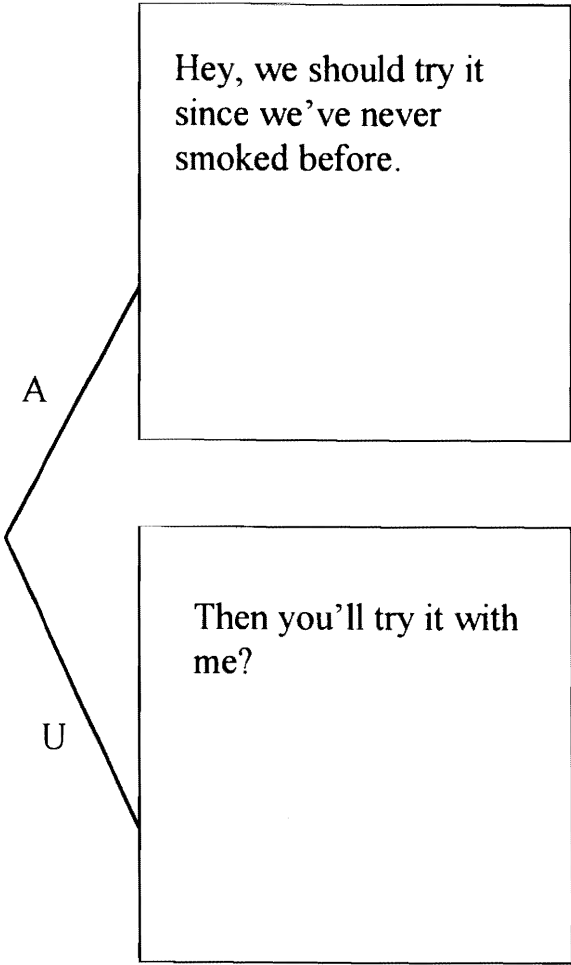
A

U

It's just pot, man.

Cool, I didn't know if you'd it.

A

U

You've never smoked one before, huh?

You're cool now.

Scene 8
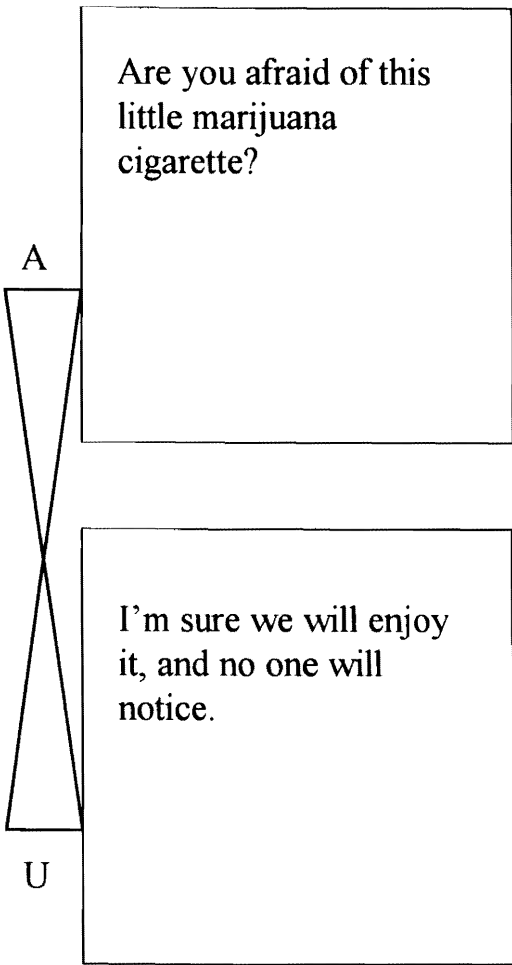Prompter Gender = F

We can make some money <u>and</u> get high.

A

U

Intro: Your best friend and you are walking down the hall. While in the hall, you find a marijuana cigarette. You suggest bringing it to the office, but your friend says, "No, don't turn it in. We'll smoke it".

Hey, we should try it since we've never smoked before.

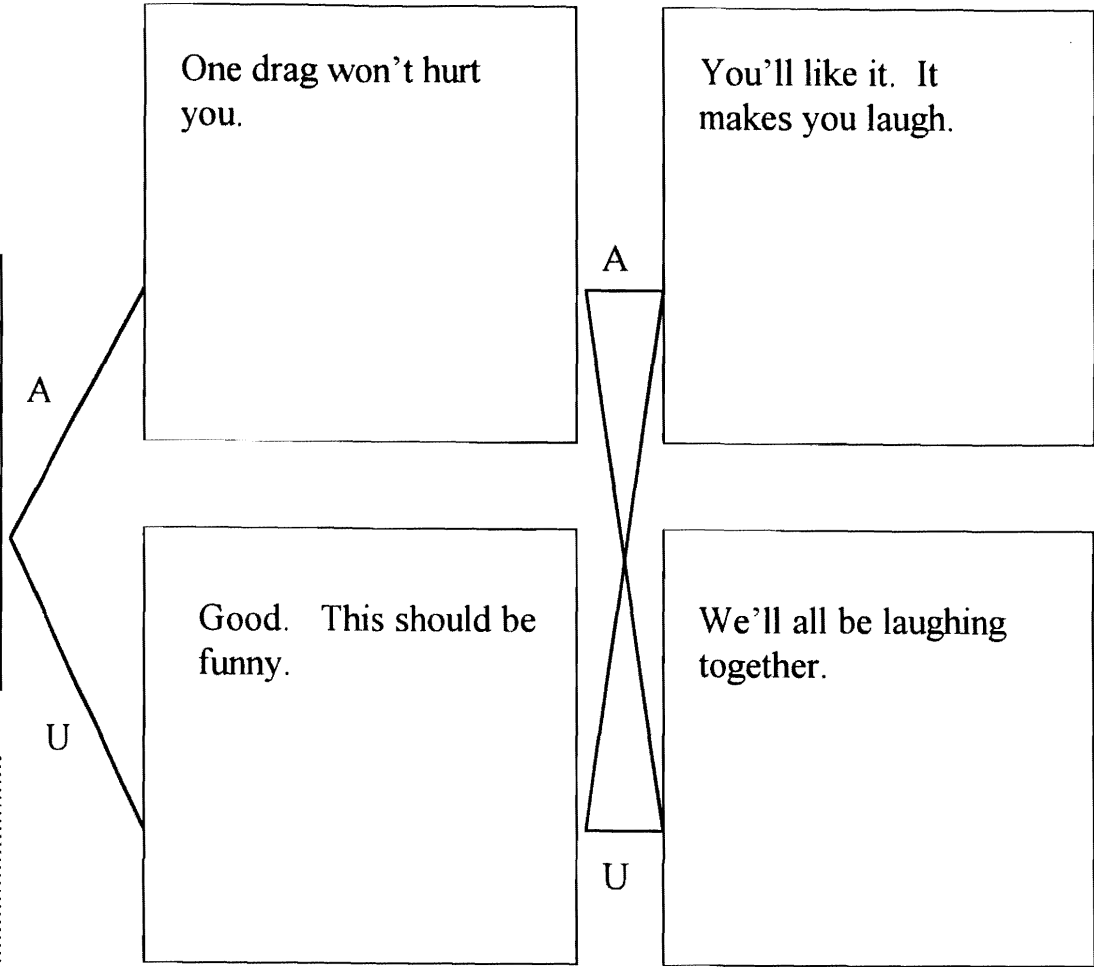Then you'll try it with me?

A

U

Are you afraid of this little marijuana cigarette?

I'm sure we will enjoy it, and no one will notice.

Scene 9
Prompter Gender = M

Here kid, we wanna see you stoned.

Intro: Your brother picks you up at the mall. The two of you leave out a side door and your brother sees his friends hanging out behind a dumpster smoking pot. He gives you a joint.

A

U

One drag won't hurt you.

Good.   This should be funny.

A

U

You'll like it. It makes you laugh.

We'll all be laughing together.

Scene 10
Prompter Gender = M

Do you want to be a
cool downer?

A

Are you a wimp?
Don't you like to have
fun?

A

Just try one.

U

Great! Take this one
and here's some beer
to wash it down.

Good - there are more
you can try later.

U

Intro: You and a friend are
going with his brother's older
friends to a baseball game. In
the car on the way there, your
friend's brother pulls out some
pills and gives one to your
friend, then turns to you and
asks if you want a downer.

80
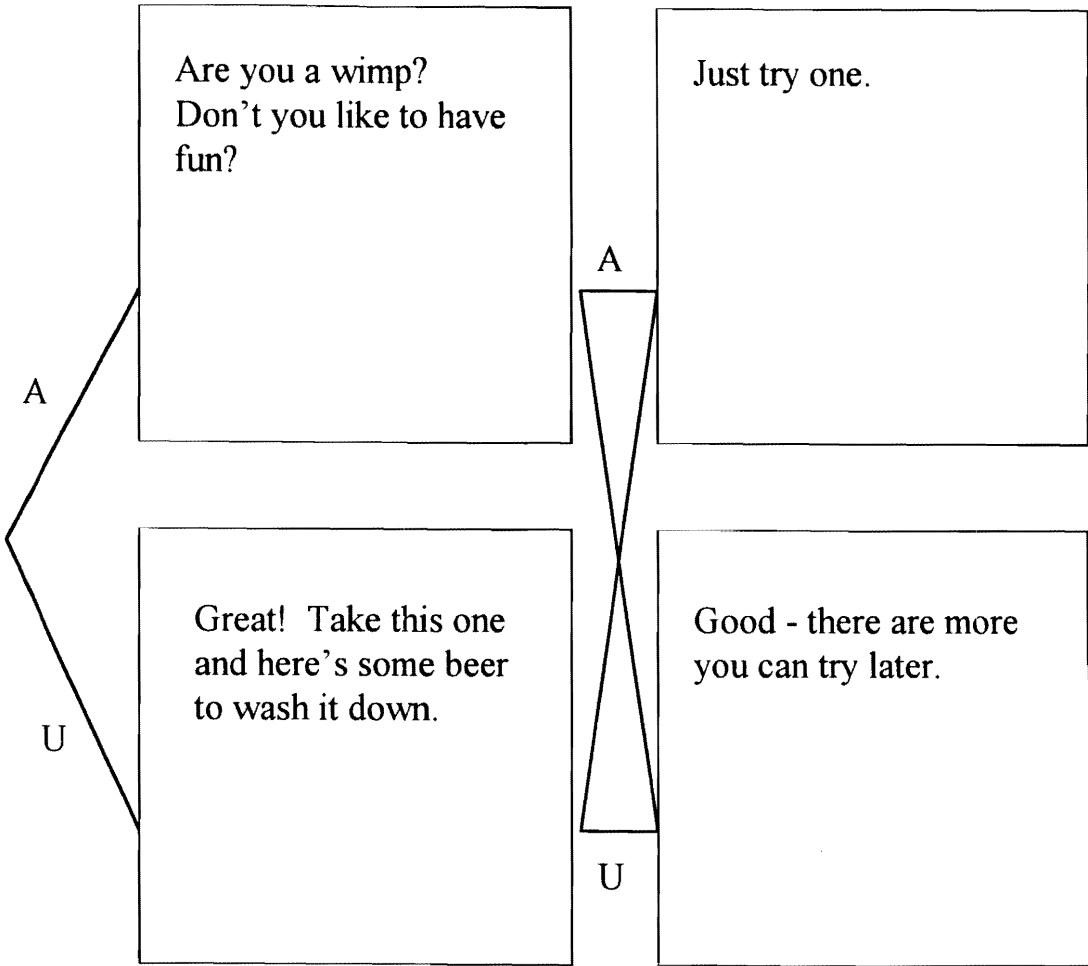
Scene 11
Prompter Gender = F

Breathe it all in and you'll feel great.

A

U

Intro: Some of your friends are hanging out with high school kids back behind the grocery store. Some of the older kids have Whip-Its. A girl passes it to you.

We're all doing it.
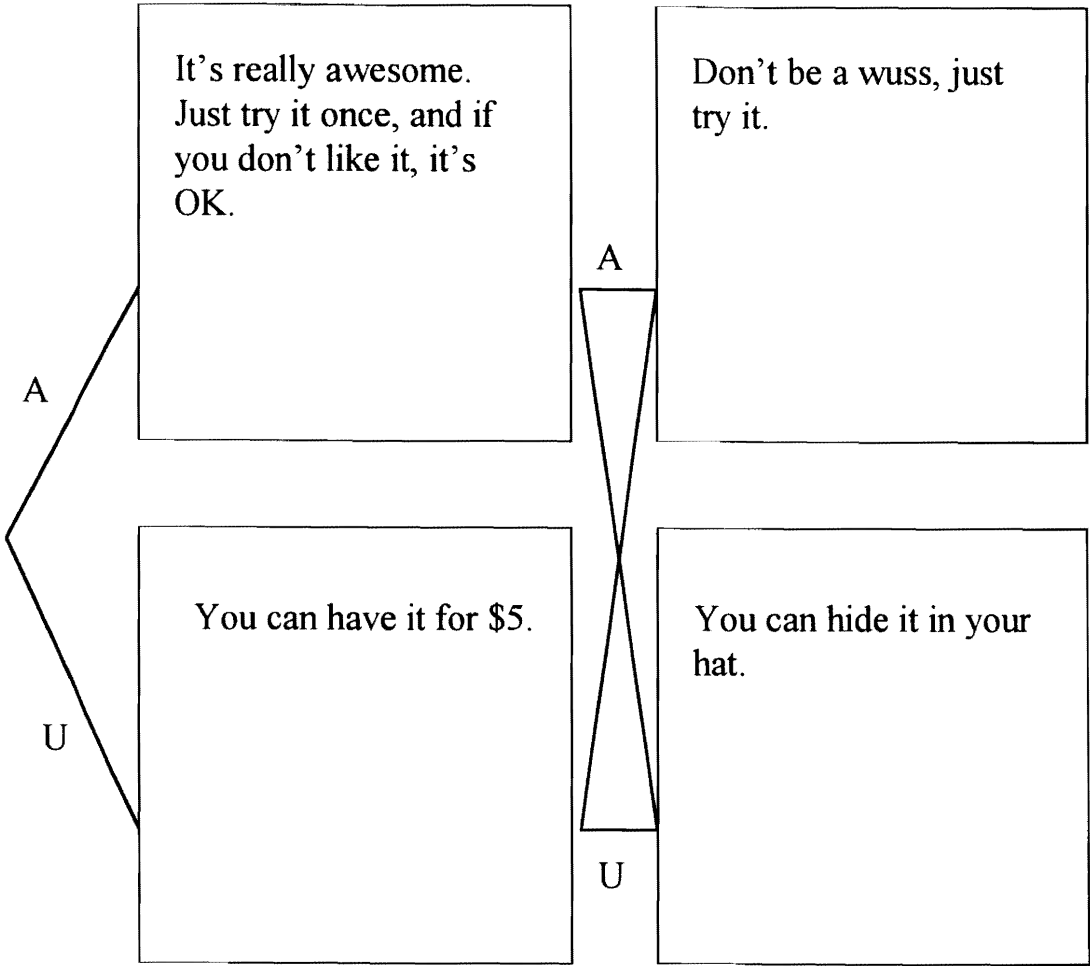You can, too.

Aren't these cool?

A

U

Come on, we're giving it to you for free.

Too bad one high doesn't last longer, huh?

Scene 12
Prompter Gender = M

Hey, we got some crack - you wanna rock?

Intro: You and your friend are walking through the park just after dark. You see a couple of kids your age with some older kids. They call you over and one guy offers you crack.

A

U

It's really awesome. Just try it once, and if you don't like it, it's OK.

You can have it for $5.

A

U

Don't be a wuss, just try it.

You can hide it in your hat.

Appendix 7: The Behavioral Assertiveness Test for Children - Revised

In a few minutes I'm going to ask you to pretend some things. I'm going to describe some situations and I'd like you to pretend that you are really there. I'm going to ask you to imagine that you are with people you know and you will be doing different kinds of things with them, like playing outside, or doing work in school. When I describe each scene to you, I want you to pretend that it is happening right now.

At times (male assistant's name) and at other times (female assistant's name) will help us by pretending that they are with you in these situations. We might pretend that he is a boy in your class or that she is your best friend at home. After I describe a situations, (male assistant's name) or (female assistant's name) will say something to you. Then, I want you to say what you really would say if you really were in that situation with that person. Do you know what I mean?

OK, let's try a situation. Remember to pretend that it is really happening now and say whatever you really would say in that situation. In some of these you might feel angry or irritated at the other person. Now here's one:

(The practice negative assertion scene is presented and counter-response delivered by the assistant. If the subject appears to understand and gave an appropriate response, the next part is presented.)
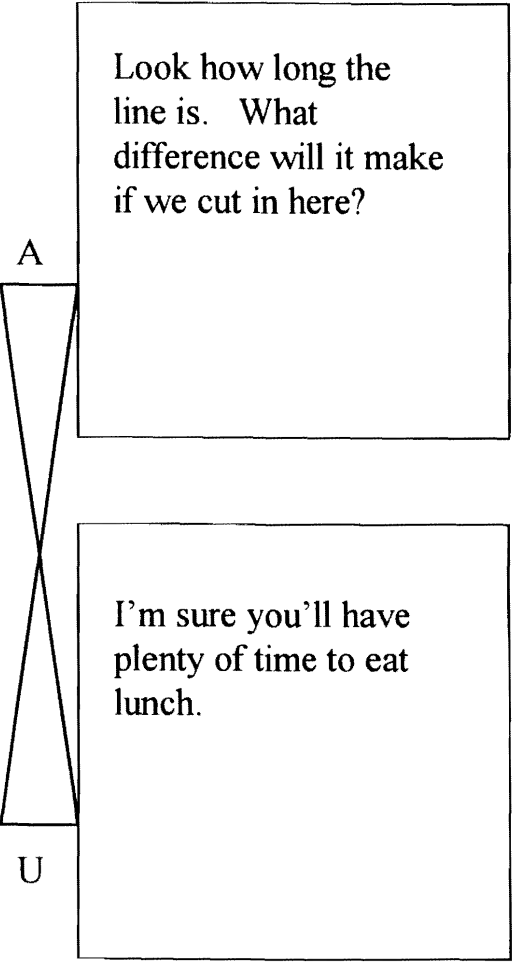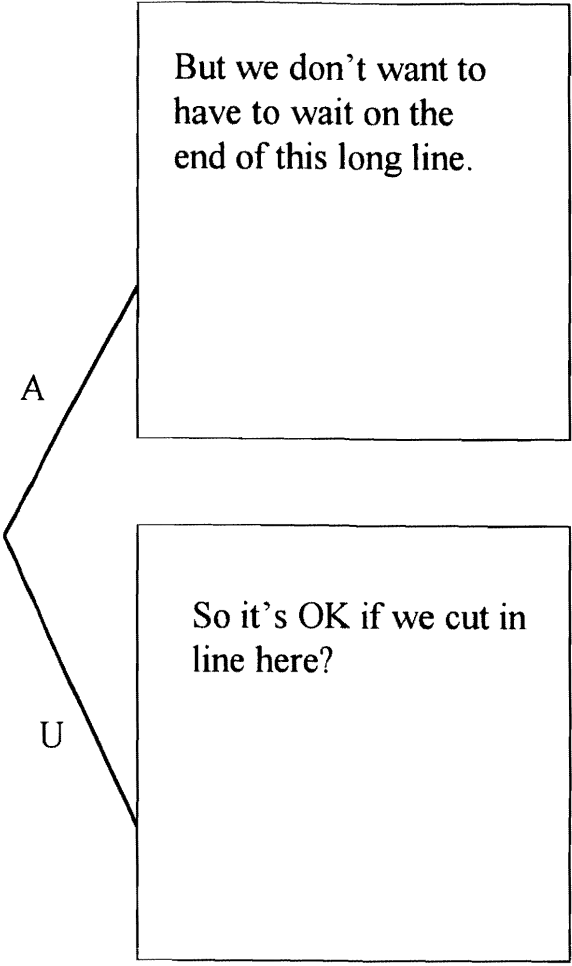
In other scenes, you might feel happy and friendly toward the other person. Listen to this one:

(The practice positive assertion scene is presented and counter-response delivered by the assistant).

Now remember to say what you would really say in these situations, whatever would be on your mind. Now, we'll do some more. Ready?

Scene 1
Prompter Gender = M
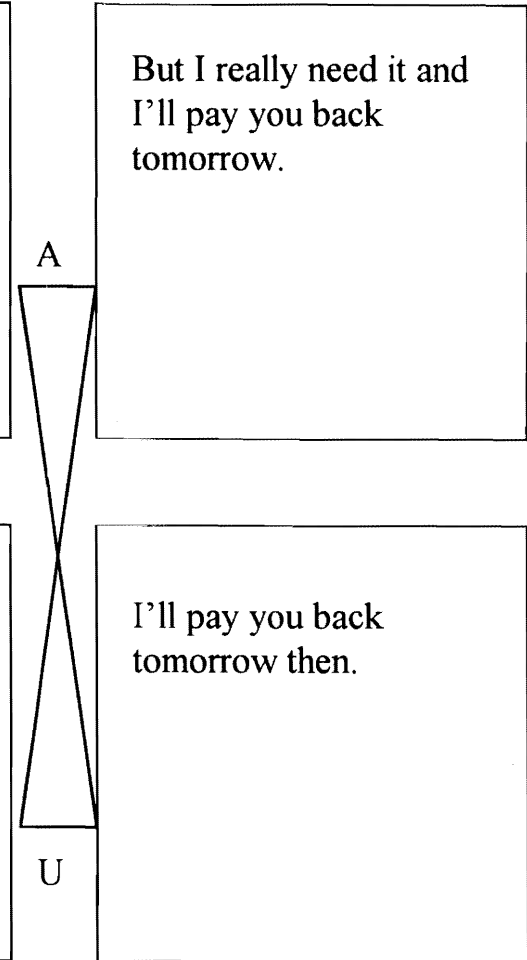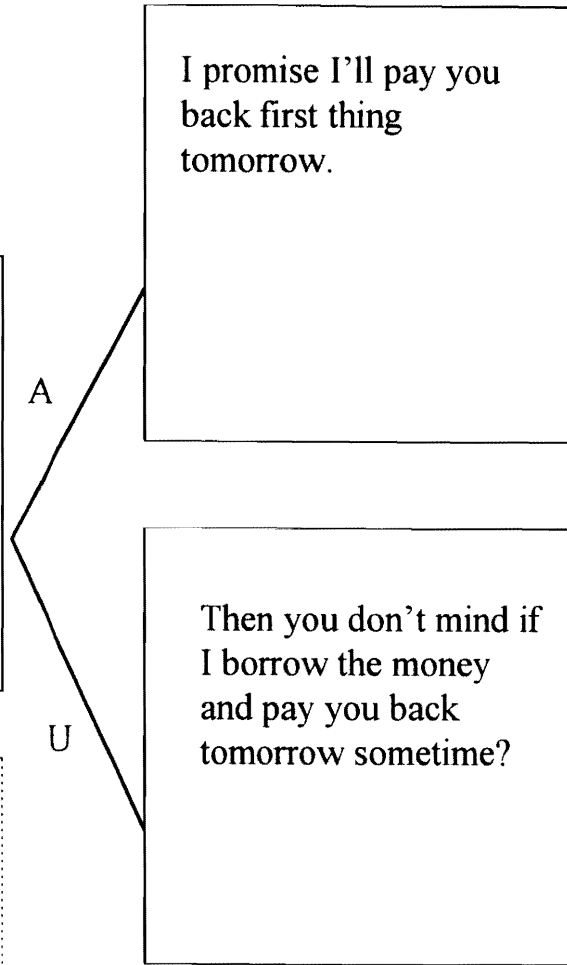
Let us cut in front of you.

A

U

Intro: Imagine that you are standing in line for lunch. A boy comes over and wants you to let him and his friends cut in line in front of you. You are real hungry and if you let them you might not have time to eat.

But we don't want to have to wait on the end of this long line.

So it's OK if we cut in line here?

A

U

Look how long the line is. What difference will it make if we cut in here?

I'm sure you'll have plenty of time to eat lunch.

Scene 2
Prompter Gender = M

Let me have a dollar.
I'll pay you back
tomorrow.

Intro: A boy in your class always borrows money but he never pays you back. After school, he comes up to you and says, 'Let me have a dollar, I'll pay you back tomorrow".

A

U

I promise I'll pay you back first thing tomorrow.

Then you don't mind if I borrow the money and pay you back tomorrow sometime?

A

U

But I really need it and I'll pay you back tomorrow.

I'll pay you back tomorrow then.

Scene 3
Prompter Gender = M

I want to keep your bike until tomorrow, OK?

Intro: Your friend borrowed your bike and said that he would bring it right back. He comes back with it several hours later and you want to use it. He asks to keep your bike until tomorrow.

A

U

But I need it to run some errands and do some other things.

Then you don't mind if I borrow it until tomorrow?

A

U

How about if I bring it back in about two or three hours instead of tomorrow?

I'll bring it back first thing in the morning.

Scene 4
Prompter Gender = F

I want to keep your book until next week.

A

How about if I get the book back in 4 or 5 days?

U

You don't mind then if I keep it until next week?

A

But I really need the book and I'll get it back to you as soon as I can.

U

I'll try to get the book back to you as soon as I can.

Intro: A girl in your class has borrowed your book but now you need it and you want it back. She comes over to you and asks to keep the book until next week.
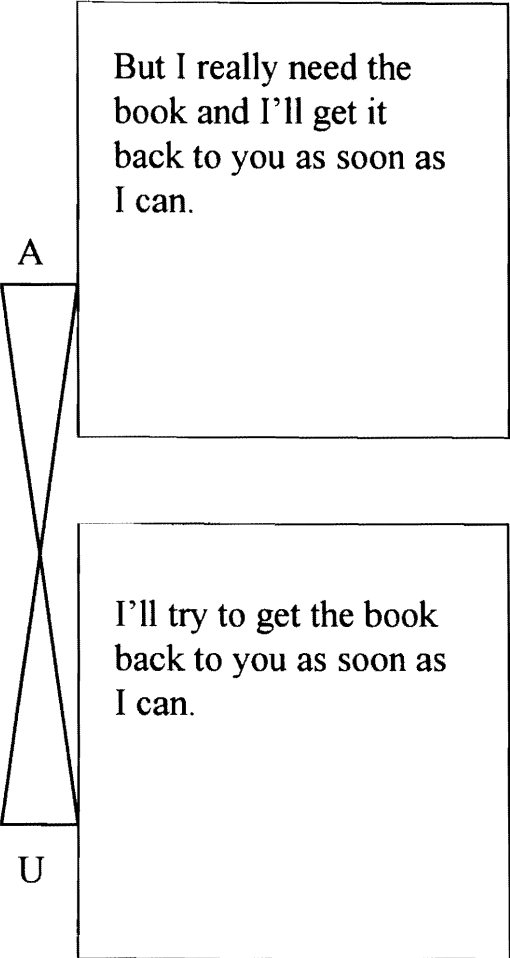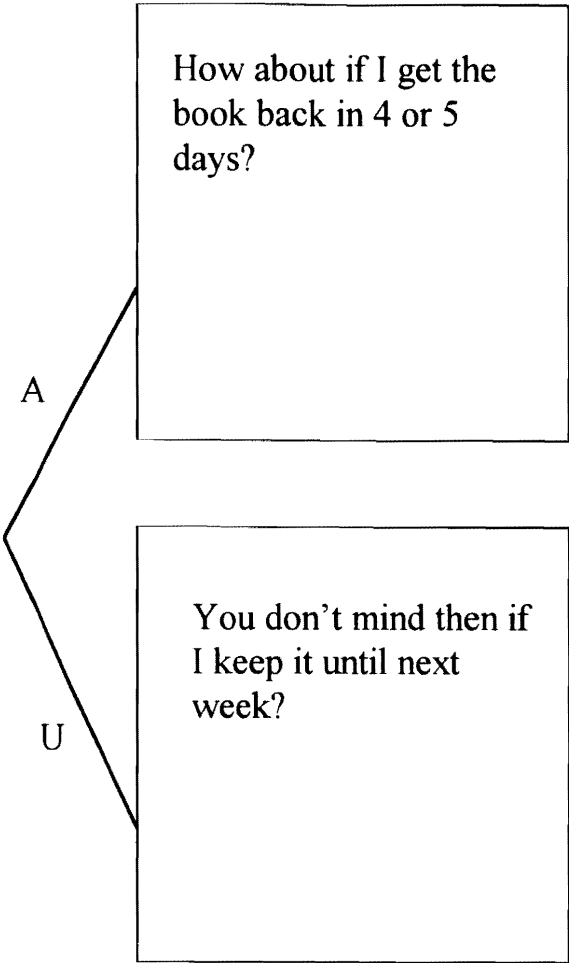
Scene 5
Prompter Gender = F

C'mon, let's play another game. Don't leave now.

A

U

Intro: You are out playing with your friends and having a good time, but you know your mother wants you to be home now and you don't want to make her angry. You want to tell your friends that you have to go home. They ask you not to leave, but to stay and play another game.

Oh, she won't mind if you're a little bit late.

Then you'll stay and play another game with us?

A

U

We can just play a quick game and then you can go home.

We'll make this game a quick one and you won't be very late.

Scene 6
Prompter Gender = F

Boy, this movie stinks.

A

What's the big deal?
It's a crummy movie
anyway.

A

But it's no fun if you
don't joke around in
the movies.

U

So it's not bothering
you too much if we
joke around back
here?

U

It's fun yelling out and
fooling around in the
movies!

Intro: You are at the movies
and it's a really good show,
but some girl in the seat
behind you is making a lot of
noise and is bothering you.
You turn around and she says
to you that the movie stinks.

Scene 7
Prompter Gender = M

Here, let me help you.	Are you sure you're OK?	It really looked like you took a hard fall.

Intro: You are on the playground and you fall down. A boy comes over and gives you his hand. He offers to help you.

Prompter Gender = M

Here, I hope you like it.

You mentioned that this was something that you've wanted for a long time.

I hope you have a lot of fun with it.

Intro: It's your birthday and your friend gives you a really neat gift. He knows that it was something that you wanted for a long time. He hands it to you and says he hopes you like it.

Scene 9
Prompter Gender = M

How did you like that one?

I've been practicing hard for a week now.

I really want to play well for the team.

Intro: You are playing kickball with some of your classmates from school. One of the boys makes a terrific kick and scores a home run. He's on your team and asks how you liked his kick.

Scene 10
Prompter Gender = F

Gee, I really like your sweater. It really looks good on you.

You said you always wished you had one like this.

I hope you really like it.

Intro: Imagine that you got a new sweater for your birthday. You like it very much. Your friend compliments you.

Prompter Gender = F

| How do you like my picture? | It took me a whole week to get it finished. | I wonder if I should try to do another one? |

Intro: A girl in your class drew a picture and she thinks it's really good. You think so too. She asks how you like her picture.

Scene 12
Prompter Gender = F

Wow, that's really great!

It sure looks like you put a lot of work into it!

You should really do more painting. You're very good at it.

Intro: You painted a picture in art class and the girl next to you compliments you.

Appendix 8: BAT-C-R Scoring

BAT-CR Scoring Criteria

(Ollendick, Hart, & Francis, 1985; Weist & Ollendick, 1991)

Eye contact: Looking at a partner at least once during the response

Latency of response: The amount of time between the role-play partner's prompt and the child's response (in seconds). If there is not one full second, then code response latency 0 seconds. If the first word is a filler and there's more than one second between filler and the 1st real word, count time to the 1st real word.

Response Length: The number of words in the child's response. Count beginning filler words like "mmmm".

Body orientation: Scored with subject seated facing the prompter with a forward body lean.

Grammatical Speech Errors: Scored as the number of grammatical errors in speech, such as unacceptable slang (e. g., ain't); incorrect past, present, or future tense; double negatives; deleting large parts of sentences, etc. Don't code contractions such as "wanna" "gonna" or "gotta" as an error.

Energy level: Scored across prompts on a 5-point scale from 1 = apathetic, listless, low-effort responses to 5 = energetic and effortful responses. [Cleaveland added 2 = fairly listless but not the worst 10%; 3 = normatively energetic response, 4 = fairly effortful, but not the best 10%].

Context-inappropriate behavior: When the subject's behavior did not match the context of the scene. Examples include bizarre movements, unusual facial gestures, and language that did not match the scene.

Verbal repertoire: Scored across prompts when two statements (each of at least three words) of divergent verbal content (e. g., containing varying nouns, verbs, adjectives) were emitted. In addition, scored in positive scenes when at least one five-word sentence was emitted.

Stammers: Includes any "filler" words, like "well". Include only if the word is obviously a filler (significant time elapses between the filler word and the "real" statement). Other examples include repetitions of parts of sentence, when there is a pause in the middle of a sentence. Any filler which is one idea should be coded as one um/ah (e.g., "you know" = 1 um/ah).

Content for positive assertion

Denial: Verbal content negating the positive compliment (e.g., "it was nothing"

Aggression: Verbal content relating an aggressive or hostile response (e.g., "Of course I'm all right, stupid"). Does NOT include just disdain (e.g., a sigh). "Shut up" would be coded as aggressive.

Acceptance: Verbal content indicating mere acceptance of the complement (e.g., thanks, it's OK). Not scored when subject is expected to compliment others.

Praise or appreciation: Verbal content expressing gratitude or approval (e.g., "What a great shot" or "Thanks, it was nice of you to help me out.)

Smiles: Scored when lip corners are drawn back and up, with or without teeth showing. Scored from the time the prompter finished speaking up to 2 sec. after the subject's verbal reply.

Negative Assertion

Compliance: verbal content indicating agreement with the role play prompt (e.g., "OK, I guess I'll stay and play.

Aggression: Verbal content reflecting an aggressive response e.g., "You're trying to get me in trouble, I'm going to trip you at recess"

Noncompliance: Basic assertive response with verbal content resisting the role-play partner's response in a minimal way (e.g., "No, I have to go home",).

Request for new behavior: verbal content requesting a change in the role play partner's behavior. "No, I can't play now. Maybe you could come over after dinner and play at my house". Even "shut up" is a request for new behavior (this should also be coded as aggressive).

<u>Statement of consequences</u>: When subject referred to a **negative internal (e. g., hunger)** or external

(e.g., trouble with parents) consequence that would result from compliance with the unreasonable

request. [Consequences may include reasons why not without a direct statement of

consequences"-Cleaveland added]. Examples: I need it 'cause I have to study. But I need to do

my homework. No, you haven't paid me that past $4. That's what you said the last time and the

time before that. I don't like the taste. DON'T code consequences unless it's HELPING an

assertive response. (For example, "I'll stay unpopular if that's what it takes to be popular" is not

helpful to the response --who wants to be unpopular?).

Appendix 9: Self-Report Self-Efficacy and Outcome Expectancy for Refusal Scale

1) **You're home alone with a friend of yours. She sees your mom's cigarettes and suggests that you smoke one.**

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

2) **You and a friend are walking through a department store in the mall. You pass a cigarette machine e and your friend asks if you want to buy a pack.**

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5

Awful	Bad	Neutral	Pretty Good	Great

3) **After school you get off the bus and the most popular person in your grade comes up to you and offers you a cigarette.**

   How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

   <u>If you did say no</u>, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

4) You're at a school dance and your friend notices that the punch has been spiked with vodka.

   How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

   <u>If you did say no</u>, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

5) **On your way back from getting a drink at the football game you see some kids under the bleachers drinking and smoking. They call you over and offer you some vodka and coke.**

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

6) **It's Friday night and you are at a party with some friends. One of them takes some beer from their parents' fridge and offers you some.**

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

7) You're going out with a friend you really like and want to impress. You go to a party and some kids are smoking pot. He takes a drag off a joint and then passes it to you.

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

8) Your best friend and you are walking down the hall. While in the hall, you find a marijuana cigarette. You suggest bringing it to the office, but your friend says, "No, don't turn it in, we should smoke it!".

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

9) **Your sister picks you up at the mall. The two of you leave out a side door and your sister sees her friends hanging out behind a dumpster smoking pot. She gives you a joint.**

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

<u>If you did say no</u>, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

10) **You and a friend are going with his brother's older friends to a baseball game. In the car on the way there, your friend's brother pulls out some pills and gives one to your friend, then turns to you and asks if you want a downer.**

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

<u>If you did say no</u>, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

11) Some of your friends are hanging out with high school kids back behind the grocery store. Some of the older kids have whip-its. A girl passes one to you.

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

12) You and your friend are walking through the park just after dark. You see a couple kids your age with some older kids. They call you over and one guy offers you crack

How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Awful	Bad	Neutral	Pretty Good	Great

Appendix 10: Self-efficacy and Outcome Expectancy for Assertiveness Scale

1. Imagine that you are standing in line for lunch. A boy comes over and wants you to let him and his friends cut in line in front of you. You are real hungry and if you let them you might not have time to eat.

   How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

   If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Would Turn out awful	Bad	Neutral	OK	Would Turn out great

2. A boy in your class always borrows money from you but he never pays you back. After school he comes up and wants to borrow a dollar.
   How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

   If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

3. Your friend borrowed your bike and said that he would bring it right back. He comes back with it several hours later and you want to use it. He asks to keep your bike until tomorrow.

   How sure are you that you could say no?

1	2	3	4	5
No way	Probably	Maybe	Probably	Definitely

If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

4. A girl in your class has borrowed your book but now you need it and you want it back. She comes over to you and asks to keep the book until next week.

   How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

   If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

5. You are out playing with your friends and having a good time, but you know that your mother wants you to be home now and you don't want to make her angry. You want to tell your friends that you have to go home. They ask you not to leave, but to stay and play another game.

   How sure are you that you could say no?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

   If you did say no, how well do you think the situation would turn out overall?

1	2	3	4	5
Would				Would

turn	Bad	Neutral	OK	turn out
out				great
awful				

6. You are at the movies and it's a really good show but some girl in the seat behind you is making a lot of noise and is bothering you. You turn around, and she says to you that the movie stinks.

How sure are you that you could ask her to be quiet?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did ask her to be quiet, how well do you think the situation would turn out overall?

1	2	3	4	5
Would				Would
turn	Bad	Neutral	OK	turn out
out				great
awful				

7. You are on the playground and you fall down. A boy comes over and gives you his hand. He offers to help you.

How sure are you that you could let him help and say thank-you?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say let him help and say thank-you, how well do you think the situation would turn out overall?

1	2	3	4	5
Would				Would
turn	Bad	Neutral	OK	turn out
out				great
awful				

8. It's your birthday and your friend gives you a really neat gift. He know that it was something that you wanted for a long time. He hands it to you and says he hopes you like it.

How sure are you that you could say you like it and thank him?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say you like it and thank him, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

9. You are playing kickball with some of your classmates from school. One of the boys makes a terrific kick and scores a home run. He's on your team, and asks how you liked his kick.
   How sure are you that you could say you like his kick?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say you like his kick, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

10. Imagine that you got a new sweater for your birthday. You like it very much. Your friend compliments you.

    How sure are you that you could say thanks?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say thanks, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

11. A girl in your class drew a picture and she thinks it's really good. You think so, too. She asks how you like her picture.

How sure are you that you could say you really like her picture?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say you really like her picture, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

12. You painted a picture in art class and the girl next to you compliments you.

How sure are you that you could say thanks?

1	2	3	4	5
No way	Probably Not	Maybe	Probably So	Definitely

If you did say thanks, how well do you think the situation would turn out overall?

1	2	3	4	5
Would turn out awful	Bad	Neutral	OK	Would turn out great

Appendix 11: CATS

Choose a or b _in each pair_ telling what you would be MOST LIKELY to REALLY DO.

1. You're playing a game with your friends. You try your very best but you keep making

    mistakes. Your friends start teasing you and calling you names. What would you do?

    a. Quit the game and come home.   or

    b. Punch the kid who's teasing me the most.

    a. Tell them to stop because they wouldn't like it if I did it to them. or

    b. Quit the game and come home.

    a. Punch the kid who's teasing me the most.   or

    b. Tell them to stop because they wouldn't like it if I did it to them.

2. You and a friend are playing in your house. Your friend makes a big mess, but your parents blame you

    and punish you. What would you do?

    a. Clean up the mess.   or

    b. Ask my friend to help me clean up the mess.

    a. Refuse to talk to or listen to my parents the next day.   or

    b. Clean up the mess.

    a. Ask my friend to help me clean up the mess.   or

b. Refuse to talk to or listen to my parents the next day.

3. One morning before class, a friend comes over to you and asks if they can copy your homework. They tell you that if you don't give them your answers, they'll tell everyone that you're really mean. What would you do?

a. Give them the answers.   or

b. Tell them to do their own work.

a. Tell them that I'll tell everyone they're a cheater.   or

b. Give them the answers.

a. Tell them to do their own work.   or

b. Tell them that I'll tell everyone they're a cheater.

4. You're standing in line for a drink of water. A kid your age and size walks over and just shoves you out of line. What would you do?

a. Push the kid back out of line.   or

b. Tell them, "You've no right to do that."

a. I'd go to the end of the line.   or

b. Push the kid back out of line.

a. Tell them, "You've no right to do that."   or

b. I'd go to the end of the line.

5. You lend to a friend your favorite book. A few days later it is returned, but some of the pages are torn and the cover is dirty and bent out of shape. What would you do?

    a. Ask my friend, "How did it happen?"   <u>or</u>

    b. Ignore it.

    a. Call the kid names.   <u>or</u>

    b. Ask my friend, "How did it happen?"

    a. Ignore it.   <u>or</u>

    b. Call the kid names.

6. You're coming out of school. A kid who is smaller and younger than you are throws a snowball right at your head. What would you do?

    a. Beat the kid up.   <u>or</u>

    b. Ignore it.

    a. Tell the kid that throwing at someone's head is very dangerous. <u>or</u>

    b. Beat the kid up.

    a. Ignore it.   <u>or</u>

    b. Tell the kid that throwing at someone's head is very dangerous.

7. You see some kids playing a game. You walk over and ask if you can join. They tell you that you can't play with them because you're not good enough. What would you do?

    a. Walk away, feeling hurt.   <u>or</u>

    b. Interfere with their game so that they won't be able to play.

    a. Ask them to give me a chance.   <u>or</u>

    b. Walk away, feeling hurt.

    a. Interfere with their game so that they won't be able to play.   <u>or</u>

    b. Ask them to give me a chance.

8. You're watching a really terrific show on television. In the middle of the show, your parents tell you that it's time for bed and turn off the television. What would you do?

    a. Scream at them, "I don't want to!"   <u>or</u>

    b. Promise to go to bed early tomorrow night if they let me stay up late tonight.

    a. Start crying.   <u>or</u>

    b. Scream at them, "I don't want to!

    a. Promise to go to bed early tomorrow night if they let me stay up late tonight.   <u>or</u>

    b. Start crying.

9. You're having lunch in the cafeteria. Your friend has a big bag of delicious chocolates for dessert. You ask if you can have just one, but your friend says, "No." What would you do?

    a. Offer to trade something of mine for the chocolate.   <u>or</u>

    b. Call the kid mean and selfish.

    a. Forget about it and continue eating my lunch.   <u>or</u>

    b. Offer to trade something of mine for the chocolate.

    a. Call the kid mean and selfish.   <u>or</u>

    b. Forget about it and continue eating my lunch.

10. A kid in your class brags that they're much smarter than you. However, you know for sure that the kid is wrong and that really you're smarter. What would you do?

    a. Tell the kid to shut up.   <u>or</u>

    b. Suggest that we ask each other questions to find out who is smarter.

    a. Ignore the kid and just walk away.   <u>or</u>

    b. Tell the kid to shut up.

    a. Suggest that we ask each other questions to find out who is smarter.   <u>or</u>

    b. Ignore the kid and just walk away.

11. You and another kid are playing a game. The winner of the game will win a nice   prize. You try

    really hard, but lose by just one point. What would you do?

    a. Tell the kid that they cheated.   or

    b. Practice, so I'll win the next time.

    a. Go home and cry.   or

    b. Tell the kid that they cheated.

    a. Practice, so I'll win the next time.   or

    b. Go home and cry.

12. One of your parents does something which really bugs you. They know that it bugs you, but they just

    ignore how you feel and keep doing it anyway. What would you do?

    a. Try to ignore it.   or

    b. Tell them that they're bugging me.

    a. Get back at them by doing something that bugs them.   or

    b. Try to ignore it.

    a. Tell them that they're bugging me.   or

    b. Get back at them by doing something that bugs them.

13. You're playing with a friend in your house and you're making a lot of noise. Your parents get really angry and start yelling at you for making so much noise. What would you do?

a. Tell them, "I'm sorry, but I can't play the game without making noise."   or

b. Ignore their yelling and continue to make noise.

a. Find something else to do.   or

b. Tell them, "I'm sorry, but I can't play the game without making noise."

a. Ignore their yelling and continue to make noise.   or

b. Find something else to do.

VIRGINIA TECH

Informed consent for Participants of Investigative Projects

Title: Cigarette, drug, & alcohol use refusal skills validation study

Principal Investigators: Bonnie L. Cleaveland, M.S. & Robert S. Stephens, Ph.D.

I. THE PURPOSE OF THIS RESEARCH: There are many drug prevention programs that teach

children to refuse drugs, but we often do not know whether children actually learn the skills. One way to

measure skills is to role-play situations in which children might be offered cigarettes, alcohol, or other

drugs and assess their ability to cope with the situation. In order to measure children's ability to refuse

drugs in actual situations, the test must be validated to confirm that children who are more assertive are,

indeed, better at refusing cigarettes, alcohol, and other drugs.

II. PROCEDURES: Your child will be asked to fill out questionnaires that ask him or her to report

personal and peer drug use and risk factors for substance abuse. Your child will be asked, during class

time or after school, to watch a tape of a child from a county in the New River Valley & rate the child's

social skills, including drug refusal skills, popularity, and attractiveness. The entire rating process will

take approximately 30 minutes. A Ph.D. student in clinical psychology will, after the rating session, give

a talk and demonstration of assertiveness skills, including how to resist peer pressure, which may be

beneficial to your child. He or she will not be pressured to participate and may refuse to participate at any

time without penalty.

III. EXTENT OF ANONYMITY AND CONFIDENTIALITY: In order for the children to feel free to

answer honestly, confidentiality will be maintained; that is, no information will be relayed to you or to

anyone else about his or her ratings. Your child's name will be only on the consent form and will be linked to the drug use and demographic questionnaire only by a number. The information from this research may be used for scientific or educational purposes. It may be presented at scientific meetings and/or published and reproduced in professional journals or books, or used for any other purpose that Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or research. However, any such presentation or publication will not include any information through which your child could be identified.

V. COMPENSATION: Your child will receive the lecture/demonstration on resisting peer pressure.

VI. FREEDOM TO WITHDRAW: He or she may stop participating at any time without loss of privilege to which s/he would otherwise be entitled.

VI. APPROVAL OF RESEARCH: This research project has been approved, as required, by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

IX. PARENTAL PERMISSION: I have read and understand the above description of the study. I have had an opportunity to ask questions and have had them all answered. I hereby acknowledge the above and give my voluntary consent for my child to participate in this study. I understand that if I have any questions regarding this research and its conduct, I should contact any of the following persons: Bonnie L. Cleaveland, M.S. @ (703) 231-7631; Robert S. Stephens, Ph.D. (703) 231-6304; R.J. Harvey, Ph.D., Chair, Human Subjects Committee (703) 231-7030; Ernest Stout, Ph.D., Chair, Institutional Review Board, (703) 231-6077.

I have explained this consent form to my child, and he or she agrees to participate.

Parent's Signature: _____

I understand the procedure of the study and agree to participate.

Teen's Signature: _____ Teen's age _____

Teen's name, printed _____ Teen's grade _____

Appendix 13: Target Subject Consent Form

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Informed consent for Participants of Investigative Projects-Tapes

Title: Cigarette, drug, & alcohol use refusal skills validation study

Principal Investigators: Bonnie L. Cleaveland, M.S. & Robert S. Stephens, Ph.D.

I. THE PURPOSE OF THIS RESEARCH

There are many drug prevention programs that teach children to refuse drugs, but we often do not know whether children actually learn the skills. One way to measure skills is to role-play situations in which children might be offered cigarettes, alcohol, or other drugs and assess their ability to cope with the situation. Your child has already participated in the role-play study. In order to measure children's ability to refuse drugs in actual situations, the test must be validated to confirm that children who are more assertive are, indeed, better at refusing cigarettes, alcohol, and other drugs and are still accepted by their peers. We would like to use the tape we made of your child role-playing drug refusal skills in another study. If you agree, we will show the tape of your child to other teens and ask them to rate the role-play on several dimensions.

II. PROCEDURES

A classroom of children your child's age will view 6 situations of the 24 assertiveness and drug refusal role-plays your child performed. If you live in the New River Valley, children from Roanoke County will be rating the tape, and if you live in Roanoke County, children from the New River Valley will rate your child's tape. This is to minimize the possibility that children rating your child's tape will know your child. Your child's name, or any other identifying information will not be provided to the students rating the tape. The ratings will determine whether the student on the tape is perceived as assertive, able to refuse peer pressure, popular, and respected in order to confirm that the role-played refusal skills are acceptable to peers.

III. EXTENT OF ANONYMITY AND CONFIDENTIALITY

In order for the children to feel free to answer honestly, confidentiality will be maintained; that is, no information will be relayed to you or to anyone else about how your child was rated. The information from this research may be used for scientific or educational purposes. It may be presented at scientific meetings or published and reproduced in professional journals or books, or used for any other purpose that Virginia Tech's Department of Psychology considers proper in the interest of education, knowledge, or research. However, any such presentation or publication will not include any information through which your child could be identified.

IV. FREEDOM TO WITHDRAW

If you change your mind after signing this consent form you can prevent your child's tape from being rated by calling Bonnie Cleaveland at 231-7631.

V. APPROVAL OF RESEARCH

This research project has been approved, as required, by the Human Subjects Committee of the Department of Psychology and by the Institutional Review Board of Virginia Tech.

VI. PARENTAL PERMISSION

I have read and understand the above description of the study. I have had an opportunity to ask questions and have had them all answered. I hereby acknowledge the above and give my voluntary consent for my child to participate in this study. I understand that if I have any questions regarding this research and its conduct, I should contact any of the persons named below.

Bonnie L. Cleaveland, M.S., 552-0652 or 231-7631

Robert S. Stephens, Ph.D. 231-6304

R.J. Harvey, Ph.D., Chair, Human Subjects Committee 231-7030

Ernest Stout, Ph.D., Chair, Institutional Review Board, 231-6077

I have explained this consent form to my child, and he or she agrees to participate.

Parent's Signature: _____ Date: _____

Parent's Name, printed _____ Child's name _____

Appendix 14: Social Validity Rating Form

<table>
<tr><td>

Realistically, would what the teen said be effective in helping him/her avoid use of the drug?

1= definitely wouldn't work   3=50/50 chance it would work   5= definitely would work

     2=probably wouldn't work   4=probably would work   →

</td></tr>
<tr><td>

Would the teen feel good or bad about him/herself after what s/he said?

1= feels bad about self   3=doesn't really feel good or bad   5= feels good about self

     2=feels somewhat bad   4=feels somewhat good   →

</td></tr>
<tr><td>

How would the person offering the cigarettes, alcohol, or drug feel about what the teen said? (Remember, pretend the person offering is your age!)

1= extremely upset or angry   3=wouldn't really care   5= would really respect the person

     2= somewhat upset or angry   4=would respect the person somewhat   →

</td></tr>
<tr><td>

How popular do you think the teen is?

1= very unpopular   3=not really popular or unpopular   5= very popular

     2= somewhat unpopular   4=somewhat popular   →

</td></tr>
<tr><td>

Did the manner in which the teen responded make you like or dislike him/her?

1= extremely disliked   3=wouldn't really like or dislike the persson: neutral   5= extremely liked

     2= somewhat disliked   4=would like the person somewhat   →

</td></tr>
</table>

<table>
<tr><td>

Realistically, would what the teen said be effective in helping him/her avoid use of the drug?

1= definitely wouldn't work   3=50/50 chance it would work   5= definitely would work

     2=probably wouldn't work   4=probably would work   →

</td></tr>
<tr><td>

Would the teen feel good or bad about him/herself after what s/he said?

1= feels bad about self   3=doesn't really feel good or bad   5= feels good about self

     2=feels somewhat bad   4=feels somewhat good   →

</td></tr>
<tr><td>

How would the person offering the cigarettes, alcohol, or drug feel about what the teen said? (Remember, pretend the person offering is your age!)

1= extremely upset or angry   3=wouldn't really care   5= would really respect the person

     2= somewhat upset or angry   4=would respect the person somewhat   →

</td></tr>
<tr><td>

How popular do you think the teen is?

1= very unpopular   3=not really popular or unpopular   5= very popular

     2= somewhat unpopular   4=somewhat popular   →

</td></tr>
<tr><td>

Did the manner in which the teen responded make you like or dislike him/her?

1= extremely disliked   3=wouldn't really like or dislike the persson: neutral   5= extremely liked

     2= somewhat disliked   4=would like the person somewhat   →

</td></tr>
</table>

25 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
26 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
27 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
28 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
29 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
30 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
31 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
32 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
33 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
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35 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
36 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
37 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
38 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
39 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
40 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
41 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
42 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
43 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
44 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
45 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
46 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
47 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩
48 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

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Education

1996

Ph.D., Clinical Community Psychology, Virginia Tech
Blacksburg, Virginia

1992

M.S., Clinical Psychology, Virginia Tech

1989

B.S., Psychology, Minor in Business, Stetson University
DeLand, Florida

Clinical and Teaching Positions

1994 -- present

Medical University of South Carolina
Charleston, South Carolina
Clinical psychology internship and post-doctoral fellowship. Post -- doctoral fellowship in Physical Medicine and Rehabilitation. Internship rotations: Inpatient substance abuse, post-traumatic stress disorder, outpatient counseling, and weight management.

1989 -- 1994

Virginia Tech
Blacksburg, Virginia
University teaching, research, and clinical positions in outpatient and university counseling centers. *Teaching skills*: (Introduction to Personality) designing course materials and tests, didactic and experiential teaching. *Research skills*: experimental design, data management and analysis, and presentation and publication of results. *Clinical skills*: Career and study skills counseling. Stress management, relaxation training, assertiveness training, and behavior modification seminars. Outpatient assessment and treatment of adults and children. Group, family and marital therapy.

1993-1994

Veteran's Administration Medical Center
Salem, Virginia
Intake assessments for 28-day inpatient alcohol treatment. Smoking cessation group. (20% time)

Research Positions

1993-1994

Graduate Project Director, Virginia Tech

"Skin Cancer Prevention Program at Swimming Pools"
[American Cancer Society grant to Richard A. Winett]

Project management, intervention planning, data collection & analysis

1989-1993

Graduate Research Assistant, Virginia Tech

"Relapse Prevention in Treating Marijuana Dependence."
[National Institute on Drug Abuse grant to Robert S. Stephens]

Assessment and intervention consulting, questionnaire creation, data analysis

1992 -- 1993

Graduate Research Assistant, Volunteer
Virginia Tech

"Video and Feedback System for Promoting Nutritious Purchases"
National Cancer Institute grant to Richard A. Winett

Recruiting coordination, design and script consultation, script writing and review

1990 -- 1992

Co-Principal Investigator, Department of Psychology, Virginia Tech

"Drug and Alcohol Assessment Study"
Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services grant, $15,000 to Bonnie L. Cleaveland and Jennifer S. Wertz

Interviewer training on Addiction Severity Index, follow-up interviews, program administration, data analysis

1989 -- 1990

Research Assistant, Volunteer, Virginia Tech

"The Effect of Enhancing Commitment on Adherence to Medical Regimen."
Thesis Research, D.E. Putnam.

Consultation & subject recruitment

Service

1992 | Women & Addictions Round-table, Virginia Tech

1989 -- 1990 | Representative to Clinical Faculty Committee, Virginia Tech

1986 -- 1987 | Honors Council Representative, Stetson University

Volunteer Work

1991 -- 1993

Project FAR (Families at Risk)
Blacksburg, VA

Prevention activities with children at risk for delinquency

Professional Associations

American Psychological Association (Student Affiliate)

Association for the Advancement of Behavior Therapy
(Student Affiliate)

Society for Behavioral Medicine (Student Affiliate)

Honors

May, 1989 | Graduated Magna Cum Laude
1986 -- 1989 | Honors Program
1989 | Outstanding Senior Psychology Major
1989 | Outstanding Research in Psychology
1989 | Outstanding Junior Psychology Major
1989 | Psi Chi Psychology Honorary

Dissertation

Cleaveland, B. L. (1996). Development and Validation of a Behavioral Measure of Drug Refusal Skills in Seventh and Eighth graders.

Thesis

Cleaveland, B.L., & Stephens, R.S. (1992). An Attention-Allocation Model for Alcohol's Effects on Aggression.

Technical Reports

Cleaveland, B.L. (1993, April). Social learning theory analysis of adolescent substance abuse prevention. Preliminary exam paper.

Cleaveland, B.L., Wertz, J.S., & Stephens, R.S. (1992, June). Standardized assessment, description, and prediction of three-month addiction outcomes in a rural community service board population. Final Report for the Student Research Award in Public Substance Abuse Services

from the Commonwealth of Virginia. Presented at the Department of Mental Health, Mental Retardation, & Substance Abuse Services, Richmond, VA.

Presentations

Winett, R. A., Cleaveland, B. L., Tate, D. F., Russ, C. R., Galper, D. I., Lombard, D. N. Lombard, T. N. Promoting skin cancer risk reduction at swimming pools: The SAFESUN project. (1996, March). Poster presented at the Fourth International Congress of Behavioral Medicine. Washington, D.C.

Stephens, R. S., Roffman, R. A., Cleaveland, B. L., Curtin L., & Wertz, J.S. (1995, November). Self-efficacy and marijuana effects expectancies in the prediction of posttreatment marijuana use. Association for the Advancement of Behavior Therapy, Washington, DC.

Cleaveland, B. L. and Denier, C. A. Understanding cognitive dysfunction and recommendations for health care professionals to improve compliance and treatment outcome. . (Symposium presentation, Nov. 4, 1994, Medical University of South Carolina Student Research Day).

Stephens, R. S., Roffman, R. A., Cleaveland, B. L., Curtin, L., & Wertz, J. S. (1994, November). Extended versus minimal intervention with marijuana dependent adults. Association for the Advancement of Behavior Therapy, San Diego, CA.

Curtin, L., Stephens, R. S., Cleaveland, B. L., & Roffman, R. A., (1993, November). Pretreatment substance abuse attrition: Implications for methodology, generalizability, and outreach. Poster presented at the Association for the Advancement of Behavior Therapy, Atlanta, GA.

Roffman, R. A., Stephens, R. S., Curtin, L., & Cleaveland, B. L. (1993, November). Differential attrition from brief and extended interventions for marijuana-dependent adults. Poster presented at the Association for the Advancement of Behavior Therapy, Atlanta, GA.

Glindemann, K.E., Clarke, S.W., Cleaveland, B.L., Buchholz, C.T., & Geller, E.S. (June, 1993). BAC Feedback and the use of Nomograms: A Community-Based Approach for Deterring DUI. Paper presented at the 7th annual meeting of the American Psychological Society, Chicago, Illinois.

Glindemann, K.E., Geller, E.S., Cleaveland, B.L., Buchholz, C.T., & Halsey, R.D. (May, 1993). Developing a Community-Based Process for Providing Individuals with Blood Alcohol Concentration Feedback. Symposium presented at the annual meeting of the Association for Behavior Analysis, Chicago, Illinois.

Wertz, J.S., Stephens, R.S., Cleaveland, B.L., & Roffman, R.A. (1991, November). Predicting Relapse to Marijuana Dependence. Poster

presented at the annual meeting of the Association for the
Advancement of Behavior Therapy, New York, New York.

Stephens, R.S., Wertz, J.S., & Cleaveland, B.L. (1991, November). Expected
Marijuana Effects and their Relation to Use. Poster presented at the
annual meeting of the Association for the Advancement of Behavior
Therapy, New York, New York.

Tashakkori, A., & Cleaveland, B.L., (1989, June). AIDS Knowledge,
Attitudes, and Behavior Among Adolescents and College Students.
Paper presented at the Annual Meeting of the International Council of
Psychologists, Halifax, Nova Scotia, Canada.

Publications

Cleaveland, B. L. (1994). Social cognitive theory recommendations for
improving modeling in adolescent substance abuse prevention
programs. Journal of Child and Adolescent Substance Abuse, 3, 53-
68.

Wertz, J.S., Cleaveland, B.L., & Stephens, R.S. (1995) Problems in the
application of the Addiction Severity Index in rural substance abuse
services. Journal of Substance Abuse, 7, 175 - 188.

Grants

Cleaveland, B. L. (Principal Investigator). Behavioral measure of drug refusal
skills. $5,500 from the Christopher D. Smithers Foundation (1994).

Cleaveland, B. L. & Wertz, J. S. (Co-principal investigators) Standardized
assessment, description, and prediction of three-month addiction
outcomes in a rural community service board population. $25,000
from the Commonwealth of Virginia Department of Mental Health,
Mental Retardation, and Substance Abuse Services (1990)

Projects underway

Cleaveland, B. L., and Shaw, D. L. Efficacy of brief telephone contact to
induce exercise resumption among health club members. Data
collected.

Libet, A. Q. and Cleaveland, B. L. Relationship between cognitive variables
and treatment outcome in patients with spinal cord injuries. Data
collected.