EVALUATING THE VALIDITY OF THE PROBLEM-SOLVING VIDEOS USED IN THE
VIOLENCE REDUCTION TRAINING PROGRAM

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ABSTRACT

EVALUATING THE VALIDITY OF THE PROBLEM-SOLVING SKILLS VIDEO USED IN
THE VIOLENCE REDUCTION TRAINING PROGRAM

by Casey Roca

Violent offenders are responsible for a significant portion of the crime in society. One potential consequence for violent offenses is court mandated anger management. The Violence Reduction Training Program (VRTP) is a 14-week program that utilizes components of the General Aggression Model (GAD) to teach individuals strategies in problem solving, communication, relaxation, and interpersonal skills. Throughout this program, videos are used to aid in introducing and explaining a five-step problem solving model. The current study aims to evaluate whether these videos are effective in teaching the first two steps in the model: Problem Definition and Formulation, and Generation of Alternative Solutions. A sample of 88 undergraduate students underwent training with and without the use of videos, followed by a portrayal of two problems, in which they are asked to define the problem and offer solutions for problem resolution. Pre and post training measures include questions from the Social Problem Solving Inventory-Revised (SPSI-R:S; D'Zurilla, Nezu, & Maydeu-Olivares, 2002a, 2002b) to indicate any changes in problem solving strategies from the training materials. A Mixed Model Analysis of Variance explored the between and within group differences. Results did not support the hypotheses presented. Future research is needed to determine a more effective way to present the problem-solving model.

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CHAPTER I

INTRODUCTION

The topic of violent crimes has made media headlines at a concerning rate. School shootings, bombing attacks, and police brutality seem to be more common topics in the news. Whereas these large acts of violence make headlines, more frequent or every day acts of violence are rarely reported. In 2015, it was estimated that 1% of individuals over the age of 12 were victims of at least one nonlethal violent act, which adds to about 5 million individuals being a victim of a violent crime (Truman & Morgan, 2016). The solution to this violence is unknown and research is limited on successful treatment of violent individuals. In 2011, 54% of state federal prison inmates were incarcerated for violent crimes (Carson & Sabol, 2012). Without appropriate treatment, these individuals are likely to be released and commit more violence, ultimately increasing the risks for others (Rosenfeld, Howe, Pierson, & Foellmi, 2015).). In addition to the higher risk to society, reoffending will generally lead to higher sentencing, which increases costs and resources spent on these institutions (Kelty, 2014). Moreover, these individuals are particularly challenging to treat due to overall hostility and distrust towards the system, including treatment providers. The offender population is more likely to be resistant in treatment and have low motivation to continue treatment after a mandated period (Rosenfeld, Howe, Pierson, & Foellmi, 2015). As a result, research supporting specific treatments over others is limited and will be needed to optimize effective treatment for these individuals and, ultimately, decrease the risk this violence poses to society (Rosenfeld, Howe, Pierson, & Foellmi, 2015).). Societal, cultural, biological, and psychological factors can contribute to violence, and understanding the mechanisms of violence is beneficial for developing the most effective intervention for offenders who engage in violent behavior.

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Theories of Violence

Why an individual is prone to violence has been a point of interest within forensic psychology. Multiple theories have attempted to explain the origin of anger, aggression, and violence. Historically, three main theories of violence are behavioral, neurobiological, and cognitive. Whereas each viewpoint provides its own valuable perspective to where violence stems from, an integrative approach may be the best explanation for this heterogeneous set of behaviors.

In 1939, Dollard and colleagues developed a theory to explain aggression in terms of frustration over goal attainment. The frustration-aggression theory defined aggression as a response always following frustration, the condition that occurs when a goal is unable to be attained (Dollard et al., 1939). Frustration was specifically defined as an external stimulus that inhibited an individual from gaining expected rewards from an established goal (Berkowitz, 1989). Factors that influence the intensity of the frustration, and future aggression, are innate desire for the specific goal or reward, how often an individual is thwarted from attaining his or her goals, and whether an individual attained "partial gratification" from the situation (Berkowitz, 1989). Essentially, the more the individual wanted the goal, the more intense the frustration of not attaining it will be, and this aggression can be amplified with consistent interferences of goals over time. However, if an individual feels as if he or she is attaining some aspect of the rewards, then his or her aggression may be less severe. Under this theory, there may be residual frustration that builds up over periods of time that increase an individual's likelihood for aggression in various situations. This model can used to describe aggression in the terms of scapegoating- when an individual is unable to attain his or her goal, he or she takes out the frustration on another situation or person (Berkowitz,1989). This model postulates that

frustration always precedes aggression, and other than a buildup over time it does not account for the variability in aggression or why some situations evoke more frustration than others. Whereas this theory is only able to explain a portion of aggressive behaviors, the theory has been used to build more comprehensive models of violence and aggression.

In 1989, the frustration-aggression hypothesis served as the foundation of the cognitive neo-association theory of aggression. Berkowitz conceded that the underlying proposition by Dollard and colleagues was adequate but was missing a major function in the explanation. He reformulated the theory to include cognitive processing as the mediator between frustration and aggression (Berkowitz, 1989). It was not defined as simply as aggression being a consequence of frustration; events that induce frustration are heterogeneous and the reaction one has differs depending on numerous factors. Aggression can be a learned response to a situation, an individual may be genetically predisposed to aggression, and various situational factors can influence the intensity or frequency of aggression and violence (Berkowitz, 1989). The neo-association theory suggests that an individual goes through stages that begins with an aversive event causing negative affect, which then generates aggression. Throughout these stages an individual takes in initial information, and automatically processes it enough to determine its aversiveness. The later stages are captured by using higher cortical functions to make connections and utilize automatic schemas to determine thoughts and emotions about the experience (Berkowitz,1989). His model posits that people make associations with stimuli that lead to aggression, and these associations can happen through automatic processing (Dodge, 2008). The frustration variable is only involved to the extent that frustrations are aversive, and aversive situations cause negative affect (Berkowitz,1989). This affect then leads to one's proclivity for anger and aggression, before the cognitive processes are activated to formulate

alternative solutions. Negative affect is not limited to anger, but any negative emotion. This includes an array of emotion, including sadness, depression, and irritability; these emotions influence how the individual appraises the situation, and the likelihood one will respond aggressively. This model suggests that emotion, schemas, and physiological reactions can all play a role in an individual's likelihood to react aggressively, and the strength of that aggression's intensity. Taking affect into consideration helps explain the different variations of aggression in different situations, which was a perceived weakness in the original frustration-aggression model (Berkowitz, 1989).

Attachment theory proposed by Bowlby (1969) has also been used to help explain violent behaviors through learned attachment styles that developed in childhood. It originally began as an explanation for general behavior that stemmed from the attachment of a care taker with an infant that ultimately develops the individual's temperament patterns. It is argued that the attachment of an infant and a caretaker provide the basis for how an individual internalizes and appraises situations. This attachment is biologically based and influences how one connects to others, reacts in situations, and how he or she internalizes emotions (Bolen, 2000). How one bonds with his or her original caretaker affects how he or she develops patterns of behavior through adulthood. These "internalized working models" are used to interprets another individual's motives and behaviors, to predict future behaviors or events, and to generate responses to situations (Bolen, 2000). The theory posits that when the original attachments are not secure individuals adopt negative cognitions and beliefs about oneself. This self-perception can lead to inaccurate perceptions of situations and interactions, which could ultimately lead to more violent contact. One subset of insecure attachment is disorganized attachment, which has been related to relationship violence, suggesting that along with other variables, attachment can

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affect an adult's predisposition to violent behaviors (Fonagy, 1999). This disorganized attachment leads to insufficient coping strategies, an ill-defined sense of self, a negative outlook on how trustworthy others are, and an increased likelihood to practice avoidant behaviors (Bolen, 2000). These characteristics are considered risk factors to impulsivity and violence, which can be traced back to the quality and type of one's early attachment.

As mentioned in previous theories, it has been proposed that aspects of behavior, including violence, can be learned. Sutherland (1947) proposed that interactions with others influence an individual's behavior and outlook on the behavior. This suggests that an individual learns negative solutions to situations, including violence. Burgess and Akers (1966) expanded and built on the specific learning processes, including modeling behavior, operant conditioning, and both nonsocial and social interactions (Nicholson & Higgins, 2017). An individual learns this type of behavior and is then reinforced for it. Albert Bandura (1973) attributed violent behavior to a system of reinforcements, punishments, and behavioral conditioning; he suggested that aggression stems from social learning, in which the behavior is observed and then reinforced in their environment. Bandura viewed behavior as an interaction between personal urges or drives and the environment (Bandura, 1973). Social learning theory suggests that the observation of aggressive behavior being rewarded can strengthened the likelihood of an organism engaging in aggression. An individual can learn both through person experience and vicarious experience (Bandura, 1978). This can be helpful in the explanation of violence across generations (Smith et al., 2011). The environment an individual is surrounded by affects how he or she interacts with other stimuli, including interactions with other people. If the environment is violent, he or she is more likely to react violently to satisfy personal urges because that is how he or she was taught to do (Smith et al, 2011; Bandura, 1973).

Rachlin (2006) adapted Bandura's learning theory and conceptualized aggressive behavior in terms of economic costs and benefits. There are considerable short-term benefits for violent acts such as the satisfaction of the release of frustration or attainment of a desired goal. The immediate gratification of attaining these short-term rewards can seem to be more appealing than the long-term costs or punishments, such as fines, arrests, and jail or prison time. (Rachlin, 2006). As with any reinforced behavior, the behavior then becomes associated with positive reward, and individuals avoid alternative behaviors (i.e, nonviolence), which reinforces violence as the answer to an array of situations. This suggests that there is a learning component to violence and how one interacts with his or her environment can determine one's prospect to engage in more violent behaviors.

Beck (1979) hypothesized the focal point of changing behavior was to identify and change cognitions. Cognitive theories focus on thoughts, thinking errors, and information processing as an explanation for aggressive behavior. This includes factors such as creativity, attention, perception, and problem solving. The cognitive approach attributes violent behaviors to the way individuals think that lead to a lack of coping skills. Violence is conceptualized by negative thoughts about others, the environment, and oneself that limit the options or solutions one sees in a situation (Deutsch, 2000). How one perceives stimuli becomes categorized in schemas, and these are developed in the individual that influence how he or she continues to interpret the environment. If an individual's schema of him or herself is perceived as being threatened or violated in some way (verbally or physically), then anger and violence can be used to restore balance (Blackburn, 1988). If those schemas become skewed to perceive more injustice in a situation, then the individual is more likely to act aggressively as a response. This

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framework accounts for a pattern of behavior that is consistently more aggressive and violent, because the individual has developed more aggressive perceptions of the environment.

According to Beck's (1979) theory of the relation between cognition and emotion, emotion is determined by basic rules and beliefs an individual has that is the foundation of their cognitions. These cognitions become effortless and automatic and one may not be consciously aware that they exist. For violent individuals, these automatic thoughts revolve around the concept of injustice, placing the blame on others and focusing on corrective action (Blackburn, 1988). Individuals give meaning to specific events through these automatic thoughts, which lead to emotions and ultimately behavior. An individual's automatic thoughts are at the basis of what drives him or her to violence, and the individual may not even be aware of these thoughts or biases; individuals will perceive his or her environment in ways that are consistent with these automatic thoughts and behave in ways to restore the perceived injustice. Automatic thoughts are not unique to criminality, however automatic thoughts focusing on injustice and externalizing blame are more likely to lead to violence and aggression (Blackburn, 1988). For example, if an individual believes he never receives a fair opportunity or is consistently treated unfairly, he might be more likely to act violently towards a professional denying him employment compared with an individual who was denied the same opportunity but has a string of different automatic thoughts. Thoughts about injustice can more easily lead to externalizing blame, which is a characteristic of aggressive behavior and a strong risk factor for career offending (DeLisi et al., 2014). Violent offenders tend to hold negative schemas with patterns relating to self-preservation and dehumanizing others. These types of cognitions are found to be one of the foundational circumstances of an individual's risk to reoffending (Polaschek, Calvert, & Gannon, 2009). If an offender continues to hold irrational thoughts that encourage or support negative behavior,

specifically aggression or violence, then he or she is more likely to commit future crimes. These ideas and beliefs one has controls how he or she emotionally reacts to all events, and when those thoughts are rooted injustice and blame externalization, the individual is going to feel justified in acting aggressively to balance that injustice. This theory concludes that cognitions drive the emotions, which become a leading force of behavior and future perceptions.

<div align="center">Integrative Model of Aggression</div>

The aforementioned theories acknowledge the complexity of aggression and how it can manifest differently dependent on the individual, the situation, and the environment. However, these previous models defined aggression and violence with a more linear explanation, and did not account for the different levels of aggression that come into play throughout one's' lifetime nor how the different functions can interact with one another. The General Aggression Model offers a more integrative perspective to explain the development and maintenance of violent behavior. This framework describes an aggression cycle that can escalate over time as more situations arise that evoke an aggressive or violent response. According to this model, aggression encompass a cycle of responses involving situational and individual factors that lead to aggression related cognitions, physiological and affective responses, and outcome appraisals (DeWall, Anderson, & Bushman, 2011). This model highlights concepts within learning, social, and cognitive realms that produce a more complete picture of how aggression develops, forms, and is maintained throughout a lifespan. It unites the previous models to a more comprehensive understanding of how to identify and possibly prevent violent tendencies that interventions would need to understand to target.

The GAM suggests focusing on four dimensions within the individual that can help explain his or her violent tendencies, as well as where to focus in treatment. The level of hostility that is present, how automatic the thoughts have become, the benefits and harm of the ultimate goal, and how much the individual considers the consequences of the aggression all are considered to be critical components to the GAM (DeWall, Anderson, & Bushman, 2011). This model emphasizes thoughts, but rather than cognitions being a narrow focus, it incorporates the various stimuli that influences thoughts and beliefs. It postulates that experiences influence beliefs and knowledge; this knowledge can be built based on previous and immediate information, automatic or irrational thinking, and can be influenced by the environment, affect and biology (Anderson & Bushman, 2002).

GAM focuses on an individual in a particular situation that encourages future decision-making processes in three stages: the person and situation variables, the internal states, and the outcomes. The person and situation are influenced by the underlying biological components, and the environmental factors that make up an individual's personality. The situation he or she encounters elicits internal states: affect, cognition and/or arousal at differing levels. These routes encompass automatic thoughts, state and trait emotions, and levels of arousal that can all influence the original assessment of a situation. These states then impact the outcome, which includes the appraisal and decision processes of what action he or she will take (i.e., thoughtful or impulsive). This outcome is influenced by the environment, such as social surroundings or the effect of the behavior which then further influences the individual. This cycle is continued through each situation and builds upon each other to create schemata and develops irrational thinking for future situations (Anderson & Bushman, 2002). Various factors are inputted into this model that can contribute to aggression and can be targeted in interventions (DeWall, Anderson

& Bushman, 2011). For example, automatic thoughts generate a skewed perception of reality, indicating the need for a defensive reaction to the individual. This is considered the original assessment of the situation, which occurs immediately and automatically. Reappraisal of the situation allows for a more rational overview and the ability to create alternate reactions to the situation (thoughtful action); this reappraisal requires cognitive skills including problem solving abilities that would lead to non-violent behaviors (Benjamin, 2007). If an individual lacks the cognitive resources necessary for successful and appropriate reappraisal, then there is a higher likelihood that the behavior stemming from negative interactions will be violent in nature. Identifying the problematic components of the individual may help identify which characteristics to target for effective treatment.

Treatment of Violent Behaviors

Interventions are developed to effectively treat offenders to eliminate future recidivism. There has been limited research on the effectiveness of specific interventions, but they continue to be utilized in the criminal justice system to reduce criminal behavior (Rosenfeld, Howe, Pierson, & Foellmi, 2015). Since violence it detrimental to society in numerous ways, violent offenders are often required to participate in anger management or violence reduction treatments. Since violence itself is a relatively low frequency variable, focus is often set on targeting anger as a precursor for violence. Meta analyses have shown positive benefits to enacting these rehabilitation programs, both individual and community based studies have found participation in these program to reduce recidivism and the financial costs of offending (Kelty, 2014). There are a few interventions focused on reducing anger and violent behavior for individuals, but the most widely used treatment has been cognitive behavioral focused anger management (Howells,

2010). CBT-based programs have been shown to have more success in decreasing recidivism compared to non-CBT-focused programs or no treatment groups. For example, Thinking For a Change is a widely used CBT focused programs in both outpatient and inpatient correctional facilities and has been found to increase problem solving strategies and individuals that completed the program had 33% less probation violations than individuals that did not complete the program (Rosenfeld, Howe, Pierson, & Foellmi, 2015). Cognitive behavior therapy focuses on how an individual's thoughts affect his or her behavior; these programs work to increase the awareness of negative thinking that leads to criminal and violent behavior. Meta-analyses comparing treatments found that including components such as problem-solving, anger management, and cognitive challenging are more successful in reducing recidivism (Rosenfeld, Howe, Pierson, & Foellmi, 2015).

Anger management is used to teach individuals how to recognize and assess aggression and anger before it evolves into violence, which ultimately will be able to be generalized into their daily functioning. Many individuals within the criminal system present with anger, which provides support to acknowledge this emotion within treatment. However, by only focusing on anger as a core component of treatment has been found to less effective in generalizing treatment across offenders (Rosenfeld, Howe, Pierson, & Foellmi, 2015). More effective anger management programs have utilized other cognitive behavioral interventions in addition to focusing on anger, such as adding components of self-awareness, relaxation, or conflict management skills training (Pilania, Mehta, & Sagar, 2015).

Participation in anger management is typically court mandated and focus on multiple aspects of the individual, including their thoughts, emotions, and behaviors. According to Deffenbacher (2011), three core factors interact to form a situation that ends in anger, which

increases the likelihood of violence. Those three factors include triggering events, an individual's state of mind, and appraisals of the situation. Anger can be triggered by an external event, a mixture of internal stimuli and external stimuli, or by internal stimuli leading to negative responses within an environment. An individual's "pre-anger state" influences the outcome of a situation, whether it be due to their state emotion (momentary or temporary) or their overall personality that can lead to certain outcomes ending more violently than others (Deffenbacher, 2011). This pre-anger state influences how an individual appraises a certain situation at first as well as how the individual processes their emotions due to the triggering event. Since there are these two steps in an individual's appraisal of a situation, there are many steps for the anger management to focus on. Effective interventions focusing on an individual's anger need to include all factors that contribute to his or her anger. This includes understanding common triggers, patterns of how the individual appraises situations and views experiences, how an individual behaves in certain situations, and the outcomes of anger-driven situations (Deffenbacher, 2011).

As previously mentioned, many individuals going through anger management include mandated participation, which could affect the self-report biases such as underreporting their anger to be perceived as less dangerous to the court. Low motivation is also a common characteristic among high-risk court-mandated offenders, which can influence success of the intervention (Rosenfeld, Howe, Pierson, & Foellmi, 2015). It is more effective for the intervention to include more personalized interactions, including interviews and active participation to determine the triggers, appraisals, experiences, and behaviors of the individual. By incorporating a more holistic intervention, compared with a narrow anger-focused treatment, individuals are more likely to remain in treatment and reduce recidivism (Rosenfeld, Howe,

Pierson, & Foellmi, 2015). Cognitive behavioral interventions target these interconnected factors to determine how to best combat their faulty processing that is leading to their dysfunctional anger (Deffenbacher, 2011).

Ideally, by incorporating skills training in anger management the individual can function without as much impulsivity or negative automatic thoughts. By teaching the individual better coping strategies, he or she will be able to appraise situations more effectively and be able to control his or her anger in a more functional way. Overtime, more positive outcomes of less impulsive behavior can reinforce more positive cognitive schemata, that influence future behavior which reduces criminal behavior (Anderson & Bushman, 2002). This can then be supplemented using combined treatments, incorporating relaxation interventions, behavioral interventions, or self-efficacy interventions. By focusing on how an individual reacts to situations, the intervention can individualize where to focus the most while maintaining a structured intervention. These programs allow for the individual to then generalize their new skills to their everyday situations that tend to invoke anger and violence.

Problem-Solving Skills

Individuals with a propensity for aggression are more likely to have aggressive cognitions, resulting in a higher likelihood to identify aggressive solutions to problems (Gilbert, Daffern, Talevski, & Ogloff, 2013). A focus in some anger management treatment includes emphasizing problem-solving skills. Individuals who experience frustration when appraising a situation often have a deficit in problem solving abilities, and are more likely to act with more anger and violence than individuals who have better developed problem solving skills. One way to determine the pattern of responses in an individual is to ask them about a problem and to

explain how they solved it, or to give them a problem and have them come up with ways to solve it (Wenzel, Dobson, & Hays, 2016). The more alternative solutions an individual can come up with, the less likely he or she is to act with anger more personally and act with more emotion have a higher likelihood of acting aggressively and violently. When introducing problem-solving, the quality of the solutions is not the immediate focus, but the overall ability to generate numerous solutions to a single problem. Problem-solving skills has been found to be negatively related to aggression, reflecting support that increasing these skills can better target aggressive behavior (D' Zurilla, Chang, & Sanna,2003). Incorporating problem solving skills in an intervention program has been found to decrease the likelihood of generating aggressive solutions to problems, and increase the individual's ability to more adequately assess his or her problems, and behave in a more functional and appropriate manner (Ramadan & McMurran, 2005).

Poor problem-solving skills is one of the criminogenic risk factors for recidivism among violent offenders (Kelty, 2014). These skills are critical in reducing aggression and violence among offenders. A study by Slaby and Guerra (1988) found problem solving skills to be more focused on aggressive solutions for violent juvenile offenders than their non-offender counterparts, indicating that their solutions to problems and their ability to think of alternative solutions were more limited in both number and content and more likely to lead to violence. If problem solving skills are part of the foundation of anger, then focusing on anger alone will not lead to effective recidivism of violence; incorporating training in problem solving skills will provide a more useful intervention among violent offenders.

Violence Reduction Training Program

The Violence Reduction Training Program (VRTP; Ronan, Maurelli, & Holman, 2013) is a cognitive-behavioral approach to treating individuals consistent with the General Aggression Model (GAM). As previously mentioned, the GAM is based on an individual's personal and environmental variables, internal states of the individual, and the interpretation or appraisal of the situation (which is influenced by cognitive processes). The aim of the program is to identify and focus on skill deficits that lead to aggressive behavior and violent offending. VRTP is a 14-week program that focuses on problem solving, communication, relaxation techniques, and overall interpersonal relationships throughout the stages of the GAM. The intervention begins with exploring beliefs and examining the attitudes that interfere with the treatment, and continues onto teaching a five-step model of problem solving, which influences how an individual both identifies and processes problems. This five-step model include identifying that there is a problem, describing and defining this problem into smaller parts, generating potential solutions for this problem, deciding which solution is the best fit for the problem, and then finally taking action and performing the solution one has identified. Each step is introduced as its own focus and the members of the group are encouraged to practice each skill within and outside of the sessions. These five steps are the basis of the VRTP program that works with individuals and groups to better assess and appraise a potentially aggressive situation.

The five-step model is explored in-depth throughout four weeks and is then utilized in a variety of role playing scenarios to be able to be generalized into real-life scenarios. Throughout the program, group members introduce problems identified throughout their week and are given homework assignments to practice using these steps in real-life situations they encounter. The steps are then continuously utilized within the context of the additional skills the following

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weeks of the program. Incorporated into the intervention are also concepts of relaxation training, including deep muscle relaxation and visual imagery, and variables that could interfere with problem solving, including thinking errors and communication problems. Individuals are taught to better identify when there is a problem, and to reevaluate their original appraisal process to then encourage better outcomes for situations that could otherwise trigger aggressive responses.

VRTP has been found to increase individual's overall problem-solving abilities and decrease offense rate after 3-year following the completion of the program (Gerhart et al., 2015). Court mandated offenders have low motivation and increased attrition rates in treatment which influences the effect the intervention can maintain in changing criminal behavior (Rosenfeld, Howe, Pierson, & Foellmi, 2015). Data on VRTP has found that individuals who complete the program are able to identify more positive solutions, as compared to negative solutions, when presented with a conflict situation (Gerhart et al., 2015).

Use of Videos in Treatment

There is evidence that individuals endorse preferences for specific learning styles, however, there is less evidence indicating that adapting learning styles for the individual increases effectiveness of teaching (Pashler, Mcdaniel, Rohrer, & Bjork, 2009). Research has aimed at identifying how teaching can be more interesting and appealing for students to increase participation and learning of the material. Offenders participating in treatment is often due to court-mandates requiring attendance. These individuals are commonly less motivated and less engaged in treatment than individuals whom volunteered or requested treatment. In addition, violent offenders often have negative schemas related to the system, psychological treatment, and other individuals (Polaschek, Calvert, & Gannon, 2009). This can create barriers in treatment

of offenders, particularly in group settings. One way to increase interest is incorporating videos into lecture to create a more engaging atmosphere for active learning. Interactive teaching has been shown to demonstrate higher engagement in learning and better understanding of the concepts being taught when compared with traditional lecturing (Slavich & Zimbardo, 2012).

Active learning encourages individuals to be more involved in the learning process, which incorporates more cognitive processes and could lead to a stronger conceptual understanding and problem-solving ability (Slavich & Zimbardo, 2012). Incorporating videos in treatment can be viewed as a similar process. By engaging the individuals in more active learning, such as watching and reacting to videos, then they are more likely to think about the concepts more deeply. This encourages further understanding about the underlying theories and ideas being taught, rather than being lectured and taking in information more passively.

When incorporating active learning, it can be viewed as increasing an individual's intrinsic motivation to grasp the concepts more concretely due to being more involved in the learning process (Benware & Deci, 1984). Since motivation may be perceived as low within the offender population, increasing the individual's involvement can be beneficial to the process. Videos in group interventions can be used as an example of learned information, but also provides an opportunity to allow individuals to discuss their opinions, as well as hear different perspectives from others in group settings. Using videos as part of the active learning process provides opportunities for critical thinking, discussion, and expanded problem-solving abilities.

Current Study

This study was conducted to evaluate the value and effectiveness of the videos used in the Violence Reduction Training Program to represent the problem-solving model. In VRTP,

specific videos are used to introduce and discuss problem solving skills, initiating conversation and application about the five-step model introduced in the program. These videos were developed using common themes reported by offenders to increase relatability. However, to date there has not been formal evaluations on the validity of the videos determining whether they are portraying the problem-solving model steps effectively enough to increase the value of the training.

The current study seeks to examine if the videos are being used to adequately train two steps within this model: problem definition and formulation of solutions. Problem definition is described as identifying the specific problem, and breaking it down into the critical components (who, what, where, and when). These descriptors help allow the individual to dissect the specific problem, rather than jumping to conclusions or defining a broad problem that is more difficult to solve. Formulation of solutions is characterized by quantity rather than quality, as determining quality comes in future steps of the model. This encourages withholding judgement and identifying any solution that would solve the defined problem. The videos utilized in the model are meant to encourage these skills, introducing negative situations for the individual to practice the steps. An increase in skills would be demonstrated by an increased ability to define problems and list a greater number of alternative solutions after watching the videos, as compared with training in problem solving without the use of these videos, and those who receive a relaxation training as a control. Training with the videos are hypothesized to be more interactive and encourage additional practice with the skills given a posed situation. This will allow support for the theory that these videos can be generalized and used for effective training in problem solving. This study aims to contribute to the research on violence reduction and problem-solving skills

training, to improve treatment for skills deficits that could be effective in reducing violent and aggressive behavior within violent populations. The following hypotheses were investigated:

1. Those in the video group will show greater skills in problem definition and formulation as evidenced by scores on post-training measures in comparison to the text-only group and the no-training group.

2. Those in the video group will show greater skills in forming alternative solutions to the problems introduced in the video, as evidence by the number of solutions generated, in comparison to the text-only group and the no-training group.

3. Those in the video group will show a greater understanding of problem solving strategies, as evidenced by a greater difference between pre- and post- training measures, in comparison to the other two groups.

CHAPTER II

METHOD

Participants

Undergraduate students enrolled at Central Michigan University that are registered through the psychology department SONA System participant pool were invited to participate in the study in exchange for course extra credit. All participation was voluntary, and participants were informed that their responses would not affect the extra credit they received. Participants included 88 students recruited and randomly assigned to a video training condition (n= 30), a no-video training condition (n= 29), and a relaxation group condition (n= 29) randomly. Two participants were excluded from final analyses due to incomplete data. Participants demographics were similar across groups, and the students were mainly female (63.6%), predominately White (87.5%), with an average age of 20.3 (range 18-42). Thirty six percent of the sample had previous mental health treatment, while 2.3% of the sample had previous violence reduction training. For specific details regarding demographics (see Table 1).

Table 1. *Demographic Characteristics*

Characteristics	Percentage	Frequency
Gender		
Male	23.9%	21
Female	63.6%	56
Missing	12.5%	11
Race		
Caucasian	87.5%	77
African American	3.4%	3
Asian American	1.1%	1
Hispanic	3.4%	3
Native American	2.3%	2
Biracial	1.1%	1
Pacific Islander	1.1%	1
Education		
Freshman	21.6%	19
Sophomore	26.1%	23
Junior	22.7%	3
Senior	11.4%	10
> Fifth year	11.4%	10
Missing	6.8%	6

Note. Mean Age = 20.3 years (SD = 2.93, range 18-42), $N = 88$

Measures and Materials

Demographics

A demographic questionnaire evaluated the characters in each sample, inquiring about gender, age, race/ethnicity, year in school, and history of psychological treatment. This

allowed for comparisons across group to account for external factors that could influences differences found.

<p style="text-align:center">Social Problem-Solving Skills</p>

Social Problem-Solving Inventory-Revised (SPSI-R; D'Zurilla, Nezu, & Maydeu-Olivares, 2002a, 2002b)

This 52- item scale assessed problem solving strengths and weaknesses and problem orientation. Each item is rated on a 0-4 Likert scale that ranges from "Not at all true of me" to "Extremely true of me." Example items include "When making decisions, I do not evaluate all my options carefully enough," or "When I am trying to solve a problem, I go with the first good idea that comes to mind." The SPSI-R is broken down into five scales that assess how problems are approached, including Positive Problem Orientation (PPO), Negative Problem Orientation (NPO), Rational Problem Solving (RPS), Impulsivity/Carelessness Style (IS), and Avoidance Style (AS). There are also 4 subscales, including Problem Definition and Formulation, Generation of Alternative Solutions, Decision Making, and Social Implementation and Verification. Internal consistency of scales has been found to be adequate, with NPO, AS, and RPS being the most consistent at $\alpha = .85$. Thirty-one questions from the SPSI-R:L used to measure Problem Orientation (Positive and Negative), Impulsivity, Problem Definition and Formulation and Generation of Alternative Solutions were used for this study. Alpha coefficients were used to assess internal consistencies of the subscales administered. Internal consistencies used in this study were found to be adequate, ranging from $\alpha = .73$ to $\alpha = .85$ for time 1, and $\alpha =.77$ to $\alpha = .90$ for time 2. The following alpha levels represent first and second administration, respectively. The internal consistency for the Positive Problem Orientation scale was found to be

.73 and .77; the internal consistency for the Negative Orientation scale was found to be α =.76 and α = .90; for the Impulsivity scale, internal consistency was found to be α = .78 and α = .84; for Problem Definition and Formulation, internal consistency was found to be α = .75 and α =.86; and for Generation of Alternative Solutions, the internal consistencies were found to be α = .85 and .89. Participants were given the questionnaire prior to training conditions and following the training. The post-questions were worded utilizing expectations for future beliefs. For example, how one "should" respond to the same questions provided.

Problem Definition and Generation of Alternative Solutions

Additional questions measuring problem definition and generation of alternative solutions were included in the questionnaire. After exposure to a video, participants were asked to 1) define the problem displayed in the video, and 2) generate as many alternative solutions as he/she can to the problem. A rater scored each response based on three criteria: the similarity of the definition to the investigators, the specificity of the problem defined, and the clarity of the definition. The rater was trained in the established scoring process, and a second equally trained rater scored a random subset of 40 items to determine reliability (interrater reliability =.61). The raters included in this study were both graduate students, familiar with the VRTP manual and the problem-solving model. They were provided the established definitions for the presented problems. The criteria were rated using a five-point Likert scale, from zero to four points.

Problem Solving-Skills Videos (VRTP; Ronan, Maurelli & Holman, 2013)

These videos are used to train and assess problem solving skills. There is a total of 10 videos within the program, and four were used during this study. The two videos used included a video introducing step 1: problem orientation and video introducing steps 2 and 3: problem

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definition and formulation, and generation of alternative solutions. For measuring skills learned within the training, two additional videos will be used to depict 'real-life' problems.

Training Video 1: This video depicts how a man reacts to a stressful morning that continues into his boss suspending him at work. Throughout the video, the man's anger escalates and it is clear he believes his problem begins at work, but it really begins in the morning with his stressors. Presented problem given: Bill is late for work for the third time this month

Training Video 2: This video depicts steps 2 and 3 in the training solving model, problem definition and formulation, and generation of alternative solutions. In this video, there is a misunderstanding between a man and woman, and he accuses her of cheating on him based on assumptions he has made during the day. The man verbally faults her and the argument continues to escalate until it appears it may become violent and she admits she was planning a surprise party for his birthday. This video portrays the differences between assumptions and fact, and opens the communication to alternative solutions throughout the argument that would not have ended in a violent reaction. Presented problem given: Doug doesn't trust his girlfriend.

Skills Video 3: This video depicts an "every-day" problem of a teenager missing her curfew and a mother waiting up to greet her when she gets home. The conversation escalates quickly and it results in the mother slapping her daughter. This assesses skills in problem formulation as well as generation of alternative solutions.

Skills Video 4: This video also portrays an "every-day" problem of a son and father arguing about the son attending a school dance. The father dislikes one of his son's friends and they begin arguing about being able to go to an after party. Both individuals feel they are being treated unfairly, and neither are listening to the other's argument. It escalates and neither individual is happy.

The training videos used in the video training provided the problem for the individual, to encourage specificity and clarity. After each skills video, the participant were asked to define the problem, and to generate as many alternatives as they can.

Procedure

Participants were recruited through SONA. The entirety of the study was conducted online through Survey Monkey. All participants gave written informed consent and completed a demographics questionnaire. This questionnaire inquired about age, sex, gender, education level, and history of psychological and anger management treatment. All participants completed the Social Problem-Solving Inventory- Revised (SPSI-R) items, inquiring about their current problem-solving methods. The participants were randomly assigned to one of the three conditions. After the training, all participants were requested to answer two questions pertaining to problem-solving videos, including to define the problem and list as many alternative solutions as they could. At the end of the session, participants completed the SPSI-R items again, inquiring about their perceived future problem-solving methods. All procedures were approved by the Institutional Review Board of Central Michigan University, Mount Pleasant, MI.

Training Conditions

Participants were randomly assigned to either a control relaxation-training group, a video-training group, or a no-video training group. Those in the control group received no formal training on the problem-solving model, but were given training on breathing-retraining methods and muscle relaxing strategies. Those in the video-training group were given training on the problem-solving model accompanied by practice modules with videos. These practice videos provided the individual with a defined problem, and encouraged them to generate solutions to

become familiar with the process of making and understanding specific definitions and

generation of multiple solutions to a problem. Those in the no-video training group were

provided with identical training to the problem-solving model as the video-training group, but

did not have the additional video training incorporated.

CHAPTER III

RESULTS

Normality was assessed through examination of the skewness and kurtosis values of the

distribution for each group and were found to be normally distributed. Homogeneity of variance

was assessed through Levene's Test of Homogeneity for all analyses, and this assumption was

met. Sphericity was unable to be assumed and the Greenhouse-Geisser adjustments were used.

Values for single questions on the questionnaires were missing for 11 items. To account for

missing items, means among the question within the group (i.e, video-training group) replaced

the missing values. Missing values were replaced with the group (i.e., video-training group)

mean value for that item. This method was chosen due to its objective nature and allowed

retaining participants with missing data when calculating subscales. Calculations were conducted

with the missing values removed and with the values averaged across item, and there were no

significant differences, so the following results include averaged items.

Hypothesis One

Problem definition skills were operationalized by scoring three criteria (similarity of the

participant's definition to the investigator's definition, the specificity of the problem defined, and

the clarity of the problem definition) of the participant's definition of the problem in response to

two problem scenarios, resulting in six outcome variables. Six one-way Analysis of Variance

(ANOVA) tests were conducted to compare the six problem definition skills outcome variables

between the three groups (relaxation, no-video, and video). For the similarity of the definition to

the investigators for the first question, the difference between means of each group was

approaching significance, $F(2, 85) = 2.94$, $p = .06$, $\eta_p^2 = .065$. However, there were significant

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group main effect on the specificity of the first problem, $F(2, 85) = 6.60$, $p =.002$, $\eta_p^2 =.134$, and

the clarity of the first problem, $F(2, 85) = 3.44$, $p = .04$, $\eta_p^2 =.075$. There were no significant

main effects of group for the second problem for similarity of definition, $F(2, 85) = 1.39$, $p =$

$.254$, $\eta_p^2 = .032$, for specificity, $F(2, 85) = 1.41$, $p = .250$, $\eta_p^2 = .032$, nor for clarity $F(2, 85) =$

1.60, $p = .208$, $\eta_p^2 = .036$ (See Table 2).

Table 2. *ANOVA of Main Effects on the Quality of Problem Definition and Formulation*

	Df	F value	η_p^2	p
Main Effects for Question 1				
Between Subjects Effects				
Similarity	2	2.94	.058	.065
Specificity	2	6.60*	.134	.002
Clarity	2	3.44*	.075	.036
Main Effects for Question 2				
Similarity	2	1.39	.032	.254
Specificity	2	1.41	.032	.250
Clarity	2	1.60	.036	.208

Note. Total $N =88$. Two questions were presented in which they were requested to provide definitions and generate alternative solutions. Group is defined as one of three conditions: no video, video, and relaxation training. *df* = degrees of freedom. η_p^2 = partial eta squared. $n =$ number of participants. * indicates significance p<.05.

Mean differences on the three criteria of problem definition skills were compared

between the three groups for the first problem presented. Scores on each of these criteria were

created for each of the individual problem-solving scenarios. For specificity, video training was

significantly different than no-video training ($p = .002$) and relaxation (p=.028). The no-video

group (M= 2.48, SD= 1.09) had the highest mean score, followed by relaxation group (M=2.24,

SD= 1.22), and then the video group (M=1.5, SD= .94). Similarly, for clarity of the first problem

presented, the no-video group (M= 2.31, SD= 1.14) had the highest scores, followed by

relaxation group (M=2.07, SD= 1.36), and then the video training group (M=1.53, SD= .97). The

difference between the video and the no-video group was significant (*p*=.033). These results

suggest that those in the no-video training group were more specific and clear in their problem

definition for this item. See Table 3 and for group mean differences for problem one and

problem two, respectively.

Table 3. *Table of Means by Group for Similarity, Specificity, and Clarity of Problem Definition*
for Problem One

Criteria	M	SD
Similarity		
Video	1.80	1.19
No-video	2.58	1.15
Relaxation	2.17	1.39
Specificity		
Video	1.50*	.94
No-video	2.48*	1.09
Relaxation	2.24*	1.22
Clarity		
Video	1.50*	.97
No-video	2.31*	1.14
Relaxation	2.07	1.36

Note. Total *N*= 88. M= mean; SD= standard deviation. The video and no-video groups were
significantly different (p<.05) on specificity and clarity. The no-video group and relaxation
group were significantly different for specificity (p<.05).

Table 4. *Table of Means by Group for Similarity, Specificity, and Clarity of Problem Definition for Problem Two*

Criteria	M	SD
Similarity		
Video	1.83	1.46
No-video	2.41	1.57
Relaxation	2.38	1.47
Specificity		
Video	1.73	1.46
No-video	2.31	1.58
Relaxation	2.31	1.53
Clarity		
Video	1.63	1.35
No-video	2.27	1.56
Relaxation	2.14	1.46

Note. Total N= 88. M= mean; SD= standard deviation. No significant group differences were found for the three criteria on the second problem presented.

Hypothesis Two

The number of solutions generated were calculated and compared across groups using an Analysis of Variance (ANOVA) to assess the differences. The training on problem-solving encouraged a "fun fifteen" suggestion on generating alternative solutions. For the first problem presented, there was a significant group effect for the number of solutions generated, $F(2, 87) = 5.50$, $p = .006$, $\eta_p^2 = .115$. There was a significant difference between the number of solutions generated between the relaxation group and the no-video group (p = .005). The difference between the no-video group and the video group was approaching significance (p=.05). The no-video group on average generated more (M= 5.0, SD = 2.49) solutions than the video (M=3.83, SD= 1.53) and the relaxation group (M= 3.4, SD= 1.48). For the second problem presented, the main effect for group on number of generation of alternatives was approaching significance,

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$F(2, 87) = 3.04$, $p = .05$, $\eta_p^2 = .067$. There were no significant differences between groups on how many solutions were generated. Tables 5 and 6 show the means for the number of solutions generated in each group for problems one and two, respectively.

Table 5. *Table of Means by Number of Alternative Solutions Generated for Problem One*

Criteria	M	SD
Video	3.83*	1.53
No-video	5.00	2.49
Relaxation	3.40*	1.48

Note. Total $N= 88$. M= mean; SD= standard deviation. There was a significant difference between the number of solutions generated for the video and relaxation training groups. Differences between video and no-video training group were approaching significance ($p=.05$).

Table 6. *Table of Means by Number of Alternative Solutions Generated for Problem Two*

Criteria	M	SD
Video	3.41	1.52
No-video	4.28	2.17
Relaxation	3.23	1.41

Note. Total $N= 88$. M= mean; SD= standard deviation. No significant group differences were found for the number of solutions generated on the second problem presented ($p=.053$).

Hypothesis Three

To examine hypothesis three, that those in the video group will show a greater understanding of problem solving strategies in comparison to the other two groups, scores were calculated for each subscale within the Social Problem-Solving Inventory-Revised: Positive Problem Orientation, Negative Problem Orientation, Impulsivity Style, Problem Definition and Formulation, and Generation of Alternative Solutions. A series of mixed-design ANOVAs were used to test for difference between groups. SPSI subscales administered at time 1 versus time 2 served as the within subject variable, whereas conditions served as the between subject variable. As shown in Table 4, there was a significant main effect for time, $F (5, 81) = 6.45$, $p < .001$, η_p^2

= .285. There were no significant main effects for group, $F(5, 81) = 1.16$, $p = .320$, $\eta_p^2 = .066$, nor an interaction effect for group x time, $F(10, 164) = 1.48$, $p = .151$, $\eta_p^2 = .083$. Table 5 shows the mean differences across group for each subscale of the SPSI items.

Table 7. *ANOVA of Main and Interaction Effects on Problem Solving Strategies*

	Df	*F* value	η_p^2	*p*
Main Effects				
Within Subjects Effects				
Time	5	6.45**	.285	<.01
Between Subjects Effects				
Group	1	.34	.066	.320
Interaction Effects				
Between Subjects Effects				
Group x Time	1	.30	.083	.151

Note. Total $N = 88$. Group is defined as one of three conditions: no video, video, and relaxation training. *df* = degrees of freedom. η_p^2 = partial eta squared. *n* = number of participants. ** = significant <.001

Table 8. *Mean Differences for Social Problem-Solving Inventory-R Scales*

Condition	Time 1		Time 2	
	M	SD	M	SD
PPO				
Video	15.57	2.53	16.10	2.87
No-video	15.69	3.16	16.13	2.94
Relaxation	14.72	2.64	16.23	3.05
NPO				
Video	12.43	3.96	10.99	5.07
No-video	12.72	4.04	11.03	4.90
Relaxation	12.24	3.60	9.83	4.73
IMP				
Video	14.23	3.62	13.33	4.79
No-video	16.20	5.14	15.27	5.12
Relaxation	16.17	5.29	14.41	5.29
PDF				
Video	15.40	2.42	16.60	2.88
No-video	14.31	3.60	15.66	3.19
Relaxation	14.26	2.56	15.21	3.77
ALT				
Video	37.63	5.54	40.63	6.73
No-video	34.45	7.07	38.58	6.35
Relaxation	33.68	6.84	39.93	8.58

Note. N=88. PPO= Positive Problem Orientation; NPO= Negative Problem Orientation; IMP= Impulsivity Style; PDF= Problem Definition and Formulation; ALT = Generation of Alternative Solutions. M= Mean, SD= Standard Deviation

CHAPTER IV

DISCUSSION

The current study attempted to identify whether the videos used in Violence Reduction Training Program (VRTP) adequately presented a problem-solving model in a way that increased effectiveness of teaching problem-solving skills. Specifically, this study looked at the first two steps of the model presented: problem definition and formulation of solutions. D'Zurilla and colleagues identified problem-solving as a key aspect of decreasing psychological distress, which in turns decreases aggression and other negative emotions and behaviors (D'Zurilla & Nezu, 2010). Rather than targeting specific behaviors, this model increases general social problem-solving skills by teaching an individual to identify and define a problem, and then to generate potential solutions (D'Zurilla & Nezu, 2010). These skills can then be generalized to a range of problems, increasing overall coping and functionality.

Increasing various skills (problem-solving, relaxation, coping, etc.) is connected to improvements in behavior above focusing on specific behavior, such as anger management (Rosenfeld, Howe, Pierson, & Foellmi, 2015). As such, skill building is being incorporated in many treatments to decrease recidivism in an offender population. VRTP utilizes these theories and incorporates social problem solving into a fourteen-week program that aims to decrease violent behavior. These skills are represented using videos meant to portray specific steps of the model.

The first hypothesis centered around the ability to define problems. This first step is crucial in being able to solve problems and regulate emotional reactions to difficult situations (Nesu et al., 1998). The other steps depend on an individual's ability to define and formulate the problem adequately. Past research suggests this is a complex and difficult step to train (Nesu, et

al., 1998). Cormier, Otani, and Cormier (1986) found that a detailed training in problem definition was effective when emphasizing a "specific approach" to not only defining problems, but also identifying possible causes of the defined problem. The specific approach in that study utilized that emphasized affect, behavior, and cognition (ABC) processes involved in the definition (Cormier, Otani, & Cormier, 1986). The present study focused on an online training module that emphasized specificity, which centered around breaking the problem into more specific parts (who, what, where, and when). The videos were aimed to increase understanding in the importance of and ability to identify and define the specific problem by portraying "problem" situations in relatable and interactive ways. The current results failed to provide support for the current training, with or without videos, which is inconsistent with previous findings that focused training in problem definition increases the ability to provide more specific definitions. Whereas there were significant differences in the first problem presented to the participants in how specific and clear definitions were, as evidenced by scores provided by graduate student raters, the group with the highest scores was the training without the videos. Additionally, there were no significant differences between the groups from the second problem presented.

The current study also failed to show support that the number of alternative solutions identified by the participants for the problems would be higher in the group that received enhanced training with the videos. D'Zurilla and colleagues identified the number of alternative solutions to be connected to an individual's ability to effectively cope with negative situations, and that the quantity of the solutions was more important than the quality of the solutions generated (D'Zurilla & Nezu, 1980). It was hypothesized that the training would increase one's effectiveness in generating more solutions by encouraging and emphasizing quantity over quality. The videos did not prove to increase effectiveness in generating more solutions as

evidenced by insignificant differences between the video-training group with the no-video training and the relaxation group. The text-only training did increase the number of solutions generated within the first problem presented, however, these results did not generalize to the second presented problem, as there were no significant group differences.

Understanding of problem solving strategies were measured with items selected from the Social Problem-Solving Inventory-Revised. The items were separated into five subscales: Positive Problem Orientation, Negative Problem Orientation, Impulsivity Style, Problem Definition and Formulation, and Generation of Alternative Solutions. The items performed well, grouping together in the appropriate scales, each with adequate internal consistencies. There was a significant, but small, difference between scores from time one and time two across all groups, however there were no main effects for the type of group. Upon inspection of the means on the items during time one, the high means may indicate that the average college student may have a higher base line for problem-solving skills. For example, positive problem orientation had a mean of 15.33, however the highest one could get within that group was a 20. Similar patterns are seen with the other subscales. This is consistent with previous research using a college sample, suggesting the training may be more effective in groups with lower initial problem-solving skills as there is more room for improvement and fewer ceiling effects (D'Zurilla & Nezu, 1980). Future research should include evaluating the training with a population known to have lower skills, such as an offender population (Gilbert, Daffern, Talevski, & Ogloff, 2013), that may benefit more from direct instruction and social problem-solving training than the average college students.

The current study had important limitations to note. As mentioned previously, the study was conducted entirely online which may have limited participant engagement in training and how interactive the trainings were. Since this study aimed at evaluating the videos used, active interaction among group members was not a focus. However, in-vivo trainings typically include opportunities for discussion and questions, which the videos may enhance rather than being used to identify specific steps. The discussion may be the active mechanism for change from which learning develops; the videos may serve to enhance discussion or provide a specific topic of focus, which could be beneficial in in-vivo groups. Moreover, the nature of these videos may also impact the ability to supplement the trainings due to the possibility of finding humor or lack of relatability within the reenactments. Additionally, as it was online, there was no control for social desirability which may have influenced the way in which participants responded to the items. Future scales could include additional questions to measure the rate individuals are responding in a favorable way, such as items from the Marlowe-Crowne Desirability Scale (Crowne & Marlowe, 1960).

Future research should evaluate how different levels of interaction within the training may or may not influence an individual's understanding of the material and how videos could enhance the interaction, while also controlling for social desirability. Additionally, relaxation training was used as a control group, which may have had an indirect effect of increasing focus. A more neutral control group could show more distinct differences among the groups. It was intended as an alternative to problem-solving training, as it is also incorporated in the VRTP protocol, and it was found to have similar patterns as direct problem-solving training. These results support that relaxation training is a positive supplement to increasing overall coping skills and decreasing negative problem-solving strategies. Additional research in incremental value of

including relaxation training in more court-mandated treatment may support continued use of these strategies. Lastly, the low interrater reliability of .61 when scoring the similarity, specificity, and clarity of the problem definition and formulation may indicate a flaw in conceptualization of these criteria that may have influenced the interpretation of progress in understanding.

Implications of these data indicate that these videos may not be the most effective way to portray these steps of the problem-solving model as intended. They do not appear to add any clarity or value to the training, and may actually provide a more confusing or contradicting message as indicated by lower scores on the measures as compared to the text-only group. Nezu and D'Zurilla (1981) suggested that the specific training was more effective than presenting general information of problem-solving skills. It was hypothesized that including videos would enhance the training, however, the results do not support that assertion. Future research would benefit from additional evaluations of enhancing problem-solving skills training to increase active learning and reduce recidivism rates.

APPENDICES

SOCIAL-PROBLEM SOLVING INVENTORY- REVISED QUESTIONS

Instructions

Below are some ways that you might think, feel, and act when faced with **PROBLEMS** in everyday living. We are **not** talking about the common hassles and pressures that you handle successfully everyday. In this questionnaire, a **problem** is something important to your life that bothers you a lot but you don't know immediately how to make it better or stop it from bothering you so much. The problem could be something about yourself (such as your thoughts, feelings, behavior, health or appearance), your relationships with other people (such as your family, friends, teachers, or boss), or your environment and the things that you own (such as your house, car, property, money). Please read each statement carefully and choose one of the numbers below that best shows how much the statement is true of you **since you began treatment**. See yourself as you **usually** think, feel, and act when you are faced with important problems in your life **these days**. Put the number that you choose on the line before the statement.

> 0 = Not at all true of me
> 1 = Slightly true of me
> 2 = Moderately true of me
> 3 = Very true of me
> 4 = Extremely true of me

1. _____ When my first efforts to solve a problem fail, I know that if I persist and do not give up too easily, I will eventually find a good solution.

2. _____ I become depressed and immobilized when I have an important problem to solve.

3. _____ When making decisions, I go with my "gut feeling" without thinking too much about the consequences of each option.

4. _____ When I am having trouble understanding a problem, I try to get more specific and concrete information about the problem to help clarify it.

5. _____ When my first efforts to solve a problem fail, I get very frustrated.

6. _____ When the outcome of my solution to a problem is not satisfactory, I try to find out what went wrong and then I try again.

7. _____ When my first efforts to solve a problem fail, I get discouraged and depressed.

8. _____ When I am attempting to solve a problem, I act on the first idea that comes to me.

0 = Not at all true of me
1 = Slightly true of me
2 = Moderately true of me
3 = Very true of me
4 = Extremely true of me

9. _____ When I have a problem to solve, I examined what factors or circumstances in my environment might be contributing to the problem.

10. _____ When I try to think of different possible solutions to a problem, I cannot come up with many ideas.

11. _____ When making decisions, I do not evaluate all my options carefully enough.

12. _____ When a solution that I have carried out does not solve my problem satisfactorily, I do not take the time to examine carefully why it did not work.

13. _____ Whenever I have a problem, I believe that it can be solved.

14. _____ When I am trying to solve a problem, I get so upset that I cannot think clearly.

15. _____ I am too impulsive when it comes to making decisions.

16. _____ When I have a problem to solve, one of the first things I do is get as many facts about the problem as possible.

17. _____ When I have decisions to make, I weigh the consequences of each option and compare them against each other.

18. _____ When I am faced with a difficult problem, I believe that I will be able to solve it on my own if I try hard enough.

19. _____ Difficult problems make me very upset.

20. _____ When I am trying to solve a problem, I go with the first idea that comes to mind.

21. _____ When I have a problem to solve, one of the things I do is analyze the situation and try to identify what obstacles are keeping me from getting what I want.

0 = Not at all true of me
1 = Slightly true of me
2 = Moderately true of me
3 = Very true of me
4 = Extremely true of me

22. _____ When I am trying to solve a problem, I think of as many options as possible until I cannot come up with any more ideas.

23. _____ I hate having to solve the problems that occur in life.

24. _____ When I have a decision to make, I do not take the time to consider the pros and cons of each option.

25. _____ When I am attempting to solve a problem, I try to be creative and think of new or original solutions.

26. _____ When I am faced with a difficult problem, I doubt that I will be able to solve it on my own no matter how hard I try.

27. _____ When I have a decision to make, I fail to consider the effects that each option is likely to have on the well-being of other people.

28. _____ When making decisions, I use a systematic method for judging and comparing alternatives.

29. _____ When I am trying to solve a problem, I often think of different solutions and then try to combine some of them to make a better solution.

30. _____ When making decision, I consider both the immediate consequences and the long-term consequences of each option.

31.   _____ When I am attempting to solve a problem, I approach it from as many different

angles as possible.

TEXT-TRAINING

The Problem-Solving Model:

1. "Noticing a problem" is the first step. It is using a helpful way to think about problems. This also is knowing when you have a problem.
2. "Describing the problem" is the second step. This is breaking the problem down into smaller pieces.
3. "Solutions" is the third step. This is coming up with ways to solve the problem.
4. "Deciding" is the fourth step. This is picking the best thing to do to solve the problem.
5. "Taking action" is the fifth step. This is doing what was decided and looking to see if it worked.

Problems can be small stressors.

1. Hassles are small situations that bother you. Hassles can happen a lot. Examples include waiting for someone, losing keys, etc. Can you come up with any examples?
2. Hassles can build throughout the day.

Problems can be large stressors.

1. Major life events are big stressors, such as a loss of a spouse. Can you identify other major events?
2. Major life events occur less frequently than hassles and can be a significant and lasting source of stress in a person's life.

Instead of doing the first thing that comes to mind, it is better to **STOP and THINK** about a problem.

1. Getting angry, you can get "off track" so that you miss the goal
2. Recognizing a problem is the first step toward solving it
3. It works better to focus on solving a problem than to look for who is to blame
4. You can blame whomever you want, but you still end up having the problem
5. It is better to solve problems than to let them build up (e.g., idea of stamp collecting)
6. Problems are solvable

To begin solving problems, first learn to recognize there is a problem:

1. Use feelings and emotions as guides (e.g., frustration, uncertainty, apprehension, sadness, and anxiety)
2. Use thoughts as guides (e.g., "Nothing seems to work," "I don't know what to do," "What is going to happen now," "I can't do anything right," and "I'm getting butterflies in my stomach")

3. Use behaviors (actions) as guides (e.g., increased swearing, sleeping, smoking, drinking, etc.)
4. Identify areas of life where problems might occur (e.g., job, friendships, relationships with intimate partners, religion, recreation, finances, career, sex, self-improvement, education, pet peeves and complaints, fears and anxieties, waste and inefficiency, environment, politics, and local community)
5. Identify situations where problems are likely to occur (e.g., unfamiliar situations, changes in the environment, obstacles to a goal, and conflicts among goals)

The last part of problem orientation is to start using the idea "stop and think**."** Stop when a problem is recognized and think what can be done to solve it.

In addition to recognizing stressful situations through changes in feelings, actions, and thoughts, someone may tell you that you have a problem. Your first reaction may be to ignore this information. Instead, spend some time trying to understand why they think you have a problem.

The next stage is **PROBLEM DEFINITION AND FORMULATION** (Nezu & D'Zurilla, 1981). The goal of this stage is to train people to define problems and goals in such a way as to increase their ability to solve problems.

Specific steps follow:

1. Describe the problem clearly and give details (e.g. how clear is the problem "I lack self-esteem").
   - Try to break down the problem into parts and specify the details of the situation (e.g., instead of "I have a terrible marriage," begin identifying problem areas in more specific details, such as, "When we talk about money we usually end up fighting").
   - Ask these questions: who, what, when, and where.
     - *Notice "why" can get into the idea of blame versus the idea of who has the problem and who can solve it. However, "why" can also be used to clarify the problem. i.e., why it is a problem for the client.*

2. List facts and assumptions. Can you think of examples of facts and assumptions? (e.g., husband/wife forgot milk at the store [fact]; he/she must not care about his/her children [assumption]).
   - A fact is an event that has been observed.
   - A fact is something that you can see, taste, smell, feel, hear, or you can look it up in several resources (e.g., encyclopedia, library, etc.).
   - An assumption is a belief, which seems to be true or probable.
   - Often people who "look before they leap" (by making sure that they have facts rather than jumping to conclusions simply on the basis of inferences or assumptions) are better able to solve the problem.
   - Opinions are not facts. (What do you think about this?) For example, an opinion is that chocolate cake is the best-tasting desert while a fact is that chocolate cake is made from eggs, flour, cocoa, etc. (What is the difference?)
   - Using more specific details helps.

3. Discuss the following common phrases (all of which are assumptions):
   - Absence makes the heart grow fonder.
   - Out of sight, out of mind.
   - Look before you leap.
   - Strike while the iron is hot.

4. Search for the facts.
   - Sometimes by getting more information, an opinion can turn into a fact.
   - Ask questions; be a scientist or a detective. An important question to ask is "Where is the evidence?"
   - Attempt to use all information at hand; do not simply focus on a small part of it (e.g., "My son gets good grades in Art and Math but poor grades in English and Gym" versus "My son gets bad grades in school").

5. Identify the goal. Can you have a problem without a goal?
   - Specify the goal in detail.
   - One way to figure out the goal is to ask "What will be different when the problem is solved?" This is important later in problem solving because goals and solutions should match.
   - Break goals down into smaller subgoals when necessary.
   - Look at the difference between rational and irrational goals (e.g., "I have to be constantly happy in my marriage" versus "My marriage is successful if most of the disagreements between my spouse and I get resolved").

Stage 3 of the problem solving model is called **GENERATION OF ALTERNATIVES** (Nezu & D'Zurilla, 1981).

1. The goal is to think of as many solutions as possible. This can be thought of as answering the question, "What can be done to overcome the obstacles in order to reach my goal?" The goal behind this stage is to come up with lots of possible responses.
2. Often the first solution that comes to mind is not the most effective one. That is why it is important to stop and think about the problem and the solutions, and not to act impulsively.
3. Important parts
   - The "fun fifteen." The more alternatives people produce, the more likely they are to generate the best ideas. Therefore, you should focus on thinking of as many ideas as possible without giving up too quickly.
   - The best ideas are often the ones that are thought of later; this is why it is important not to quit too quickly or early.
   - Sometimes after running out of ideas people will find that by giving their minds a "rest" for a short period they will again be able to think of more ideas.
   - There can never be too many ideas to choose from. More ideas increase the chance of finding the best solutions to the problem.

4. Wait to judge
    - Try not to judge the solutions at this point. Judgments are to be saved for the decision making stage later on.
    - Don't evaluate a solution until a list of possible alternatives has been compiled. Some people refer to this list as the "fun fifteen" because our problem should have at least 15 solutions.
    - Try thinking out of the box to come up with many different solutions.
    - More effective solutions are thought up using these procedures than trying to produce only good quality solutions.
5. Be detailed
    - It is good to be as specific and detailed as possible.
    - Solutions should contain information about "what" is going to be done about a particular problem and "how" it is going to be carried through.
    - The solutions are should be stated in clear, understandable terms, and should not include any unnecessary details.

APPENDIX C

VIDEO-TRANSCRIPTS FOR TRAINING

Video 1: *Bill is having a difficult morning: woke up later than usual and worried about being late for work; children are being difficult and nonresponsive; and wife brings up financial problems as he is attempting to leave for work. Bill arrives to work and his boss, Sheila, confronts him about his lateness. Sheila brings up that he has been late on two previous occasions this month and tells him that she is going to write up a disciplinary report. He reacts defensively and starts arguing with Sheila. Sheila then tells him that she is no longer going to put up with his angry outbursts and therefore will suggest a one-week suspension without pay. Bill continues his verbal attack.*

Video 2: *Doug and his wife, Kathy, are getting ready for work. Kathy tells Doug that her ex-boyfriend and father of her child, Jack, is coming to pick up the kids. Doug tells Kathy he will not be home for lunch as he is working out of town that day on a construction job. Jack picks up the kids and then Kathy leaves for work. Before leaving for work, Doug receives a call from his boss saying that his site was rained out, and he was not needed that day. While at home, the phone rings. While checking the caller ID, Doug discovers that it was Jack who called. Doug prepares lunch to surprise Kathy, but Kathy does not return home for lunch. Doug calls her office and is told that Kathy did not come in for work that day. Doug assumes she is with Jack and constantly thinks about her unfaithfulness until Kathy returns home, at which point, he confronts her. After verbally and physically attacking her, Doug learns that Kathy spent the day planning a surprise birthday party for him.*

APPENDIX D

RELAXATION TRAINING

Introduction to muscle relaxation.

1. Muscle relaxation helps people to relax by physically relaxing the muscles.
2. Daily muscle relaxation can prevent the build-up of stress in the body.
3. Taking the time to relax also helps with having more energy.
4. People can be taught to remove tension from their muscles. A good feeling can result. This feeling can also be used to help decrease alcohol and drug use.
5. Relaxation may be used to facilitate sleep.
6. Muscle relaxation can help people to be less impulsive or less aggressive.
7. Muscle relaxation can be learned. Like riding a bike well, practice is required.
8. We recommend practicing muscle relaxation twice daily for at least 10 minutes.
9. Over time people can learn where tension is stored in their body and to concentrate their efforts on specific muscles.

Using thought pictures.

1. Emotional stress can be from daily events (e.g., having an argument with the boss).
2. Emotional stress can also be from thoughts (e.g., worrying about finances).
3. In the same way, emotional calm is from daily events or thoughts.
4. Sometimes people can't control daily events so thoughts must be used to help reduce stress.
5. Thought pictures can provide a time-out from everyday events and create a sense of well-being.
6. Thought pictures can also create a relaxed feeling in stressful situations. You can't be stressed and relaxed at the same time.
7. We use thought pictures to create a calm scene.
8. "How many windows are in your living room?" Did you see your living rooms in your head and count the windows? That is an example of using thought pictures.
9. Some people find thought pictures of being on a beach to be calming; others like a forest scene or relaxing in a hammock.
10. One important thing is that the scene use sight, sound, touch, smell, and taste.

Creating thought pictures.

1. The scene should be a place where no one can interfere. It should be a place where only the individual can go. Don't use a place such as a bedroom or a living room, where others often go.
2. Use as many senses as possible.
3. Learn to use thought pictures in stressful situations.

Breathing Retraining.

The way we feel is affected by the way we breathe. For example, when we are upset, we are often told to 'take a few deep breaths'. This is not quite right, however. When we are feeling anxious or frightened, we don't need to take a deep breath; we need to take a normal breath and exhale slowly. Breathing out is associated with relaxation, not breathing in.

While concentrating on a long, slow exhalation, it is a good idea to say the words 'calm' or 'relax' to yourself. These are good words to use because they are already associated with feeling peaceful and at ease. They can also be dragged out to match the long, slow exhalation, as in 'r-e-e-e-l-a-a-a-x' or 'c-a-a-a-a-a-l-m'.
It is also important to remember to slow your breathing down. Often when people are frightened or upset, they start to breathe faster. This is a natural reaction and prepares the body to fight the threat or to run away. If you are not going to fight or run away, however, you may be taking in too much air and starting to over-breathe or 'hyperventilate'. This causes unpleasant physical symptoms.
So, what we need to do is to slow our breathing down and take in less air. We do this by taking smaller breaths and by pausing between breaths to space them out. It is also important to try and breathe in through your nose, not through your mouth. Once you have taken a normal breath in through your nose, hold your breath for a count of four before exhaling slowly.

Now, try putting it all together:
• take in a normal breath through your nose with your mouth closed
• pause briefly while you count to four
• exhale very slowly (mouth open or closed, whichever feels most comfortable) while saying 'calm' or 'relax' to yourself
• repeat the process.

Relaxation and Lifestyle Change.

1. Stress plays an important and sometimes harmful role in people's lives. It can result in feelings of frustration and anger, and interfere with effective problem solving. There are many different sources of stress and stress reactions.

Relaxation will help reduce daily stress levels, and help people to be calm and relaxed in stressful situations. Being calm and relaxed helps people to solve problems better. You can also use relaxation exercises as a substitute for anger and aggression, even when the urge is strong.

Ways to Maintain Relaxation.

1. Make a time commitment to yourself (e.g., "I will spend 10 minutes each day practicing relaxation").

2. Tell a person close to you in your life.
3. Develop a "relaxation schedule" for practicing relaxation.
4. Practice relaxing early on so that it becomes a habit.
5. Use reminders, such as notes to yourself, so you don't forget.

Write down when you practice relaxation.

APPENDIX E

VIDEO TRANSCRIPTS FOR EVALUATION

Video 3: *Becky's mother is sitting at home, waiting for her teenage daughter to come home. Becky, who told her mother that she was going out with her friend, Janie, was supposed to be home at 11:00 pm; it is now 2:30 am. Mom calls Janie's house and finds out that Becky has not been there. Shortly after that, Becky returns home. Mom confronts her, asking her if she knows what time it is and demanding to know whom she was with. Becky first tells her mother that she was with Janie, but when she hears that Mom called Janie's house, Becky admits that she was with her boyfriend, Mark. Mom and Becky continue to argue with Becky cursing at her. The situation ends with Mom slapping Becky.*

Video 4: *Sixteen-year old Rob has been planning for a month to go to his school's homecoming dance. After the dance, he plans to attend a party at his friend Dan's house.*
Rob's father has never liked Dan, and the friendship has always been a source of argument between him and Rob. Rob's father gives him a curfew, but Rob tells his father that he plans on spending the night at Dan's. Rob and his father begin arguing about the party and Dan.

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