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DEVELOPMENT AND VALIDATION OF A ROLE-PLAY TEST FOR ASSESSING CRISIS (HOSTAGE) NEGOTIATION SKILLS

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The purpose of this article is to (a) describe the construction of a role-play test (RPT), which is based on actual negotiated encounters by the Crisis Negotiation Unit of the FBI and employed specifically for evaluation and training of negotiation skills, and (b) provide preliminary validational support for the RPT. The first part of the study includes an overview of RPT item development and the role of active-listening skills, and the second part involves the validation of the RPT. Both groups were also administered self-report measures of social problem-solving

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skills and emotional empathy. Results indicate that in comparison to experts, nonexpert negotiators show deficiencies across active-listening skill categories. Relationships between use of active listening and emotional empathy are observed.

Keywords: crisis negotiation; hostage negotiation; role-play tests; assessment

Ithough hostage negotiation has been described as the most sig-Anificant development in law enforcement in the past several decades (G. Noesner, personal communication, December, 2, 2000), the burgeoning phenomenon of hostage taking continues to pose serious challenges to law enforcement professionals worldwide (Call, 1996; McMains & Mullins, 2001; Romano, 1998). Hostage taking is the holding of one or more persons against their will with the actual or implied use of force (Lanceley, 1999). A hostage situation could result from a crime (e.g., failed bank robbery), an altered murder-suicide pact, or an act of terrorism in which a ransom is sought or a political agenda is promoted (Rogan, Hammer, & Van Zandt, 1997). More common, however, are domestic situations in which a subject has taken a hostage (or multiple hostages) for a wide range of possible motives, including (a) forcing fulfillment of certain demands on a third party (e.g., a fired employee seeking his job back); (b) holding a person for expressive or emotional reasons (e.g., rejected spouse trying to reconcile or seek revenge); (c) fear and paranoia, often resulting from a serious mental illness; and (d) setting the stage for suicide by cop, in which the offender forces police to kill him or her by engaging in threatening behavior (Fuselier, 1981; Noesner & Dolan, 1992).

Despite the attention directed to hostage situations, most lawenforcement-negotiated encounters actually involve barricaded subject incidents. In these events, the subject is not holding another person as part of an instrumental or expressive act. According to McMains and Mullins (1996), these

are situations in which a person has isolated himself in a protected position, has a weapon that can harm others, and is threatening to use it.... The majority of barricaded subjects are people who are in emo-

tional crisis . . . [and] threaten others as a way of getting attention or of getting police to kill them. (p. 39)

Other situations that have required negotiated interventions include jail and prison riots, serving of high-risk warrants, and school and workplace violence (Lanceley, 1999; McMains & Mullins, 1996).

In light of the wide range of problems to which negotiators must respond, this field of activity has been broadened to encompass the management of critical incidents by crisis negotiators. For example, the Crisis Negotiation Unit (CNU) of the FBI is a specialized group that responds to crises worldwide. Another function of the CNU concerns the training of the FBI, and other law enforcement personnel, in crisis (hostage) negotiation techniques. A major goal of this instruction is the teaching of active-listening skills (i.e., emotion labeling, paraphrasing, mirroring, open-ended questions), which have proven critical for the establishment of social relationships and interpersonal alliances in previous psychological research (Cairns, 1979; Webster, 2003) and effective in peacefully resolving volatile confrontations (Dolan & Fuselier, 1989; Noesner & Webster, 1997).

The primary vehicle for the evaluation and training of crisis negotiation skills has been the behavioral assessment measurement strategy known as role-playing (Bellack & Hersen, 1998). Indeed, role-playing has been a hallmark of law enforcement training in general (e.g., recruit selection, promotion assessment, special weapons and tactics training) and crisis negotiation instruction for many years in particular (Sharp, 2000). As an illustration of the importance of role-playing in law enforcement training, Sharp (2000) notes that more than 80% of police agencies polled use it in their training efforts. Also, 100% of the respondents indicated that role-plays are valuable in a variety of training situations. Moreover, the vast majority of crisis negotiation training programs rely on role-playing (also referred to as scenario training) to provide simulations of real-world critical incidents. Furthermore, specific behavioral competencies (e.g., active-listening skills) are trained in the context of role-play training scenarios (Greenstone, 1994, 1995; Noesner & Webster, 1997).

Although role-play strategies have enjoyed widespread application in law enforcement, relatively little attention has been directed to the systematic development and validation of these procedures. This is a significant void given the central role of such instruments in current programs of police instruction, most notably those whose primary function is the training of crisis negotiators. And although direct or naturalistic observation (the hallmark of behavioral assessment; Bellack & Hersen, 1998) of negotiators in actual critical incidents would be a preferred approach for assessment and modification of negotiators' skill levels, the seriousness and high-risk nature of these encounters make such an approach unrealistic (and dangerous). Therefore, role-playing is a vital next best approach (Bellack & Hersen, 1998; Ciminero, Calhoun, & Adams, 1986) for crisis negotiator assessment and training.

The purpose of this study was twofold: (a) to describe the development of a role-play test (RPT) specifically for crisis negotiators and (b) to determine the validity of the technique by determining the extent to which it discriminated expert from nonexpert crisis negotiators. In addition, the correspondence between use of active-listening skills in role-plays and self-report measures of social problem-solving skills and emotional empathy was evaluated.

METHOD

PARTICIPANTS

Forty-seven male and 14 female participants were recruited from the FBI. Participants were divided into two groups of law enforcement personnel. One group consisted of 31 expert negotiators (CNU members at the FBI Academy and bureau agents from the FBI, Washington, D.C., and Baltimore field offices) who completed the National Crisis Negotiation Course offered by the CNU at the FBI Academy. The second group included 30 nonexpert negotiators (bureau agents from the FBI Miami field office) with no formal crisis and hostage negotiation training. Participation in the research was voluntary, and participants were notified that participation may be discontinued at any time without penalty. Of the 61 participants who initially participated, one participant was eliminated because of an audiotape recording error. Additionally, of the remaining 60 participants, 53 completed and returned self-report assessment packets (described below).

TABLE 1: Demographic Characteristics of the Participants

Measure	Ex	pert Negotia (n = 28)	Nonexpert Negotiators ^b (n = 25)			
	n	М	SD	n	М	SD
Age		42.08	7.19		36.08	6.39
Gender						
Male	19			19		
Female	8			6		
Marital status						
Single	5			5		
Married	19			16		
Divorced	2			2		
Widowed	_			1		
Ethnicity						
Caucasian	21			23		
Hispanic	6			2		
Education (years)		16.81	1.44		16.28	3.06
Time in law						
enforcement (years)		17.19	8.13		8.40	6.95

a. This is a combined group of Crisis Negotiation Unit (CNU) members at the FBI Academy and bureau (i.e., agents who have completed the Negotiations School offered by the CNU at the FBI Academy). b. Bureau agents with no formal crisis and hostage negotiation training.

To obtain demographic information (i.e., age, gender, marital status, ethnicity, educational level, and years in law enforcement), each participant was asked to complete a one-page questionnaire as part of a self-report assessment packet. The age of participants ranged from 27 to 56, with a mean age of 39.4 (SD = 6.86). Married participants (n = 35) accounted for 56.7% of the participants, with 16.7% (n = 10)of participants never being married and 6.7% (n = 4) reporting being divorced. One individual was widowed, and two participants failed to indicate marital status. Educational attainment varied from college to graduate degrees, with an average grade level of 16.56. Every participant had law enforcement experience, with a mean of 12.96 years (SD = 8.72). Table 1 provides a summary of age, gender, marital status, ethnicity, educational level, and years in law enforcement.

PROCEDURE

The procedure involved the observation and recording of participants' interpersonal behavior in an RPT of crisis negotiation skill. A battery of self-report instruments was also administered to each participant. All participants were first involved in the role-play procedure, which was conducted either at the FBI Academy in Quantico, Virginia (for the expert negotiators group), or the FBI Miami field office (for the nonexpert group).

MEASURES

Development of the RPT of crisis negotiation skill. All participants were administered an RPT of crisis negotiation skill. The RPT was developed by Supervisory Special Agents of the CNU at the FBI Academy in Quantico, Virginia (Noesner & Romano, 2002). All RPT scenarios were narrative adaptations of actual hostage or barricaded subject incidents that have occurred during the past several years and have necessitated a law enforcement response. In their role as an international law enforcement resource for resolution of hostage and barricade incidents, CNU personnel are unique in having extensive expertise in crisis negotiation and management. The RPT items employed in this study were derived from their years of experience in this field and reflect their direct involvement in numerous critical incidents during the past 20 years.

The RPT developed by the CNU and employed in this study consisted of 12 audiotaped, narrated scenarios describing various crisis negotiation situations, with four scenarios in each of three categories: (a) family domestic, (b) workplace, and (c) suicide. Furthermore, each role-play scenario included four prearranged prompts provided by a role-play partner (confederate) to facilitate an extended interaction and to make RPT items more similar to real-life encounters (Bellack, 1983). Also, each prompt was sufficiently neutral in content to be appropriate and facilitative, irrespective of the participant's responses.

Examples of RPT items from each of the three previously mentioned categories are provided below:¹

• Family Domestic

Narrator: Jim Smith has abducted his common-law wife and their son from a distant state. She had obtained a court order preventing him

from seeing her or their son. She has repeatedly rejected his efforts at reconciliation, and he has stalked and harassed her in the past. He kidnapped her and the child in the middle of the night from her parent's home and drove her to an unoccupied farmhouse nearby where he ran out of gas. Authorities located his vehicle and then discovered them held up in the farmhouse.

Prompt 1: I'm not letting her take my son away from me.

Prompt 2: I've tried over and over to get her to come back to me.

Prompt 3: My son is what I live for.

Prompt 4: I don't think I can take any more.

Workplace

Narrator: John Henry is angry because the factory where he has worked for 10 years fired most of the senior workers to reduce payroll and increase profits. He blames the factory manager for the loss of his job. He brought a gun into his office and is threatening to kill him if he doesn't get his job back. He feels he has been treated badly and not given the respect he has earned after 10 years of hard work.

Prompt 1: I've given 10 years of my life to this place.

Prompt 2: It's that damn manager's fault.

Prompt 3: They had no right doing this to me.

Prompt 4: If I can't work, I can't support my family.

Suicide

Narrator: Frank was a successful banker who has been living the good life. Unfortunately, several of his investments and financial decisions have failed, and he is facing financial ruin. He feels he will bring shame to his family, his wife will leave him, and his possessions will be taken away. He feels hopeless and helpless. He believes that killing himself is the only way out. One of his bank employees observed him with a gun in his office and called the police to intervene.

Prompt 1: I'm ruined; my life is over.

Prompt 2: My family will be so ashamed of me.

Prompt 3: This is hopeless; I can't go on.

Prompt 4: Killing myself is the only answer.

The RPT scenarios were presented in a standardized fashion via audiotape, with participants' responses to scenarios also audiotaped and retrospectively rated on verbal behavioral categories considered requisite to effective crisis negotiations (see below). Each participant was seated in a comfortable chair at a 180-degree angle to the researcher, who was in the direct view of the participant. The researcher first explained the procedure to the participant by stating the following:

The purpose of the study is to determine the usefulness of a role-play procedure in assessing crisis negotiation skills. You will be presented with 12 audiotaped crisis scenarios. Each scenario will be repeated twice. After you hear the scenario the first time, I would like you to imagine that you are actually faced with that situation as a crisis negotiator and think of what you would say to the subject if the scenario was actually taking place. You will then hear the scenario a second time. This will be followed by a brief statement by the subject in the scenario. Once you have heard his first statement, please respond to him the way you would if you were actually dealing with this subject. Take as much time as you need. Your response can be as long or as short as you feel is necessary. There is no time limit. You will then hear three additional statements from the subject. As with the first statement, please respond to each of the next three as you would if the scenario were actually taking place. Do you have any questions?

Scoring. Audiotaped responses to the RPT were subsequently rated on behavioral components of crisis negotiation skills identified by Noesner and Webster (1997) and their colleagues at the FBI CNU. These components included paraphrasing (repeating in one's own words the meaning of the subject's messages back to them), emotion labeling (attachment of a tentative label to the feelings expressed or implied by the subject's words or actions), reflecting and mirroring (use of statements indicating an ability to take the perspective of the subject and repetition of the last words or main ideas of the subject's message), and open-ended questions (questions that stimulate the subject to talk and do not elicit short or one-word answers). Furthermore, overall active-listening skills were calculated by adding the total number of active-listening skills. Response duration (partici-

pant's total scenario response time measured in seconds) was also rated in light of previous contentions that a good crisis negotiator is a good listener rather than an overly active speaker (Dolan & Fuselier, 1989). All ratings were made by trained research assistants (doctoral candidates in clinical psychology) who were unaware of the participants' group status. Raters were trained based on the criteria definitions provided above (for more detailed behavioral definitions, see Noesner & Webster, 1997). Other assessment instruments employed in this investigation are described briefly in the following sections.

Social Problem-Solving Inventory-Revised. The Social Problem-Solving Inventory–Revised (SPSI-R; D'Zurilla & Maydeu-Olivares, 1994) is a self-report measure consisting of 52 items designed to assess multiple dimensions of the problem-solving process, including two adaptive or constructive problem-solving dimensions and three dysfunctional dimensions: Positive Problem Orientation (5 items), Rational Problem-Solving (RPS) scale (20 items), Negative Problem Orientation (10 items), Impulsivity and Carelessness Style (10 items), and Avoidance Style (7 items). Additionally, the RPS scale can be divided into the following four subscales, each with 5 items: Problem Definition and Formulation, Generation of Alternatives, Decision Making, and Solution Implementation and Verification. Each SPSI-R item is rated on a 5-point Likert-type scale, with 0 = not at all true of me and 4 = extremely true of me. A total social problem solving score was also calculated. Satisfactory test-retest reliability has been demonstrated, and internal consistency estimates have generally exceeded .70 (D'Zurilla & Nezu, 1990). Furthermore, moderate correlations between SPSI-R scores and other measures of social problem solving supported the convergent validity of the scores (D'Zurilla & Maydeu-Olivares, 1994).

Balanced Emotional Empathy Scale. The Balanced Emotional Empathy Scale (BEES; Mehrabian, 1996) was designed to update, improve, and replace the Emotional Empathic Tendency Scale (EETS; Mehrabian & Epstein, 1972). Much of the item content is similar on the two instruments; however, all of the items for the BEES have been newly revised. The BEES (as with the EETS before it) is a self-report measure that assesses individual differences in the tendency to feel and vicariously experience the emotional experiences of others. The BEES, which consists of 30 items, employs a 9-point response format, with 4 = very strong agreement and -4 = very strong disagreement. Normative data on this measure consist of mean scores and standard deviations for men, women, and a combined sample of men and women. The BEES demonstrated adequate internal consistency (Cronbach's alpha = .87; Mehrabian, 1997), and the construct validity of the BEES is superior to the EETS (Mehrabian, 1996).

Most of the validity of the BEES has been derived from validity studies conducted on the EETS, with which it is highly correlated (r = .77). Studies conducted with the EETS found that individuals who scored high on the scale were more likely to demonstrate empathic behavior in their relationships with others and show greater arousal of their autonomic nervous system in response to emotional stimuli than were those who scored low on this scale. Furthermore, individuals with high scores tended to show more altruism, less aggressiveness, greater affiliation, and a greater likelihood to volunteer to help others (Mehrabian, Young, & Sato, 1988).

RESULTS

RELIABILITY OF RATINGS

As mentioned above, raters were trained based on criterion definitions of active-listening skills provided by Noesner and Webster (1997) and using sample responses to role-play scenarios. Raters first learned to match criterion ratings and then practiced independently until each verbal category was rated with an interrater reliability coefficient of at least a kappa (K) of 0.80. Initial tapes from this protocol were rated independently by the primary raters and then jointly by the rater and one of the authors (Monty T. Baker) to further ensure the accuracy and consistency of ratings. All ratings were scored based on the occurrence or nonoccurrence of the active-listening skill. One third of the audiotapes (drawn proportionately and randomly from each group) were scored by an independent rater to provide a reliability check. Interrater reliability was high for all behavioral categories, ranging from K = 0.80 to 0.94 (M = 0.89, SD = 4.39).

EXPERT VERSUS NONEXPERT NEGOTIATORS

The primary purpose of evaluating the role-play scenarios was to examine if use of specific active-listening skills on the role-play measure distinguished expert from nonexpert negotiators. A series of t tests between expert and nonexpert groups were completed for measures obtained across the 12 role-play situations administered to the two groups. The means, standard deviations, group differences, and effect sizes are presented in Table 2. As evident from Table 2, expert negotiators, compared to their nonexpert counterparts, demonstrated significantly higher frequencies of paraphrasing, emotion labeling, and reflecting and mirroring. In addition, they had a significantly higher score on the total number of active-listening skills as well as on subjective ratings of overall active-listening skills conducted by an independent set of raters. Furthermore, response duration, although not statistically significant (p = .054), yielded means in the expected direction (i.e., expert negotiators talked less than nonexperts). Finally, no significance between groups were found on open-ended questioning.

Effect size measures the magnitude of effect or relationship that can, and should be, calculated in all studies (Weinfurt, 2000). This is different from statistical significance, which tells only whether an effect is present. In this study, effect sizes (Cohen's d) were large or very large for all active-listening skills except open-ended questioning (see Table 2).

CORRELATIONAL ANALYSES

One purpose of the study was to determine the correspondence between use of active-listening skills and measures of social problemsolving skills and emotional empathy. Pearson-product-moment correlation coefficients were computed between scores on behavioral components of the RPT (paraphrasing, emotion labeling, reflecting and mirroring, open-ended questions, and total active-listening skills), SPSI-R, BEES, and demographic variables. Results of these analyses show no significant associations between active-listening skills and social problem solving as assessed by the SPSI-R. However, significant, albeit low to moderate, correlations were obtained

TABLE 2: Comparison of Expert and Nonexpert Groups on Behavioral Components of Negotiation Skills

	Negotia	Expert Negotiators ^a (n = 30)		Nonexpert Negotiators ^b (n = 30)			Size
Component	М	SD	М	SD	t <i>(58)</i>	<i>p</i> <	Effect (d)
Paraphrasing	22.30	14.03	1.73	1.98	7.95	.001	2.57
Emotion labeling Reflecting and	18.53	9.34	9.34	2.62	2.97	.001	1.54
mirroring Open-ended	24.40	12.97	7.33	5.63	6.61	.001	1.84
questioning Total active-	6.67	8.25	5.57	9.41	0.48	ns	0.12
listening skills Overall active-	71.90	30.38	17.60	10.51	9.25	.001	2.66
listening skills Response duration	145.07	38.39	72.62	15.56	9.67	.001	2.69
(in seconds)	24.70	18.23	34.94	21.89	3.87	ns	0.51

a. This is a combined group of Crisis Negotiation Unit (CNU) members at the FBI Academy and bureau (i.e., agents who have completed the Negotiations School offered by the CNU at the FBI Academy). b. Bureau agents with no formal crisis and hostage negotiation training.

between BEES scores and paraphrasing (r = .29, p < .05), reflecting and mirroring (r = .28, p < .05), and total active-listening skills (r = .28, p < .05). Also, participants' age, education, and years in law enforcement were not significantly related to any of the aforementioned variables.

DISCUSSION

The present study described the development and validation of a role-play assessment procedure to assess crisis (hostage) negotiation skills. The RPT was originally conceptualized and constructed by personnel of the FBI CNU who specialize in the resolution of hostage and barricade incidents worldwide. The role-play procedure presented here has been employed specifically for evaluation and training of negotiators in skills requisite to the successful resolution of a wide variety of critical incidents. Furthermore, all role-play scenarios

included in this investigation were adaptations of actual critical situations that have culminated in law enforcement deployment in the past. Active-listening skills, which have been implicated as requisite to effective negotiation tactics (Noesner & Webster, 1997), were rated and scored for groups of expert and nonexpert crisis negotiators.

Validation of the RPT was carried out by determining the extent to which it discriminated expert from nonexpert participants. Results indicated that nonexperts displayed significantly lower levels of all active-listening skills indices (paraphrasing, emotion labeling, reflecting and mirroring, total active-listening skills, and overall active-listening skills). In addition, moderate correlations were found between a measure of emotional empathy and some of the activelistening skill categories (paraphrasing, reflecting and mirroring, and total active-listening skills).

Overall, the present results are consistent with the current emphasis on empathic listening and effective communication, hallmarks of crisis intervention in general and, more recently, crisis negotiation in particular (Hatcher, Mohandie, Turner, & Gelles, 1998). For example, differences in rates of paraphrasing and emotional labeling, important elements in social relationship development, were dramatic between expert and nonexpert negotiators in the present investigation. Indeed, many nonexperts failed to demonstrate either of these components in their negotiation efforts. Similarly, significant differences were obtained between groups on use of reflecting and mirroring. These too are behaviors that have been underscored as important for alliance building in crisis situations (Bolton, 1984; Noesner & Webster, 1997) as well as clinical contexts (e.g., therapeutic settings; Lambert, 1983).

In addition, subjective ratings of overall negotiation skill revealed striking differences in ability, favoring the expert participants. Only response duration (not considered an active-listening skill) failed to distinguish groups. However, mean group values indicated that experts displayed less talk time than nonexperts. This is presumably a function of their focus on listening rather than speaking.

The role of active-listening skills in successful crisis negotiations cannot be overstated. As McMains and Mullins (2001) cogently point out, "active listening skills are fundamental to negotiations. They open the door for developing a relationship with the subject, they give the negotiator a non-threatening way of responding to the subject that is disarming and invites cooperation" (p. 85). The expert negotiators in our investigation demonstrated significantly greater use of these much-needed skills relative to their nonexpert counterparts.

The relationship between scores on a measure of social problemsolving and negotiation skills, as assessed on the various behavioral components, was also examined. Results show virtually no correspondence between any of these scores. This finding is, perhaps, not too surprising given the aforementioned trend away from the employment of bargaining principles characteristic of police negotiations years ago (Feldman & Johnson, 1999) to the current focus on active listening and relationship building (Noesner & Webster, 1997). Indeed, evidence suggests that emphasizing bargaining or problemsolving approaches (particularly in early stages of negotiation) may undermine efficacious negotiation and crisis resolution.

Some significant relationships (albeit in the low to moderate range) were found between a measure of emotional empathy and certain behavioral indices (paraphrasing, reflecting, and total active-listening skills). Mehrabian (1996) defines emotional empathy as "one's vicarious experience of another's emotional experiences—feeling what the other person feels" (p. 2). Demonstration of empathy would appear to be of considerable value in the negotiation process. Furthermore, the ability to take the emotional perspective of another would be expected to facilitate the formulation of effective negotiator responses (e.g., emotional labeling, reflecting feelings and emotions) during crisis situations, especially those characterized by high levels of emotional volatility (e.g., domestic disputes, suicidal persons). The role of emotional empathy in crisis negotiations certainly warrants further study.

Several limitations of this investigation deserve attention. To begin with, all participants were recruited from the ranks of the FBI. It is possible that a disparate pattern of results would emerge if non-FBI law enforcement personnel, with different training backgrounds, were included. Particularly noteworthy is the strong emphasis placed on active-listening skills in FBI crisis negotiation training programs, which might not be as evident in other law enforcement agencies. Thus, the generality of the findings may be limited. However, there is a growing consensus among crisis negotiators nationwide concerning

the importance of such relationship-building skills in the successful resolution of critical incidents.

The present research was an initial step toward providing a heuristic assessment tool (i.e., role-play procedure) to evaluate crisis negotiation skills. However, further work clearly is needed in this area. For example, the active-listening skills included in this study may not exhaust the possible behavioral components that are most relevant in effective negotiations. Furthermore, there may be personality characteristics or response styles that may be instrumental in determining successful negotiators (Vakili, Gonzalez, Allen, & Westwell, 2002). Finally, the present study did not ascertain the external validity (i.e., the relationship between role-play performance and skill in realworld critical incidents) of the role-play task. Conducting such research is admittedly difficult because of the low-frequency, highmagnitude pattern of critical incidents, which limits opportunities for in vivo observation of negotiation skills in actual crisis situations. However, empirical efforts in this regard are clearly called for.

Despite the voluminous number of published reports on the topic of crisis negotiations, empirical research in this field remains at the nascent stage. Further systematic investigation of evaluation and training methods, such as role-plays and other scenario-based procedures, is needed for law enforcement professionals to effectively address the considerable challenges ahead.

NOTE

1. The complete set of RPT items is available from the first author on request.

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