

The Alternatives to Violence Project (AVP), a nonviolence training program run for inmates by inmates, represents an attempt to combat institutional violence. This program provides alternatives to violent behavior; it decreases the rate of violence within and among the prison population and may translate back to the community on release. An impact evaluation of an AVP was conducted in a medium-security corrections facility in Maryland. Despite limitations, the results from this evaluation demonstrate a positive impact on anger and self-reported confrontation for inmates who completed a basic level conflict resolution workshop as compared to those who did not. The power of the institutional environment, the need for continued intervention with offenders, and future directions for correctional setting-based evaluations are discussed.

Evaluation of an Inmate-Run Alternatives to Violence Project The Impact of Inmate-to-Inmate Intervention

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Violence and crime are among the most pressing concerns in our society today. Violence in the community, home, school, and workplace are recurrent themes in both popular and scientific forums. Not surprisingly, violence and its obvious consequences extend to, and some may argue stem from, the behaviors and activities that take place within the confines of our correctional facilities. According to the Bureau of Justice Statistics, 1,585,401 inmates were held in the custody of state or federal prisons or local jails in 1995 (U.S. Department of Justice, 1996). This represented an incarceration rate of 600 per 100,000 U.S. residents in 1995. About 44% of the prisoners sentenced to a state or federal correctional facility in 1995 had committed a violent offense (e.g., homicide, assault, robbery or kidnapping, rape, other sexual assaults) as their most serious offense (U.S. Department of Justice, 1997b). In a 1991 survey of state and federal prisoners, 32.8% of those admitted for the first time in the 12 months preceding the survey had committed a violent offense (U.S. Department of Justice, 1993).

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Although incarceration removes the individual from the community environment into the correctional environment, it does not necessarily alter that individual's behavior or prevent future violent activity. As an indication, official justice statistics demonstrate that violence within correctional facilities is a relatively common occurrence. Based on the average daily population rates in state and federal correctional facilities in 1995, about 18 in every 100 inmates were charged with a major violation (e.g., assault, riots, fires, etc.). About 4 in every 100 were charged with assault on inmates or staff. These assaults resulted in the death of the victim in .2% of the occurrences (U.S. Department of Justice, 1997a). In addition, it has been estimated that 5.1% of people living in the United States will be confined in a state or federal prison at some point within their lifetime (U.S. Department of Justice, 1997c). On average, violent offenders released in 1992 served 48% of their sentence (U.S. Department of Justice, 1995). Finally, a Bureau of Justice Special Report (U.S. Department of Justice, 1988) indicated that in 1986, more than four fifths of all inmates surveyed in state correctional facilities were recidivists; 79.9% of the violent offenders surveyed were recidivists, and nearly 20% of those surveyed were violent recidivists (i.e., current and past offenses were both violent).

These statistics make it clear that a meaningful percentage of the U.S. population will be incarcerated within their lifetime, a substantial percentage of those incarcerations will be for violent offenses, and recidivism rates (both for violent and nonviolent offenses) are alarmingly high. We must either prevent violent behavior or provide individuals with alternatives to violence; otherwise, the violence will merely be displaced from communities to correctional facilities and ultimately returned to the community. Prison-based intervention to combat institutional violence serves, at the very least, two crucial functions: Providing alternatives to violent behavior (a) decreases the rate of violence within and among the prison population and (b) may influence behavior in the community on release. The Alternatives to Violence Project (AVP), an inmate-run, prison-based intervention, provides inmates with just such options.

The AVP philosophy originated in 1975 at the Green Haven Prison in New York State. It began as an inmate-run initiative to provide nonviolence training to hard-to-reach young offenders. Since its inception, workshops of various forms have been conducted in prisons across the United States and abroad. The specific structure and presentation of AVP can be modified to best meet the needs of the target group. Regardless of modifications, the fundamental values of the initiative remain unchanged: (a) to take responsibility for oneself and the consequences of one's behavior, (b) to serve as one another's community, and (c) to find options other than fight or flight when

faced with conflict. In addition, the philosophy of AVP dictates that participants volunteer as opposed to being administratively mandated to participate. These principal values serve as the conceptual underpinnings for the AVP intervention, which is being implemented at a medium-security state correctional facility in Maryland. At the time of this evaluation (1995 to 1996), AVP had been in existence at this state facility for about 7 years. It is a five-step program (basic training, advanced training, training for trainers, facilitation, and management council membership) that provides training in conflict resolution techniques to inmates being housed at the facility. Each of the five training steps is composed of three day-long sessions. Each session is run by a group of inmate facilitators who have successfully completed all AVP steps. The graduation of inmates through each of the successive AVP steps and ultimately into roles as trainers promotes a nonviolent community within the institution. Each of the three day-long sessions involves a series of structured interactive activities (e.g., role-plays, rap sessions, etc.) between trainees and facilitators. Each activity focuses on the expression of thoughts, feelings, and experiences.

With the exception of a small number of cognitive-behavioral anger management programs (Feindler, Marriott, & Iwata, 1984; Goldstein & Keller, 1987; Howells, 1989; Hughes, 1996; Schlichter & Horan, 1981), there is a relative dearth of published literature describing or evaluating conflict-related interventions in an inmate population. Furthermore, discussion of anger management and conflict resolution interventions run by individuals other than trained clinicians (i.e., inmates) are noticeably absent from the literature.

As expected, despite the extensive national and local history of AVP, there is no report of systematic evaluation in the published literature. The current evaluation was undertaken at the joint request of the outside (i.e., outside of the penal institution) AVP liaison and the volunteer activities coordinator employed by the prison. The primary objective was to conduct a methodologically robust evaluation to gain a more in-depth understanding of the impact of the AVP initiative, more than 6 months postintervention, on attributes and behavior of participant inmates as compared to nonparticipant inmates.

METHOD

Participants

The evaluation was conducted at a medium-security corrections facility in Maryland. The facility has a design capacity of about 700; at the close of the

evaluation, capacity was exceeded by more than 50%. This is an all-male facility housing inmates serving sentences of 3 months or longer.

Random assignment to AVP and non-AVP participant groups was not feasible within the correctional institution. It was against both the prison's administrative policy and the AVP philosophy to require and/or deny participation in the AVP initiative. For this reason, inmates who had been scheduled for but had not yet completed a basic AVP workshop (i.e., the first step of the AVP process) were asked to participate in the evaluation effort and served as the intervention group. About 94% of those scheduled for a basic workshop agreed to participate in the evaluation effort. Concurrently, inmates from the general population in the same facility who were not scheduled for and had not expressed an interest in the AVP initiative were recruited to serve as a comparison group. The AVP Management Council announced the study opportunity to the general population, and those interested were recruited. No information is available on the number of general population inmates approached for participation. Ninety-four inmates (53 intervention and 41 comparison) were recruited for the evaluation effort. Recruitment for both the AVP intervention and the comparison group was completed over a period of about 12 months in 1995. Due to the voluntary nature of recruitment, no demographic information is available for those inmates (AVP or non-AVP) who were unwilling to participate.

About 88% of the recruits were African American, and 12% were Caucasian. The racial composition in the study sample reflects that of the correctional facility. The recruits ranged in age from 18 years to 51 years, with an average age of 30 years. The average sentence of the recruited group was 20 years, ranging from less than 1 year to life. Participant inmates were serving time for crimes that included drug and other violation of parole offenses (VOP) (36%), robbery/burglary/theft (30%), murder/manslaughter (19%), assault/attempted murder (10%), and sex offenses (5%).

Procedure

Evaluation participants were recruited for the intervention and comparison study groups from prescheduled AVP basic workshop enrollees and from the general population, respectively. Once recruited, inmates from both groups were instructed on the procedures of the evaluation and provided with three consent forms to sign (university, state correctional consent to be interviewed, state correctional consent to access inmate base files). Aside from a letter of appreciation, no incentive was provided for participation in the evaluation.

Both the intervention and the comparison groups were assessed at baseline and 6 month follow-up. Intervention group baseline assessment occurred immediately prior to the start of their AVP basic workshop, on the same morning. Study sample recruitment was carried out over a 12-month period. Each time a basic workshop was scheduled, its enrollees were asked to participate in the evaluation. An average of one basic workshop a month was held during the 1-year recruitment period. In an effort to control for any institutional changes over time, the number of AVP recruits each month was used to gauge the number of non-AVP participants recruited from the general population in that same month.

At each assessment period, inmates were given a study packet that included the measures described below. In the event the recruit needed assistance reading, understanding, or filling out the packet, it was provided. All self-report measures were completed in a group setting. On a subsequent visit to the correctional facility, inmate base files were reviewed for the group of inmates surveyed on the previous visit. At this time, basic demographic information (i.e., age, race, offense, and length of sentence) was obtained. Finally, a letter was written to case management on behalf of each inmate, thanking them for participating in the evaluation process.

Measures

The intrapersonal and behavioral measures described below were jointly selected as relevant impact indicators by the AVP Management Council, the outside AVP liaison, and a representative from the prison administration. An effort was made to include multiple constructs and multiple perspectives in the selection of these measures.

Intrapersonal Measures

Four attitude/attribute-dependent measures were included in this evaluation to assess anger, self-esteem, optimism, and locus of control. All instruments were administered to both the intervention and comparison groups at baseline and 6-month follow-up. These assessments were included to explore the possible intrapersonal impact of the AVP initiative. Some of the instruments selected for the evaluation were developed for use with adolescents. Due to the large variation in literacy levels among inmates, these instruments were selected in an effort to preserve content while simplifying language.

Anger. The Anger Expression Scale is a 20-item comprehensive self-report assessment of feelings of anger. It assesses both experienced (anger-in) and expressed anger (anger-out) (Spielberger, Johnson, & Jacobs, 1982). The authors reported acceptable levels of internal consistency, Cronbach's alphas between .73 and .84 for total and subscale scores, and convergent and divergent validity for the scale (Spielberger et al., 1985). In addition, the Anger Expression Scale has been used previously as an outcome measure in an anger reduction-intervention evaluation (Deffenbacher, Story, Stark, Hogg, & Brandon, 1987). For the purposes of this evaluation, total anger scores were calculated. As scored, higher scores indicate higher levels of combined experienced and expressed anger.

Self-esteem. The Rosenberg Self-Esteem Scale is a 10-item global self-esteem measure that focuses primarily on general feelings of self-worth, contribution, and personal success (Rosenberg, 1965). This measure has been used in numerous studies and is brief enough to be administered as part of a battery. Rosenberg (1965) demonstrated 93% reproducibility in his initial development studies. In addition, considerable internal consistency and test-retest reliability, as well as convergent and discriminant validity information, exists for the Rosenberg Self-Esteem Scale (Blascovich & Tomaka, 1991). As scored, higher scores indicate higher levels of self-esteem.

Locus of control. Rotter's (1966) Locus of Control Inventory was used to assess inmates' tendencies to attribute happenings to internal forces (i.e., personally responsible) versus external forces (i.e., luck, chance, etc.). It is a 29-item scale that has demonstrated 1-month test-retest reliability ($r = .78$) in an inmate sample. In addition, construct validation studies have been conducted with prison and other populations. Finally, internal consistency, test-retest reliability, and divergent validity have been demonstrated in a variety of samples. Higher scores indicate more of an externalizing tendency.

Optimism. Scheier and Carver's (1985) Life Orientation Test was used to assess inmates' general sense of optimism. Optimism, as assessed by this scale, involves global life positivism as opposed to situation-specific optimism. It is a reliable and valid 12-item scale with reasonable internal consistency (Cronbach's alpha = .76) and test-retest reliability ($r = .79$) and demonstrated convergent and discriminant validity (Scheier & Carver, 1985). As scored, higher scores on the Life Orientation Test indicate higher levels of optimism.

Behavioral Measures

Inmate behavior was assessed through self-report. Inmates were asked to complete a questionnaire that assessed their level of exposure to and involvement in nonviolent and violent confrontations over the preceding 1-month period. This questionnaire included 10 items that asked the inmate to report frequency of involvement in confrontation (e.g., How many times in the LAST MONTH have you found yourself in a confrontation with another inmate over a telephone-related issue?) and the number of times those confrontations turned violent (e.g., How many of those confrontations resulted in physical violence at the time of the conflict or later?). Items were constructed to reflect a variety of situations (e.g., confrontations over food, contraband, space, etc.) and individuals (e.g., confrontations with correctional officer, other inmates, etc.). Given that these questions were designed specifically to assess violent and nonviolent confrontations within the prison, their internal consistency estimates were high (Cronbach's standardized item alpha = .89 for nonviolent confrontations and .98 for violent confrontations). Behavioral measures were included in this evaluation as an assessment of the interpersonal impact of the AVP intervention.

RESULTS

Preliminary Analyses

Preliminary analyses were conducted to determine baseline group equivalency on demographic characteristics of the AVP participants as compared to the non-AVP participants. Specifically, the intervention and comparison groups did not differ significantly with regard to age, $t(92) = 1.56, p = .122$; racial composition, $\chi^2(1) = .228, p = .431$; length of sentence, $t(87) = 1.052, p = .296$; or crime committed, $\chi^2(4) = 3.256, p = .516$. Table 1 shows the demographics of the total sample by group status and statistical equivalency. Although no statistically significant differences were found between the two groups on these demographic characteristics, there was a tendency for the AVP group to be older. For this reason, age was included as a covariate in subsequent analyses.

Complete baseline assessment packets were obtained from 53 AVP participants and 41 non-AVP participants. At 6-month follow-up, completed assessment packets were obtained on 32 AVP participants and 24 non-AVP participants. This translates into a 40% attrition rate across groups. Attrition was attributed to (a) inmate refusal to participate at follow-up, (b) inmate seg-

TABLE 1: Baseline Demographic Data for Total Sample by Group Status and Group Equivalency

	<i>AVP Inmates</i>				<i>Non-AVP Inmates</i>				<i>Statistic</i>
	<i>n</i>	<i>Percentage</i>	<i>M</i>	<i>(SD)</i>	<i>n</i>	<i>Percentage</i>	<i>M</i>	<i>(SD)</i>	
Race									$\chi^2(1) = .228, p = .431$
African American	46	87			35	85			
Caucasian	7	13			6	15			
Offense									$\chi^2(1) = 3.256, p =$
.516									
Robbery/burglary/theft	17	32			12	29			
Drug/violation of parole	16	30			18	44			
Murder/manslaughter	13	24			5	12			
Assault/attempted murder	4	5			5	12			
Sex offenses	3	6			2	5			
Age	53		31.5	(8.3)	41		29.1	(6.4)	$t(92) = 1.562, p = .122$
Sentence	49		23.4	(23.9)	40		18.1	(22.4)	$t(87) = 1.052, p = .296$

NOTE: AVP = Alternative to Violence Project.

TABLE 2: Missing Data Comparative Analyses of Baseline Characteristics: Present at 6 Months Versus Lost to Follow-up

<i>Baseline Characteristic</i>	<i>Present at 6 Months</i>		<i>Lost to Follow-up at 6 months</i>		<i>Statistic</i>
Race (%)					
African American	88.7		86.0		$\chi^2 (1) = .150, p = .698$
Caucasian	11.3		14.0		
Offense (%)					
Robbery/burglary	27.5		28.6		$\chi^2 (1) = 4.01, p = .393$
Drug/violation of probation	31.4		47.6		
Murder/manslaughter	27.5		16.7		
Assault/attempted murder	5.9		4.8		
Sexual offenses	7.8		2.4		
Age (Mean, <i>SD</i>)	29.60 (6.99)	31.72 (8.20)	$t(94) = 1.366, p = .175$		
Sentence (Mean, <i>SD</i>)	21.87 (3.28)	19.52 (23.17)	$t(89) = -.481, p = .632$		
Anger (Mean, <i>SD</i>)	40.46 (10.61)	41.26 (9.86)	$t(103) = .399, p = .691$		
Locus of control (Mean, <i>SD</i>)	8.12 (2.96)	10.26 (13.0)	$t(103) = 1.191, p = .237$		
Optimism (Mean, <i>SD</i>)	19.89 (5.0)	18.63 (4.84)	$t(102) = -1.304, p = .195$		
Self-esteem (Mean, <i>SD</i>)	39.88 (5.72)	39.14 (5.30)	$t(103) = -.677, p = .500$		
Confrontations in past					
6 months (Mean, <i>SD</i>)	8.88 (14.32)	12.54 (32.51)	$t(101) = .757, p = .451$		
Violent confrontations					
past 6 months (Mean, <i>SD</i>)	3.18 (12.99)	1.85 (13.20)	$t(101) = -.566, p = .573$		

regation, (c) inmate transfer, and (d) inmate release. Attrition rates were not substantially different between the two study groups: 39% attrition within the AVP group versus 41% within the non-AVP group. The reasons for attrition were consistent across groups. Missing data-comparative analyses were performed to assess differences in baseline characteristics (age, race, offense, length of sentence, anger, locus of control, optimism, and self-esteem) of those present at 6-month follow-up versus those lost to follow-up. As indicated in Table 2, there were no differences.

Despite the high rate of attrition, reliable statistical analyses are still possible. In addition, the similarity between those present and those lost to follow-up at 6 months enhances internal validity and generalizability of the findings.

Outcome Analyses

Intrapersonal outcomes. Four 2×2 (time by group status) independent General Linear Model-Mixed Model (GLM-MM) analyses of covariance,

with age entered as a covariate, were used to assess change from baseline to 6-month follow-up on each of the attitude/attribute dependent variables, as a function of study group status (intervention versus comparison group). One of the strengths of this analytic procedure is that it assesses change from Time 1 (baseline) to Time 2 (6-month follow-up), while inherently accounting for differences in initial scores as a function of study group status. Due to the number of statistical analyses being performed, a more conservative Type I error rate was set. Results were considered statistically significant at the $p \leq .01$ level and marginally significant at the $.01 \leq p \leq .05$ level. The results of the GLM-MM are discussed in subsequent sections.

Using the conservative Type I error rate for interpretation, the interaction between change in anger scores over time and study group status was marginally significant, $F(1, 50) = 3.99, p < .05$. Group means at baseline indicated that the intervention group ($M = 40.32, SD = 10.39$) and the comparison group ($M = 39.86, SD = 11.57$) had similar scores on average on the Anger Expression Scale. However, at 6-month follow-up, the intervention group rated lower on average on the Anger Expression Scale ($M = 38.13, SD = 7.95$), and the comparison group rated higher ($M = 42.14, SD = 11.58$). In other words, there was a significant relationship between change in anger over time and participation in AVP versus no participation.

A marginally significant within-group effect was found for changes in Rosenberg self-esteem scores over time, $F(1, 50) = 4.50, p < .05$. There was an overall decrease in average global self-esteem scores from baseline ($M = 39.81, SD = 5.81$) to 6-month follow-up ($M = 37.66, SD = 3.84$), which was unrelated to study group status. In other words, self-esteem scores dropped significantly over time, regardless of participation in the AVP intervention. In addition, a within-group tendency was found for changes in the Life Orientation Test scores over time, $F(1, 50) = 2.91, p < .10$, which indicated an overall increase in average optimism scores from baseline ($M = 19.87, SD = 5.14$) to 6-month follow-up ($M = 21.17, SD = 4.68$), independent of study group status. There were no significant effects associated with Locus of Control.

Behavioral outcomes. Given that the behavioral measures were count variables (i.e., number of confrontations in the previous month, number of confrontations turned violent in the previous month), Poisson Regressions were used to assess the impact of the intervention for the AVP group as compared to the non-AVP group at 6-month follow-up, controlling for baseline characteristics. The incident rate ratio for the number of confrontations at 6 months postintervention, controlling for the number of confrontations preintervention, was $.432, p < .0005$ (CI = $.319$ to $.583$). In other words, the AVP

group reported .43 times (fewer than one half) the number of confrontations reported by those who did not receive the intervention, controlling for age, pretest confrontation score, type of sentence, and length of sentence. The incident rate ratio for number of postintervention confrontations turned violent did not reach significance.

Summary

In summary, after a follow-up study of inmates involved in AVP compared to a like group of general population nonparticipants, it was found after controlling for age that

1. Inmates who participated in AVP had significantly lower levels of expressed/experienced anger at 6 months postintervention, compared to nonparticipant inmates.
2. Inmates who participated in AVP reported significantly lower rates of confrontations 6 months postintervention, compared to nonparticipants.
3. Inmates, regardless of study group status, had significantly lower levels of global self-esteem at 6 months postintervention.
4. Inmates, regardless of study group status, demonstrated a trend toward higher levels of optimism at 6 months postintervention.

DISCUSSION

This evaluation has several limitations. First, random assignment to intervention and comparison groups was not feasible due to both administrative policy and program philosophy. Although baseline assessments of the two groups indicated no significant differences associated with race, offense, age, or sentence, it is possible that participants who elected to go through the AVP intervention were qualitatively different from those who did not on some unmeasured characteristics. Second, attrition rates were reasonably high at 6-month follow-up. Although attrition from both the AVP and non-AVP groups was comparable and there were no differences in baseline characteristics of those present at 6 months compared to those lost to follow-up, it is difficult to discount the possibility that those inmates who refused to participate at follow-up, were in segregation, had been transferred, or were released experienced different outcomes than those who remained in the evaluation. Third, behavioral measures were self-reported by inmates and may be subject to bias. Although the results of this evaluation should be interpreted within the context of these limitations, they nonetheless give rise to important implications.

To understand fully the implications of this investigation, it is necessary to begin by looking at the intrapersonal changes over time that were not specifically related to AVP participation but rather were seen in all inmates surveyed, regardless of group status. These findings suggest that as time passes, inmate perception of self worsens. The literature about the psychological and emotional effects of incarceration offers conflicting evidence (Bonta & Gendreau, 1992; Paulus & Dzindolet, 1992); however, findings of decline in self-concept (Bennett, 1974; Culbertson, 1975; Paulus, 1988) have been supported within and across subpopulations of inmates. The self-esteem results from this evaluation are consistent with those demonstrated in previous investigations. Alternatively, a recent review of the literature suggests that highly favorable views of self (coupled with threats to the ego) may be linked to violent behavior in a variety of groups, including inmates (Baumeister, Smart, & Boden, 1996). The decrease in self-esteem over time for this study population may actually represent a decline in what some may refer to as an overinflated sense of self.

After 6 months, inmates participating in this evaluation reported a tendency toward higher levels of optimism. Repeated interaction with inmates made it clear that hope (i.e., optimism) was one of the mechanisms that carried inmates from one day to the next. Hope is not synonymous with self-esteem. Self-esteem reflects feelings of self-worth, self-perception, and self-contribution, constructs that are functions of internal self-evaluation processes. Optimism, on the other hand, can be viewed as an emotional self-preservation construct in an institutionalized population, a mechanism to navigate rather than evaluate oneself. In other words, the increased level of optimism over time may be a mechanism associated with emotional survival. Although Scheier and Carver (1985) view dispositional optimism as a relatively stable trait, they discuss the relationship of stress, coping, and optimism, specifically, the link between optimists and active coping mechanisms. If we acknowledge that the correctional institution represents a stressful environment and that optimism as a positive emotion is correlated with active coping, then it is not difficult to expect an increase in optimism over time as a learned strategy among incarcerated men.

The combination of lowered self-esteem and increased optimism could be viewed as support for an institutional effect of confinement. More controlled studies and replication of existing research about intrapersonal change (Bennett, 1974; Culbertson, 1975) should be conducted to look at change from initial point of incarceration (first offense) across time in prison. We must understand the environment within which the interventions are being implemented before we can truly understand their impact. In addition, the

notion that decline in self-esteem may represent a positive change for violent/aggressive groups should be considered.

In light of evidence suggesting an institutional effect among these evaluation participants, and existing literature that suggests the difficulties associated with implementing appropriate interventions with incarcerated populations (Bonta & Gendreau, 1992; Hughes, 1996; Meehan, McClurg, & Lowe, 1990; Schlichter & Horan, 1981), the challenges associated with effecting change in areas of inmate self-perception, attribution, and behavior are extensive. The AVP intervention, as evaluated, did have a positive impact on participants. Not only did levels of expressed/experienced anger decrease as a function of participation in the AVP intervention, but as expected, for those individuals who did not participate in AVP, levels of anger increased over time. In addition, self-reported decline in number of confrontations was indicated for the AVP group compared to those who did not participate in AVP.

The demonstration of both intrapersonal and interpersonal impact while incarcerated is crucial at this time of alarmingly high recidivism rates. In a society where an estimated 5.1% of people will be confined in a state or federal prison at some point within their lifetime (U.S. Department of Justice, 1997c), where more than 40% of the inmate population is incarcerated for violent offenses (U.S. Department of Justice, 1997b), where the average percentage of sentence served by violent offenders is 48%, and where nearly 80% of violent offenders surveyed in a Bureau of Justice special report (U.S. Department of Justice, 1988) were recidivists, there is an unequivocal need for violence intervention.

An anger management and conflict resolution intervention that exhibits positive impact on participants, both psychological and behavioral, and can be implemented by inmates at little or no cost to the prison administration has potential worth considering. Although universal violence prevention may be the societal ideal, the most recently published incarceration rate in the United States of 600 per 100,000 residents (U.S. Department of Justice, 1996) suggests that more than 1 million U.S. residents are beyond the reach of universal prevention initiatives. Selected and targeted violence intervention with those individuals must be considered.

In conclusion, this investigation was a first attempt at an empirical evaluation of an inmate-run AVP. To gain a complete understanding of a complex intervention such as AVP, continued, expanded, and long-term (e.g., post-incarceration) evaluation is required. Intensity of exposure to the AVP intervention, the link between self-reported anger and violent behavior, the link between decreasing self-esteem and AVP impact, postrelease carryover effects of AVP, and systematic investigation of the overall effects of AVP on the penal institution in which it is implemented are potential next steps in the

evaluative process. Regardless of design limitations, results from this initial investigation are promising and provide a foundation for program development, institutional policy decision making, and continued investigation.

REFERENCES

- Baumeister, R. F., Smart, L., & Boden, J. M. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review*, *103*, 5-33.
- Bennett, L. A. (1974). The application of self-esteem measures in a correctional setting: Changes in self-esteem during incarceration. *Journal of Research in Crime and Delinquency*, *11*, 9-15.
- Blascovich, J., & Tomaka, J. (1991). Measures of self-esteem. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (Vol. 1). San Diego, CA: Academic Press.
- Bonta, J., & Gendreau, P. (1992). Coping with prison. In P. Suedfeld & P. E. Tetlock (Eds.), *Psychology and social policy* (pp. 343-355). Washington, DC: Hemisphere Publishing.
- Culbertson, R. G. (1975). The effect of institutionalization on the delinquent inmate's self-concept. *Journal of Criminal Law and Criminology*, *66*, 88-93.
- Deffenbacher, J. L., Story, D. A., Stark, R. S., Hogg, J. A., & Brandon, A. D. (1987). Cognitive-relaxation and social skills interventions in the treatment of general anger. *Journal of Counseling Psychology*, *34*, 171-176.
- Feindler, E. L., Marriott, S. A., & Iwata, M. (1984). Group anger control training for junior high delinquents. *Cognitive Therapy and Research*, *8*, 299-311.
- Goldstein, A. P., & Keller, H. R. (1987). *Aggressive behavior: Assessment and intervention*. New York: Pergamon.
- Howells, K. (1989). Anger-management methods in relation to the prevention of violent behavior. In J. Archer & K. Browne (Eds.), *Human aggression: Naturalistic approaches* (pp. 153-181). New York: Routledge.
- Hughes, G. V. (1996). Short- and long-term outcomes for a cognitive-behavioral anger management program. In G. Davies, S. Lloyd-Bostock, M. McMurrin, & C. Wilson (Eds.), *Psychology, law, and criminal justice: International developments in research and practice* (pp. 485-494). New York: Walter de Gruyter.
- Meehan, M., McClurg, G., & Lowe, P. (1990). Intervention with a remand population. *Issues in Criminology and Legal Psychology*, *15*, 59-63.
- Paulus, P. B. (1988). *Prison crowding: A psychological perspective*. New York: Springer-Verlag.
- Paulus, P. B., & Dzindolet, M. T. (1992). The effects of prison confinement. In P. Suedfeld & P. E. Tetlock (Eds.), *Psychology and social policy* (pp. 327-341). Washington, DC: Hemisphere Publishing.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, *80*, 8-16.
- Scheier, M. D., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, *4*, 219-247.

- Schlichter, K. J., & Horan, J. J. (1981). Effects of stress inoculation on the anger and aggression management skills of institutionalized juvenile delinquents. *Cognitive Therapy and Research*, 5, 359-365.
- Spielberger, C. D., Johnson, E. H., & Jacobs, C. A. (1982). *Anger expression scale manual*. Tampa: University of South Florida, Human Resources Institute.
- Spielberger, C. D., Johnson, E. H., Russell, S. F., Crane, R. J., Jacobs, G. A., & Worden, T. J. (1985). The experience and expression of anger: Construction and validation of an anger expression scale. In M. A. Chesney & R. H. Rosenman (Eds.), *Anger and hostility in cardiovascular and behavioral disorders*. Washington, DC: Hemisphere Publishing.
- U.S. Department of Justice, Bureau of Justice Statistics. (1988, January). *Profile of state prison inmates* (NCJ-161132). Annapolis Junction, MD: Bureau of Justice Statistics Clearinghouse.
- U.S. Department of Justice, Bureau of Justice Statistics. (1993, March). *Survey of state prison inmates* (NCJ-136949). Rockville, MD: Bureau of Justice Clearinghouse.
- U.S. Department of Justice, Bureau of Justice Statistics. (1995, April). *Prison sentences and time served for violence* (NCJ-1538580). Rockville, MD: Bureau of Justice Clearinghouse.
- U.S. Department of Justice, Bureau of Justice Statistics. (1996, August). *Prison and jail inmates* (NCJ-16132). Annapolis Junction, MD: Bureau of Justice Statistics Clearinghouse.
- U.S. Department of Justice, Bureau of Justice Statistics. (1997a, August). *Census of state and federal correctional facilities* (NCJ-164266). Rockville, MD: Bureau of Justice Clearinghouse.
- U.S. Department of Justice, Bureau of Justice Statistics. (1997b, May). *Correctional populations in the United States* (NJC-163916). Annapolis Junction, MD: Bureau of Justice Clearinghouse.
- U.S. Department of Justice, Bureau of Justice Statistics. (1997c, March). *Lifetime likelihood of going to state or federal prison* (NCJ-160092). Rockville, MD: Bureau of Justice Clearinghouse.

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