

CONSIDERING THE EFFICACY OF STRESS MANAGEMENT EDUCATION ON SMALL-TOWN AND RURAL POLICE*

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Previous studies on police stress have focused on both maladaptive and adaptive coping strategies and have consistently made the recommendation that agencies provide stress management programs for their officers. As research into the efficacy of these programs is lacking, this study attempted to address this gap in the literature by assessing the impact of stress management training on officers' anxiety, self-reported levels of stress, and behaviors in a paired sample (pretest/posttest) t-test. Findings suggested that these programs do have an impact on officer stress, but as the lag time increases, there is a diminished return of benefit, supporting the need for continued education.

Research in the area of police stress has produced quite an extensive body of literature over the past four decades. Some of this research has focused on police perception of stressors (Crank & Caldero, 1991; Cullen, Link, Travis, & Lemming, 1983; Hillgren, Bond, & Jones, 1976; Kirkcaldy, Cooper, & Ruffalo, 1995; Lotz & Regoli, 1977; McLaren, Gollan, & Horwell, 1998; Regoli, Crank, & Culbertson, 1989; Violanti, 1992; Violanti & Aron, 1994, 1995).

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*This project was supported by cooperative agreement #97-DD-BX-0061 awarded by the Bureau of Justice Assistance, U.S. Department of Justice. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice. The authors would like to thank Brian Lawton for his review of an earlier draft and the APCJ anonymous reviewers' most helpful comments.

Other studies have examined actual types of police stressors (Burke, 1993; Crank, Regoli, Hewitt, & Culbertson, 1993; Hageman, 1978; Kroes, 1985; Lawrence, 1984; Marshall & House, 1985; Morash & Haarr, 1995; Patterson, 1992; Reiser, 1974; Sewell, 1983; Singleton & Teahan, 1978; Terry, 1981; Violanti, Marshall, & Howe, 1985; White, Lawrence, Biggerstaff, & Grubb, 1985; Zhao, He, & Lovrich, 2002). Still further research has classified these stressors into four major categories: organizational, external, task related, and personal (Kroes, Margolis, & Hurrell, 1974a, 1974b; Territo & Vetter, 1983; Wexler & Logan, 1983).

The first of these classifications, organizational stress, consists of those factors brought on by the bureaucratic nature of the typical police agency and the conflicts that arise between management and line officers (Kroes, Margolis, & Hurrell, 1974b; Storch & Panzarella, 1996; Toch, 2002). The second, external, consists of those factors related to things that lie outside of policing that are often beyond their control, such as politics and economic constraints. The third is task related which tends to center on the dangers inherent within police work as related to the daily tasks which police must perform. And finally, the fourth area, personal stressors, included those stressors that affect the individual, such as their family life, conflicts between family life and the police profession, and personal feelings of self-actualization and expression (Coman & Evans, 1991; Crank & Caldero, 1991; Violanti & Aron, 1994). The research has continually cited the first two, specifically organizational structure and management practices, as being the two leading stressors in policing (Coman & Evans, 1991; Crank & Caldero, 1991; Hillgren, Bond, & Jones, 1976; Kirkcaldy, Cooper, & Ruffalo, 1995; Kroes, Margolis, & Hurrell, 1974a, 1974b; Maynard & Maynard, 1982; Patterson, 1992; Storch & Panazarella, 1996; Violanti & Aron, 1994, 1995; White & Marino, 1983).

Research into stress and policing has also looked at the issue of coping and effective social support mechanisms for police officers in dealing with these stressors (Aaron, 2000; Anshel, M. H., 2000; Fain & McCromick, 1988; Finn & Tomz, 1997; Patterson, 2003). The more recent focus has been on maladaptive (e.g., alcohol,

aloofness, drug use; See Bonifacio, 1991; Carter & Stephens, 1988; Evans, Coman, Stanley, & Burrows, 1993; Fain & McCromick, 1988; Kroes, 1985) and adaptive (e.g., talking things over with coworkers, exercise, education; See Evans, Coman, Stanley, & Burrows, 1993; Patterson, 2003; Violanti, 1992) coping strategies, as well as the different models, such as clinical intervention and individual coping (Stinchcomb, 2004). It is this latter model, typically offered through stress prevention and stress management training, that has been identified as the “most common method for addressing stress in law enforcement today” (Stinchcomb, 2004, p. 269; See also Finn, 2000, p. 22; Sewell, 1999, p. 364). It is also understood that much of the research into police stress generally addresses this as one of the primary means by which police organizations can help to alleviate officer stress (Anderson, Litzberger, & Plecas, 2002; Anshel, 2000; Fain & McCromick, 1988; Lawrence, 1984; Lord, 1996; Violanti & Aron, 1995). More recently, Patterson (2003) has stated that “stress management programs can help police officers acquire the cognitive skills necessary to utilize emotion-focused coping and social support seeking in response to stressful events experienced in work and nonwork domains” (p. 224). Little work has been done in this area with the exception of Patterson (2003) and Garner (2008). Which is why Patterson (2003) points out that “more empirical evidence demonstrating the efficacy of stress management programs on psychological well-being and the utility of cognitive approaches to stress management is needed” (p. 224). Recognizing this gap in the literature, this study assessed the impact that a stress management program had on small-town and rural police officers and sheriffs’ deputies in West Virginia.

REVIEW OF THE LITERATURE

As previously stated, there is a large body of research related to stress in law enforcement. One slice of this large body of knowledge has dealt with coping strategies employed by the officers and how police agencies have attempted to teach officers these stress reducing coping skills. A number of the early studies related to police officer coping methods dealt with such issues as alcoholism, cynicism, emotional detachment, aloofness, suspicion, and de-

personalization (Bonifacio, 1991; Davidson & Veno, 1991; Evans, Coman, Stanley, & Burrows, 1993; Kroes, 1985; Niederhoffer, 1967; Violanti & Marshall, 1983). Although drug use, beyond alcohol, had been hypothesized, no empirical evidence was found to support this assertion (Carter & Stephens, 1988), and one study found no empirical evidence for cynicism buffering the effects of stress (Violanti, Marshall, & Howe, 1985).

More recent research has divided the categories of coping methods into adaptive and maladaptive coping methods (Anshel, 2000). One study found officers use maladaptive coping skills such as depression, alcohol, and somatic problems (Band & Manuele, 1987), another for alcohol (Dietrich & Smith, 1984), and still another for both alcohol and drug use (Burke, 1993). Some studies have found that officers use both maladaptive (e.g., alcohol, smoking, etc.) and adaptive (e.g., exercise, good diet, etc.) coping methods (Alexander & Walker, 1994). It should also be noted that one study found when officers used no coping method, it resulted in high levels of stress (Lazarus & Folkman, 1991).

The predominant approach utilized in the stress research literature for coping is predicated on the view that coping mechanisms and social support buffers the negative effects that stress has on psychological and physiological well-being (Coyne & Downey, 1991; Folkman & Lazarus, 1991; Patterson, 2003). The literature is also rife with the conviction that coping mechanisms and the awareness of social support can be taught, thus leading to a reduction in stress (Anderson, Litzenberger, and Plecas, 2002; Anshel, 2000; Fain & McCormick, 1988; Lawrence, 1984; Lord, 1996; Stinchcomb, 2004; Violanti & Aron, 1995). This is found in such conclusions as Fain and McCormick's assertion (1988) that it is "increasingly apparent that departments will have to place into effect some type of program to relieve occupational stress, or face the liability for failure to do so" (p. 27). Others have found qualifications, such as Lawrence (1984) arguing that "training can be more effective when it meets the specific needs of new recruits" (pp. 260-261), Violanti and Aron (1995) stating that certain characteristics associated with officer stress should be taken into consideration by police manage-

ment in order to “build intervention strategies for dealing with organizational stress” (p. 293), and Lord (1996) arguing that “teaching immediate supervisors, as well as upper management, methods and techniques of providing positive reinforcement, clear expectations, and general support” (p. 516) could help reduce stress.

Despite the continued assertion that stress management programs, sponsored by police agencies, are important in helping officers develop positive and adaptive coping skills, research has also found qualifications to these programs. In general, Anshel (2000) found that police training and supervision aimed at reducing stress in officers faces many difficulties. More specifically, Anshel concludes that “it is apparent that the teaching and monitoring of officers’ adaptive and maladaptive coping skills remain a limitation in police training and job supervision” (p. 397). In addition, Patterson (2003) has argued that “stress management programs designed for police officers should consider the number of stressful life events police officers experience, and that such programs should not focus exclusively on work-related events and situations” (p. 224). However, Kaufman and Beehr’s study (1986), found that these police sponsored stress management training sessions can have a drawback: When the source of support and training is derived from the same source as the stress, the negative effects of work stress actually increased rather than decreased. Regardless of this last finding, police agencies across the country have continually adopted some sort of stress management/stress reduction training for its officers (Stinchcomb, 2004), and the National Institute of Justice published a rather lengthy monograph titled *Developing a Law Enforcement Stress Program for Officers and Their Families* (Finn & Tomz, 1997).

The above findings demonstrate that police sponsored stress management training has become a common response among law enforcement agencies attempting to deal with stress caused by the police occupation. Teaching stress awareness and how to recognize the signs and symptoms (e.g., constant worrying, irritability, insomnia, teeth grinding, etc.), as well as the various means for coping with stress (e.g., diet and exercise, critical incident stress debriefings, critical incident stress management, encouraging communication with

friends, colleagues, parents, and spouse, etc.), have become common practices throughout law enforcement in the United States (Finn & Tomz, 1997; Morash, Haarr, & Kwak, 2006; Stinchcomb, 2004). What is not clear from these findings is whether there is efficacy in these stress management training sessions. Do they, in fact, reduce stress? It was, therefore, the aim of the present study to investigate whether stress management training has any effect on levels of officer anxiety (Oliver & Meier, 2004; Reynolds, Richmond, & Lowe, 2003), self-reported levels of stress (Garner, 2008; Patterson, 2003), and behavioral changes (Walker, 2005; Walker, Alpert, & Kenney, 2001) with those factors associated with high officer stress. It was hypothesized that stress management training would reduce officer anxiety, perceived levels of stress, and stress manifested behaviors.

METHODS

Data

The data used in this study is derived from a project that developed and delivered training to small-town and rural police officers and sheriff's deputies in the State of West Virginia. Sworn police officers from across the West Virginia that serve in a small-town or rural agency, specifically those serving populations under 50,000 citizens, were provided the opportunity to participate in the training (See McDonald, Wood & Pflug, 1996; Weisheit, Falcone, & Wells, 1999). This only excluded three agencies in West Virginia, the Charleston and Wheeling Police Departments, as well as the state police. The officers that participated were given a voluntary survey, between August 1, 1998, and May 1, 2002, just prior to the delivery of an eight-credit-hour in-service training on stress management. The first four hours consisted of stress awareness training, including the definition of stress, how to recognize the signs and symptoms, stress in policing in general, and stress in small-town and rural policing specifically; while the remaining four hours consisted of stress management training, including a discussion of diet and exercise, stress reduction techniques, and critical incident stress debriefing (CISD) (Malcolm, Seaton, Perera, Sheehan, & Van Hasselt, 2005). Each block of training was based on previous research that has suggested that this type of knowledge and training helps to reduce stress.

The training was offered by instructors who had received a 20-hour train-the-trainer instructional course from leading experts on stress in policing, dieticians, and a nationally known CISD instructor. The in-service training was delivered at the law enforcement agency's headquarters or at an agency co-located with their jurisdiction, thus bringing the class to them rather than having the participants travel to a central location. Class size typically ranged from 2 to 12 officers. Prior to the beginning of training, instructors presented the participants a voluntary survey with consent form, which when completed was placed in a sealed envelope and mailed to an independent researcher at a university not associated with the primary researchers. It was her responsibility to remove the consent form and any identifying information from the survey, to code and input the data, and then mail only the coded data to the researchers. This use of a "blind" was done to ensure the privacy of the police officers and so that the researchers would not know how any individual officer responded.

The total number of officers trained and surveys collected were 664 out of a population of 2,070 officers from small-town and rural departments in the State of West Virginia (See Table 1 on page 8). After the 664 officers received their training, on a computer generated random basis, coded numbers were selected and sent back to the blind in order to mail a follow-up survey to 20% of the original sample participants ($n = 132$). The survey instrument used in the post-test was the same as the one used in the original data collection. The officers were asked to complete the survey and mail it back to the blind in order to perform the same functions as previously detailed, labeling the new data as belonging to the post-test data. Matching was made based on the consent form information which only the blind was able to see. The blind followed up with subsequent mailings and phone calls using a standard script to encourage officers to voluntarily complete the second survey instrument resulting in a 100% participation rate. These surveys were mailed between February 1, 1999, and December 1, 2002, with a reported lag of between 1 to 18 months from the pre-test to the post-test.

Table 1
Characteristics of the Sample, Original Study, and West Virginia Police Population

<i>Variables</i>	<i>West Virginia (Population)</i>	<i>Original Study</i>	<i>Current Sample</i>
Agency			
Police (%)	79	60	60
Sheriff (%)	20	39	40
Special PD (%)	1	1	0
Gender			
Male (%)	96	96	96
Female (%)	4	4	4
Race			
White (%)	95	95	94
Black (%)	4	4	6
Other (%)	1	1	0
Marital Status			
Married (%)	—	86	83
Divorced/Separated (%)	—	28*	16
Education			
GED (%)	—	<1	1
High School (%)	—	24	1
Some College (%)	—	51	30
College Degree (%)	—	21	68
Military (%)	—	35	39
Officers			
Number of Officers* (n)	2,070	664	132
Average Age (Years)	38	38	38
Tenure (Years)	11	12	12
Income (mode)	—	\$15,000– \$19,999	\$15,000– \$19,999

Note: Data Excludes West Virginia State Police, West Virginia Department of Natural Resources - Law Enforcement Division, and the Charleston & Huntington Police Departments.

* Percentages exceed 100% due to several officers listing both married and divorced.

It is important to note at this point that all of the officers in the original sample, except one, had received the two-hour stress management training in the police academy. Regardless of the tenure of the respondents, this was the only training they reported ever receiving on stress management. The one exception was a Division of Natural Resources Officer who had attended a 40-hour course. This officer was removed from the final sample of small-town and rural officers, and subsequently this study, and became one of the study's trainers. This is important to acknowledge as there was no variance in the amount of institutional training that any of the officers in the sample had received previously or since the eight-hour training.

In order to assess the relationship between the post-test sample, the original sample, and the population, Table 1 presents the data for all three for comparison purposes. As the original study obtained slightly more sheriffs' deputies than police officers, the post-test sample also obtained a similar response rate. In terms of education, the post-test appears to under-represent those with only a high school education and some college, while taking into account more officers and deputies with a college degree. It should be noted that all officers and deputies, in order to be certified, must attend the West Virginia State Police Academy and that Marshall University (Huntington, West Virginia) allows, with the completion of some general education requirements, the granting of an Associates degree in Criminal Justice to those graduating from the academy. In all other categories—gender, race, marital status, military experience, department size, average age, years of tenure, and income—the post-test sample is reflective of the original study, which in itself is reflective of the small-town and rural law enforcement population in the State of West Virginia. This is especially evident in the fact that the average size (mean and median) of the officer/deputy's agency was twelve officers/deputies, and the mode was only four officers/deputies. In addition, the agencies were predominately male, White, with a high rate of being either divorced or separated, and with an average tenure of 12 years, very similar to the findings of other small-town and rural studies (See Scott, 2004).

Variables

Stress, for the purposes of this study, attempted to go beyond the “everyday understanding of the word” (Storch & Panzarella, 1996, p. 100), and attempted to use a more defined definition, specifically “something that is imposed on a person usually from outside, that is external or personal factors that bring about some degree of physical or psychological discomfort” (Zhao et al., 2002, p. 48; See also Brown & Campbell, 1994; Selye, 1974; Sewell, 1981). In order to tap into the latent variable that would adequately address this definition of stress, the authors used three types of measures: psychological (anxiety), personal factors (self-report), and physical (behavioral).

The first variable, aimed at assessing psychological discomfort, was based upon the Adult Manifest Anxiety Scale (AMAS) (Lowe & Reynolds, 2004; Reynolds, Richmond, & Lowe, 2003), specifically the AMAS-A test, which is a 36-item self-report measure that was designed to assess anxiety in the adult population (18-59 years old). The questions on this scale specifically look at behaviors related to anxiety posed in a simple “yes/no” format. The AMAS includes such questions as “I certainly feel useless at times,” “I am certainly lacking in self-confidence,” and “I work under a great deal of tension” (Reynolds, Richmond, & Lowe, 2003). Scores are derived from summing the “yes” responses with a higher score indicating a higher level of anxiety (Lowe & Reynolds, 2004). The AMAS-A has an adequate internal consistency reliability with scores of .89 for the total sample, .85 for male respondents, and .90 for female respondents (Lowe & Reynolds, 2004). The three anxiety subscales have internal consistency reliability estimates of .67 to .84, a lie scale with an internal consistency reliability estimate of .71, and a test/retest reliability coefficient of .85 on the total scale score. It is the total scale score that was utilized for the pre-test and post-test purposes of this study.

The second measure utilized, aimed at addressing the personal factors and one that is consistent with the literature, was a self-report indicator of one’s level of perceived stress. Many studies have utilized a thermometer style of assessing this data (e.g.,

Perrin, Smith, & Yule, 2000), while others have used 10-point scales (e.g., Scott, 2004). As the majority of the questions in this study were Likert-like scales, this study used a question asking respondents to rate the level of stress inherent within their job with a 5 indicating high stress, 3 representing an “average” level of stress, and 1 representing low stress.

The third measure was a behavioral scale aimed at addressing the behavioral factors by summing the responses to the reported number of sick days over the previous year along with the number of complaints made by citizens against the officers. These factors are based on behaviors that may be indicative of personal problems/stress and are indicators in what is known as the police “early intervention system” (Walker, 2003, 2005). A reliability analysis of the scale resulted in an acceptable Cronbach’s alpha of .74, indicating that the two items share common variance and thus adequately measure the same underlying concept.

In addition to these three measures, this study assessed a variety of sociodemographic characteristics that previous research has associated with higher levels of stress in both work and personal environments. These variables included age (Patterson, 2003; Turner & Marino, 1983), gender (Patterson, 2003; Roxburgh, 1996; Thoits, 1986; Turner & Marino, 1983), race (Zhao, He, & Lovrich, 2002), marital status (Horwitz, McLaughlin, & White, 1997; Patterson, 2003), department size (Brooks & Piquero, 1998; Scott, 2004; Terry, 1981; White & Marino, 1983), tenure (Buzwa, Austin, & Bannon, 1994; Evans, Coman, & Stanley, 1992; Patterson, 1992; Patterson, 2003; Zhao, Thurman, & He, 1999), education (Ayes & Flanagan, 1992; Patterson, 2003), and income (Patterson, 2003; Zhao, Thurman, & He, 1999).

The variables gender, race, marital status, and education, were all coded as dummy variables with “1” equaling male, White, divorced and/or separated, and college degree, respectively. Age and tenure were coded in years, specifically how old the officer or deputy was and how long they had been in policing. Department size was coded as the number of sworn police officers or sheriffs’ deputies assigned to the law enforcement agency at the time of the

survey. Finally, income was reported in brackets of \$5,000 with the last category being \$40,000 or more.

Quantitative Analysis

Descriptive statistics were utilized to assess the sample of participants who completed the post-test with the original sample and also that of the population. Pearson correlations were used to assess the relationships between the demographic characteristics with the three measures employed to assess stress (See Appendix). Then, in order to ascertain if improvements in stress occurred between the pre- and post-tests, paired sample t-tests were employed for each of the three outcome variables (AMAS, Self-Report, and Behavioral). Because of the possibility that variance in lags may have masked the impact that the stress training had on the participants, the outcome measures were broken down into three time categories—1 to 6 months, 7 to 12 months, and 13 to 18 months—and paired sample t-tests were again employed. Finally, the significance level for the study was initially set at the standard .05 level. However, as there were 20 separate hypotheses tested in the study, it was anticipated that the true alpha level would be inflated for the entire study ($1 - (1 - 0.05)^{12} = 0.60$) indicating a 60% chance of making a Type I error, finding significance where none exists (Bernard, 2005; Cook & Campbell, 1979). In order to correct for this, the Bonferroni correction was made by dividing the desired alpha (.05) by the number of significance tests (12), resulting in a new level of significance: .0041 ($.05/12 = .0041$) (Bernard, 2005; Gavin, 2008; Miles & Banyard, 2007).

RESULTS

Table 2 [page 13] displays the results of the paired sample t-tests used to assess the pre-test and post-test outcome measures. Findings indicate that only one of the three measures employed, the Self-Report measure, was significant. In this case, the mean improved from 3.469 to 2.212. In the case of both the anxiety and behavioral scales, the means actually increased, but again, neither was found to be statistically significant. Because of the concern that the range of 1- to 18-month lags between the pre-test and post-test may

mask variation in the means due to time, arbitrary lags were introduced into the three outcome measures, in increments of six months, and t-tests were reevaluated.¹

Table 2
Pre and Post Stress Training Outcome Measures (n = 132)

	Pretest		Post-test		<i>t</i>
	Mean	SD	Mean	SD	
AMAS	5.757	3.169	5.954	2.857	-0.726
Self-Report	3.469	1.161	2.212	0.996	15.272*
Behavioral	6.166	24.957	8.196	16.986	-1.362

* p < .0041 level (Bonferroni correction)

Table 3 [below] displays the findings of the paired sample t-tests with six-month lag increments. The n for each of the six-month categories were 36 (1-6 months), 30 (7-12 months), and 66 (13-18 months). Findings indicate that, unlike the aggregated analysis, when the three lags are introduced for the Adult Manifest Anxiety Scale,

Table 3
Pre and Post Stress Training Outcome Measures with Lags

	Pre-test		Post-test		<i>t</i>	
	Lags+	Mean	SD	Mean		SD
AMAS						
1-6 months		7.897	3.127	4.487	1.448	9.390*
7-12 months		5.769	2.746	5.153	2.053	2.215*
13-18 months		4.515	2.696	6.939	3.195	-10.512*
Self-Report						
1-6 months		3.615	0.814	1.589	0.751	15.014*
7-12 months		3.615	1.358	2.230	0.992	9.383*
13-18 months		3.333	1.256	2.575	0.961	8.256*
Behavioral						
1-6 months		3.282	3.077	2.820	2.761	0.743
7-12 months		11.923	39.786	7.615	20.392	1.114
13-18 months		2.969	3.002	10.333	15.842	-3.981

+ n = 36 (1-6 months), 30 (7-12 months), 66 (13-18 months).

* p < .0041 level (Bonferroni correction)

the t-tests are statistically significant. In the first six months the mean scores improved from 7.897 to 4.487. In the second six-month period, the means continued to improve, dropping from 5.769 to 5.153. Finally, in the last six-month period, the mean increased from 4.515 to 6.939, suggesting a decay in the effects of the stress training.

In terms of the self-report measure, findings indicated significant improvements in all three lags. The means improved in the first six months, falling from 3.615 to 1.589; in the second six months they fell from 3.615 to 2.230; and in the final six-month time period they moved from 3.333 to 2.575.

Finally, in regard to the behavioral scale, the first two six-month time periods were not found to be statistically significant. Only the third six-month period was statistically significant at the original .05 level, but not at the level set by the Bonferroni correction (.0041) calling into question if this one behavioral measure was simply inflated. The mean rose from 2.969 to 10.333, showing a significant decay in the effects of the stress training. However, the highly inflated standard deviations indicated the possibility of outliers, which was verified by the data. One individual reported 205 sick days and two other officers indicated they had taken over 100 sick days in the previous year. This greatly inflated the data as evidenced by the higher mean in the 7-12 month lag. When these outliers were removed from the database and the t reassessed the t value was reported as -9.727, but the standard deviation remained high (16.785) despite it showing significance ($p < .0041$). It would appear that the behavioral scale, at least in this study, is an inappropriate scale, and any findings drawn from it would have to be considered unreliable.

DISCUSSION & CONCLUSION

This study was based on a larger data set that surveyed small-town and rural law enforcement officers throughout the State of West Virginia. Three measures of stress were used, specifically the Adult Manifest Anxiety Scale (AMAS), self-reported level of stress, and a behavioral scale assessing behaviors associated with high levels of

stress, namely sick days and citizen complaints, prior to the delivery of an eight-hour in-service training on stress management. Officers were also asked a series of other questions related to stress, their job environment, and socio-demographic questions. A sample of officers was then given the post-test by mail with a lag of 1 to 18 months in-between the pre-test and post-test to assess changes in the level of officer stress. It should be noted that no officer in the post-test received any additional training on stress, as they all answered they had received 10 hours of training in their careers (the 2 hours in the police academy and the 8 hours in-service training provided by the grant). A series of t-tests were conducted to examine whether stress was reduced by the stress management training intervention. It was found that stress, particularly in terms of levels of anxiety (as measured by the AMAS) and perceived stress (as measured by self-report data), were reduced by the training. The effects of the stress management training, however, would appear to diminish over time, especially between the 13- and 18-month lags, presenting as the point at which gains begin to be lost, and possibly begin to rise again to levels exceeding where they started.

The findings of this study are supportive of previous policy recommendations, that institutional-sponsored stress management training would assist officers in managing their levels of stress (Anderson, Litzberger, & Plecas, 2002; Anshel, 2000; Fain & McCromick, 1988; Lawrence, 1984; Lord, 1996; Violanti & Aron, 1995). It has also been found that this is the most common method that law enforcement has used in order to address high levels of stress among its officers (Finn, 2000; Sewell, 1999; Stinchcomb, 2004). The findings of this study would suggest that these training programs are in fact effective at reducing stress among small-town and rural police officers in West Virginia.

From a policy standpoint then, the authors would make the recommendation to law enforcement agencies that they continue their institutional-sponsored stress management training, or, if lacking such program, they initiate one for the psychological and physical well-being of their officers (Similar recommendations have been made by Finn & Tomz, 1997; International Association of Chiefs

of Police, 2002; Janik, 1999; Scott, 2004; Sewell, 2002). Further, because the benefits of such training appear to diminish over time, with the effects beginning to degrade after 12 months, and potentially rising by the 16- to 18-month mark, the authors would make the further recommendation that stress management training become a yearly requirement for all officers. What is not known is whether the entire stress management course must be repeated (in this case 8 hours) or if a simple review would suffice (e.g., 2 to 4 hours) to maintain the gains made by the initial stress management training. Further research might help to address the level of training necessary to maintain the level of benefit derived from the initial training.

Although findings from the present study appear to support the efficacy of stress management programs, some caution should be taken in interpreting the results. One limitation of the study is that the population was limited to West Virginia law enforcement officers, raising some questions as to the generalizability of other law enforcement officers. As the original data was limited to those classified as small-town and rural, the findings may only be generalizable to similar populations and not all police officers, especially those in an urban setting (Crank & Caldero, 1991; Regoli et al., 1989). The sample size itself could also be a limiting factor (Brooks & Piquero, 1998; Scott, 2004), especially for those defined as “small-town” and “rural.” Still further, because all officers in the West Virginia State Police Academy, through which all law enforcement officers are certified, receive college credit, there is some debate as to whether or not this additional “college education” may have some impact on the officers’ level of stress, despite the fact that education was not a significant predictor.

Finally, there were two significant limitations to this study that must be addressed by future studies. First is the issue of temporal ordering. As the study was conducted piecemeal, providing training for only 2 to 12 officers at a time, it raises the question of whether temporal distortions account for any of the changes from pre-test to post-test. A future study should consider testing a large cohort at one time, provide the training, and then follow up with surveys at 6, 12, and 18 months to better assess variation across

time. The second, and greatest limitation to this study, was the lack of a control group. As there were a number of administrative reasons that arose preventing the use of a comparison group, one was not utilized thus bringing into question the study's ability to properly assess that any impact was truly from the intervention and not other factors, as well as its ability to assess the long-term impact of the intervention. Future research addressing the efficacy of stress management training in reducing stress should not only employ a control group in order to better verify the results, but it may help us to understand how the training does so and how best it could be employed in the future.

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ENDNOTES

1. It should be noted that due to the arbitrariness of introducing lags at six-month intervals, a third iteration was conducted using three-month intervals with very similar findings, demonstrating statistical significance for the AMAS and self-report variables in the first twelve months (four lags) with continued decay over the next six months (fifth and sixth lags).

**APPENDIX: CORRELATIONS AMONG ALL MODEL
VARIABLES (N = 132)**

	X1	X2	X3	X4	X5	X6	X7	X8	X9	Y1	Y2	Y3
X1 Age	1.00											
X2 Gender	-.11	1.00										
X3 Race	.01	-.05	1.00									
X4 Div./Sep.	.09	.09	-.06	1.00								
X5 Dept. Size	-.16	-.20	-.00	.18	1.00							
X6 Tenure	.85	-.14	.16	.02	-.13	1.00						
X7 Education	-.18	.17	.10	.18	-.17	-.12	1.00					
X8 Income	.02	-.04	-.08	.22	.54	.18	.10	1.00				
X9 Lag	.06	.33	-.08	.03	-.19	-.04	-.00	-.21	1.00			
Y1 AMAS	-.03	.02	-.18	.21	-.11	-.06	-.04	-.03	.42	1.00		
Y2 Self-Report	-.02	.04	-.07	-.04	-.02	-.00	.20	-.15	.45	.31	1.00	
Y3 Behavior	.12	.04	.01	-.10	-.21	.03	-.07	-.24	.25	.29	.19	1.00

Note: All Pearson's r correlations in this table were statistically significant at the .05 level.

Received: 9/08
Accepted: 11/08

Suggested Citation:

Oliver, W. M., & Meier, C. (2009). Considering the efficacy of stress management education on small-town and rural police. [Electronic Version]. *Applied Psychology in Criminal Justice*, 5(1), 1–25.