SUPPORTING STATEMENT

Part A. Justification:

1. Necessity of Information Collection.

On September 13, 1994, President Clinton signed into law the Violent Crime Control and Law Enforcement Act of 1994 (Pub. L. 103-322). Title I of the "crime bill," the Public Safety Partnership and Community Policing Act of 1994 (the Act), authorizes the Attorney General to make grants to states, units of local government, Indian tribal governments, other public and private entities, and multi-jurisdictional or regional consortia thereof to increase police presence, to expand and improve cooperative efforts between law enforcement agencies and members of the community, to address crime and disorder problems, and to otherwise enhance public safety.

Pursuant with the above, the Office of Community Oriented Policing Services (COPS) is seeking OMB approval of a battery of standard psychological survey instrument that measure stress. These instruments will be administered as part of a broader cooperative agreement awarded to the Milwaukee Police Department (MPD). The name of the project is "*Promoting Officer Resiliency to Stress*." The battery of survey instruments to be used in this study is referenced as *The Milwaukee Police Department Stress Resiliency Study Questionnaires.*

The primary goal of this COPS funded project is to systematically assess the implementation of training using a stress reduction protocol that has been used with military personnel. The MPD had worked with the principal investigator on previous occasions and had expressed an interest implementing this strategy on a trial basis with small sample of officers, to minimize disruption to standard operations.

This project has been designed as a pilot program that will provide MPD executives and administrators with baseline information regarding the viability of this training approach and the potential benefits of expanding its implementation within the department. In addition, the implementation process of this training protocol will be assessed systematically to determine how the pilot training protocol might be refined in subsequent iterations. An internal report will be generated by the principal investigator for the MPD. The single COPS sponsored deliverable for this work is the publication of a monograph directed to law enforcement audience, written as a "lessons learned" overview of the training protocol and implementation experiences of the MPD.

Part of this project supports carrying out a small scale pilot study with a limited number of participants that will provide preliminary assessment of the training protocol within the MPD. The training protocol that will be used is adapted from military applications. A sample of 20 police officers will be taught to self-regulate their emotional and physiological responses to stressors in ways intended to increase their resiliency to stress. As has been demonstrated in other settings, stress is a modifiable risk factor that contributes to chronic disease.

Prior research projects that supporting the finding that occupational stress is a modifiable risk factor are extensive, but specific protocols for reducing stress and determining which indicators of stress are modified are less developed. This pilot is unique in that the aim is not to modify stress but

rather the officers' response to stress. This project hopes to fill some of these gaps with respect to law enforcement by building off of previous research and clinical knowledge. Publications which directly support and inform this project include the following:

1. McCraty, R., Atkinson, M., Lipsenthal, L., & Arguelles, L. (2009). New hope for correctional officers: An innovative program for reducing stress and health risks. *Appl Psychophysiol Biofeedback, 34*, 251-272;
2. McCraty, R., & Atkinson, M. (2012). Resilience training program reduces physiological and psychological stress in police officers. *Global Advances in Health and Medicine, 1*(5), 44-67; and
3. Franke, W., Kohut, M., Russell, D., Lim Yoo, H., Ekkekakis, P., & Ramey, S. (2010). Is job-related stress the link between cardiovascular disease and the law enforcement profession? *Journal of Occupational and Environmental Medicine*, 52(5), 561-565.

Training Protocol

Over a three-month time period, the stress resilience training protocol will educate police officers in the MPD on techniques to manage and modify physiological, emotional, and behavioral responses to stress. Training will include practice sessions that use a hand-held, non-invasive heart-rhythm monitor to facilitate acquiring the skills to self-regulate responses to stress techniques.

Outcome measures that will be used as part of the assessment of this pilot training protocol include physiological indictors of stress (these are comprised of the variables of systolic and diastolic blood pressure, waist girth, and heart rate variability) as well as psychological/behavioral indicators of stress collected through self-administered survey instruments.

For the purposes of OMB review and approval, these five instruments are referred to as *The Milwaukee Police Department Stress Resiliency Study Questionnaires*, will be used to measure psychological/behavioral indictors of stress.

Psychological/Behavioral Survey Instruments

The five survey instruments included in this battery are (1) *the Impact of Events Scale (IES)*; (2) *the Perceived Stress Scale (PSS)*; (3) *the Personal and Organizational Quality Assessment (POQA)*; (4) *the Response to Stressful Experiences Scale (RSES);* and (5) *the Vital Exhaustion Scale (VES)*. Each of these instruments has been widely used in studies of emotional responses stress, has been standardized, and has been established as reliable and valid.

The rationale for using these instruments as a battery is that they collectively measure broad dimension of psychological/behavioral outcomes related to stress. The use of these instruments will provide detailed data necessary to determine whether and the extent to which particular psychological and behavioral outcomes were favorably affected by training. Assessment of these outcomes will inform potential modification to training regimes and directions for future research and help MPD executives determine if this protocol is viable for wider use within the department. The pilot project also provides an opportunity to systematically assess the adaptation of a military training protocol in a law enforcement setting.

Recruitment Process and Informed Consent

Recruitment will be accomplished by a group presentation and individual follow-up visits. Initial recruitment will take place in two police districts within the City of Milwaukee. Dr. Ramey will recruit participants through a short presentation lasting less than 3 minutes conducted at the beginning each shift, most likely during routine roll call. This presentation will parallel the content of the consent forms discussed below and review the key elements of the form. Officers will be informed about the content of the training, the measures that will be used in assessment of the training, and the potential benefits of the training to increase officer resiliency to stress.

For those participants expressing an interest in the training, the protocol and associated research will be discussed fully with potential subjects prior to the subject granting final agreement. Officers will be given the opportunity to ask question both during the roll-call presentation and personally with Dr. Ramey regarding individual questions. Interested officers will be able to contact Dr. Ramey by phone or email. Those who indicate interest will be contacted by telephone by Dr. Ramey to provide an opportunity to answer any additional questions about the study.

A copy of the consent form will be mailed to these officers for their review. The consent form explains the content of training and both the physiological and psychological/behavior measures that will be collected to assess training. Subjects are notified both verbally and in writing through informed consent forms that participation in the study is voluntary, that they may withdraw from the study at any time at their discretion, or that they may elect not to complete any particular physiological measurements or survey protocols.

The subject will have 10 days to decide whether they want to participate. This will allow them time to discuss with family and friends if they so desire. By the time officers volunteer they will have 1) listened to information at roll call, 2) conversed with Dr. Ramey about any questions related to the study and 3) reviewed the written consent form. For those who elect to participate, Dr. Ramey or the Research Assistant will schedule the first data collection visit for baseline measures.

The official consent form will be signed at the MPD at the time the subject comes to the site for data collection. Only Dr. Ramey will be involved in the consent process. The study does not include any form of deception (e.g. providing the participants with false information, misleading information or withholding information about any certain study procedures).

The project consent form and the process outlined above have been reviewed and approved by the University of Iowa IRB. In keeping with University of Iowa research protocols involving human subjects, the IRB approval granted indicates that this project meets the regulatory requirements for the protection of human subjects consistent with the Federal Code of Regulations Title 45, Part 46. The IRB application has been approved for recruitment of subjects not to exceed the number indicated on in the principal investigator's application form (n=20). The University of Iowa IRB approval number for this research is 201210794, dated 12/03/2012.

2. Needs and Uses

As discussed above the purpose of this COPS funded project is to systematically assess the process of implementing stress resiliency training using an innovative stress reduction protocol in a single law enforcement setting; assess the implementation process and receptivity to the training; determine viability for expanded training at MPD; assess the need for modification and

enhancement of the training protocol; and a monograph for a law enforcement audience, published by COPS.

Inclusion of the five instruments that comprise *The Milwaukee Police Department Stress Resiliency Study Questionnaires* is seen as necessary because the surveys will measure a range of potential psychological, emotional, and behavioral impacts of the stress reduction training across a broad dimension of outcomes. These additional indicators complement the standard physiological measures of stress that will be used as part of the study.

While previous research has focused on the physiological outcome associated with stress, this pilot study also will provide a means to directly assess psychological, emotional and behavioral changes reported by training participants. These indices would not be discernible from the physiological outcome variables alone.

Each of these survey instruments is widely used in the study of stress, has been standardized, and has been established as reliable and valid. The principal investigator and colleagues have used these instruments in previous research and have found them to measure distinct yet complementary behavioral and emotional dimensions of stress. Together they provide a broad range of psychological/behavioral outcome indicators necessary to assess the pilot training and determine specific areas of training impact.

Specifically, the Perceived Stress Scale (PSS) and the Impact Events Scale (IES) surveys are widely used as clinical diagnostic tools in police research and widely cited in research literature on police stress. The PSS is designed to be used as a general measure of stress, and the IES as a measure of post-traumatic stress disorder.

The Response to Stressful Experiences Scale (RSES) and the Practical Organizational Quality Assessment (POQA) instruments have been used extensively in studies of stress among military personnel, as well as with other occupations with high-stress profiles.

The Vital Exhaustion Survey (VES) is a measure of self-reported stress symptoms and outcomes related to employment. Vital exhaustion has recently been recognized as an outcome for stress and a newly recognized risk factor cardiovascular disease (CVD). This instrument has been used along with the PSS, IES in many other studies.

Below is a list of research and clinical publications in which each of these instruments has been used to measure stress in policing, military, or other employment settings. Several of these studies used more than one of these instruments as noted below.

Perceived Stress Scale (PSS)

- Franke, W., Kohut, M., Russell, D. Lim Yoo, H., Ekkekakis, P., & Ramey, S. (2010). Is job-related stress the link between cardiovascular disease and the law enforcement profession? *Journal of Occupational and Environmental Medicine*, 52(5), 561-565. **(Also incorporates VES below)**
- McCanlies, E. C., Kesete Araia, S., Nedra Joseph, P., Mnatsakanova, A., Andrew, M. E., Burchfiel, C. M., & Violanti, J. M. (2011). C-reactive protein, interleukin-6, and posttraumatic stress disorder symptomology in urban police officers. *Cytokine*, *55*, 74-78.

- Ramey, S. L., Perkhounkova, Y., Downing, N. R., & Culp, K. R. (2011). Relationship of cardiovascular disease to stress and vital exhaustion in an urban, Midwestern police department. *AAOHN Journal*, *59*(5), 221-227. **(Also incorporates VES below)**
- Ramey, S. L., Downing, N. R., Franke, W. D., Perkhounkova, Y., & Alasagheirin, M. H. (2012). Relationships among stress measures, risk factors, and inflammatory biomarkers in law enforcement officers. *Biological Research for Nursing*, *14*(1), 16-26.
- Yoo, H., & Franke, W. D. (2011). Stress and cardiovascular disease risk in female law enforcement officers. *Int Arch Occup Environ Health*, *84*, 279–286. **(Also incorporates VES below)**

Impact Events Scale (IES)

- McCanlies, E. C., Kesete Araia, S., Nedra Joseph, P., Mnatsakanova, A., Andrew, M. E., Burchfiel, C. M., & Violanti, J. M. (2011). C-reactive protein, interleukin-6, and posttraumatic stress disorder symptomology in urban police officers. *Cytokine*, *55*, 74-78.
- Ramey, S. L., Downing, N. R., Franke, W. D., Perkhounkova, Y., & Alasagheirin, M. H. (2012). Relationships among stress measures, risk factors, and inflammatory biomarkers in law enforcement officers. *Biological Research for Nursing*, *14*(1), 16-26.
- Violanti, J., Fekedulegn, D., Hartley, T., Andrew, M. Charles, L., Mnatsakanova, A. et al. 2006. Police trauma and cardiovascular disease: association between PTSD symptoms and metabolic syndrome. Int J Emerg Ment Health, *8*(4), 227-37.

Response to Stressful Experiences Scale (RSES)

- Johnson, D. C., Polusny, M. A., Erbes, C. R., King, D., King, L., Litz, B. T., Schnurr, P. P., & Friedman, M. (2011). Development and initial validation of the response to stressful experiences scale. *Military Medicine*, *176*(2), 161-169.
- Johnson, D. C., Polusny, M .A., Erbes, C. R., King, D., King, L., Litz, B. T., Schnurr, P., Friedman, M. and Southwick, S. M. (2008). *Resilience and Response to Stress: Development and Initial Validation of the Response to Stressful Experiences Scale (RSES).* Paper presented at the 2ndAnnual Marine Corps Combat and Operational Stress Control (MCCOSC) Conference, San Diego, CA.
- McCraty, R., Atkinson, M., Lipsenthal, L., & Arguelles, L. (2009). New hope for correctional officers: An innovative program for reducing stress and health risks. *Appl Psychophysiol Biofeedback*, *34*, 251-272.
- Ramey, S. L., Downing, N. R., Franke, W. D., Perkhounkova, Y., & Alasagheirin, M. H. (2012). Relationships among stress measures, risk factors, and inflammatory biomarkers in law enforcement officers. *Biological Research for Nursing*, *14*(1), 16-26.

Practical Organizational Quality Assessment (POQA)

- Britt Pipe, T., Buchda, V. L., Launder, S., Hudak, B., Hulvey, L., Karns, K. E., & Pendergast, D. (2012). Building personal and professional resources of resilience and agility in the healthcare workplace. *Stress and Health*, *28*, 11-22.
- McCraty, R., & Atkinson, M. (2012). Resilience training program reduces physiological and psychological stress in police officers. *Global Advances in Health and Medicine*, *1*(5), 44-67.
- McCraty, R., Atkinson, M., & Tomasino, D. (2003). Impact of a workplace stress reduction program on blood pressure and emotional health in hypertensive employees. *The Journal of Alternative and Complementary Medicine*, *9*, 355-369.

Vital Exhaustion Survey (VES)

- Franke, W. D., Kohut, M. L., Russell, D. W., Lim Yoo, H., Ekkekakis, P., & Ramey, S. P. (2010). Is job-related stress the link between cardiovascular disease and the law enforcement profession? *Journal of Occupational and Environmental Medicine*, 52(5), 561-565. **(Also incorporates PSS above)**
- McCanlies, E. C., Kesete Araia, S., Nedra Joseph, P., Mnatsakanova, A., Andrew, M. E., Burchfiel, C. M., & Violanti, J. M. (2011). C-reactive protein, interleukin-6, and posttraumatic stress disorder symptomology in urban police officers. *Cytokine*, 55, 74-78.
- Ramey, S. L., Perkhounkova, Y., Moon, M., Budde, L., Tseng, H. C., & Clark, K. M. (2012). The effect of work shifts and sleep duration on various aspects of police officers' health. *Workplace Health and Safety*, *60*(5), 215-222. **(Also incorporates PSS above)**
- Ramey, S. L., Perkhounkova, Y., Downing, N. R., & Culp, K. R. (2011). Relationship of cardiovascular disease to stress and vital exhaustion in an urban, Midwestern police department. *AAOHN Journal*, *59*(5), 221-227.
- Yoo, H., & Franke, W. D. (2011). Stress and cardiovascular disease risk in female law enforcement officers. *Int Arch Occup Environ Health*, *84*, 279–286. **(Also incorporates PSS above)**

3. Efforts to Minimize Burden

Each of the five surveys will be completed at 3 time intervals during the study: at baseline intervention, 3 and 6 months. Completion at these time points is necessary to measure the effect of the intervention on psychological variables. Together the five surveys take approximately 10 to 15 minutes to complete.

4. Efforts to Identify Duplication

There is no duplicative effort. The surveys used for this pilot research do not duplicate a current information collection effort.

5. Methods to Minimize Burden on Small Business

There is no significant impact on small business.

6. Consequences of Less Frequent Collection

A less frequent collection or fewer respondents would not allow sufficient information to evaluate the effects of the stress reduction training in this pilot project. Three points of data collection are the minimal needed to adequately assess the initial impact and duration of treatment effects against baseline measurements.

7. Special Circumstances Influencing Collection

There are no special circumstances that would influence the collection of information.

8. Reasons for Inconsistencies with 5 CFR 1320.6

Not applicable

9. Payment or Gift to Respondents

No government funds will be used as payment or for gifts to respondents.

10. Assurance of Confidentiality

No assurance of confidentiality has been made to respondents.

11. Justification for Sensitive Questions

There are no questions of a sensitive nature. No information commonly considered as private is included in the proposed requested information.

12. Estimate of Hour Burden

There are 20 participants in the study. The average response time for the packet of psychological surveys is approximately 15 minutes (maximum) and the total number of burden hours per participant per year for completion of surveys is 45 minutes. Each of the psychological survey instruments are designed to be self-explanatory so there is no training time associated with the instruments.

In addition to the time burden for completion of the survey instruments, there is a training component associated with the research intervention. The pilot study will use a 2 hour in-person format to train individuals on methods to self-regulate stress. The stress reduction training for the Milwaukee Police Department is a modified version of a 3 ½ hour training protocol designed for use in military settings by HeartMath, LLC. Modifications to the protocol were achieved by excluding components of the training protocol that are specifically related to military combat and not relevant to policing. HeartMath has an established contract with the Department of Defense for the use of his training and has been working with the both the Army and Navy for the past several years.

13. Estimate of Cost Burden

This collection will not generate any costs other than those associated with the applicants' time. Therefore, the estimated burden cost in dollars is 0.

14. Estimated Annualized Cost to Federal Government

There is no annual cost to the Federal Government for this pilot research project.

15. Reason for Change in Burden

No changes, proposed new collection.

16. Publication

The results of the study will be published in a monograph written by Dr. Ramey and published by the COPS Office. This publication will describe the implementation of training in the MPD and discuss what other law enforcement agencies can learn from the experiences in Milwaukee. The monograph will address topics such as how to recruit subjects, how to retain subjects, how to effectively communicate the benefits of the stress reduction approaches with officers, and how to best promote the program with law enforcement administrators/managers.

Findings of the research will be presented as part of this monograph. Only aggregate data will be reported. No individual-level or personably identifiable data will be reported.

Report findings and discussion of statistical findings, whether or not they are statistically significant, will be presented within the monograph in language geared toward a lay audience, primarily of law enforcement officers and executives. This discussion will address the implications of the research finding for the MPD as well as lessons learned for the benefit of law enforcement executives.

17. Request not to Display OMB Control Number

The grantee and its contractor will display the OMB approval number and expiration date on the upper right hand corner of the collection instrument.

18. Exceptions to Certification Statement

The COPS Office does not request an exception to the certification of this information collection.