

# Effect of a Combined Coping Skills and Wellness Program on Perceived Stress and Physical Energy among Police Emergency Dispatchers: An Exploratory Study

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**Abstract** The purpose of this exploratory study was to determine the effectiveness of a coping and wellness program on changes in perceived stress, job satisfaction, and physical energy among emergency dispatchers (EDs) from a medium-sized (110 k+) city in the southeastern U.S. Participants included nine EDs, ranging in age from 24 to 45 yrs, who agreed to complete a 2-hour seminar on coping skills and receive instruction on proper strength training at a local fitness club over a 10-week period. Results indicated significantly greater use of avoidance (but not approach) coping strategies and markedly improved perceived physical energy. Perceived stress, but not job satisfaction, significantly improved at posttest. A manipulation check to determine the effect of the exercise intervention indicated significant improvements in upper and lower body strength. Personal narratives by selected EDs indicated that the work environment was particularly “challenging” and that the coping skills program was helpful in dealing with the array of job-related stressors. These results support the need for additional research on the effects of coping skills and wellness programs on the mental and physical health and job performance of EDs.

**Keywords** Law enforcement · Emergency dispatchers · Wellness · Exercise · Perceived stress · Coping skills

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Sources of acute (sudden) stress in law enforcement are ubiquitous. Examples include lack of supervisory support, poor communication with work colleagues, sexual harassment, exposure to violent or aggressive actions by others, responding to an emergency, and dealing with the court system (Aumiller et al., 2007). Hart et al. (1995) found that “police organizations are the main source of psychological distress among police officers” (p. 150). Perhaps not surprisingly, police personnel report markedly reduced passion for their job, leading to chronic stress, burnout, and quitting the force as a result of the effects of prolonged negative behavioral patterns (Slate et al. 2007). One sub-group of employees in law enforcement that has similar stressful feelings, yet has received scant attention by researchers, is emergency dispatchers (Jenkins 1997).

Emergency dispatchers (EDs) are not sworn members of law enforcement; however, they constitute an integral and highly relevant component of police operations. While they do not experience face-to-face confrontation with perpetrators and victims of crime, they still experience enormous stress in both chronic and acute forms, sleep deprivation, poor relationships with co-workers and supervisors, disrespect by law enforcement officers, and verbal abuse by members of the community (Behr 2000; Kirmeyer 1988; Shepherd and Hodgkinson 1990). The result is a sedentary lifestyle, overweight and obesity, poor overall health, and low quality of life at rates very similar to or above their police counterparts. Studies on the effects of interventions on the performance, health, job satisfaction, physical energy, and quality of life of EDs, however, have been virtually non-existent.

In one rare related study, Kirmeyer (1988) observed the work demands, cognitive appraisals (i.e., perceived work stress and overload), and coping strategies of 72 dispatchers

throughout one work shift. EDs who were categorized as Type A had lower thresholds of appraising demands as overloading and taking coping actions than dispatchers designated as Type B. An important mediator on the level of stress in this study was the effects of interruption on the EDs' appraisal and coping. Interruption is an uncontrollable and unpredictable stressor among EDs resulting in information overload and cognitive fatigue. Interruption was particularly disruptive to EDs who scored high on Type A, as compared to Type Bs. Kirmeyer speculates that Type As might work harder than Type Bs due, in part, to their higher level of "job involvement and hard-driving competitiveness" (p. 627). Apparently, Type A behavior may be a moderating variable in experiencing job-related stress among dispatchers.

The ability to manage stressful feelings and to deal with the unpleasant events from which those feelings originate is called *coping*. Coping *strategies* reflect a person's use of specific cognitive or behavioral techniques that assist the person to build personal resources (e.g., feelings, emotions) or manipulate environmental demands that promote stress reduction or management. Coping *styles*, on the other hand, reflect a person's disposition to use certain types, or categories, of coping strategies; usually the type of coping strategies the individual prefers may be predicted from his or her style (Anshel et al. 2010; Krohne 1993).

Failure to use effective coping strategies in response to stressful situations is a particular problem among EDs, whose training rarely includes building coping skills (Behr 2000). In one of the few studies to address this issue, Jenkins (1997) examined the coping skills and social support of 68 emergency dispatchers in Florida in response to the Category 5 Hurricane Andrew. Not surprisingly, the dispatchers' coping strategies were a function of the type of stressor. The three most common coping strategies were Planned Effort, Positive Reappraisal, and Social Support-Seeking. Psychological distancing and anger were much less common. Maintaining situational control in reaction to adversity is a common characteristic of dispatchers, again, not unlike their law enforcement colleagues. Jenkins called for additional research in determining the coping preferences of emergency dispatchers.

A popular conceptual framework to identify categories of coping is approach and avoidance (Anshel et al. 2010; Krohne 1993). *Approach* coping, also referred to as attention, sensitization, monitoring, engagement, or vigilance, consists of the thoughts or actions of a person following an event perceived as stressful with the intention of reducing or managing the unpleasant experience (Anshel 2000). To Roth and Cohen (1986), an approach coping strategy is characterized by cognitive and emotional activity that is oriented toward the threat. Along these lines, Krohne (1993) refers to approach (vigilance) coping "as those strategies

which are characterized by intensified intake and processing of threatening information" (p. 21). Examples of approach coping include seeking information or knowledge, covert rehearsal, arguing, planning, monitoring, venting, strategizing, psyching up, and imaging.

*Avoidance* coping, on the other hand, consists of physically removing oneself from a perceived threat (e.g., exercising, walking away), filtering out or ignoring information, discounting the relevance or meaningfulness of potentially stressful input (i.e., not taking it seriously), or psychologically distancing oneself from the stressor (Anshel, 2001; Krohne 1993; Roth & Cohen, 1986). This coping style is also referred to as desensitization, distraction, repression, blunting, non-vigilance, passive, or disengagement coping. Perhaps not surprisingly, approach coping is used most often in law enforcement (Anshel 2011). Researchers and practitioners agree that the main objective of coping, and a primary focus of this study, is not to prioritize one coping style and to eliminate the other. Rather, the objective of effective coping is to use approach and avoidance coping selectively based on various situational characteristics. Approach and avoidance coping *styles*, however, are dispositional and reflect the individual's preference to use certain types (categories) of coping *strategies*. Coping effectiveness is an important outcome of selecting and properly using both types of coping.

There is an apparent absence of research examining the effectiveness of coping interventions on perceived stress among dispatchers. The close working stations and ongoing interactions among dispatchers when dealing with law enforcement officers and the public throughout an 8-hour shift create sources of stress that are unique, continuous, and intense. The unique job characteristics of EDs virtually mandate mastery of avoidance coping. As Anshel (2000), Anshel and Sutarso (2007), and Krohne (1993) claim, responding to stressful events is superior in low-control situations that require the performer's persistent vigilance, intense cognitive processing, and rapid and accurate decision-making. Responding to emergencies should allocate attention to the task at hand with as few distractions as possible. This is especially true if the stressor is unrelated to resolving the unpleasant situation, such as the caustic remarks of a work colleague or an abusive caller.

Avoidance coping was especially important to use regularly in this study – with EDs – because of their job demands and environmental characteristics. There are up to six EDs working simultaneously in the same dimly lit room just a few feet apart. The shift supervisor is also located in this facility. Adjacent to the work room is a kitchenette, restroom, and break area (smoking is allowed but only outdoors). Therefore, there is relatively close proximity and frequent verbal interactions among the EDs. Staff may take 15-min. rest (and smoking) breaks every 90 minutes. Given

the stressful and relentless nature of this work over the 8-hour shift, it is not surprising that negative emotions emerge, work quality is continuously judged by colleagues, and the opportunity to rest and recover is rare – or non-existent. One objective of the intervention in the current study was to help EDs identify the criteria for using approach and avoidance coping skills, and to improve their use of avoidance skills. Thus, coping can be effective or ineffective.

Effective or adaptive coping should lead to a safe, legal, and permanent resolution of the problem, with no additional conflict, while maintaining a positive emotional state. Other forms of adaptive coping include discussing the problem, avoiding the stressor, exercise, prayer, meditation, psychological distancing, and various forms of distraction (Zeidner and Saklofske 1996).

Ineffective responses may exacerbate the effects of stress on a person's emotions, thoughts, and behaviors. Maladaptive (ineffective) coping consists of strategies that may contribute to the person's stress intensity, lead to undesirable emotions and poorer performance outcomes, and, perhaps, result in reduced job satisfaction and general physical and mental well-being. According to Zeidner and Saklofske (1996), examples of ineffective coping strategies that have implications for law enforcement include the excessive use of alcohol, tobacco, sudden explosive anger, hallucinogenic (mind-altering) drugs, impatience, anger, and verbal or physical confrontation.

There is ample evidence that coping with stress in law enforcement is often maladaptive (Anshel 2000; Anshel et al. 1997; Hart et al. 1995). Hart et al. contend that the goal of programs intended to improve coping skills in law enforcement, including EDs, should not be to eliminate stress, but rather to help the individual better manage it, thereby reducing its unpleasant effect on job performance and mental, emotional, and physical well-being. The results of poor coping in law enforcement include relatively high rates of divorce, thoughts of or actual suicide, negative mood, chronic anxiety, depression, ineffective communication with others, and poor performance (Rybacki and Nutter 2002). Thus, it is apparent that detecting and attempting to change poor coping skills is especially important with EDs. One area of the law enforcement literature that has received surprisingly little attention by researchers, but strongly relates to maintaining proper mental and physical health, including stress management, is the effect of exercise and nutrition programs, collectively called *wellness*, on selected job-related outcome measures.

Wellness is typically defined as a positive state of physical, mental, and social well-being – not merely the absence of injury or disease – that varies over time (Sarafino and Smith 2011). Obesity is ubiquitous in law enforcement, in general, and among emergency dispatchers, in particular (Hoffman and Collingwood 2005). The result of this

unhealthy physical condition is low physical energy and poor general health, often leading to a shortened professional career (Dunn et al. 1998). In their study of 67 male and female police officers employed in a moderate-sized police department in the southeastern U.S., Anshel and Kang (2008) found that the vast majority of these officers (86 %) were diagnosed as obese immediately prior to the study. McCarty et al. (2007) found similar results and the need for wellness programs in law enforcement. As Wyllie (2011) asserts, a high quality fitness routine in law enforcement can help prevent injuries that have unnecessarily forced many police officers into medically retired status. Similar sentiments may be echoed for EDs.

In summary, the work demands of EDs create “the perfect storm” of factors that contribute to being overweight and obese. The work routines of EDs (common in law enforcement) combine overeating - both in frequency and volume per sitting - with food content consisting of relatively high fat and low fiber, long-term inactivity, working in a dimly lit, enclosed environment that often prevents individuals from receiving daylight or fresh air, constant monitoring by colleagues and the supervisor, exposure to negative input from law enforcement officers and callers, and remaining sedentary over an 8-hour shift. The EDs excessive rate of alcohol and tobacco use only exacerbates the unhealthy work environment (Hoffman & Collingwood, 2005).

Aumiller et al. (2007) recommend instituting wellness programs aimed at reducing stress and promoting good physical and mental health for all members of law enforcement. These include programs designed to “assist law enforcement officers with psychological preparation that helps them gain self-confidence and an ability to coordinate cognitions, emotions, and behavior in an optimally adaptive manner” (p. 72). In one study of 51 law enforcement officers, Tanigoshi et al. (2008) examined the effectiveness of counseling on selected health outcomes. The results indicated a significant groups x time (pretest-posttest) interaction, in which the wellness counseling group, but not the control group, significantly improved fitness scores between pretest and posttest. Because of the apparent absence of this kind of research among EDs, similar programs and studies for these workers are needed.

The demands of normal dispatcher work increase the importance of good health, high energy, and effective coping skills. These demands include a variety of stressors about which the ED has little control, including (1) absent co-workers (resulting in being short-staffed), (2) experiencing insults and hostility from emotionally distraught callers, (3) exposure to threats of violence and suicide, and (4) actual suicide and other forms of violent behavior from callers, all of which are combined with a relatively low salary. In this context, effective coping skills, in general,

and avoidance coping, in particular, are needed to maintain job satisfaction, good health, and effective performance. As Jenkins (1997) confirms, dispatchers “share with other emergency workers a strong commitment to help others, a tolerance for time pressures and unpredictable demands, and proficiency at demanding tasks under pressure” (p. 202). There is a clear need to improve the coping skills and general health, energy, and well-being of EDs.

Thus, the purposes of this exploratory study were: (1) to determine the effectiveness of a program that combines coping skills and wellness training on changes in perceived stress, job satisfaction, and perceived energy among emergency dispatchers, and (2) to employ a narrative inquiry research method to obtain insights into the type of work environment in which EDs functioned and the types of obstacles to which they were frequently exposed during their shifts. It was hypothesized that the dispatchers would increase their use of avoidance coping skills, that their level of perceived stress would be significantly reduced, and that job satisfaction and perceived physical energy would markedly improve after they practiced a combined wellness and coping skills program based on the approach-avoidance conceptual framework.

## Method

### Participants

Participants consisted of full-time emergency dispatchers (EDs) who were employed by the local municipal police department of a medium-sized (110,000+) city in the south-eastern U.S. While the full ED unit consisted of 31 full time employees (2 males and 29 females), only 11 individuals volunteered to participate in the study. Participation in the study could not be mandatory for two reasons. First, the study was supported by a university grant, thereby reflecting Institutional Review Board guidelines that involvement in the study must be on a volunteer basis. Second, members of the police department, including the EDs, are City employees whose contract does not mandate participation in research, particularly if sponsored by an external agency. Reasons given for non-participation included “lack of time,” “no desire to begin an exercise program,” “injury or other physical disability,” “have a smoking habit, so exercise will be very uncomfortable,” self-conscious about exercising in public due to overweight or obese,” “family responsibilities,” “lack of someone with whom to exercise,” and “negative attitude toward exercise.”

Two of the 11 original participants dropped out of the study due to a combination of “perceived lack of time” and general fatigue. Therefore, complete data sets were obtained from a total of nine EDs, eight women and one man. The

final group ranged in age from 24 to 45 yrs ( $M=34.78$ ,  $SD=6.61$ ), was unfit based on self-reports of leading a sedentary (no exercise) lifestyle, and had served as dispatchers for an average of 7.78 yrs ( $SD=7.05$ ).

All participants volunteered following an oral presentation at which the nature of the study was described. The EDs received no financial incentives for their participation, although they were informed that this study was financially and jointly supported by the local university and by their police department. This included costs associated with fitness coaching and membership at a local fitness club.

The ED unit is located on the second story of the police department’s administration facility in a dimly lit, almost darkened room with no windows. If at full strength, six dispatchers work each of three shifts, 6 a.m. to 2 p.m., 2 p.m. to 10 p.m., and 10 p.m. to 6 a.m. They take one 15-minute break every 2 hours and have one 30-minute meal break. During breaks they may leave the dispatcher facility, visit the kitchen area, or interact with others while remaining in the dispatcher facility. Each dispatcher performs their duties in front of three computer monitors which depict different geographical areas and a headset linked to a multichannel phone system. Thus, they attend to multiple channels of visual and auditory information simultaneously which make concurrent demands. Not surprisingly, the content of selected phone calls is highly stressful, including gunfire and emotional turmoil. In addition, the EDs are required to accurately document and process incoming calls before leaving their 8-hour shift.

### Measures

At both pretest and posttest, participants completed a questionnaire survey and fitness tests. The survey was completed individually at the convenience of the participants. They bubbled in their responses using a scan sheet. The survey consisted of several sections, measuring a variety of cognitive, attitudinal, and behavioral domains related to the dispatchers and their job. Participants completed the measures in the order described below.

*Perceived Stress Scale* Participants completed the 10-item Perceived Stress Scale (PSS; Cohen and Williamson 1988). The PSS is a frequently used and well-validated general measure of perceptions of life stress. Using a 5-point scale (0=*never*, 4=*very often*), respondents rate the frequency over the past month of a variety of feelings (e.g., “been upset because of something that happened unexpectedly”) and experiences (e.g., “you could not cope with all the things that you had to do”). Possible scores ranged from 0 – 40, with higher scores denoting greater perceived stress. With the present sample, coefficient alpha reliability for the



PSS was acceptable at both pretest ( $r=.82$ ) and posttest ( $r=.81$ ).

**Job Satisfaction** Participants also completed a 6-item measure of general job satisfaction (JS; Pond and Geyer 1991), which was a modification of Quinn and Shepard's (1974) measure. Using a 5-point scale (0=*not at all*, 4=*definitely/a great deal*), respondents indicated their likelihood of taking their current job again and recommending their job to a friend, how this job compares to their ideal job and what they wanted, and their overall satisfaction with and liking of the job. Mean scores for the six items were calculated, with higher scores indicating greater job satisfaction. With the present sample, coefficient alpha reliability for the JS was acceptable at both pretest ( $r=.81$ ) and posttest ( $r=.79$ ).

**Perceived Physical Energy** Participants completed a 13-item measure pertaining to their perceived physical energy (PE; e.g., "I feel high physical energy at work," "I get to sleep rather easily," "I consider myself physically fit," "I drink plenty of water that keeps me hydrated," "I wake up feeling rested," "I eat breakfast every day"). Respondents rated each item using a 5-point scale (0=*strongly disagree*, 4=*strongly agree*). Items were summed to create a total score, with possible scores ranging from 0 to 52. This measure was created specifically for this study and followed the guidelines provided by Loehr and Schwartz (2003) in the area of "energy management." Higher scores indicated higher levels of perceived physical energy. Coefficient alpha reliabilities for this measure were acceptable at both pretest ( $r=.63$ ) and posttest ( $r=.77$ ).

**Coping Style for Acute Stress** In the next section of the survey, participants rated how they typically deal with work-related stressful events. They were first instructed to think of a highly stressful event on the job from recent weeks or months. Then, they rated 24 items, using a 5-point scale (0=*not at all like me*, 4=*always like me*) on how they responded to the event. This instrument reflected common sources of job-related acute stress and a variety of coping responses, both adaptive and maladaptive. The measure included 13 items that reflected an approach coping style (e.g., "I confronted the problem," "I discussed the problem with another person") and 11 items that reflected an avoidance coping style (e.g., "I did something else to get my mind off the situation," "I did not take the person/situation seriously"). In order to obtain acceptable alpha coefficients, we eliminated several approach and avoidance items. This process led to 8 approach items and 7 avoidance items. Scores were calculated for approach and avoidance coping by summing the items for each subscale. Higher scores indicated greater use of that coping style. Coefficient

alpha reliabilities for both subscales were acceptable at the pretest (approach:  $r=.72$ , avoidance:  $r=.73$ ) and at the posttest (approach:  $r=.64$ , avoidance:  $r=.76$ ).

The objective of examining coping style was to determine if the coping skills intervention resulted in improved use of effective coping strategies, with particular focus on increased use of avoidance coping over the intervention. Avoidance coping reflects an ED's ability to discount or mentally distance oneself from stressors that are inevitable, not controllable, and have previously caused considerable stress to the person. As determined by pre-study interviews, the overuse of approach coping led to excessive stress for the EDs in this study (e.g., persistent negative thoughts about difficult colleagues, unpleasant or ineffective unit policies, an ineffective supervisor, generally low job satisfaction).

**Fitness Testing** Fitness testing was conducted to ascertain if participants adhered to their exercise prescription and improved their fitness, particularly muscular strength. Cardiovascular fitness was not recorded because most of the participants were either overweight or obese and were unable to comfortably exercise aerobically without chance of injury. Significant changes in aerobic fitness could not be anticipated in this group. The fitness testing included pretest and posttest calculations of muscular strength. Upper and lower body muscular strength was measured using a Universal Weight Machine (model no. SS1500, Universal Gym Equipment Co., West Point, MS). Participants were briefly instructed as to proper form and breathing technique before performing each test (ACSM 2006). Bench press was used for upper body testing, and leg press was used for lower body testing. Participants then performed as many repetitions at the selected weight resistance until fatigue was established (i.e., the person could not complete another repetition), with a maximum of 15 repetitions. Scores represented the maximum resistance (lbs.) lifted.

#### Action Research Design

An action research design was implemented because all volunteer participants expected to receive the full intervention, consisting of the coping skills seminar, exercise coaching, and nutritional information. Thus, it was not feasible to conduct a randomized control group study. Action research is defined as any systematic inquiry to gather information about the operation and effectiveness of particular programs (Mills 2003; Stringer 2007). It is also conducted to gain insights into conditions affected by experimental treatments, as opposed to reliance on outcomes to explain treatment effects (Mills, 2003). The primary goal of action research is to improve understanding of the processes that accompany changes in

cognition, emotion, and behavior for the purpose of enhancing performance outcomes.

Action research often incorporates intervention designs intended to help participants to adopt pre-determined behaviors in which a control (no-treatment) group is not feasible. An intact group, for instance, might be expecting to receive a particular treatment, or in the present context, a coping skills and wellness program was offered to all emergency dispatchers employed by the local police department. It was not feasible for certain individuals to receive no treatment, while knowing that a group of co-workers was receiving the program. In addition, one goal of action research is to identify the mechanisms by which dispatchers who participate in the intervention (explained later) change the manner in which they react to acute stress using the coping skills program, and how changes in diet and exercise habits foster selected health outcomes (e.g., sleep quality, energy, perceived stress, job satisfaction). Action research does not usually include a control (no treatment) group because, according to Herr and Anderson (2005), “action research is done *by* or *with* insiders to an organization or community, but never *to* or *on* them” (p. 3).

Action research has been published in the law enforcement literature. For example, Anshel and Kang (2008) conducted an action study to examine the effects of a 10-week wellness program on changes in various health measures among 67 male and female police officers. An action study was necessary due to the implausible inclusion of a no treatment (control) group in one police department. They found significantly improved cardiovascular and strength scores, as well as an extraordinarily high exercise adherence rate and improved blood lipids. One segment of the intervention that was intended to improve the officers’ commitment to improving their health, similar to the Anshel and Kang study, included three steps: (1) identifying their most important values e.g., family, faith, high quality job performance), (2) examining the disconnects, or inconsistencies, between their values and their unhealthy behavior patterns, and (3) after acknowledging these inconsistencies, to agree to replace their current behaviors, at least those related to lack of exercise and poor nutrition, to more desirable, healthier habits.

## Procedure

As indicated earlier, all EDs in the study engaged in a similar protocol. This protocol included the coping skills seminar, exercise testing/coaching, and follow-up individual consulting sessions with a coping skills coach. Baseline (pretest) data were obtained on measures of muscular strength, perceived stress, job satisfaction, and perceived physical energy, followed by a 10-week cognitive-behavior intervention combining wellness (i.e., exercise and nutrition coaching) and the proper and effective use of coping skills,

followed by post-intervention data on identical measures. The length of the program was selected in order to allow for scheduling of university exercise science students to serve as the EDs’ fitness coaches.

The study began with a 2-hour coping skills seminar on ways of responding to stressful events often experienced by EDs. To accommodate the three dispatcher shifts, three identical seminars were provided for each shift. The seminar, held one week prior to the fitness program, included a PowerPoint presentation on sources of stress in law enforcement, stressful events that are specific to EDs, and sources of stress that have been experienced by dispatchers from this particular unit. The approach-avoidance coping framework described the preferred use of coping strategies in response to various types of stressors. For example, if dispatchers received a phone call consisting of obscene and disrespectful content, they were advised to apply avoidance coping strategies of discounting (“What the caller thinks is not important to me”), psychological distancing (“The caller is such an unhappy person and likely has a lot of problems”), and labeling (“The person who just insulted me on the phone is a jerk; perhaps not normal”). Avoidance coping is used under conditions of low self-control over the stressful event, among other criteria. The EDs also completed all inventories at the seminar, finishing this task within 30 minutes. Table 1 lists the coping skills categorized as approach-cognitive, approach-behavior, avoidance-cognitive, and avoidance-behavior.

At the seminar, participants were assigned a fitness coach, who was matched to them based on two criteria: (a) the EDs’ preferred gender of the coach, and (b) compatibility of meeting schedules between coach and ED for fitness testing and coaching. Each ED received a complimentary 3-month membership to a local fitness club where all fitness testing, exercise, and coaching would take place. Their assigned fitness coach contacted the EDs to schedule fitness tests and subsequent training sessions. Based on fitness pretest scores, the EDs were given an exercise prescription that they were asked to follow each week.

During the 10-week intervention, each performance coach met with his or her client weekly: (a) to review the client’s “action plan” consisting of the proper exercises and schedule, as well as improved dietary choices, (b) to provide instruction on specific resistance training techniques, and (c) to improve client motivation by providing positive feedback on discontinuing undesirable behaviors (e.g., criticizing work colleagues and supervisors) and constructive feedback on increasing desirable behaviors (e.g., using avoidance coping following stressful events that could not be controlled).

An additional component of the coaching intervention was to communicate proper dietary and nutritional habits for the purpose of improving the EDs’ physical energy (conducted at separate times from the coping skills seminar). This information was communicated verbally by a 1-hour

**Table 1** Selected coping strategies for emergency dispatchers using approach and avoidance dimensions, and cognitive and behavior sub-dimensions in response to acute stress

<p><b>Approach-Behavior Coping</b></p> <p>Confronting, threatening, arguing, information-seeking, social support, explaining, friendly non-verbal/verbal affirmation, verbal acknowledgment, discussing, catastrophizing, speaking to a mentor or supervisor, receiving counseling, soliciting opinions from others.</p> <p><b>Avoidance-Behavior Coping</b></p> <p>Walking away, social engineering (avoiding a certain location), exercise, reading, watching television, listening to music, attending church, ingesting an alcoholic beverage, recreational activity, engaging in sexual behavior, playing or watching sports, reading, target shooting.</p> <p><b>Examples of Ineffective/Maladaptive Approach and Avoidance Coping</b></p> <p>Excessive alcohol, smoking, mind-altering drugs, emotional eating, prolonged anger and hostility, car speeding, thoughts of self-destructive actions, negative self-talk, rumination (repeating self-blame), resignation (helplessness/hopelessness), exhibit bad mood toward others, excessive exercise.</p>	<p><b>Approach-Cognitive Coping</b></p> <p>Covert rehearsal, planning, analyzing, self-talk reanalyzing, justifying, psyching-up, prayer (if related to coping with the stress), self-statements, logic/reason.</p> <p><b>Avoidance-Cognitive Coping</b></p> <p>Discounting, psychological distancing, labeling, empathy, thought-stopping, ignoring, self-talk, mental imagery, progressive relaxation, focusing on the next task, prayer (if focusing on the Lord and not on the stressor).</p>
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seminar by a registered dietician, who presented a set of PowerPoint slides on “strategic eating,” reflecting food intake to control weight and improve energy. While no specific dietary regimen was proposed, general nutritional content included eating breakfast, consuming light, frequent meals (about every 3 hours) during the day, avoiding “heavy” meals within 2 hours of bedtime, separating “need” foods (80 % of dietary daily intake) from “want” foods (20 % of dietary daily intake), eating recommended snacks in order to maintain proper blood sugar levels throughout the day, drinking approximately 64 oz. of water daily, minimizing caffeine intake during the day (preferably no caffeine after midday), and above all, avoiding excessive food consumption at one sitting (i.e., overeating) in which the person feels “stuffed” or “very full.” All eating guidelines were consistent with the general nutrition literature (Whitnesy and Rady-Rolfes 2004).

#### Dispatcher Narratives

Not surprisingly, interventions such as the action research approach used in the current study require additional information to understand the issues, experiences, and factors that help explain the quantitative analyses and the intervention’s effectiveness. The process of communicating one’s experiences, thoughts, and emotions is a research method called *narrative inquiry* (NI; Clandinin and Connelly 2000). Narratives consist of personal stories that are shaped, mediated, and regulated by one’s narrative resources (Riessman 2008). They are intended to lend insight into the reasons and explanations of the dispatchers’ needs, habits, aspirations, and behavior patterns, both “good” (healthy) and “bad” (unhealthy). In the present study, NI consisted of the dispatchers providing information about their experiences and personal feelings related to their job (e.g., assessing the department’s dispatcher unit, relationships with colleagues and supervisors, reactions to job-related stress) prior to the

implementation of the intervention. These narratives provided important insights that served as the foundation of the coping intervention content.

A performance coach (i.e., one of the current researchers) met with each ED for two 1-hour sessions to discuss the ED’s sources of stress—personal and job-related “storms”—that required improved coping skills using the approach-avoidance framework. It was important to personalize the coping intervention so that each ED perceived the intervention as relevant and beneficial. The narratives also enlightened the coach about areas that needed immediate attention. These areas included determining (1) what could change and what was under the ED’s control, (2) what could not change and, therefore, was not controllable (e.g., the supervisor’s actions, including perceived incompetent performance), and (3) how to provide ED participants with personal and professional support. All information obtained in the narrative was strictly confidential and not available to other personnel in the ED unit and to police department administration.

#### Data Analyses

Because of the small sample size and potential violation of normality assumption, we used the Wilcoxon signed-rank test, a nonparametric test for matched pairs, for all analyses. We first checked the fitness manipulation by comparing pretest and posttest measures. The coping, stress, job satisfaction, and physical energy hypotheses for this study were tested by comparing the pretest and posttest scores for each of these measures. While alpha is typically set at  $p < .05$  to determine significance for all quantitative analyses, an alpha of  $p < .06$  may be accepted to avoid a Type II error and in response to a small sample size and moderate standard deviation (Rosnow and Rosenthal 1989). In addition, participants’ narratives were collected and analyzed in a qualitative, interpretative manner.

## Results

### Manipulation Check on Strength Scores

Analysis of the muscular strength measures indicated significant improvement for the EDs' lower body strength from pretest ( $M=218.89$ ,  $SD=61.53$ ) to posttest ( $M=245.56$ ,  $SD=71.65$ ),  $Z=2.55$ ,  $p=.011$ ). A similar pattern was found for upper body strength, with posttest scores ( $M=125.56$ ,  $SD=35.48$ ) significantly higher than pretest scores ( $M=107.22$ ,  $SD=29.70$ ),  $Z=2.414$ ,  $p=.016$ ). This suggests that the EDs engaged in and adhered to their prescribed exercise program held at a local fitness club.

### Coping Skills, Perceived Stress, Job Satisfaction, and Perceived Physical Energy

Examination of pretest and posttest differences for the approach coping strategies indicated that participants' pretest scores ( $M=17.56$ ,  $SD=4.45$ ) did not differ significantly from their posttest scores ( $M=19.56$ ,  $SD=2.07$ ),  $Z=1.058$ ,  $p=.290$ . Use of approach coping strategies appeared consistent over the intervention period. However, analysis of avoidance coping strategies indicated that participants' posttest scores ( $M=15.11$ ,  $SD=4.34$ ) were higher than their pretest scores ( $M=11.44$ ,  $SD=4.48$ ),  $Z=1.83$ ,  $p=.067$ . In other words, participants reported increased use of avoidance work-related coping strategies after the program. Apparently, the EDs were able to learn and integrate avoidance coping as part of their repertoire of handling sources of job-related acute stress.

As we expected, comparison of the pretest and posttest scores indicated that EDs were significantly less stressed at posttest ( $M=16.00$ ,  $SD=4.82$ ) compared to pretest ( $M=19.67$ ,  $SD=5.36$ ),  $Z=1.90$ ,  $p=.058$ ). However, participants did not differ on their job satisfaction at posttest ( $M=2.15$ ,  $SD=0.74$ ) compared to pretest ( $M=2.31$ ,  $SD=0.67$ ),  $Z=1.268$ ,  $p=.205$ . Consistent with our hypothesis, comparison of the pretest and posttest scores for the physical energy measure revealed that participants reported significantly more physical energy after the program ( $M=35.44$ ,  $SD=7.52$ ) than before ( $M=23.00$ ,  $SD=7.14$ ),  $Z=1.955$ ,  $p=.051$ ).

Examination of the correlations among these measures at pretest indicated that perceived stress was significantly and negatively correlated with physical energy,  $r(7)=-.81$ ,  $p=.009$ , whereas job satisfaction was unrelated to physical energy,  $r(7)=-.08$ ,  $p=.841$ . At posttest, job satisfaction was significantly and positively correlated with physical energy,  $r(7)=.68$ ,  $p=.045$ , whereas the perceived stress and physical energy relationship did not reach statistical significance,  $r(7)=-.424$ ,  $p=.26$ .

In summary, despite the small sample size, the manipulation check confirmed that the combined wellness program

was effective at increasing the participants' strength scores. Analyses of the major measures supported the hypotheses that participants would increase their use of avoidance coping skills, that perceived stress would decrease, and that physical energy would increase after program participation. However, job satisfaction did not change as a result of program participation.

### Dispatcher Narratives

As indicated earlier, a performance coach met with the EDs to discuss their sources of stress and possible ways to address those stressors. Following are selected, unedited, narratives and the researchers'/seminar leaders' reactions using the approach-avoidance (cognitive-behavior) coping conceptual framework. This section includes the narratives, researcher notes, and suggested coping strategies of four EDs who participated in the study. The primary goal in the individual interventions was to assist EDs in the proper selection and application of each type of coping strategy, approach or avoidance, irrespective of the person's coping style.

#### Dispatcher 1

"Often there is no supervisor on weekends, so we have to fend for ourselves. No one really has any authority to say anything to people not doing their jobs. It quickly turns personal and nasty when you want to make sure things are done right. I just want people to do their jobs. Sure we all know that what we do is important, but being afraid that it will 'get to us' isn't an excuse to slack off."

*Researchers' Commentary* This long-time-employed and experienced dispatcher has the capacity and skills to be a supervisor, but said she had mixed feelings about applying. She seems to be frustrated, but is waiting for things to change on their own, which is not likely to happen. We advised her to focus on developing her coping skills that will increase her sense of self-control, since she has little control over her work environment. Three coping strategies were attempted:

*Avoidance-cognitive coping.* In response to being criticized by certain co-workers when doing her job, instead of focusing on the critic, her attentional focus should be on recognizing her own competence and to ignore or discount the importance of critics.

*Approach-behavior coping.* She's going to make a special effort to pay attention to the times when her co-workers are doing their jobs well and offer verbal compliments when she sees her co-workers performing well to reinforce their "professional behavior."



*Approach-cognitive coping.* The dispatcher feels frustrated with her co-workers. She is going to monitor what appears to upset her (e.g., co-worker laziness, placing officers at risk, performing unprofessionally and embarrassing the dispatcher unit). Identifying the triggers that cause stressful feelings can lead to anticipating or preventing those triggers and can help the ED to be prepared to react with specific coping strategies.

#### Dispatcher 2

“I received some great ideas for dealing with one of my main stressors, which concerns a fellow employee. I feel that the coping skills you gave me help me handle the negative attitude of a certain colleague. The coping skills have not improved my job satisfaction, but at least I am able to adjust to her antics.”

*Researchers' Commentary* This dispatcher struggles with negative comments from other dispatchers, and she is often annoyed when they do not perform according to her high standards. Unfortunately, this dispatcher also suffers from low job satisfaction (e.g., “Most days I want to be working someplace else”). We reviewed coping skills that centered on a combination of approach-behavior and avoidance-cognitive.

*Approach-Behavior* Instead of responding to negative comments with anger, this dispatcher learned to stay emotionally calm and to seek further information and clarification from the abusive colleague. In response to her criticism, dispatcher 2 asks her critic to suggest a better way to handle a particular call or to clarify, in greater depth, how she (the critic) would handle the call better (e.g., “Why did you feel I mishandled that call? What would you have done differently?”). She would speak in a manner that suggests she is merely seeking information, and would thank her colleague for the advice, ending the dialogue with, “I appreciate the feedback.” Conversely, this dispatcher can also provide her critical colleague with additional information that would suggest the call was, in fact, handled properly. Still, it was important to inform her critic that she—the stressed dispatcher—appreciated the suggestion.

*Avoidance-Cognitive* For situations in which the critical colleague is verbalizing her disapproval of this dispatcher's performance, the dispatcher has several avoidance coping options at her disposal. She can use “labeling” by covertly designating the person as “a complainer,” “a critic,” or something more cynical, such as “Ms. Negative,” “Ms. Know-it-all,” or “the unit's pretend supervisor.” The goal, she agreed, was to move beyond the stressful situation quickly and to stay focused on the task at hand or on the next call, while always maintaining professionalism.

#### Dispatcher 3

“I can't stand ignorance. Some of my co-workers say really stupid things. On the phone they keep it mostly professional with the callers, but when we talk in-between calls, I realize how small-minded some of them are.” “I use the time during my home commute to let go of whatever happened on the shift. When I get home, all my other responsibilities keep me from thinking about work.”

“I had a really rough day last week. I made a mistake. It was a big one and I'm really glad no one got hurt. But my co-workers keep calling me ‘incompetent.’ I *know* I made the mistake. I was the first one to report it so we could get it fixed. But (the others) make mistakes, too. No one bugs them. They almost seem happy that they have an excuse to talk down to me.”

*Researchers' Commentary* This dispatcher complained that the initial job training was okay, but there were a lot of “holes” in what she learned. She said that even though there were supervisors and a mentor/trainer, they left her alone. She wants to perform well, but feels she has no support. Still, she has no thoughts of quitting or changing jobs. She indicated plans to make emergency dispatching her new career. Her biggest frustrations related to family relationships (particularly her mother) who have not been as supportive, respectful, and loving as she needed. Working on these relationships consumes considerable energy and affects her job satisfaction and effectiveness.

*Approach-Behavior* This dispatcher wants to work on asking for help and guidance from her supervisor when she has questions about improving her performance. Her primary coping strategy includes seeking information from others, especially her supervisor, to show her coworkers that she is competent.

*Avoidance-Cognitive* She will use this coping style in her personal life, by not allowing her mother's concerns to become her own. She will employ *psychological distancing* in being able to view her mother's problems objectively and not feel personally responsible for having to solve her mother's problems.

*Avoidance-Behavior* This coping style includes speaking to her mother at predetermined times to avoid interfering with her work, to offer her mother occasional advice or opinions about how to resolve her mother's problems (but not to react to her mother's words or actions in a combative or derogatory manner), and not to feel personally responsible for her mother's happiness and feeling guilty if she is unavailable to take her mother's calls or solve her mother's problems.

#### Dispatcher 4

“I get really nervous about going to work some days because of the people there. There’s one woman who’s always yelling at the supervisor. She’s a bully and never gets any discipline for it. She turns it on the rest of us, too, if we don’t stay out of her way. I don’t think it’s related (to the bully), but there’s another woman on my shift who calls in sick about 60 % of the time. The supervisors don’t really count on her to show up. I like that it gives me overtime hours, but then I don’t get enough of a break between shifts.” “I was suffering from bad depression for several months. Between work and home, I had a hard time seeing anything positive. The work is depressing, even without all the drama with my co-workers.”

*Researchers’ Commentary* This dispatcher ranks in the middle of the group’s seniority level. She has three children living at home and her husband works several jobs. She is struggling in her personal life and changes to improve her situation may be forthcoming. There is also concern about her mental health and maintaining the proper financial status. In addition, she has nightmares about “the office (dispatcher) bully.” She feels, however, that her nightmares are more likely about her lack of control in her life. She wants to quit the job, but says she needs a paycheck, and it’s hard to job hunt when you work third shift and sleep days. She does not want to set any goals with us, since she feels her current therapist is already doing this. So, the following points are things we would suggest to her if she wanted suggestions.

*Avoidance-Behavior* This dispatcher needs to exercise and generate other forms of recovery during her waking hours. One plausible explanation for the stress-reducing effect of exercise is called the distraction/time out hypothesis (Bahrke and Morgan 1978), which posits that the exerciser’s attentional focus is on the physical exertion of the activity and not on sources of chronic stress. Other recovery strategies might include taking time to be with one or more friends, walking through the mall, watching a film or television, and even driving out of town for part of the day.

*Approach-Behavior* If this dispatcher anticipates a divorce she needs to obtain two services: (1) marital counseling if she and her husband both feel the marriage can be saved and (2) legal assistance—an attorney—to ensure the divorce conditions meet her family’s financial and legal requirements and demands. Along these lines, to avoid an unpleasant confrontation with her spouse, she might consider approaching her husband to ascertain his views of their marital future.

*Avoidance-Cognitive* At work, this dispatcher has a job to do and should have as little emotional involvement as possible with colleagues who are unpleasant or treat each other with disrespect. The job environment may not be ideally suited for her personality, but coping with adversity includes knowing when to “shut out” unpleasant aspects of the environment.

#### Discussion

The purpose of this study was to examine the effect of a combined coping skills and wellness program on reducing perceived stress, while attempting to increase the selective use of avoidance coping skills, job satisfaction, and perceived energy using an action research paradigm. It was hypothesized that the EDs’ use of avoidance coping would be significantly increased, perceived stress would be significantly reduced, and that job satisfaction and perceived physical energy would markedly improve in response to a 10-week combined wellness and coping skills program. These hypotheses were partially supported. A manipulation check was conducted in this study to ensure that the intervention was performed properly and had its intended effect (see Whitley 2002, pp. 187–188, for an in-depth explanation of manipulation checks). The manipulation check was conducted to ensure that participants followed the exercise (strength) training program. Pre-posttest comparisons on fitness scores indicated the dispatchers significantly improved both lower body and upper body strength. This finding indicates that the fitness aspect of the program was effective.

Exercise serves as a “time out” from sources of anxiety-producing “storms,” thereby allowing recovery time and increasing energy (Loehr and Schwartz 2003). All participants in the current study, however, who received personal coaching one session per week expressed a very positive attitude toward their exercise coach and the resistance training program. A positive attitude toward the type of exercise and the program in which one participates are essential features for experiencing exercise benefits (Anshel and Kang 2008).

As predicted, pre- and posttest comparisons indicated that participants reported greater use of avoidance coping, were less stressed, and reported significantly more perceived physical energy after the program. Contrary to expectations, however, changes in job satisfaction were not statistically significant. The ability of EDs to adopt proper coping strategies over a 10-week intervention did not transfer to improved job satisfaction. Interestingly, job satisfaction was unrelated to perceived physical energy at *pretest*; however, at *posttest* job satisfaction was significantly and positively correlated with perceived physical energy. This implies that

increased perceived physical energy also improved the EDs' job satisfaction. Future research is needed to test the robustness of this finding.

It is plausible to speculate that increased energy was an outcome of the exercise and coping skills intervention. As Loehr and Schwartz (2003) contend, based on over 25 years of corporate consulting on the relationship between energy and job performance, "performance, health and happiness are grounded in the skillful management of energy" (p. 5). In addition, "the challenge of great performance is to manage your energy more effectively" (p. 9). Dispatchers who maintain healthier habits are more likely to improve their energy, which will likely contribute to improved job satisfaction.

Given the work dynamics, job demands, and relationships among EDs and between EDs and their respective supervisor, the lack of improved job satisfaction was not surprising, particularly within a relatively short – 10 week - time period. Given the numerous sources of low job satisfaction, more extensive time to change job satisfaction than the 10 weeks provided in this study is likely to be needed. A job satisfaction intervention might involve others with whom the worker interacts, including a facilitator who has established trust with the worker, and treatment content that is focused and individualized (Kirmeyer 1988; Page and Jacobs 2011).

The narrative inquiry data further supported the effectiveness of the combined wellness and coping skills program in two ways. First, allowing each participant an opportunity to share with his or her performance coach some of the personal and professional "storms" as an intrinsic part of the intervention allowed the coach to target specific issues and stressors that warranted the correct coping skill – approach (cognitive-behavior) or avoidance (cognitive-behavior). Second, in addition to pointing out which coping strategy to use, the EDs' narrative provided a base from which to compare coping effectiveness in dealing with the same or similar type of stressor. Thus, for a narrative that reflected poor communication between the ED and his or her supervisor, particularly in dealing with criticism or other harsh exchanges, the correct use of avoidance coping - in both cognitive and behavioral forms – was taught and correctly applied. This strategy allowed the intervention content to be meaningful and realistic, and it promoted mastery of the coping technique and allowed the ED to transfer these coping skills to other situations.

One objective of this study's intervention was to instruct the EDs on learning, selecting, and properly applying approach or avoidance coping strategies. These strategies were discussed at length in private settings with their coach. All EDs indicated to their performance coach in the second of two individual meetings held during the intervention that some coping skills were more difficult and challenging to

use than others. However, they applied the coping skills they were taught and reported that the coping strategies reduced their stress. This was particularly the case with increasing the application of avoidance coping. Most job-related stressful events were beyond the ED's control. This outcome was corroborated by the pre-posttest results on the coping data which indicated significantly greater use of avoidance (but not approach) coping at the end of the intervention.

Participants demonstrated an understanding and use of coping skills that were appropriate to the nature of the stressors they were experiencing. The importance of avoidance coping, in particular, is consistent with the findings of Jenkins' (1997) study of dispatchers who were on the job during Hurricane Andrew. Those dispatchers used avoidance and coped with the extensive devastation and death by using distancing both during and for two months following that event. These findings lend credence to the effectiveness of avoidance coping in response to stressful events or conditions over which EDs have little or no control and that require continuous cognitive processing in dealing with sudden job demands (Bramson 1981). It may be surmised that increased avoidance coping likely contributed to reduced perceived stress scores. Avoidance coping is also useful in meeting the performance and cognitive demands inherent in many areas of physical performance such as competitive sport (Anshel and Sutarso 2007) or law enforcement (Anshel 2000).

It appears that the approach-avoidance coping framework formed an effective educational tool in the coping process in the present study. Future research is needed to examine the effect of active recovery breaks (e.g., removing oneself from the dispatcher facility and a computer screen by walking the stairs, going outside, consuming nourishing products that improve energy) during the ED's 8-hour shift on changes in perceived stress, job satisfaction, perceived energy, and other outcome measures.

In summary, the results of this study, reflecting both quantitative and qualitative data, reveal a work environment that is highly stressful and lacking in cordial professional relationships. Several of the EDs in this study, representing about one-third of the full unit, perceived their supervisors as ineffective, in general, and not someone to whom they feel comfortable asking to address problems that are experienced during their shift. Perceived low self-control is pervasive among these participants. At the same time, the job requires composure and rapid responses to emergencies, so that wallowing in self-pity, catastrophizing (i.e., chronic complaining, often accompanied by feelings of helplessness), and negative thinking are ineffective coping responses. The combination of a noxious work environment, numerous sources of chronic and acute stress, and the lack of recovery from the job's inherent "storms" warrants the use of a combination of approach and

avoidance coping styles, in both behavioral and cognitive forms. Avoidance coping, however, was used somewhat sparingly by the EDs prior to this study, at least according to the coping style scores and the narratives. Learning and applying this coping technique, therefore, appeared to contribute to reducing their perceived stress.

Although this study employed an action research design, its findings are still worthwhile and useful for the field. The results of action research should provide five forms of validation (Mills, 2003). In this study, theoretical, evaluative, outcome, process, and catalytic forms of validity were met.

*Theoretical validity* was established in this study by explaining changes in selected dependent variables, particularly perceived stress, based on the approach-avoidance coping framework. The study's orientation required participants to become familiar with the approach and avoidance coping dimensions, each with cognitive and behavioral sub-dimensions. In addition, the dispatchers were instructed on when to use approach and when to apply avoidance coping strategies. It is plausible to speculate that EDs used the approach-avoidance coping options appropriately and judiciously. *Evaluative validity* was established by obtaining data that were objective, reported in an unbiased manner, and reflected treatment efficacy. Thus, evidence was found for desirable changes in cognitive-behavior coping skills. EDs reported marked improvements in their coping skills. Fitness measures were also improved, reaching statistical significance.

*Outcome validity* was obtained in this study because the participants' actions emerging from this intervention resulted in successful changes in unhealthy coping patterns, and participants engaged in healthier, more active lifestyle changes. In the present study, specific quantitative outcomes significantly improved from pretest to posttest, suggesting strong adherence to program concepts. In addition, the program's coaches reported strong compliance with new exercise and dietary routines. The relatively low sample size may have compromised the probability of statistical significance with some of the measures.

*Process validity* required the study to be conducted in a manner that reflected the competence of the orientation seminar leader and two researchers who provided initial information and developed participant motivation to engage in this program. Post-study evaluations indicated highly favorable views of the seminar, of the performance coaches, and of the coping skills and exercise programs. A registered dietician also lent further credence toward providing expert coaching related to participants' nutritional and eating habits. Although no data were obtained on changes in dietary habits, post-program evaluations

about the intervention's quality indicated highly favorable perceptions of the nutrition coaching. While three participants wished they had experienced additional time with the dietician, they viewed nutrition information as valuable and reported that it resulted in changes in their dietary intake patterns.

Finally, *catalytic validity* requires that participants initiated behavior change based on their heightened understanding of the study's primary content, in this case, coping effectively with job-related acute stress, the importance of exercise, nutrition, proper sleep, and taking regular job-related recovery breaks. It was apparent in the present investigation that participants were highly self-motivated to take action in replacing selected negative (unhealthy) habits with positive (healthy) routines. This conclusion reflects the high program completion rate, and improvements on selected dependent measures.

There were some limitations associated with this study. For instance, the study included a relatively small sample size of only nine emergency dispatchers. This was unavoidable because recruitment was based on volunteering for the study, as opposed to a requirement through the department's in-service training program. However, it should be noted that the participants represented the characteristics of other EDs in the department and carried out their job in a manner that represents typical demands and issues experienced by most EDs. Whether the results of this study can be generalized to other ED units will need to be addressed by future research.

A second limitation concerned the nutrition intervention. Although the participants met with a registered dietician in a group seminar and one additional time individually, the effect of this intervention was not measured. The nutrition component of the study was consistent with the study's wellness theme to improve the EDs' health and energy. However, changes in participants' eating patterns, both on and off the job, could not be determined and did not represent a focus of this study. Examining dietary changes and concomitant changes in job-related and health-related variables is recommended in future related studies.

Another limitation of this study was the use of an action study research design, which does not include a control group. An action study method was preferred for two reasons. First, the conditions under which this study was conducted did not allow for a control (no treatment) group. The participants work in close proximity and there was continued verbal interaction among EDs concerning this study. Second, all participants wanted to engage in an exercise program and receive fitness coaching and a fitness club membership. Anyone randomly assigned to a no-treatment group, in which these services were not provided, would not



have participated in the study. While it is acknowledged that action research usually does not include a no-treatment (control) group, the results of this study indicated apparent pre-posttest changes in selected attitudes and behaviors.

This study consisted of an action research design that explored problem-solving options. As indicated earlier, action research designs attempt to gain insights into the factors that explain behavior change and to improve outcomes in natural settings. The current pre-post one-group design, combined with both quantitative data and personal narratives, allowed the researchers to gain insight into the personal issues, group dynamics, and environmental conditions that helped explain sources of turmoil, and assess the usefulness of applying cognitive and behavior coping strategies in overcoming these job-related obstacles.

The focus of this study was to examine the mechanics and internal processes of a high-stressed work environment that required a specific intervention in one unit of a single police department. No other research design was possible or feasible, particularly with a small sample size. The design we used was successful at illustrating the effectiveness of a coping and wellness intervention for emergency dispatchers. Certainly, future experimental research on determining the effectiveness of coping skills in addition to and at the exclusion of exercise programs with emergency dispatchers, inclusion of a control or placebo group, and a larger sample size are warranted. The current study, while exploratory, can be considered promising.

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