

Mindfulness as a Potential Means of Attenuating Anger and Aggression for Prospective Criminal Justice Professionals

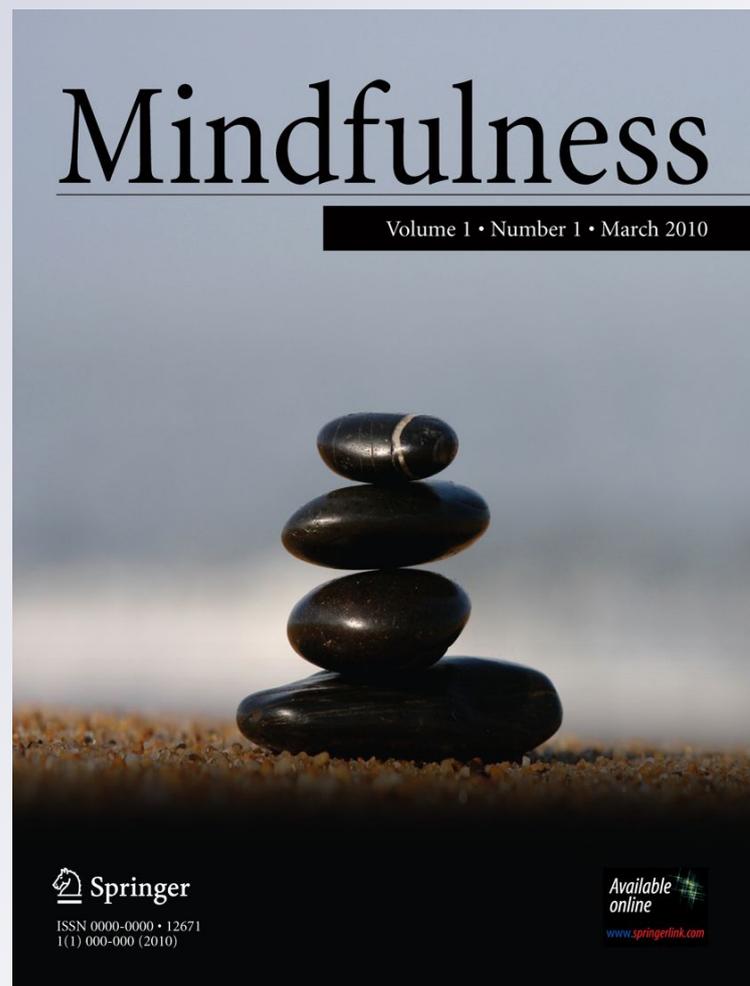
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Mindfulness as a Potential Means of Attenuating Anger and Aggression for Prospective Criminal Justice Professionals

Thomas M. Kelley · Eric G. Lambert

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Abstract This study is the first to examine the potential role of mindfulness for attenuating anger and aggression in prospective criminal justice professionals. The Mindful Attention Awareness Scale, Aggression Questionnaire, Hostile Attribution Bias Scale, and Thought Recognition Inventory were administered to 272 undergraduate criminal justice majors. The results of a multivariate analysis of variance model indicated that dispositional mindfulness related negatively with self-reported aggression and hostile attribution bias and positively with thought recognition. A possible relationship between mindfulness and thought recognition may operate to influence other mechanisms to heighten mental health, as well as reduce anger and aggression. The potential benefits of mindfulness and thought recognition training for criminal justice professionals and prospective criminal justice professionals are discussed.

Keywords Mindfulness · Aggressive behavior · Criminal justice professionals · Thought recognition · Three principle psychology · Health realization

Introduction

Criminal justice (CJ) professionals are frequently called upon to intervene in situations involving conflict, hostility, and aggression. During these situations, they can become

targets of personal attacks, threats, and insults. The very nature of their work places many CJ professionals into emotionally and physically challenging events such as domestic disputes, assaults, homicides, and other brutal crimes. A police officer, for example, may find himself or herself in a violent confrontation with an offender and soon after be called upon to intervene in a volatile domestic dispute. During a typical law enforcement career, most officers have been threatened or assaulted, often with a weapon. In 2007, for example, more than 59,200 police officers were assaulted in the USA, and more than 25% of these assaults resulted in injury (Federal Bureau of Investigation 2009). At one time or another, most officers have struggled with anger, hostility, and aggression related to assaults, threats, and insults experienced during their careers.

Correctional officers are also exposed to violence, threats, and insults on a regular basis. During a workday, for example, a correctional officer may have a physical altercation with an inmate, experience numerous verbal taunts, and be the target of excrement hurled from a cell. Many judges, prosecutors, and defense attorneys deal with horrific crimes and difficult defendants. They experience anger, sarcasm, and hostility in their courtrooms, as well as threats, insults, and violent outbursts from some litigants.

It is essential that CJ professionals maintain their composure during emotionally charged situations (Bayley and Bittner 1989). At a moment's notice, they may encounter life-or-death events, during which their ability to control their emotions could determine the outcome. The more agitated CJ professionals become, the less likely they will be able to calm others and gain cooperation from citizens and colleagues. If they lose control and allow anger and hostility to cloud their judgment, the result can include a myriad of dysfunctional outcomes including stress,

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prejudice, stereotyping, heightened conflict, brutality, and the use of excessive force (Fein and Spencer 1997; O'Brien and Bremner 2010; Stinchcomb 2004). The personal, social, and economic consequences of uncontrolled anger and aggression for CJ personnel, their families, citizens, agencies, and the communities they serve can be enormous (Holmes and Smith 2008). Every year, for example, scores of CJ professionals and innocent bystanders are injured or killed when incidents escalate into unnecessary aggression. Along with the millions paid out in civil litigation (Lonsway et al. 2002), these incidents severely undermine the trust and confidence that the community places in CJ professionals.

Several considerations suggest that mindfulness, or enhanced awareness and attention in the present moment (Brown and Ryan 2003), may be a reliable means of attenuating anger and aggression. The prevailing view is that mindful people are less likely to respond to the aggression, threats, and insults from others with their own aggression (Heppner et al. 2008; Wright et al. 2009).

This study examined the potential of dispositional mindfulness to inhibit or mitigate anger and aggression. It first reviews the role of conflict, perceived threat, and other mechanisms in increasing the likelihood of anger and aggressive behavior. Then it presents research that suggests that mindfulness may have implications for attenuating anger and aggression in response to anger and aggression from others. Next, it describes the construct of thought recognition (TR) and proposes a possible relationship between mindfulness and TR that may help clarify why mindfulness is associated with healthy psychological functioning and appears to attenuate anger and aggression. Finally, it presents findings of a study that is the first to examine the relationship between mindfulness and TR, and the potential ability of mindfulness to attenuate anger and aggression for prospective CJ professionals.

Perceived Threat and Heightened Anger and Aggression

Psychological studies of anger and aggression have found both to be highly complex entities with numerous triggers, including several personality factors and situational variables (for a review, see Anderson and Bushman 2002). An obvious trigger of anger and aggression is physical threats and assaults. Considered from an evolutionary perspective, the function of anger and aggression in the context of self-preservation is obvious. As a survival tool, anger is triggered automatically without conscious awareness. The instinctive triggering of this intense emotion, however, can have destructive consequences in modern times, because it overrides the higher order thought processes that help people remain in control, make clear assessments of reality, and avoid responding in harmful ways (Goleman 2003; Howells 2004).

Another common instigator of anger and aggression is social or interpersonal situations that involve insults, rejections, and ego threats (Baron and Richardson 1994). Being rejected socially can damage one's self-concept and become a threat to self-esteem (Baumeister et al. 1996). This is particularly evident for people with conditional or fragile high self-esteem, which is tied to the approval and opinions of others (Fein and Spencer 1997; Feshbach 1970; Plant and Ryan 1985). For these people, social rejection can serve as a potent trigger of anger and aggression, which is likely viewed as a means of repairing an unstable or fragile self-view (Baumeister et al. 1994; Kernis et al. 2008).

Several other mechanisms have been linked with an increased likelihood of anger and aggression following perceived social threats. For example, rumination or fixating on negative thoughts about perceived past or future wrongs has been shown to be a major factor in the production and perpetuation of chronic anger and aggression (Rusting and Nolen-Hoeksema 1998; Sukhodolsky et al. 2001). Also, for people with low self-control or cognitive inhibition, anger and aggression are more likely responses to perceived threats (Chambers et al. 2008). People who display high-trait anger tend to attribute hostile intent habitually (Averill 1983), including perceptions of unfairness, intentionality, and blameworthiness (Kassinove and Sukhodolsky 1995). People who have pessimistic, judgmental attitudes, and experience insecure emotions like suspiciousness and cynicism are more likely to respond to perceived threats with aggression. These negative attitudes and emotions appear to increase the reactivity characteristic of anger and aggression (Brantley 2007). Furthermore, people who typically employ avoidant coping strategies to repress or dissociate from angry thoughts and feelings often experience an intensification of the very emotions and cognitions they are trying to avoid, which increases the likelihood of aggression following perceived threats (Feldner et al. 2003).

Mindfulness

Mindfulness has been defined as enhanced awareness and attention in the present moment (Brown and Ryan 2003), paying attention on purpose in the present moment (Kabat-Zinn 2003), and an active state of consciousness that involves being open to and engaging with all aspects of one's moment-to-moment experience (Ciarrochi and Godsell 2005). Bishop et al. (2004) proposed a two-factor operational model of mindfulness, in which one's attention is focused and maintained on immediate experience while incorporating an orientation toward that experience of openness, acceptance, and curiosity. Mindful people typically experience life in a non-judgmental, nondefensive manner. They avoid value judgments about their experiences, both internally and externally.

They allow their thoughts to flow through their mind without taking them personally, becoming gripped by them, or attaching them to the self (Heppner et al. 2008). Thoughts of rejection, insult, threat, etc., appear to pass through the minds of mindful people without initiating self-esteem threats, triggering angry outbursts, or defensive reactions (Hodgins and Knee 2002). Mindful people appear to view their self-esteem as unconnected to the circumstances they experience, whether positive or negative. They tend to accept the world as it is, other people the way they are, and “go with the flow.”

Research has found mindfulness to be related to lower levels of conflict and relationship accommodation (Barnes et al. 2007), an increased capacity to respond to conflict and threat in a compassionate manner (Borders et al. 2010), lower levels of aggression and hostility (Heppner et al. 2008), and an enhanced ability to dismiss angry thoughts and feelings (Baer 2003; Shapiro et al. 2006). The prevailing view is that mindful people are less bothered, defensive, and reactive to the negative and aggressive behavior of others, and more likely to respond to conflict, insults, and threats in more civil, sensible ways.

Furthermore, well-documented positive relationships have been found between mindfulness and subjective well-being (Brown and Ryan 2003; Lau et al. 2006), self-acceptance (Carson and Langer 2006), authenticity (Lakey et al. 2007), life satisfaction (Brown and Ryan 2003), vitality, and self-actualization (Carlson and Brown 2005). Mindfulness has also been associated with enhanced executive functioning, improved self-regulation (Tangney et al. 2004), greater autonomy, and superior relationship capabilities (Baer et al. 2004; Baumeister et al. 1996). Research on mindfulness-based clinical interventions concludes that many such programs (e.g., mindfulness-based stress reduction) reduce a variety of psychological symptoms (Broderick 2005; Heppner et al. 2008; Specca et al. 2000) and enhance positive affect and self-regulation (Bishop et al. 2004; Lakey et al. 2007).

Thought Recognition

As the review suggests, several mechanisms have been offered to explain the increased likelihood of anger and aggression in response to perceived threat. We offer an additional factor. This mechanism is TR, or the ability to see thought in the moment as the source of one's experience (Pransky 1997). TR has been associated with dramatic reductions in anger and aggression in several violent, crime ridden communities (Kelley 2003; Mills and Spittle 2002). We also suspect that TR, and the understanding from which it evolved, may relate to mindfulness in a manner which improves peoples' mental health and thus, reduces the likelihood of anger and aggression. Before offering our view of

the possible relationship between mindfulness and TR in our “Discussion” section, we must first familiarize readers with the nature and meaning of TR (for an in-depth description, see Kelley 2011; Mills 1995, and Pransky 1998).

TR is the main construct of the principle-based prevention model commonly referred to as the three principle understanding (TPU). The initial research leading to the development of TPU was funded by a 5-year NIMH grant (1972–1977), and carried out at the Universities of Michigan and Oregon by psychologists, Roger Mills and George Pransky (Golann and Eisdorfer 1977; Mills 1977). TPU is grounded in the following assumptions: (1) people have within them an innate well-spring of mental health from which to draw containing a set of inter-related attributes including self-esteem, well-being, self-motivation, creativity, compassion, and common sense and (2) people can realize, activate, and live from this healthy, wise, balanced state of mind regardless of current circumstances, mental status, or prior socialization. TPU further proposes that human psychological experience can be explained, inclusively and exclusively, by three principles: (1) *mind*, or the universal energy that animates all of life, and is the source of innate health and well-being; (2) *thought*, or the *ability to think*, which thereby creates one's subjective experience; and (3) *consciousness*, or *the ability to be aware* or cognizant of one's subjective thought created experience. According to TPU, mind, thought, and consciousness combine to produce peoples' on-going mental–emotional life experience. Following this logic, TPU asserts that peoples' behavior unfolds synchronously with their continually changing realities constructed by these three principles.

In the TPU view of generic psychological functioning, mind and consciousness are constant and neutral. Mind continually powers thought and consciousness to create subjective experience. Consciousness continually converts whatever thinking it encounters into personal experience. Thus, the only variable in this proposed equation of psychological functioning is thought. *That people think* is not a variable because all people think continually. However, *what people think about, how they use their thinking agency, and how they relate to the products of their thinking* (e.g., *feelings, perceptions, sensations, etc.*) are variables ultimately under their control. TPU proposes an *optimal design* behind the ability of thought, and asserts that when people allow their thinking to operate in sync with this design, they access innate mental health. According to TPU, the optimal design for the ability of thought involves the proper use of the two distinct ways that people can think: *natural thought* and *personal thought*.

TPU views natural thought as an innate, intelligent thought process, observable from birth, and as effortless and automatic as breathing. According to TPU, when natural thought is enlivened by consciousness, it generates the

cadre of positive psychological attributes associated with mental health. Because it can access individual memory as well as fresh, insightful thoughts, natural thinking is unfailingly responsive to the moment, providing people with sensory data appropriate to their immediate needs and goals. According to TPU, *natural thinking surfaces automatically whenever peoples' minds are quiet or clear*. TPU views natural thought as the source of what athletes refer to as "being in the zone," as well as positive psychology's construct of "flow" (Csikszentmihalyi 2002).

Personal thinking, on the other hand, is a learned thought process that requires effort and concentration to hold various thoughts in mind in order to learn, memorize, problem solve, perform tasks, etc. While personal thinking is indispensable for navigating one's culture, *it is restricted to memory and always and only useful for applying known variables to known formulae*. Even when used appropriately, the *overuse* of personal thinking, because it takes effort, results in fatigue and ultimately symptoms of burnout. When misused, personal thinking produces symptoms of psychological dysfunction (e.g., anger, anxiety, depression, etc.). While myriad personal thinking misuses exist, common ones include worrying, ruminating, fault-finding, obsessing, perfectionistic thinking, suspicious thinking, angry thinking, and egoistic thinking. According to TPU, *the overuse and misuse of personal thinking is the major source of chronic stress, distress, and the dysfunctional and health-damaging coping behavior that often follows*.

TPU proposes the following optimal design for using the ability of thought; *the responsive use of natural and personal thought, mediated by natural thought*. Put another way, optimal thinking takes on a balanced movement, back and forth, between a spontaneous reliance on natural thinking and the implementation of personal thinking when appropriate. Thus, optimal thinking requires that people allow natural thought to direct their thinking. With natural thinking at the helm, people receive prompts (i.e., responsive thoughts) to move in and out of personal thinking when necessary, without getting stuck in the personal mode. According to TPU, the capacity or potential to access innate mental health by allowing thought to operate in this natural, free-flowing way is available to people as an intrinsic ability, invulnerable to external influences, current circumstances, mental status, or prior socialization.

Finally, TPU proposes that people have a built-in self-monitoring system or reliable way of discerning whether they are using thought in their best interest or against themselves. According to TPU, *people's feelings serve as a reliable barometer of the moment-to-moment quality of their thinking and mental health*. To use an analogy, in the same way that physical pain signals a physical malfunction, painful feelings signal a misuse of thought and psychological dysfunction. The greater a person's emotional pain, the

further he or she has drifted away from a natural thought process and innate healthy functioning.

According to TPU, TR involves an *insightful level of TPU* including: (1) that moment-to-moment subjective experience is created by the ability of thought, (2) that innate, healthy psychological functioning can be accessed through a quiet mind and natural thought process, (3) that behavior unfolds synchronously with moment-to-moment thought-created experience, and (4) that feelings can serve a reliable barometer of thought quality and mental health. TPU proposes that as people's level of TR deepens, their minds quiet or clear, the quality of their thinking improves and thus, the quality of their feelings, perceptions, and behavior (i.e., mental health) improves as well.

Interestingly, TR has been associated with the same cadre of healthy attributes that has been associated with mindfulness. These qualities include self-esteem, neurological flexibility, self-awareness, self-control, well-being, civility, and creativity (Kelley 2003, 2011; Kelley et al. 2005; Mills 1995; Mills and Spittle 2002; Pransky 1998). Furthermore, impressive reductions in conflict, hostility, and aggression have been achieved by teaching TR to hundreds of residents, social workers, teachers, and police officers in several impoverished, crime-ridden communities in the USA, Australia, and New Zealand (Kelley 2011; Mills and Spittle 2002; Pransky 1997).

The Current Research

This study is the first to examine the relationship of trait mindfulness and TR, and to assess the potential of dispositional mindfulness to attenuate anger, aggression, and hostile attribution bias for prospective criminal justice professionals. Our predictions are: (1) that mindfulness will relate to lower levels of anger, aggression, and hostile attribution bias and (2) that higher dispositional mindfulness will relate to higher TR.

Method

Participants

Two hundred and seventy-two undergraduate CJ majors at a large Midwestern urban university participated. Forty-two percent were male and 56% were female. Seventy-two percent were between 18 and 25 years of age, and 28% were 26 years or older. Forty percent were African American, 43% were European-American, 6% were Arab-American, 3% each were Hispanic-American and Asian-American, and 5% were of other ethnic origin. Policing was the self-reported occupational goal of 38% of participants, judicial

work (e.g., lawyer, judge, or court administrator) was the goal of 25%, corrections (e.g., probation officer or correctional officer) was the goal of 23%, and security and other CJ occupations (e.g., forensic science) was the future career choice of 13%.

Measures

Mindful Attention Awareness Scale The Mindful Attention Awareness Scale (MAAS) is a dispositional measure of mindfulness that measures the degree to which a person is living and responding to life in the present moment (Brown and Ryan 2003). The MAAS has demonstrated good retest reliability ($r=.81$, $p<.001$), as well as adequate convergent and discriminant validity when compared with other measures of mindfulness (Williams et al. 2010). The MAAS contains 15 items each scored on a 6-point Likert scale ranging from 1 (almost always) to 6 (almost never). Sample items include, "I find myself preoccupied with the past and the future," and "I find it difficult to stay focused on what is happening in the present." Items were summed with higher totals indicating higher mindfulness.

Aggression Questionnaire The Aggression Questionnaire (AQ) (Buss and Perry 1992) was used to measure whether mindfulness was associated with respondents' propensity for aggressiveness. The AQ is a well-validated measure of dispositional aggression containing 29 items across the four subscales of anger, hostility, physical aggression, and verbal aggression. Sample items include, "I have trouble controlling my temper" (anger), "When people are especially nice to me I wonder what they want" (hostility), "Once in a while I can't control my urge to strike another person" (physical aggression), and "My friends say that I am somewhat argumentative" (verbal aggression). Participants responded on a 5-point Likert scale ranging from 1 (extremely uncharacteristic of me) to 5 (extremely characteristic of me). Items were summed for each sub-scale and for a total aggressiveness score with higher totals indicating stronger aggressive tendencies.

Hostile Attribution Bias Scale The Hostile Attribution Bias Scale (HABS) (Kernis 2005) was used to measure whether mindfulness was associated with respondents' interpretation of ambiguous social information as benign or hostile. Research has shown that people with greater hostile attribution bias tend (1) to appraise ambiguous provocations as being intentional, (2) to respond to such provocations with anger, and (3) to retaliate (Epps and Kendall 1995). The HABS consists of 14 scenarios of ambiguous social events, each describing a situation in which someone or some group behaves in a manner to which people could respond with different levels of anger and hostility. A sample vignette is,

"Imagine you are boarding a crowded bus. Just as you start to sit down next to someone, he/she places a bag in what would have been your seat." Responses were obtained on a 5-point Likert scale for participant's perception of intent (e.g., "How certain would you be that this person did this to you on purpose?"), level of felt anger (e.g., "How angry would you feel in this situation?"), and desire to retaliate (e.g., "How much would you wish you could get back at this person?"). Items were summed for each response category, and for a total hostile attribution bias score with higher scores indicating stronger hostile tendencies.

Thought Recognition Inventory The Thought Recognition Inventory (TRI) was developed at the Center for Innate Health at West Virginia University and was used to measure people's level of understanding of the relationship between their thinking, their use of thought, and their subjective experience (Kelley 2004). The TRI contains eight items measured on an 8-point Likert scale ranging from 1 (disagree absolutely) to 8 (agree absolutely). Sample items include, "My moment-to-moment experience of life is created by my thinking" and, "Feelings like anger and resentment signal that the quality of my thinking is poor." Items were summed with higher totals indicating higher TR.

Procedure

Participants completed these measures in several CJ classes during the fall semester, 2010. The order of completion of each instrument was the same for all participants with the HABS completed first, followed by the MAAS, the AQ, and the TRI.

Results

Table 1 presents the intercorrelations, means, standard deviations, and Cronbach's alpha coefficients of all measurement instruments. Cronbach's alphas, a measure of internal reliability, ranged from moderate (.61) to high (.89) for all measures. Furthermore, higher MAAS scores significantly related to lower total AQ aggressiveness, as well as each of the AQ subscales of anger, hostility, physical aggression, and verbal aggression. Also, higher scores on the MAAS related to lower total HABS scores, as well as lower scores on each of the HABS subscales of intent, anger, and retaliate. Higher MAAS scores significantly related to higher TRI scores as well. Higher HABS Intent was associated with lower TRI scores. Finally, the HABS subscale scores were highly intercorrelated indicating strong relationships between attributing hostile intent, feelings of anger, and desire to retaliate.

Table 1 Intercorrelations and psychometric properties of the mindfulness and aggression measures

Measure	1	2	3	4	5	6	7	8	9	10	11
MAAS	1.00										
AQ total	-.36**	1.00									
AQ anger	-.33**	.81**	1.00								
AQ hostility	-.35**	.76**	.47**	1.00							
AQ physical aggression	-.23**	.82**	.23**	.46**	1.00						
AQ verbal aggression	-.26**	.71**	.57**	.43**	.44**	1.00					
HABS total	-.21**	.39**	.23**	.36**	.35**	.27**	1.00				
HABS intent	-.15*	.24**	.10*	.26**	.23**	.16**	.35**	1.00			
HABS anger	-.19**	.39**	.27**	.38**	.31**	.30**	.39**	.69**	1.00		
HABS retaliate	-.21**	.38**	.23**	.32**	.38**	.23**	.87**	.59**	.65**	1.00	
TRI	.18**	-.08	-.09	-.04	-.07	-.10	-.01	-.16*	-.08	-.06	1.00
Mean	62.23	73.16	16.80	19.45	22.05	15.08	30.29	38.20	45.088	30.29	35.54
Standard deviation	12.55	19.99	6.15	6.61	7.71	4.40	12.67	10.38	10.84	12.67	8.39
Cronbach's alpha	.85	.82	.72	.71	.81	.61	.83	.85	.89	.84	.77

MAAS mindful attention awareness scale, AQ aggression questionnaire, HABS Hostile Attribution Bias Scale, TRI Thought Recognition Inventory
 * $p \leq .05$; ** $p \leq .01$

A multivariate analysis of variance (MANOVA) model was estimated with MAAS as the dependant variable and gender (male or female), race (White, African American, or other), age (under 26 years and 26 and older), and criminal justice career goal (law enforcement, judiciary, corrections, and other) as the independent variables (see Table 2). Among the independent variables, only race had a significant relationship. Based on the post hoc Scheffe test, African American participants had a higher MAAS score than did White or other participants.

MANOVA models were estimated with AQ total, AQ anger, AQ hostility, AQ physical aggression, and AQ verbal aggression as the dependant variables and gender, race, age, and criminal justice career goal as the independent variables (see Table 2). Among the AQ measures, gender had a significant association with AQ physical aggression. Men, on average, were higher on this measure than women. Race did not have any significant associations with any of the AQ measures. Younger participants had higher scores on the AQ hostility and AQ Total scales than did older students. Finally, criminal justice career goal had nonsignificant associations with the AQ measures. None of the independent variables had a significant relationship with either the AQ anger measure or the AQ verbal aggression measure.

MANOVA models were estimated with HABS total, HABS intent, HABS anger, and HABS retaliate as the dependant variables and gender, race, age, and criminal justice career goal as the independent variables (results reported in Table 2). Women tended to have higher levels of HABS Anger, and men were generally higher on the HABS retaliate scale. There were no significant differences

for gender with the HABS total and HABS intent scales. Race, age and criminal justice career goals had no significant association with any of the HABS measures.

MANOVA models were also estimated for the TRI variable with gender, race, age, and criminal justice career goal as the independent variables (see Table 3). Gender, race, and age, all had nonsignificant associations with TRI. Criminal justice career goal had a significant relationship with the TRI measure. Those who identified corrections as their career goal had the highest TRI scores on average, followed closely by the “other” career group, and the judiciary group. Those who had selected law enforcement as their career goal had the lowest TRI scores.

Finally, MANOVA models were estimated with AQ total, AQ anger, AQ hostility, AQ physical aggression, AQ verbal aggression, HABS total, HABS intent, HABS anger, HABS retaliate, and TRI as the dependant variables, and gender, race, age, criminal justice career goal, and MAAS as the independent variables. For all the models, MAAS had significant relationships with all the dependant variables. Higher MAAS scores were associated with lower AQ total, AQ anger, AQ hostility, AQ physical aggression, AQ verbal aggression, HABS total, HABS intent, HABS anger, and HABS retaliate scores. In addition, higher MAAS scores were associated with higher TRI scores.

Discussion

Results for this group of prospective CJ professionals indicate that higher dispositional mindfulness is associated with

Mindfulness

Table 2 Multivariate analysis of variance results

Variable	Sum of squares	Mean squares	F value	Partial Eta ^{2a}	R ²
MAAS					
Gender	335.63	335.63	2.46	.01	.26
Race	1,240.50	620.25	4.54**	.04	
Age	117.03	117.03	0.86	.00	
Career goal	718.76	239.59	1.75	.02	
AQ total					
Gender	758.72	758.72	1.89	.01	.16
Race	236.10	118.05	0.29	.00	
Age	2,651.30	2,651.30	6.61**	.04	
Career goal	977.42	325.81	0.81	.01	
AQ anger					
Gender	7.74	7.74	0.22	.00	.17
Race	11.38	5.69	0.15	.00	
Age	282.23	56.45	1.60	.02	
Career goal	84.82	21.21	0.60	.01	
AQ hostility					
Gender	4.45	4.45	0.11	.00	.18
Race	11.73	5.80	0.14	.00	
Age	530.09	530.09	12.65**	.06	
Career goal	136.36	45.45	1.08	.02	
AQ physical aggression					
Gender	362.13	362.13	6.31**	.03	.20
Race	89.16	44.58	0.78	.01	
Age	138.84	138.84	2.42	.01	
Career goal	124.62	41.54	0.72	.01	
AQ verbal aggression					
Gender	33.49	33.49	1.73	.01	.15
Race	2.30	1.15	0.59	.00	
Age	16.30	16.30	0.84	.00	
Career goal	45.43	15.14	0.78	.01	
HABS total					
Gender	550.36	550.36	0.62	.00	.13
Race	2,764.43	1,373.21	1.55	.01	
Age	2,174.70	2,174.70	2.45	.01	
Career goal	1,621.69	540.56	0.61	.01	
HABS intent					
Gender	109.95	109.95	1.04	.01	.16
Race	575.63	287.81	2.72	.02	
Age	169.60	169.60	1.60	.01	
Career goal	284.71	94.90	0.90	.01	

Table 2 (continued)

Variable	Sum of squares	Mean squares	F value	Partial Eta ^{2a}	R ²
HABS anger					
Gender	548.86	548.86	4.76*	.02	.17
Race	182.10	91.05	0.79	.01	
Age	114.18	114.18	0.99	.01	
Career goal	70.35	23.45	0.20	.00	
HABS retaliate					
Gender	842.66	842.66	5.55*	.04	.23
Race	189.30	94.65	0.62	.01	
Age	1,289.33	257.87	1.70	.03	
Career goal	24.81	12.41	.08	.00	
TRI					
Gender	134.51	134.51	2.10	.01	.23
Race	25.29	12.64	0.20	.00	
Age	39.09	39.09	0.61	.00	
Career goal	1,121.11	373.70	5.82**	.08	

MAAS mindful attention awareness scale, AQ aggression questionnaire, HABS Hostile Attribution Bias Scale, TRI Thought Recognition Inventory, Career goal criminal justice career goal

^a The estimated effect size of the variable

* $p \leq .05$; ** $p \leq .01$

lower levels of anger, aggression, and hostile attribution bias. Significant inverse correlations were found between the MAAS and AQ total, AQ anger, AQ hostility, AQ physical aggression, AQ verbal aggression, HABS total, HABS intent, HABS anger, and HABS retaliate. The inverse correlations between mindfulness and each AQ subscale suggest that mindful future CJ professionals may be less likely to respond to conflict, threats, and insults from other people with their own anger, hostility, physical aggression, or verbal aggression. The inverse relationship found between mindfulness and each of the HABS subscales suggest that more mindful prospective CJ professionals may be less likely to interpret the ambiguous behavior of others as intentionally aggressive, and to respond to such behavior with anger and retaliation.

While mindfulness relates to decreased anger and aggression for these participants, there were some significant demographic scoring differences on the HABS, AQ, and MAAS that deserve consideration. For example, we found that men were more likely than women to react to HABS scenarios with retaliation and physical aggression. Although women scored higher than their male counterparts on HABS Anger, they were less likely than men to respond with aggression and retaliation. A possible explanation for this

Table 3 Multivariate analysis of variance results with MAAS added to the models

Variable	Sum of squares	Mean squares	F value	Partial Eta ^{2a}	R ²
AQ total					
Gender	311.19	311.19	0.86	.00	.24
Race	1,072.20	536.10	1.48	.01	
Age	1,995.70	1,995.70	5.51*	.03	
Career Goal	434.48	144.83	0.40	.01	
MAAS	8,452.04	8,452.04	23.32**	.10	
AQ anger					
Gender	0.43	0.43	0.43	.00	.23
Race	27.18	13.69	0.39	.00	
Age	114.11	114.11	3.30	.02	
Career goal	55.87	18.62	0.54	.00	
MAAS	1,043.04	1,043.04	28.11**	.08	
AQ hostility					
Gender	30.51	30.51	0.82	.00	.28
Race	94.49	47.24	1.27	.01	
Age	425.01	425.01	11.46**	.05	
Career goal	50.66	16.89	0.46	.01	
MAAS	1,043.04	1,043.04	28.11**	.12	
AQ physical aggression					
Gender	284.41	284.41	5.10*	.02	.23
Race	174.44	87.22	1.56	.02	
Age	106.94	106.94	1.92	.01	
Career goal	102.97	34.16	0.61	.01	
MAAS	376.62	376.62	6.75**	.04	
AQ verbal aggression					
Gender	18.04	18.04	0.97	.01	.20
Race	16.63	8.32	0.45	.00	
Age	8.96	8.96	0.48	.00	
Career goal	41.64	13.88	0.75	.01	
MAAS	202.14	202.14	10.91**	.05	
HABS total					
Gender	1,262.46	1,262.46	1.52	.01	.19
Race	5,092.02	2,546.01	3.07*	.03	
Age	1,545.25	1,545.25	1.86	.01	
Career goal	1,512.58	504.19	0.61	.01	
MAAS	13,306.86	13,306.86	16.06**	.07	
HABS intent					
Gender	170.86	170.86	1.66	.01	
Race	742.78	371.14	3.60*	.03	
Age	130.66	130.66	1.27	.01	
Career goal	261.82	87.27	0.84	.01	

Table 3 (continued)

Variable	Sum of squares	Mean squares	F value	Partial Eta ^{2a}	R ²	
MAAS	624.77	624.77	6.05*	.03	.18	
HABS anger						
Gender	780.31	780.31	7.29**	.03		
Race	361.84	180.92	1.69	.02		
Age	62.66	62.66	0.59	.00		
Career goal	197.23	65.74	.061	.01	.23	
MAAS	1,921.94	1,921.94	17.96**	.08		
HABS retaliate						
Gender	35.63	35.63	0.24	.00		
Race	816.74	408.37	2.72	.02		
Age	392.68	392.68	2.62	.01	.25	
Career goal	478.53	159.51	1.06	.02		
MAAS	2,037.40	2,037.40	13.59**	.06		
TRI						
Gender	195.06	195.06	3.12	.02		
Race	16.89	8.45	0.14	.00	.26	
Age	20.73	20.73	0.33	.00		
Career goal	1,253.93	417.98	6.68**	.09		
MAAS	435.22	435.22	6.96**	.04		

MAAS mindful attention awareness scale, AQ aggression questionnaire, HABS Hostile Attribution Bias Scale, TRI Thought Recognition Inventory, Career goal criminal justice career goal

^a The estimated effect size of the variable

* $p \leq .05$; ** $p \leq .01$

finding relates to the consensus of considerable research that, compared with their male colleagues, female CJ professionals tend to use a different style of responding to potential conflict that emphasizes communication tools and skills over physical force (Grennan 1987). For example, several studies have concluded that while male and female police officers are equally effective on the job, female officers are less likely than male officers to use excessive force. By emphasizing communication skills and techniques that may help de-escalate potentially volatile situations, female officers, more so than male officers, appear better able to short-circuit the need for aggression (Balkin 1988; Lonsway et al. 2002; Martin and Jurik 1996). More mindful participants, however, independent of gender, self-reported less aggression, and hostile attribution bias.

We also found that younger participants scored significantly higher than older participants on AQ total, AQ physical aggression, and AQ hostility. This finding suggests that younger CJ students are more likely than older students to

respond to conflict, threats and insults with their own hostility and aggression. This result appears to be consistent with the finding of several studies that younger, less experienced CJ professionals are more likely than their older, more experienced counterparts to be aggressive in the performance of their work. For example, several studies (Alpert 1989; Smith and Klein 1983; Sun et al. 2008; Worden 1989) have concluded that younger, less experienced police officers make more arrests, initiate more encounters with citizens, and use more deadly force than older, more experienced officers. Again, the more mindful participants in this study, independent of age, displayed less aggression and hostile attribution bias.

We suspect that the positive association found between mindfulness and TR may point to a possible relationship between these constructs that may help explain not only the potential anger and aggression attenuating effects of mindfulness, but also the other positive attributes associated with mindfulness described earlier. We offer the following view which is based on the logic of TPU. First, we suspect that dispositionally mindful people have quieter minds than less mindful people. Thus, we suspect that the thinking, or use of thought, of mindful people is more natural and free-flowing than their less mindful counterparts; therefore, we believe that the more optimal thinking of mindful people, enlivened by consciousness, may provide them with the cadre of positive psychological attributes associated with mental health. These healthy qualities include the self-esteem, patience, compassion, creativity, and common sense which are necessary to avoid chronic anger and unnecessary aggression, and to handle social, and other threats, in more creative, responsive ways. We also suspect that the quieter minds, healthier thinking, and heightened mental health of mindful people provide them with insightful understanding that thought in the moment is the source of their experience (i.e., TR). For example, we suspect that mindful people are more likely to realize that anger is simply “anger thoughts” coming to mind creating a temporary, uncomfortable experience, which does not represent “the” truth and which actually signals dysfunctional thinking.

In sum, we offer the possibility that reduced anger and aggression, as well as the other healthy attributes associated with mindfulness are constructed by the principles of mind, thought, and consciousness in the manner proposed by TPU. We are proposing that mindful people, and people with TR, have quieter, clearer minds that allow their thoughts and thought products (painful or otherwise) to flow freely, rather than entertaining or re-thinking them, unless it makes sense to do so. Thus, mindful people, and people with TR, think, or use thought, in a more natural or optimal way which then produces the positive feelings, perceptions, and behavior associated with healthy mental functioning. Our suspicions, if they holds up under scrutiny, may help clarify why

mindful people, compared with their less mindful cohorts, are more likely to allow angry thoughts to flow through their mind rather than taking them personally, identifying with them, becoming gripped by them, and responding to them with anger and aggression. It may also help clarify why mindful people appear to respond to threats, social or otherwise, in more creative, responsive ways.

We further suspect that TR may facilitate mindfulness. TR appears to enhance the two abilities typically associated with mindfulness: (1) the ability to be present, in the moment, to one's experience and (2) the ability to accept and release one's thoughts and thought products (e.g., feelings, sensations, etc.). Interestingly, this association between TR and mindfulness was reported recently by Kelley (2011) for a sample of 54 adult probationers trained in TPU/TR. Kelley found that as the participants' level of TR increased, they became more mindful as well.

Several other explanations have been offered to explain the apparent anger and aggression-attenuating effect of mindfulness. Each of these explanations highlights a factor or mechanism (several cited earlier) thought to be influenced by mindfulness in a positive way that then reduces the likelihood of anger and aggression. Interestingly, each of these proposed mediating factors appears to be influenced in the same positive direction by TR. For example, it has been offered that mindfulness may lower ego-involvement and promote secure forms of high self-esteem. This explanation proposes that high ego-involved people connect their self-worth to the judgments and opinions of others (Heppner et al. 2008; Ryan 1982; Ryan and Brown 2006). This results in fragile high self-esteem, which must be maintained or validated (Goleman 2006; Kernis 2003; Ryan and Brown 2006), often by retaliating against the source of the perceived threat (Kernis et al. 1993; Kernis et al. 1989; Kernis et al. 2008). The self-esteem of people with low ego-involvement, on the other hand, is thought to be less dependent on outside influences and thus, requires less validation (Ryan and Brown 2003, 2006).

TPU/TR has also been associated with low ego-involvement and what it refers to as *natural*, rather than secure high self-esteem. Again, we suspect that both mindfulness and TR help quiet peoples' minds, improve the quality of their thinking and mental health, and therefore reduce the dysfunctional symptoms produced by personal thought misuses like egoistic thinking which creates the illusion of a “me-self” or self-image that must be validated. According to TPU/TR, when peoples' minds quiet or clear, natural thought and innate mental health surface, ushering in the experience of natural self-esteem. Furthermore, we suspect that mindful people are more likely to realize that self-esteem is an inherent, nonconditional human attribute that is not earned or acquired, and can be accessed at any time through a quiet mind and natural thought process. Thus, we

suspect that natural or secure high self-esteem as well as the other positive attributes necessary to handle threat in a more responsive, nonaggressive ways (e.g., patience, compassion, creativity, etc.) are part and parcel of the complete package of innate, healthy attributes that appear to be facilitated by both mindfulness and TR.

Another example relates to the well-documented association between rumination and chronic anger management issues (Rusting and Nolen-Hoeksema 1998). Rumination has been linked to lower levels of neuropsychological flexibility, or the capacity to respond to present situations in creative, realistic ways (Miller et al. 2003; Philippot and Brutoux 2007). Rumination is thought to maintain anger by increasing attention to the self, stimulating negative self-cognitions and self-righteous perceptions (Simpson and Pappageorgiou 2003). Mindfulness is thought to break the grip of rumination by re-directing people's attention to the present (Baer 2003; Bishop et al. 2004; Ramel et al. 2004; Shapiro et al. 2006; Teasdale 1999).

TR has also been associated with less rumination by helping people realize that innate healthy functioning is accessed through a quiet mind and natural thought process. According to TPU/TR, when people realize how thought works to create their experience from within, they realize that angry feelings signal a misuse of thought and thus, let go of angry thoughts, instead of re-thinking them over and over again. If our suspicion is correct that the quiet minds, free-flowing thinking, and TR of mindful people release innate, healthy functioning, this would appear to clarify why mindfulness is associated with fewer personal thought misuses, such as rumination, and the painful feelings (e.g., anger) and misguided coping behavior (e.g., aggression) that they spawn.

Mindfulness has also been linked with positive feelings like well-being, equanimity, joy, and compassion (Brantley 2007; Kabat-Zinn 1990; Nhat Hanh 2005). These attributes are thought to diminish the reactivity characteristic, and assist in the regulation of chronic anger (Fredrickson et al. 2000). Mindfulness appears to engender positive emotions (Galantino et al. 2005), and facilitate a more accepting or receptive state of mind, thus reducing the likelihood of taking offense when life does not match one's desires or expectations (Arch and Craske 2006; Hayes et al. 1999; Teasdale et al. 2003).

Again, we suspect that mindfulness is associated with a more optimal use of thought and the healthier functioning it produces including the experience of deep human feelings that are inconsistent with anger and aggression. TPU views well-being, equanimity, exhilaration, joy, compassion, and love as natural, unconditioned human feelings. A very young child, for example, does not have to learn to be joyful or curious. We suspect that these healthy feelings do not regulate anger, or diminish the reactivity characteristic. We

think instead that these emotions are simply one component of a healthy mind state that is anathema to insecure feelings like anger, and dysfunctional behavior like unnecessary aggression. Mustakova-Possardt (2002) puts it this way,

In every moment, when a person's individual mind quiets or clears either spontaneously or intentionally, and is focused away from its intensely personal memory-based world, innate mental health bubbles up and is characterized by a natural and effortless flow of thought ... as the experience of peace, contentment, larger perspective on immediate reality, detachment, and a generous, loving, deeply moral view of life (p. 11).

Avoidant coping strategies are used to escape from, forget about, or avoid angry emotions, memories, images, and bodily sensations. Considerable research suggests that avoidant or suppressive coping strategies are ineffective (Gross 2002; John and Gross 2004), associated with depression and substance abuse (Hayes et al. 1996), anxiety (Feldner et al. 2003), poor well-being (Bond and Bunce 2000), and anger and aggression following threat (Feldner et al. 2003). Mindful acceptance of angry thoughts and feelings is the opposite of avoidant coping. Mindfulness involves openness, welcoming or psychological acceptance of moment-to-moment experience without judging its nature. Efforts to control, repress, or ignore angry emotions, memories, and bodily sensations are replaced with the acknowledgment that these experiences are present (Bishop et al. 2004; Hayes et al. 1996). Accepting these experiences has been associated with improved mental health, well-being, and enhanced responsivity (Ciarrochi and Godsell 2005).

TR is also associated with less avoidant coping by helping people realize that angry thoughts are not dangerous, that these thoughts have no power to control them and actually signal dysfunctional thinking. According to TPU, when people understand how thought works to create anger from within, and how powerful the transitory and illusory angry images appear to be, they are set free from living at the mercy of the thoughts they think (angry or otherwise). With TR, people realize that anger is merely their own thought-consciousness manifesting a temporary, disturbing, insecure experience, and that these thoughts have no life or power beyond the moment they are created in their own minds.

In sum, we suspect that the logic of TPU/TR may help explain the potential anger and aggression attenuating effects of mindfulness as well as the other healthy attributes associated with mindfulness. Our finding of a positive relationship between mindfulness and TR, the positive association between TR and mindfulness reported recently by Kelley (2011), and our observation that both mindfulness and TR have been associated with the same cadre of healthy

psychological attributes would appear to support the value of additional research to test our view.

Study Limitations and Future Research

Some might view our failure to measure directly any of the mechanisms believed to mediate the anger and aggression-attenuating effects of mindfulness as a limitation. For example, we did not measure ego-involvement or fragile and secure high self-esteem. Nor did we measure rumination, self-control, avoidant coping, or positive emotions and attitudes. Future research may want test whether, and to what extent, each of these factors is associated with the anger- and aggression-attenuating effects of mindfulness. We chose not to measure these mechanisms at this time because we suspect they do not operate separately, and that viewed alone are not likely the source of limiting anger and aggression. We suspect instead that the source of natural or secure high self-esteem, heightened self-control, positive emotions and attitudes, low ego involvement, decreased rumination, less avoidant coping, as well as reduced anger and aggression, is the innate healthy functioning released through the quieter minds, more optimal thinking, and TR of mindful people.

We are presently preparing a study to examine our suspicions. This study will examine participants with varying levels of TR, including a large group with extensive training in TPU/TR. Our prediction is that higher levels of TPU/TR will relate to quieter minds and more optimal thinking which, in turn, will relate to higher flourishing mental health and lower psychological distress which, in turn, will relate to higher levels of mindfulness, nonattachment, clarity about experience, insight capacity, managing painful emotions, and lower levels of rumination, avoidant coping, ego-involvement, anger, and aggression.

Another limitation of this study was its use of cross-sectional data which means that the causality of variables in the study cannot be determined. A longitudinal study will be required to demonstrate empirically the causal process of the variables. Also, the MAAS scale, which we used to measure mindfulness, disproportionately emphasizes the ability of mindful attention over the ability of mindful acceptance. Thus, future research should use a more comprehensive measure of mindfulness (e.g., the Five-Factor Mindfulness Questionnaire). Finally, the use of a convenience sample of college students limits the generalizations of the findings. Because it was a nonrandom sample, the results cannot be generalized to either the general population of college students or criminal justice professionals. Future research is needed to see if the findings can be replicated among students at other academic institutions and among professionals employed in the field of criminal justice.

Implications and Conclusions

Competence studies in criminal justice organizations have concluded that effective CJ professionals use the least force necessary, approach volatile people calmly and with a professional demeanor, and are adept at de-escalation (Goleman 1998). Such exemplary performance is difficult to maintain, however, as many CJ careers are associated with frustration, anger, and cynicism. The findings of this study suggest that more mindful CJ professionals may be less likely to display anger and aggression in response to threats, insults, and other forms of social rejection, and more likely to offer constructive, compassionate, optimistic responses to the unpleasant and distasteful aspects of their work (Goleman 2003).

Clearly, more research is needed to determine the processes or mechanisms by which mindfulness and/or TR appear be associated with lower levels of anger and aggression. We have suggested a possible explanation which we believe deserves further investigation. We suspect that mindful people have quieter minds, higher quality thinking, TR, and good mental health, including the self-esteem, self-control, positive attitudes and emotions, neuropsychological flexibility, creativity, and emotional intelligence necessary to handle threats in a responsive manner without anger and unnecessary aggression. We also suspect that the higher quality thinking and healthier functioning of mindful people goes hand in hand with fewer thought misuses like egoistic thinking, ruminating, and dissociating.

In the meantime, considerable support exists for the potential benefits of teaching mindfulness and TR to CJ professionals. For example, Strozzi-Heckler (2007) concluded that mindfulness training may improve CJ professional's performance during critical incidents. After Special Forces soldiers were trained in mindfulness meditation and Aikido, 85% reported improved ability to deal with stress and shock, 100% reported improved mental and emotional resources, and 65% reported improved coordination between mind, body, and emotions. DeValve and Adkinson (2008) concluded that more mindful CJ professionals were more likely to experience insights which may facilitate creative community-based and problem-oriented policing efforts. Realizations derived through mindful practice may help officers identify causes of social ills and address them in more innovative ways (Goldstein 1990). Williams et al. (2010) followed 60 police recruits through their first year of service and reported that mindfulness predicted their level of well-being and mental health on the job. More mindful recruits made the transition to police work with fewer depressive symptoms and better overall psychological functioning. These researchers recommended that police agencies take baseline measures of recruit's level of mindfulness and conduct mindfulness workshops as part of an

overall resilience strategy. Beehr et al. (1995) found that the use of negative coping strategies used by CJ professionals (e.g., substance abuse, divorce, and suicide) was inversely related to efforts to help them and their spouses directly attend to their insecure thoughts and emotions, a practice encouraged by mindfulness practice.

Several longitudinal studies have documented the effectiveness of TPU/TR-based community empowerment projects in several impoverished, crime-ridden communities in South Central Los Angeles, the South Bronx, Oakland, San Francisco, Miami, Tampa, rural Illinois, Fresno, Minneapolis, Des Moines, Charlotte, and the Mississippi Delta (Kelley 2003; Kelley et al. 2005; Mills 1995; Mills and Spittle 2002; Pransky 1998). In each of these communities, replete with violence, drug gangs, shootings, crack addicts, and family violence, TPU/TR was taught to residents, as well as social service, school, and police personnel. Each of these projects demonstrated significant reductions in crime and delinquency, and improvements in police-community relations. For example, Coliseum Gardens, a 200-unit housing community in Oakland, California, had the highest homicide and violent crime rate in the state. After the second TPU/TR project year, violent crime decreased 45%, and homicides dropped 100% remaining at zero for ten consecutive years (Kelley 2003).

Considering the inherent resistance to change and psychotherapy in many CJ organizations, DeValve and Adkinson (2008) recommended that mindfulness training be presented within the context of affective neuroscience, emphasizing its relation to personal and professional satisfaction. Psychoneuroimmunology research asserts that positive states of mind like those apparently facilitated through mindfulness training and TR education increase the body's resistance to illness and disease while afflictive mind states compromise immunological functioning (Goleman 1998). To increase acceptability, mindfulness training and TR education could also be couched in a stress management format (Nhat Hanh 2005). However they are incorporated, the results of this study join with many others in proposing positive effects of mindfulness and TR that may benefit CJ professionals, their agencies, and the communities they serve.

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