

UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

THROUGH THE BLUE LENS: NEGATIVE PUBLICITY, COGNITION, AND
PROFESSIONAL SELF-REPRESENTATION IN LAW ENFORCEMENT OFFICERS

A THESIS
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
Degree of
MASTER OF SCIENCE

By
MADISON L. BENEDA-BENDER
Norman, Oklahoma
2018

THROUGH THE BLUE LENS: NEGATIVE PUBLICITY, COGNITION, AND
PROFESSIONAL SELF-REPRESENTATION IN LAW ENFORCEMENT OFFICERS

A THESIS APPROVED FOR THE
DEPARTMENT OF PSYCHOLOGY

BY

Dr. Luz-Eugenia Fuenzalida, Chair

Dr. Andrea Vincent, Co-Chair

Dr. Mauricio Carvallo

Table of Contents

List of Tables.....	v
List of Figures.....	vi
Abstract.....	vii
Introduction.....	1
News Media: A Significant Source of Stress.....	3
Cognitive Impact of News	5
Cognitive Impact of News: Stress Related Mechanisms.....	7
Reaction Time.....	8
Attention.....	9
Executive Function.....	10
Memory.....	10
Negative Media in Law Enforcement Settings: Application-based Avenues.....	11
Personality, and Self-Representation: Potential Buffers for Negative Media.....	13
Research Goals and Hypotheses.....	14
Method.....	15
Design.....	15
Participants.....	15
Procedure.....	16
Measures.....	17
Data Analysis	20
Results.....	21
Characteristics of the Sample.....	21
Neurocognitive Tasks.....	22
Mood Scale.....	22
Personality.....	23
Discussion.....	23
References.....	28
Tables.....	44
Figures.....	47
Appendix: Professional Self-Representation Questionnaire.....	55

List of Tables

Table 1. <i>Demographic Information</i>	44
Table 2. <i>Professional Self-Representation Questionnaire Item Scores</i>	45
Table 3. <i>Negative Publicity Scale Item Scores</i>	46

List of Figures

Figure 1. <i>SRT task</i>	47
Figure 2. <i>MATH task</i>	48
Figure 3. <i>RMCPPT task</i>	49
Figure 4. <i>Manikin Task</i>	50
Figure 5. <i>Switching Task</i>	51
Figure 6. <i>Mood Scale</i>	52
Figure 7. <i>Neurocognitive Test Results</i>	53
Figure 8. <i>Mood Scale Results</i>	54

Abstract

Increased access to digital media has allowed for widespread proliferation of news coverage. Unfortunately, recent research has demonstrated a variety of acute negative outcomes associated with exposure to disturbing news content, such as increased negative affect, anxiety, and stress. Given the large body of literature demonstrating acute cognitive deficits in response to stressful stimuli, it is possible that exposure to stress-inducing negative media might negatively impact cognition. While a number of heavily publicized, high-profile negative interactions between police officers and citizens make this question particularly applicable to law enforcement samples, little research has addressed whether negative coverage of police activity result in acute cognitive deficits for officers exposed to such content. To address this gap, 30 veteran police officers completed a cognitive assessment battery both prior to and following exposure to either negatively-valenced or positively-valenced media clips in order to examine the effect of media exposure on officers' performance on basic cognitive tasks. Officers also completed a series of questionnaires to explore the views that officers hold about themselves, the public's perception of police officers, and the media within the context of their occupation. Results indicated that performance over time was not significantly influenced by exposure to valenced clips, though there were significant time effects for certain cognitive tests. Despite lack of acute cognitive decrements, officers did indicate that negative publicity surrounding officer activity makes it more difficult and dangerous to work in law enforcement. As perception of danger on the job has been linked to negative affective and behavioral consequences, future research should further explore connections between negatively valenced coverage of police activity and other areas of police performance, health, and well-being.

Keywords: news media, stress, cognitive performance, law enforcement, self-representation

Introduction

In the wake of a profusion of technological advances in the area of digital media, access to and proliferation of news coverage is unprecedented (Livingston & Bennett, 2003; McNaughton-Cassill, 2001; Shenk, 1997). While greater access to news content in general has been linked to positive outcomes (de Vreese & Boomgaarden, 2006; Dimitrova, Shehata, Strömbäck, & Nord, 2014), a number of studies demonstrate that negative news stories, particularly those disseminated via television, can induce psychological distress (Harrell, 2000; Johnston & Davey, 1997; McNaughton-Cassill, 2001). This finding is concerning, as there is some indication that there has been a shift in the valence of news coverage, with news stations overemphasizing or disproportionately favoring inclusion of negative news (Aday, 2010; Altheide, 1997; Lawrence & Mueller, 2003; van der Meer, Kroon, Verhoeven, & Jonkman, 2018). Irrespective of the amount of negative coverage, extant research has demonstrated that negatively-valenced stimuli or events are more likely to be attended to and will exert a greater impact on information processing, meaning that even small amounts of negative coverage might hold more weight compared to positive coverage (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Smith, Cacioppo, Larsen, & Chartrand, 2003; S. E. Taylor, 1991). Saturation of broadcasts with negatively-valenced content, coupled with the tendency to attend negative content more closely, could have important psychological implications for individuals who remain apprised of the news on a daily basis.

The ever-expanding ability to quickly acquire and access media that might ultimately result in increased levels of acute psychological distress raises a serious question: how might the experience of such distress impact facets of day-to-day functioning or behavior? A small subset of literature has addressed the direct impact of news exposure on cognitive performance, generally indicating that negative news content that is affectively reactive can induce deficits in

recall and recognition of information presented both prior to and following viewing disturbing content (Lang, Newhagen, & Reeves, 1996; Mundorf, Drew, Zillman, & Weaver, 1990; Mundorf, Zillmann, & Drew, 1991; Mundorf & Zillmann, 1991; Scott & Goff, 1988).

Though there has been little systematic inquiry exploring the effects of exposure to news coverage on aspects of cognition, there is a large body of research evaluating the impact of stress on cognitive performance. This particular domain is relevant given the evidence that traumatic news is stressful (Ahern et al., 2002; Bernstein et al., 2007; Bodas, Siman-Tov, Peleg, & Solomon, 2015; Lau, 2006; Otto et al., 2007; Pfefferbaum et al., 2014). In general, the experience of stress and anxiety has been associated with decrements in *reaction time* (Hoffman, 2004; Jones & Hardy, 1988; Kosinski, 2008; Lieberman, Tharion, Shukitt-Hale, Speckman, & Tulley, 2002; Wachtel, 1968), *memory* (Jiang & Rau, 2017; Lieberman et al., 2002; Lupien, Maheu, Tu, Fiocco, & Schramek, 2007; Matthews & Campbell, 2010; Qin, Hermans, van Marle, Luo, & Fernández, 2009; Sandi & Pinelo-Nava, 2007; Schoofs, Pabst, Brand, & Wolf, 2013; Schwabe & Wolf, 2010; Schwabe, Wolf, & Oitzl, 2010; Vedhara, Hyde, Gilchrist, Tytherleigh, & Plummer, 2000; Wolf, 2009), *executive function* (Eysenck, Derakshan, Santos, & Calvo, 2007; Kofman, Meiran, Greenberg, Balas, & Cohen, 2006; Plessow, Schade, Kirschbaum, & Fischer, 2012; Shields, Sazma, & Yonelinas, 2016; Starcke, Wiesen, Trotzke, & Brand, 2016), and *attention* (Caswell et al., 2003; Eysenck et al., 2007; Hoffman, 2004; Matthews & Campbell, 2010; Vedhara et al., 2000, 2000; Wachtel, 1968).

Though the degree of negativity, the length or number of exposures, and the degree to which content is personally relevant will likely dictate the extent to which exposure might be detrimental, the fact that news stations are increasingly including negative news may heighten the likelihood that individuals actively following developing news may experience day-to-day cognitive decrements. This could be particularly problematic for individuals working in safety-

sensitive occupations, where even small disruptions in cognition induced by attending to negative news stories immediately before shifts or during breaks could have significant consequences. As such, exploring the extent to which such deficits occur and whether there might be individual differences buffering those effects in certain populations is a judicious endeavor.

News Media: A Significant Source of Stress

While growing access to news coverage is associated with a more politically active electorate, recent research in both experimental and observational settings seems to indicate that it also might result in a more psychologically distressed population. Szabo and Hopkinson (2007) exposed a sample of undergraduate students to a random news sample and collected pre-and post- exposure measures of state anxiety, total mood disturbance, positive affect, and negative affect. Results indicated that students experienced increased state anxiety and total mood disturbance, as well as lessened levels of positive affect. Levels only returned to baseline within fifteen minutes following exposure for the students who had performed a progressive relaxation task, indicating that the ill effects of such broadcasts could persist without some attempt at active coping.

In a study conducted by Harrell (2000), participants viewed televised newscasts consisting of either negatively valenced, positively valenced, or mixed content (multiple times of day to control time of day effects). Those who were exposed to negative news showed increases in negative affect and anxiety, whereas those who viewed positive news showed decreases in negative affect and anxiety. These affective shifts were no longer apparent three hours post-exposure, demonstrating that such affects may be transient in nature.

Another study explored the possibility that certain patterns of cognition (e.g. irrationality, optimism-pessimism) might interact with higher levels of exposure to media, allowing for the

prediction of higher levels of depression and trait anxiety (McNaughton-Cassill, 2000). Results indicated that high levels of media exposure and pessimism predicted higher levels of trait and state anxiety. Similarly, high levels of media exposure and lower irrationality predicted higher levels of trait and state anxiety; while this finding is perhaps counterintuitive, authors speculate that media might provide evidence of senseless acts to those who otherwise see the world in a rational way, thereby generating anxiety in the light that the world is a threatening place.

While the majority of the research exploring the effects of viewing news media has demonstrated increases in negative affect, anxiety, and/or stress, there have been studies indicating no relationship. For example, Deal et al. (2018) demonstrated no acute increase in stress following 40 minutes of exposure to cable news in a sample of older adults. However, it is important to note that authors suggested that older adults tend to watch more television news in general, potentially desensitizing them to the negative affective consequences seen in other studies.

Similarly, McNaughton-Cassill (2001) found no significant relationship between amount of media consumption and trait or state anxiety and depression. While this finding seems to indicate that exposure to more media in general is not correlated with negative affective outcomes, the possibility of acute affective responses following negative media stories remains.

Although the link between general negative news stories and psychological distress appears tenuous, a subset of research exploring the effects of saturation coverage following specific, highly-publicized negative events (e.g. the terrorist attacks of September 11th, 2001) or specific types of events (e.g. school shootings) more clearly demonstrates that news broadcasts addressing certain types of incidents can have negative psychological effects, especially if the event is particularly salient for the viewer. For example, Wilson, Martins, and Marske (2005) randomly surveyed 182 parents following a number of child abductions profiled prominently in

news stations across America between 2002 and 2005. Given the particular relevance of child abductions to individuals with children, it is perhaps unsurprising that parents reported experiencing fear reactions in response to abduction-related news coverage. Importantly, the degree to which parents experienced kidnapping-related anxiety was positively correlated with how much focus had been devoted to news stories discussing kidnapping (Wilson Martins, & Marske, 2005).

Similarly, researchers have specifically evaluated stress or post-traumatic stress disorder (PTSD) symptoms and media coverage following a variety of specific disaster-related events, such as terrorist attacks (Ahern et al., 2002, p. 11; Holman, Garfin, & Silver, 2014; Huddy, Feldman, Lahav, & Taber, 2003; Huddy et al., 2003; Monfort & Afzali, 2017; Otto et al., 2007; Pfefferbaum et al., 2016; Propper, Stickgold, Keeley, & Christman, 2007; Saylor, Cowart, Lipovsky, Jackson, & Finch, 2003; Schuster et al., 2001), mass shootings (Fallahi, Austad, Fallon, & Leishman, 2009; Haravuori, Suomalainen, Berg, Kiviruusu, & Marttunen, 2011), natural disasters (Lau, 2006; McLeish & Del Ben, 2008; Nishi et al., 2012), political violence or war (Bodas et al., 2015), and tragic accidents (Terr et al., 1999). While it is difficult to experimentally establish a causal link between exposure to disaster media and negative psychological outcomes, reviews evaluating existing research related to news coverage of traumatic events have indicated that such coverage appears to be related to adverse psychological outcomes, particularly stress-related outcomes (i.e. stress reactions, posttraumatic stress, and posttraumatic stress disorder), across a broad range of disasters and evaluative methods (Pfefferbaum et al., 2014; Vasterman, Yzermans, & Dirkzwager, 2005).

Cognitive Impact of News

A number of studies have demonstrated that viewing news that might be considered disturbing can result in downstream impacts on performance, particularly performance involving

cognition. Some of these effects appear to be relegated to the recall of affective state for videos preceding and following those that cause an affective reaction. When exposed to affect-evoking news coverage, participants' memories of stories that evoked strong, negative affective responses diminished and distorted recall of the valence of the stories preceding and following the affectively strong story (Mundorf & Zillmann, 1991).

In addition to the valence of the content, other deficits have been demonstrated for the recall of content preceding and following the negative news. A study by Lang, Newhagen, and Reeves (1996) indicated that while participants are better able to recall the details of negative videos, exposure to negative content subsequently impedes the recognition of information presented in the stories shown before the one including the negative video. Given that participants also found negative video content to be more affectively impactful (Lang et al., 1996), this result seems to support Mudorf and Zillman's (1991) conclusion that strong, affectively-stimulating material overshadows the details of comparatively less emotionally-laden stories presented before exposure to negative content.

Proactive decrements in content recall following exposure to negatively-valenced news stories have also been established. According to Mundorf, Drew, Zillman, and Weaver (1990), participants exposed to stories that can be considered emotionally distressing recalled less information from news stories presented subsequently. Authors speculate that the arousing nature of disturbing news "preoccupies," the viewer, essentially distracting them from receiving the subsequent information properly (Mundorf et al., 1990). This finding also holds true for recall of subsequently presented commercial content, with deficits in acquisition lasting approximately two and a half minutes following exposure to emotionally disturbing news stories (Mundorf et al., 1991).

Cognitive Impact of News: Stress-Related Mechanisms. While negative news can clearly cause decrements in areas of cognition such as memory function, it is important to recognize that such decrements could be the result of shifts in affect or psychological distress evoked by negative news broadcasts. Given the research indicating that negative news stories induce stress under a variety of conditions (Ben-Zur, Gil, & Shamshins, 2012; Bernstein et al., 2007; Lau, 2006; Monfort & Afzali, 2017; Otto et al., 2007; Pfefferbaum et al., 2014, 2016; Saylor, Cowart, Lipovsky, Jackson, & Finch, 2003; Terr et al., 1999), it is possible such deficits in cognition are a result of the well-researched relationship between stress and cognition.

While the concept of stress has defied narrow definitional descriptions and has been broadly applied (Matthews, Davies, Stammers, & Westerman, 2000; Staal, 2004), prominent contemporary models of stress are cognitively based, with stress symptoms considered the result of complex person-environment interactions involving the appraisal of both environmental characteristics or demands and ability to cope with or to meet such demands (Cox & Ferguson, 1991; Lazarus, 1991; Lazarus & Folkman, 1984). According to Matthews et al. (2000), the subsequent stress response can be manifested in a variety of ways, from the experience of negative emotions to disturbances in both health and behavior. These responses can, and often do, then dynamically interact with human performance (Matthews, Davies, Stammers, & Westerman, 2000; Staal, 2004).

While most of the seminal research relating to stress and human performance stemmed from *arousal theory* (Duffy, 1962), contemporary researchers such as Hockey (1984) and Matthews, Davies, Stammers, and Westerman (2000) have advocated a more stressor-oriented approach, allowing for both differentiation between type of stressor and type of processing function affected. This approach operates under the principle that it is unlikely that one mechanism, such as the Yerkes-Dodson Law applied in arousal theory (Broadhurst, 1957;

Yerkes & Dodson, 1908), could adequately account for all stressor effects. Instead, it is posited that it is better to specifically investigate the effects of certain stressors on discrete information processing functions, such as executive function or attention.

As such, for the purpose of the present study, selected research evaluating the impact of a variety of stressors on varying levels and mechanisms of cognitive function will be discussed. Given that there has been little systematic, theoretical evaluation of the effects of negative news on disparate information processing systems apart from memory, this approach will allow for a more thorough consideration of a wider range of cognitive functions that might be impacted by negative news.

Reaction time. Reaction time has long been used as a psychological task (Deary, Liewald, & Nissan, 2011; Kosinski, 2008), and is known to be an important indicator of ability “to cope with information processing load” (Lange-Küttner, 2012). To evaluate simple reaction time under conditions of stress, Wachtel (1968) asked participants to track a piece of moving metal using a pointer (central task); in addition, participants were responsible for switching off a light that would turn on intermittently during the tracking task as quickly as possible (peripheral task), while continuing to accurately track the metal piece. Results indicated that reaction times slowed significantly on peripheral tasks when participants were informed that they would also be experiencing intermittent shocks throughout the study. This is consistent with more recent research indicating that stress results in a narrowing of attention, which could certainly account for slower reactions to peripheral stimuli (Chajut & Algom, 2003); in other words, participants may have had longer reaction times because it took them longer to attend to, and then respond to, the light.

While threat of shock is not often encountered outside of laboratory conditions, studies evaluating stress and reaction time in real-world settings have also been conducted. For example,

in a study evaluating U.S. Navy SEAL trainees, deficits in reaction time were measured during a particularly stressful period of training known as “Hell Week” (Lieberman et al., 2002). During this week, trainees are subjected to intense psychological, physical, and environmental stressors, while still being expected to perform well on both physically and mentally challenging tasks. When given a four-choice visual reaction time task during Hell Week, reaction times slowed substantially compared to pre-Hell Week baseline data, with the number of correct choices, premature errors, and time-out errors increasing. Similarly, reaction time data collected as part of a distinct vigilance task indicated false alarm responses increasing by 181%. These findings, one of which has been replicated in other studies using choice reaction time (e.g. Jones & Hardy, 1988), potentially have more generalizable implications for safety sensitive occupations in which individuals face extreme and, in some cases, prolonged periods of stress, but must still frequently respond quickly to environmental stimuli.

Attention. In contrast to the other information processing functions, stress is commonly associated with *increases* in certain areas of attention (Wachtel, 1968). Chajut and Algom (2003) demonstrated attention selectivity improved under stress conditions of high stress, meaning that participants were better able to focus on attention solely on the central attribute of the task and disregard stimuli that were irrelevant than participants in a low stress condition. While authors argued that this increase in selective attention might actually result in more adaptive action in certain situations, with a brief caveat included noting that more complex tasks might be impacted when cognitive load is higher, the potentially deleterious consequences of narrowing of attention cannot be understated. Indeed, only attending to “task-relevant” stimuli would, by definition, result in the inability to detect potentially important off-target cues in certain situations, such as those often faced by individuals employed in safety-sensitive occupations.

Take, for instance, an on-duty soldier in Afghanistan. While his or her central task at a given moment might be aiding in-route clearance of road side bombs, a task that it is safe to assume requires a great deal of concentration, he or she would undoubtedly still need to have a degree of peripheral attention necessary to detect suspicious behavior by an individual approaching on a side street; while the latter is undoubtedly vital to the convoy as a whole, by the principles applied in selective attention studies, it is tangential to the central task—clearing bombs—all the same. As such, lack of attention to peripheral or seemingly “task-irrelevant” characteristics could be incredibly detrimental under certain conditions.

Executive Function. Executive function refers to a set of cognitive processes associated with planning, goal formation, switching between tasks, inhibition of behaviors, and other higher-order functions (Diamond, 2013; Suchy, 2009). While there is less consistency in work evaluating distinct subcomponents of executive function (see memory section below), in general, executive function capacity declines during and following exposure to stress (Shields et al., 2016). While one study conducted by Kofman et al. (2006) indicated that examination stress enhances performance on executive function tasks, the majority of articles assessing the relationship between acute stress and executive function indicate that facets of executive function such as cognitive flexibility and working memory are reduced under conditions of stress (Shields et al., 2016).

Memory. While working memory is often subsumed under executive function in discussions of higher-order cognition, the inconsistent results generated from evaluations of certain aspects of memory under stress conditions bear further discussion. In general, stress appears to induce decrements in working memory in experimental evaluations. For example, while a selection of studies have indicated that participants exposed to the Trier Social Stress Test exhibited poorer accuracy on an N-back working memory task (Jiang & Rau, 2017;

Schoofs, Preuß, & Wolf, 2008), Oei et al. (2006) demonstrated declines only at high cognitive loads. Similarly, while longer reaction times are generally seen for participants in the stress condition in most studies assessing stress and working memory performance (Elzinga & Bremner, 2002; Kuhlmann, 2005; Oei et al., 2006), shorter reaction times on working memory tasks with higher cognitive load were found for participants in the stress condition in a study conducted by Duncko, Johnson, Merikangas, and Grillon (2009).

Evaluations of the role of stress related to the disruption in formation of memory have also indicated conflicting results. Schwabe and Wolf (2010a) determined that individuals undergoing the socially evaluated cold pressor test while learning a series of words demonstrated significantly poorer recall and recognition performance 24 hours later than did individuals in a control condition, suggesting that memory formation is impaired when the learner is experiencing stress. However, this finding clashes with a collection of other studies that suggest formation of memory is often enhanced given exposure to stress, depending on the timing of the stressor (Schwabe et al., 2010b).

Negative Media in Law Enforcement Settings: Application-based Research.

While researchers have noted that there seems to have been an upsurge of negatively-valenced media coverage in general, this seems to be particularly true in the case of law enforcement-related broadcasts. Saturation coverage of a number of recent, high-profile negative interactions between police officers and citizens has spurred intense discussion regarding the state of police-public relations in America, as well as a growing feeling within the law enforcement community that the media generally treats police officers unfairly (Pew Research Center, 2016).

As negative news broadcasts have been demonstrated to induce negative emotionality and stress in general samples, it is reasonable to assume that such broadcasts might be

particularly evocative for those groups for whom the broadcasts are personally relevant. Indeed, media coverage of police activity has long been established as major source of stress for many law enforcement officials (Harpold & Feemster, 2002; Nisar, Rasheed, & Qiang, 2018; Wexler & Logan, 1983). As a result, recent research has focused on how police officers perceive the influence of negative media on day-to-day law enforcement activity.

Nix and Wolfe (2017) used descriptive evaluations to determine officers' perceptions of the influence of negatively-valenced media on both themselves and police work as a whole. While authors were unable to demonstrate that a significant portion of their sample experienced lessened motivation as a result of negative publicity—a phenomenon that has been termed the Ferguson Effect (Nix & Wolfe, 2016)—their results did indicate that many officers felt that negative publicity makes it both more difficult and more dangerous to be employed as a law enforcement officer. As heightened perception of danger has been linked to a number of negative outcomes, such as affective distress, further evaluation is needed to understand exactly how this perception of increased danger influences officer performance (Castle & Martin, 2006; Hart & Wearing, 1995; Jermier, Gaines, & McIntosh, 1989)

While negative publicity has been clearly demonstrated to result in potentially stressful perceptions by police officers, it has never been directly tied to deficits in cognitive processes such as reaction time, working memory, or executive function. However, as negative publicity has been established as a significant source of stress, which has clearly been shown to induce deficits in cognitive performance in both general and law enforcement samples, it is logical to question whether negative publicity related to police activity might be related to decrements in performance on tasks that involve cognition when the subject is a law enforcement officer. Given these connections, it is both reasonable and necessary to further examine the relationship between negative publicity and cognition in law enforcement samples.

Personality, and Self-Representation: Potential Buffers for Negative Media

Given the abundance of literature demonstrating 1) exposure to negative news clips can be stressful, and 2) that stress can have distinct, decremental effects on cognitive performance, a logical next step in this area of inquiry is evaluating individual differences that might buffer or exacerbate decrements in cognition following exposure to stress-inducing negative media, particularly in populations of individuals for whom such deficits might be particularly adverse (e.g. individuals working in safety sensitive occupations).

The trait of neuroticism is one individual characteristic that might be particularly relevant to the experience of stress following exposure to negative media. Eysenck's (1967) biologically-based theory of personality has been well supported both biologically and experimentally (see Matthews & Gilliland, 1999 for a review), and provides a potential mechanism by which neuroticism might interact with experience of stressors and cognitive performance.

According to this view, those scoring higher in neuroticism (i.e., trait anxiety), may be more sensitive to emotionally-laden stimulation. In other words, those with high levels of neuroticism experience increased vulnerability to negatively-valenced stimuli or stressful events, and as a consequence, exhibit greater levels of negative emotions such as worry, fear, and sadness in response to anxiety-provoking situations. Given this heightened stress response, it is possible that individuals higher in neuroticism would subsequently experience greater cognitive decrements.

Furthermore, though the present study is more concerned with the effect of acute stress, it bears consideration that repeated exposure to negative content might result in chronic stress responses (Ahern et al., 2002; Bernstein et al., 2007; Bodas et al., 2015; Otto et al., 2007; Pfefferbaum et al., 2014, 2016, p. 11, 2016, p. 11; Saylor et al., 2003; Terr et al., 1999). In applied settings, chronic stress is often associated with poor work-related outcomes such as poor

health (McEwen & Stellar, 1993), addiction (Sinha, 2008), and burnout (Caroli & Sagone, 2012; Sagone & Caroli, 2010). While burnout is particularly endemic among law enforcement professions (Bakker & Heuven, 2006; Castle & Martin, 2006; Hawkins, 2001; Perez, Jones, Englert, & Sachau, 2010; Roberg, Hayhurst, & Allen, 1988; Russell, Cole, & Jones III, 2014), promising work in teaching settings has suggested that professional self-representation, or the views that one holds about him- or herself within the context of his or her occupation, might be an important preventative element in warding off factors associated with burnout. More specifically, individuals with a stronger, more positive professional self-representation express lower levels of characteristics such as depersonalization or emotional exhaustion (Caroli & Sagone, 2012; Sagone & Caroli, 2010). Given the clear indication that professional pride can buffer against negative work-related outcomes, it seems possible that high levels of professional self-representation might also serve to protect officers against negative publicity that might otherwise elicit negative emotionality.

Research Goals and Hypotheses

The primary goal of the present study was to evaluate the influence of positively- and negatively-valenced media clips on cognitive performance and mood of law enforcement officers. As such, two hypotheses were posited:

1. Officers would show decrements in performance on tests of basic processing speed, response time, attention, and working memory immediately following exposure to negative media clips, and
2. Officers exposed to negative media clips would experience a shift in mood.

Secondary research goals were to 1) explore officers' views on professional self-representation and negative publicity to better understand how officers visualize themselves within the context of police work and perceive the influence of negative publicity on the

dynamics of law enforcement and 2) explore the relationship of officer's personality characteristics with factors such as professional self-representation and beliefs about negative publicity views.

Method

Design

This 2 (group: positive/negative valence) x 2 (session: pre/post) mixed models repeated measures design was based on a combination of self-report data and neurocognitive tests administered prior to and following exposure to negatively-valenced or positively-valenced media clips.

Participants

Veteran police officers from a major city Midwestern police department were recruited through the department's training academy. To qualify for this study officers must have completed the Council on Law Enforcement Education and Training (CLEET) requirements and mandated departmental education and field training. Each participant signed a consent form approved by the Institutional Review Board of the University of Oklahoma and received financial compensation for participating.

A total of 31 officers participated in the study. Individuals with history of traumatic brain injury with loss of consciousness greater than 30 min were excluded from participation in the study ($n = 1$) resulting in a total sample size of 30. Additionally, accuracy scores (i.e., percent correct) were examined and data from participants with near chance-level responding (i.e., 56%) were excluded on a test-by-test basis. Given the simplicity of the tasks included in the battery, scores in this range typically indicate either misunderstanding of the directions for the task, guessing on the part of the participant, or insufficient effort. This review resulted in the

elimination of scores from four participants from each of two tests (ANAM Manikin and Running Memory Continuous Performance Test).

Additionally, prior to formal data analysis, all data were closely examined to explore for outliers and to ensure that statistical assumptions were met. Screening for outliers consisted of an examination of each participant's reaction time distribution for each of the ANAM tests.

Reaction times falling beyond three standard deviations of the participant's own mean were excluded and relevant performance scores were recalculated for analysis. On average, only one reaction time was dropped per participant.

Procedure

Prior to initiation of the study, informed consent was obtained from all participants. Participants were then randomly assigned to one of two groups which differed according to the valence of media clips to which the officers were exposed (positive or negative). Participants completed a demographic form and a series of self-report questionnaires followed by baseline cognitive testing. Upon completion of the cognitive baseline, participants were exposed to a montage of media clips taken from news coverage describing either positive or negative opinions of or encounters with law enforcement. Videos were approximately one minute in length and were composed of three to four short excerpts from news broadcasts. As an example, the positive condition included clips showing footage of a woman commending a police officer for playing football with her children, while the negative condition included footage of a man describing his frustration regarding an incident of racial profiling by police. Following video exposure, participants repeated cognitive testing and completed a survey regarding their views on effects of negative publicity related to law enforcement. Upon conclusion of the experiment, participants were given a \$20 gift card as compensation for their time.

Measures

Big Five Inventory (BFI). The 44-item BFI developed by John, Donahue, and Kentle, (1991) was used to measure the “Big Five” personality factors of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (Goldberg, 1993). Each factor’s scale includes 8 to 10 items consisting of brief phrases based on prototypical adjectives associated with that trait, with alpha reliabilities for the scales averaging above .80 in U.S. samples (John, Naumann, & Soto, 2008). Participants rated items on a scale ranging from 1 (*disagree strongly*) to 5 (*agree strongly*). Items include statements such as “is full of energy” and “can be cold and aloof.” All negatively-keyed items were reverse scored, and scale scores were created by averaging the item scores for each domain.

Professional Self-Representation Questionnaire. The Professional Self-Representation Questionnaire was developed to gauge both officers’ views about themselves within the context of their occupation and their views regarding public opinion of law enforcement. The eight-item questionnaire consisted of items such as “being a law enforcement officer is important to my self-image” and “in general, the public does not respect law enforcement officials,” which were adapted from a select portion of items on the Collective Self-Esteem Scale created by Luhtanen and Crocker (1992). Participants rated each item on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A mean score of all items (after reverse scoring negatively worded items) was computed for each participant, with higher scores indicating more positive assessments of public perception and greater endorsement of police work as an integral part of self-image. Alpha reliabilities for this adapted scale averaged .64 in the present sample.

Automated Neuropsychological Assessment Metrics (ANAM). Several broad dimensions of cognitive function were assessed using a customized subset of ANAM computerized cognitive tests (ANAM, Version 4, 2007, Vista Life Sciences, Parker, CO).

Originally commissioned by the Department of Defense, ANAM has been widely used to detect changes in cognition across a diverse range of clinical and experimental settings (Reeves, Winter, Bleiberg, & Kane, 2007). Recent experimental paradigms employing ANAM include studies on the effect of use-of-force scenarios (Dawes et al., 2014), sleep deprivation (Barker & Nussbaum, 2011; Christine Lo Bue-Estes et al., 2008; D. J. Taylor & McFatter, 2003), extreme environments (Lowe et al., 2007; Makinen et al., 2006) and changes in diet (Solianik, Sujeta, Terentjevienė, & Skurvydas, 2016; Williams et al., 2017) on neurocognitive performance (for a review on ANAM, see McCaffrey & Kane, 2007).

Confirmatory analyses have demonstrated high levels of construct validity between regularly used ANAM tests and other traditional assessments (Short, Cernich, Wilken, & Kane, 2007). The concurrent validity of ANAM as a clinical tool has been investigated in a variety of studies by using factor analysis and structural equation modeling techniques to explore the factor structure using the correlations between ANAM and traditional neuropsychological tests.

For the present study, areas of function assessed included basic processing speed, response time, attention, working memory, executive function, basic computational skills, divided attention, spatial rotation ability, concentration and mental flexibility.

Simple Reaction Time (SRT). The SRT task taps visuomotor processing speed, simple motor speed, and attention. A stimulus (asterisk) appears on screen and participants respond by clicking the left mouse button as quickly as possible each time the stimulus is presented (Figure 1).

Mathematical Processing (MTH). The MTH task gauges basic computational skill, processing speed, concentration, and working memory. A basic arithmetic problem with two operators (+/-) and three single digit numbers is displayed, and

the participant must indicate using the mouse as instructed whether the answer to the problem is greater than or less than five (Figure 2).

Running Memory Continuous Performance Task (RMCPT). The RMCPT task assesses attention, concentration, and working memory. This task follows a classic n-back design in which the participant must indicate by mouse click whether the character shown on screen is the same as or different from the preceding character (Figure 3).

Manikin (MKN). The MKN test measures spatial rotation ability, left-right orientation, problem solving, and attention. A man appears on the screen standing upright or upside down on either a ball or a block and facing either toward or away the participant. The man is also holding a ball or a block in each hand, and the user must indicate in which hand the man is holding the same object (ball or block) he is standing on (Figure 4).

Switching. This test combines the MTH and MKN subtests and assesses divided attention, mental flexibility, and executive function, as well as the domains evaluated by each individual test. A MKN or MTH problem appears on the screen, and the user responds using the mouse as instructed for each test (Figure 5).

Mood Scale II – Revised. The mood scale evaluates seven mood states: anger, anxiety, happiness, depression, fatigue, vigor, and restlessness. For this task, the participant views a list of 44 adjectives that fall into one of the seven mood categories, and is asked to rate the degree to which he or she is currently experiencing each adjective on a scale from 0 (*not at all*) to 6 (*very much*) (Figure 6).

Throughput served as the primary outcome variable for the cognitive tests given extant research distinguishing throughput as a valid and robust measure for tasks requiring a combination of accuracy and speed (Short et al., 2007; Thorne, 2006). Throughput is calculated using a ratio of reaction time and percentage of correct responses across all trials of the task and is often considered a measure of cognitive efficiency. Throughput units are the number of correct responses per minute with higher values indicating better performance.

Percent endorsement served as the primary outcome measure for the mood scale and was computed as the average of the responses across the adjectives for each category relative to the maximum possible rating. Higher values represent greater endorsement of the mood state.

Negative Publicity Scale. This nine-item scale measures how officers feel negative media coverage involving police officers in the past year has affected them (Nix and Wolfe, 201). For each item, participants indicated the degree to which they identified with a series of statements measuring these two factors, such as negative publicity surrounding law enforcement has “made it less enjoyable to have a career in law enforcement,” or negative publicity surrounding law enforcement has “made it more dangerous to be a law enforcement officer,” on a scale of 0 (*strongly disagree*) to 5 (*strongly agree*). A principal components analysis of the items conducted by Nix and Wolfe (2015) indicated two distinct dimensions included within the scale: motivation on the job and perception of police work as dangerous. A summed total of participant response is computed, and this score can be further broken down into the aforementioned components.

Data Analysis

All data analyses for this paper were generated using SAS software, Version 9.2 of the SAS System for Windows (SAS Institute Inc., Cary, NC, USA) and SPSS (IBM Corp. Released 2016. IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp.). SAS and all

other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc., Cary, NC, USA.

Descriptive statistics were computed to explore demographic characteristics of the present sample, including those related to perceptions of professional self-representation and the effect of negative publicity. T-tests were used to compare demographic characteristics between study groups. Bivariate correlations were computed between the big five personality dimensions and the scores on the Professional Self-Representation Questionnaire and Negative Publicity Scale.

A series of multivariate repeated measures analyses of variance (rmANOVA) conducted in the SAS system were used to compare cognitive and mood scores pre- and post-manipulation. A rmANOVA was conducted for each test included in the ANAM battery, as well as each mood domain. Group membership (positive or negative media exposure) served as the between-subjects variable with session (pre- or post-manipulation) serving as the within-subject variable. rmANOVA distributional assumptions were evaluated using a SAS macro for evaluating multivariate normality. The analysis indicated significant skewness and kurtosis in the data. To accommodate for this issue, the author ran both parametric and nonparametric analyses, which yielded the same results.

Results

Characteristics of the Sample

The final sample consisted primarily of male officers working the day shift and assigned to operations and patrol (Table 1). In addition to their general assignment, all participants also served on the department's Special Operations Team (S.O.T.). There were no significant differences between the two experimental groups on any of the demographic factors.

On average, participants reported neutral views relating to professional self-representation ($M \pm SD$; 3.58 ± 0.56), with high endorsement on only two items (Table 2). However, participants indicated that negative publicity had affected them within the past year (33.2 ± 7.36 ; 45 being the highest score possible). Upon evaluating the individual dimensions of negative publicity, average respondents remained “neutral” as to whether negative publicity results in less motivation (3.3 ± 0.56), but did report that negative publicity makes policing more perilous (4.4 ± 0.56).

Neurocognitive Tasks

There were no significant session x group interaction effects for any of the cognitive tests (Figure 7) indicating that the pattern of performance across session (i.e., pre- and post-manipulation) was similar between the two groups. No significant group effects were observed for any of the tasks suggesting that the participants’ cognitive performance did not differ for those viewing either positive or negative media clips. There were, however, significant session effects for Math ($p = .0187$), RMCPT ($p < .0001$), Manikin ($p < .0001$), and Switching ($p = .0017$) tasks. For each of these tasks, mean performance improvements were observed from session 1 to session 2.

Mood Scale

There were no significant interaction or group effects for any of the mood dimensions assessed (Figure 8). The happiness dimension was the only mood included in the scale to have a session main effect ($p = .0042$), with both the positive and the negatively-valenced groups reporting decreased happiness following the manipulation, essentially indicating that both groups were less happy as the study progressed (Figure 8C).

Personality

While results did not support the primary hypotheses regarding cognitive performance and mood, the present study was also geared toward evaluating the relationship between personality and other variables of interest. Statistically significant positive correlations were found between extraversion and professional self-representation when controlling for neuroticism, $r(28) = .37, p = .047$, and between neuroticism and Negative Publicity Scale when controlling for extraversion, $r(28) = .45, p < .01$. No other significant correlations were discovered between personality dimensions and study measures.

Discussion

The primary goal of the present study was to evaluate the acute effect of exposure to negatively valenced or positively valenced media clips on officers' mood and performance on basic neurocognitive tasks. Further, the present study sought to elucidate the views that officers hold about themselves within the context of their occupation and the views that officers hold about the public's perception of law enforcement as well as the influence of the media on police work, while exploring the influence of personality on both of these factors.

Results of the current study did not indicate significant decrements in performance on neurocognitive tests and mood. Improvements following the video manipulation were observed on 3 tests; however, as this pattern was observed in both the positive and negative groups, it is possible that such improvements are the result of the beneficial influence of exposure to the tasks during baseline testing. The three tasks on which participants' performance improved represent the three most complicated tasks included in the battery, bolstering the likelihood that the demonstrated improvements reflect practice effects—though participants may struggle with those tasks initially, they often have them figured out by the second round of testing.

Further, mood changes were only observed for the happiness dimension and were equal across group. It is important to note that the decrease in levels of happiness detected could simply be an artifact of participating in a research study; testing sessions were roughly 45 minutes long, and it is possible that officers were simply ready to get back to their typical daily routine by the time they reached the post-manipulation mood scale.

While results did not support the primary hypotheses regarding neurocognitive tasks and mood, the current study did replicate a portion of the findings of Nix and Wolfe (2017) demonstrating that negative publicity inclines officers to perceive police work as more difficult and dangerous. Similarly, the present work established correlations between extraversion and professional self-representation, as well as neuroticism and negative publicity scale scores. While neither extraversion nor neuroticism had significant effects when included in the regression models evaluating pre- and post- exposure performance, the correlation between neuroticism and negative publicity is particularly noteworthy, as it suggests that individuals scoring higher in neuroticism are more likely to be susceptible to negative publicity. This finding is consistent with a plethora of research suggesting that individuals higher in neuroticism have a heightened sensitivity to negative stimuli (Chan, Goodwin, & Harmer, 2007; Larsen & Ketelaar, 1989, 1991; Matthews & Gilliland, 1999; McCrae & Costa, 1991; Norris, Larsen, & Cacioppo, 2007; Robinson, Ode, Moeller, & Goetz, 2007). Furthermore, while professional self-representation did not appear to be related to officer perceptions of negative publicity, research indicating a link between professional self-representation and burnout in other applied settings makes it a promising variable for future studies assessing officer satisfaction and well-being.

While results suggested no acute effect of exposure to negatively-valenced media clips on performance on basic cognitive tasks or mood, these findings should be interpreted in light of a number of limitations. Though working with non-convenient samples is certainly preferable

when attempting to apply experimental results to specific populations, it is often more difficult to gain access to large pools of participants in applied settings. As such, though the present study was the first to experimentally manipulate exposure to media in an effort to examine cognition in an applied population, with only thirty participants total, and less participants included on certain tasks, it is possible that this study simply did not have the power necessary to reveal effects that might be expected from this type of exposure. It is also important to note that the present sample was also composed entirely of veteran officers serving on the department's S.O.T. team. As there is some evidence to indicate that experienced officers outperform Field Training Officers (FTOs; "rookies") on certain tasks, it is possible that the officers within our sample had enough experience to remain unaffected by the clips, allowing them to continue performing at expected levels based on baseline scores following our manipulation. Furthermore, though all officers are expected to remain calm and collected under pressure, those skills are particularly important for members of the S.O.T. team, who are chosen in part for their ability to perform well in high-pressure situations, potentially making them better suited for performing following exposure to potentially stressful stimuli. While the present study does not provide evidence that certain officers have a higher threshold for stress than others, this remains an important consideration that cannot be discounted without further exploration.

Further, though this is a timely topic because of the recent, high-profile incidents involving police officers, the timeliness ironically may create barriers to the conduct of valid experimental research. For example, it was not possible to experimentally control for previous exposure to negative media and for any potential first-hand experience of being featured in mainstream media, either individually or as a department. While officers did indicate that negative media had impacted them in the last year, it is possible that officers have subsequently become desensitized to unfavorable broadcasts. With this in mind, it is important to consider that

a minute-long clip—negative or positive—may not have been long enough to significantly affect officers who have been potentially experiencing saturated negative publicity for months.

Likewise, officers who are seeing their department on the news might react significantly differently upon exposure to valenced media than those who are only tangentially affected by negative publicity.

Given the limitations of the current study, it seems worthwhile to systematically explore the relationship between media and cognition in law enforcement employing possibly lengthier and more personally relevant clips, or potentially a different manipulation entirely, in larger, more varied samples. Specifically, it is possible that a manipulation that required officers to actively imagine an instance in which they felt negative media influenced them might better reproduce the types of thoughts and feelings officers typically have when considering negative publicity, thus enabling better examination of potential distortions in cognition (Morrison & O'Connor, 2005).

Future research should also continue to evaluate the influence of officers' perceptions that negatively-valenced media makes police work more dangerous on various facets of officer health and well-being. As the perception of danger on the job has been linked to negative affective and behavioral consequences, potential downstream effects of this aspect of unfavorable coverage of police activity, as well as potential buffers for these effects, should be evaluated.

This study represents an important first step in better understanding factors that have been (anecdotally) reported concerning the effects of negative media on officers' mood. This is a necessary step in establishing targeted interventions to minimize the influence of negative media in applied settings. Indeed, the present study highlights in particular the potential benefit of

efforts to promote active coping mechanisms in individuals more susceptible to the impact of negative media, such as those higher in neuroticism.

References

- Aday, S. (2010). Chasing the Bad News: An Analysis of 2005 Iraq and Afghanistan War Coverage on NBC and Fox News Channel. *Journal of Communication, 60*(1), 144–164. <https://doi.org/10.1111/j.1460-2466.2009.01472.x>
- Ahern, J., Galea, S., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., & Vlahov, D. (2002). Television images and psychological symptoms after the September 11 terrorist attacks. *Psychiatry, 65*(4), 289–300.
- Altheide, D. L. (1997). The News Media, the Problem Frame, and the Production of Fear. *The Sociological Quarterly, 38*(4), 647–668. <https://doi.org/10.1111/j.1533-8525.1997.tb00758.x>
- Bakker, A. B., & Heuven, E. (2006). Emotional dissonance, burnout, and in-role performance among nurses and police officers. *International Journal of Stress Management, 13*(4), 423.
- Barker, L. M., & Nussbaum, M. A. (2011). The effects of fatigue on performance in simulated nursing work. *Ergonomics, 54*(9), 815–829. <https://doi.org/10.1080/00140139.2011.597878>
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*(4), 323–370. <https://doi.org/10.1037//1089-2680.5.4.323>
- Ben-Zur, H., Gil, S., & Shamshins, Y. (2012). The relationship between exposure to terror through the media, coping strategies and resources, and distress and secondary traumatization. *International Journal of Stress Management, 19*(2), 132–150. <https://doi.org/10.1037/a0027864>

- Bernstein, K. T., Ahern, J., Tracy, M., Boscarino, J. A., Vlahov, D., & Galea, S. (2007). Television Watching and the Risk of Incident Probable Posttraumatic Stress Disorder: A Prospective Evaluation. *The Journal of Nervous and Mental Disease, 195*(1), 41–47. <https://doi.org/10.1097/01.nmd.0000244784.36745.a5>
- Bodas, M., Siman-Tov, M., Peleg, K., & Solomon, Z. (2015). Anxiety-Inducing Media: The Effect of Constant News Broadcasting on the Well-Being of Israeli Television Viewers. *Psychiatry, 78*(3), 265–276. <https://doi.org/10.1080/00332747.2015.1069658>
- Broadhurst, P. L. (1957). Emotionality and the Yerkes-Dodson law. *Journal of Experimental Psychology, 54*(5), 345.
- Caroli, M. E. D., & Sagone, E. (2012). Professional Self Representation and Risk of Burnout in School Teachers. *Procedia - Social and Behavioral Sciences, 46*, 5509–5515. <https://doi.org/10.1016/j.sbspro.2012.06.466>
- Castle, T. L., & Martin, J. S. (2006). Occupational hazard: Predictors of stress among jail correctional officers. *American Journal of Criminal Justice, 31*(1), 65–80. <https://doi.org/10.1007/BF02885685>
- Caswell, L. W., Vitaliano, P. P., Croyle, K. L., Scanlan, J. M., Zhang, J., & Daruwala, A. (2003). Negative Associations of Chronic Stress and Cognitive Performance in Older Adult Spouse Caregivers. *Experimental Aging Research, 29*(3), 303–318. <https://doi.org/10.1080/03610730303721>
- Chajut, E., & Algom, D. (2003). Selective attention improves under stress: Implications for theories of social cognition. *Journal of Personality and Social Psychology, 85*(2), 231–248. <https://doi.org/10.1037/0022-3514.85.2.231>

- Chan, S. W. Y., Goodwin, G. M., & Harmer, C. J. (2007). Highly neurotic never-depressed students have negative biases in information processing. *Psychological Medicine*, *37*(09), 1281. <https://doi.org/10.1017/S0033291707000669>
- Christine Lo Bue-Estes, Willer, Barry, Burton, Harold, Leddy, John J., Wilding, Gregory E., & Horvath, Peter J. (2008). Short-term exercise to exhaustion and its effect on cognitive function in young women. *Percept Mot Skills*, *107*(3), 933–945.
- Cox, T., & Ferguson, E. (1991). Individual differences, stress and coping.
- Dawes, D. M., Ho, J. D., Vincent, A. S., Nystrom, P. C., Moore, J. C., Steinberg, L. W., ... Miner, J. R. (2014). The neurocognitive effects of simulated use-of-force scenarios. *Forensic Science, Medicine, and Pathology*, *10*(1), 9–17. <https://doi.org/10.1007/s12024-013-9510-y>
- de Vreese, C. H., & Boomgaarden, H. (2006). News, Political Knowledge and Participation: The Differential Effects of News Media Exposure on Political Knowledge and Participation. *Acta Politica*, *41*(4), 317–341. <https://doi.org/10.1057/palgrave.ap.5500164>
- Deal, C., Bogdan, R., Miller, J. P., Rodebaugh, T., Caburnay, C., Yingling, M., ... Lenze, E. J. (2018). Effects of Cable News Watching on Older Adults' Physiological and Self-Reported Stress and Cognitive Function. *The International Journal of Aging and Human Development*, *87*(2), 111–123. <https://doi.org/10.1177/0091415017729684>
- Deary, I. J., Liewald, D., & Nissan, J. (2011). A free, easy-to-use, computer-based simple and four-choice reaction time programme: The Deary-Liewald reaction time task. *Behavior Research Methods*, *43*(1), 258–268. <https://doi.org/10.3758/s13428-010-0024-1>
- Diamond, A. (2013). Executive Functions. *Annual Review of Psychology*, *64*(1), 135–168. <https://doi.org/10.1146/annurev-psych-113011-143750>

- Dimitrova, D. V., Shehata, A., Strömbäck, J., & Nord, L. W. (2014). The Effects of Digital Media on Political Knowledge and Participation in Election Campaigns: Evidence From Panel Data. *Communication Research*, *41*(1), 95–118.
<https://doi.org/10.1177/0093650211426004>
- Duffy, E. (1962). *Activation and behavior*. New York: John Wiley & Sons Inc.
- Duncko, R., Johnson, L., Merikangas, K., & Grillon, C. (2009). Working memory performance after acute exposure to the cold pressor stress in healthy volunteers. *Neurobiology of Learning and Memory*, *91*(4), 377–381. <https://doi.org/10.1016/j.nlm.2009.01.006>
- Elzinga, B. M., & Bremner, J. D. (2002). Are the neural substrates of memory the final common pathway in posttraumatic stress disorder (PTSD)? *Journal of Affective Disorders*, *70*(1), 1–17. [https://doi.org/10.1016/S0165-0327\(01\)00351-2](https://doi.org/10.1016/S0165-0327(01)00351-2)
- Eysenck, H. (1967). *The biological basis of personality*. Springfield, IL: Charles Thomas.
- Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional control theory. *Emotion*, *7*(2), 336–353.
<https://doi.org/10.1037/1528-3542.7.2.336>
- Fallahi, C. R., Austad, C. S., Fallon, M., & Leishman, L. (2009). A Survey of Perceptions of the Virginia Tech Tragedy. *Journal of School Violence*, *8*(2), 120–135.
<https://doi.org/10.1080/15388220802074017>
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*(1), 26–34. <http://dx.doi.org.ezproxy.lib.ou.edu/10.1037/0003-066X.48.1.26>
- Haravuori, H., Suomalainen, L., Berg, N., Kiviruusu, O., & Marttunen, M. (2011). Effects of media exposure on adolescents traumatized in a school shooting. *Journal of Traumatic Stress*, *24*(1), 70–77. <https://doi.org/10.1002/jts.20605>

- Harpold, J. A., & Feemster, S. L. (2002). Negative Influences of Police Stress. *FBI Law Enforcement Bulletin*, 71, 1–7.
- Harrell, J. P. (2000). Affective Responses to Television Newscasts: Have You Heard the News? *Dissertations.*, 1456. <http://scholarworks.wmich.edu/dissertations/1456>
- Hart, P. M., & Wearing, A. J. (1995). Police stress and well-being: Integrating personality, coping and daily work experiences. *Journal of Occupational & Organizational Psychology*, 68(2), 133–156.
- Hawkins, H. C. (2001). Police officer burnout: A partial replication of Maslach's Burnout Inventory. *Police Quarterly*, 4(3), 343–360.
- Hockey, R. (1984). Varieties of attentional state: The effects of environment. *Varieties of Attention*, 449–483.
- Hoffman, R. (2004). The effect of acute stress on subsequent neuropsychological test performance (2003). *Archives of Clinical Neuropsychology*, 19(4), 497–506. <https://doi.org/10.1016/j.acn.2003.07.005>
- Holman, E. A., Garfin, D. R., & Silver, R. C. (2014). Media's role in broadcasting acute stress following the Boston Marathon bombings. *Proceedings of the National Academy of Sciences*, 111(1), 93–98. <https://doi.org/10.1073/pnas.1316265110>
- Huddy, L., Feldman, S., Lahav, G., & Taber, C. (2003). Fear and terrorism: Psychological reactions to 9/11. *Framing Terrorism: The News Media, the Government, and the Public*, 255–78.
- Jermier, J. M., Gaines, J., & McIntosh, N. J. (1989). Reactions to Physically Dangerous Work: A Conceptual and Empirical Analysis. *Journal of Organizational Behavior*, 10(1), 15–33.

- Jiang, C., & Rau, P.-L. P. (2017). Working memory performance impaired after exposure to acute social stress: The evidence comes from ERPs. *Neuroscience Letters*, *658*, 137–141. <https://doi.org/10.1016/j.neulet.2017.08.054>
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The big five inventory—versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- Johnston, W. M., & Davey, G. C. L. (1997). The psychological impact of negative TV news bulletins: The catastrophizing of personal worries. *British Journal of Psychology*, *88*(1), 85–91. <https://doi.org/10.1111/j.2044-8295.1997.tb02622.x>
- Jones, J. G., & Hardy, L. (1988). The effects of anxiety upon psychomotor performance. *Journal of Sports Sciences*, *6*(1), 59–67. <https://doi.org/10.1080/02640418808729794>
- Kofman, O., Meiran, N., Greenberg, E., Balas, M., & Cohen, H. (2006). Enhanced performance on executive functions associated with examination stress: Evidence from task-switching and Stroop paradigms. *Cognition & Emotion*, *20*(5), 577–595. <https://doi.org/10.1080/02699930500270913>
- Kosinski, R. J. (2008). A literature review on reaction time. *Clemson University*, *10*.
- Kuhlmann, S. (2005). Impaired Memory Retrieval after Psychosocial Stress in Healthy Young Men. *Journal of Neuroscience*, *25*(11), 2977–2982. <https://doi.org/10.1523/JNEUROSCI.5139-04.2005>
- Lang, A., Newhagen, J., & Reeves, B. (1996). Negative video as structure: Emotion, attention, capacity, and memory. *Journal of Broadcasting & Electronic Media*, *40*(4), 460–477. <https://doi.org/10.1080/08838159609364369>

- Lange-Küttner, C. (2012). The Importance of Reaction Times for Developmental Science: What a Difference Milliseconds Make. *International Journal of Developmental Science*, 6(1–2), 51–55. <https://doi.org/10.3233/DEV-2012-11089>
- Larsen, R. J., & Ketelaar, T. (1989). Extraversion, neuroticism and susceptibility to positive and negative mood induction procedures. *Personality and Individual Differences*, 10(12), 1221–1228. [https://doi.org/10.1016/0191-8869\(89\)90233-X](https://doi.org/10.1016/0191-8869(89)90233-X)
- Larsen, R. J., & Ketelaar, T. (1991). Personality and susceptibility to positive and negative emotional states. *Journal of Personality and Social Psychology*, 61(1), 132.
- Lau, J. T. F. (2006). Impacts of media coverage on the community stress level in Hong Kong after the tsunami on 26 December 2004. *Journal of Epidemiology & Community Health*, 60(8), 675–682. <https://doi.org/10.1136/jech.2005.041897>
- Lawrence, R., & Mueller, D. (2003). School Shootings and the Man-Bites-Dog Criterion of Newsworthiness. *Youth Violence and Juvenile Justice*, 1(4), 330–345. <https://doi.org/10.1177/1541204003255842>
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford University Press on Demand.
- Lazarus, R. S., & Folkman, S. (1984). Coping and adaptation. *The Handbook of Behavioral Medicine*, 282325.
- Lieberman, H., Tharion, W., Shukitt-Hale, B., Speckman, K., & Tulley, R. (2002). Effects of caffeine, sleep loss, and stress on cognitive performance and mood during U.S. Navy SEAL training. *Psychopharmacology*, 164(3), 250–261. <https://doi.org/10.1007/s00213-002-1217-9>
- Livingston, S., & Bennett, W. L. (2003). Gatekeeping, Indexing, and Live-Event News: Is Technology Altering the Construction of News? *Political Communication*, 20(4), 363–380. <https://doi.org/10.1080/10584600390244121>

- Lowe, M., Harris, W., Kane, R., Banderet, L., Levinson, D., & Reeves, D. (2007). Neuropsychological assessment in extreme environments. *Archives of Clinical Neuropsychology*, 22, 89–99. <https://doi.org/10.1016/j.acn.2006.10.010>
- Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18(3), 302–318.
- Lupien, S. J., Maheu, F., Tu, M., Fiocco, A., & Schramek, T. E. (2007). The effects of stress and stress hormones on human cognition: Implications for the field of brain and cognition. *Brain and Cognition*, 65(3), 209–237. <https://doi.org/10.1016/j.bandc.2007.02.007>
- Makinen, T., Palinkas, L., Reeves, D., Paakkonen, T., Rintamaki, H., Leppaluoto, J., & Hassi, J. (2006). Effect of repeated exposures to cold on cognitive performance in humans. *Physiology & Behavior*, 87(1), 166–176. <https://doi.org/10.1016/j.physbeh.2005.09.015>
- Matthews, G., & Campbell, S. E. (2010). Dynamic relationships between stress states and working memory. *Cognition & Emotion*, 24(2), 357–373. <https://doi.org/10.1080/02699930903378719>
- Matthews, G., Davies, D. R., Stammers, R. B., & Westerman, S. J. (2000). *Human performance: Cognition, stress, and individual differences*. Psychology Press.
- Matthews, G., & Gilliland, K. (1999). The personality theories of H.J. Eysenck and J.A. Gray: a comparative review. *Personality and Individual Differences*, 26(4), 583–626. [https://doi.org/10.1016/S0191-8869\(98\)00158-5](https://doi.org/10.1016/S0191-8869(98)00158-5)
- McCaffrey, R. J., & Kane, R. L. (Eds.). (2007). DoD Contributions to Computerized Neurocognitive Assessment: the ANAM Test System [Supplemental], 22S1.
- McCrae, R. R., & Costa, P. T. (1991). Adding Liebe und Arbeit: The Full Five-Factor Model and Well-Being. *Personality and Social Psychology Bulletin*, 17(2), 227–232. <https://doi.org/10.1177/014616729101700217>

- McEwen, B. S., & Stellar, E. (1993). Stress and the Individual: Mechanisms Leading to Disease. *Archives of Internal Medicine, 153*(18), 2093–2101.
<https://doi.org/10.1001/archinte.1993.00410180039004>
- McLeish, A. C., & Del Ben, K. S. (2008). Symptoms of depression and posttraumatic stress disorder in an outpatient population before and after Hurricane Katrina. *Depression and Anxiety, 25*(5), 416–421.
- McNaughton-cassill, M. E. (2001). The news media and psychological distress. *Anxiety, Stress & Coping, 14*(2), 193–211. <https://doi.org/10.1080/10615800108248354>
- Monfort, E., & Afzali, M. H. (2017). Traumatic stress symptoms after the November 13th 2015 Terrorist Attacks among Young Adults: The relation to media and emotion regulation. *Comprehensive Psychiatry, 75*, 68–74. <https://doi.org/10.1016/j.comppsy.2017.02.015>
- Morrison, R., & O'Connor, R. C. (2005). Predicting psychological distress in college students: The role of rumination and stress. *Journal of Clinical Psychology, 61*(4), 447–460.
<https://doi.org/10.1002/jclp.20021>
- Most officers say the media treat police unfairly. (2016). *Pew Research Center*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/01/25/most-officers-say-the-media-treat-police-unfairly/>
- Mundorf, N., Drew, D., Zillman, D., & Weaver, J. (1990). Effects of Disturbing News on Recall of Subsequently Presented News. *Communication Research, 17*(5), 601–615.
<https://doi.org/10.1177/009365090017005002>
- Mundorf, N., & Zillmann, D. (1991). Effects of story sequencing on affective reactions to broadcast news. *Journal of Broadcasting & Electronic Media, 35*(2), 197–211.
<https://doi.org/10.1080/08838159109364118>

- Mundorf, N., Zillmann, D., & Drew, D. (1991). Effects of Disturbing Televised Events on the Acquisition of Information from Subsequently Presented Commercials. *Journal of Advertising, 20*(1), 46–53.
- Nisar, S. K., Rasheed, M. I., & Qiang, W. (2018). They can't safeguard you when they are under stress: An exploratory study on issues and problems of job stress in police. *International Journal of Police Science & Management, 14*61355718763467.
- Nishi, D., Koido, Y., Nakaya, N., Sone, T., Noguchi, H., Hamazaki, K., ... Matsuoka, Y. (2012). Peritraumatic distress, watching television, and posttraumatic stress symptoms among rescue workers after the Great East Japan earthquake. *PLoS One, 7*(4), e35248.
- Nix, J., & Wolfe, S. E. (2016). Sensitivity to the Ferguson Effect: The role of managerial organizational justice. *Journal of Criminal Justice, 47*, 12–20.
- Nix, J., & Wolfe, S. E. (2017). The impact of negative publicity on police self-legitimacy. *Justice Quarterly, 34*(1), 84–108.
- Norris, C. J., Larsen, J. T., & Cacioppo, J. T. (2007). Neuroticism is associated with larger and more prolonged electrodermal responses to emotionally evocative pictures. *Psychophysiology, 44*(5), 823–826.
- Oei, N. Y. L., Everaerd, W. T. A. M., Elzinga, B. M., van Well, S., & Bermond, B. (2006). Psychosocial stress impairs working memory at high loads: An association with cortisol levels and memory retrieval. *Stress, 9*(3), 133–141.
<https://doi.org/10.1080/10253890600965773>
- Otto, M. W., Henin, A., Hirshfeld-Becker, D. R., Pollack, M. H., Biederman, J., & Rosenbaum, J. F. (2007). Posttraumatic stress disorder symptoms following media exposure to tragic events: Impact of 9/11 on children at risk for anxiety disorders. *Journal of Anxiety Disorders, 21*(7), 888–902. <https://doi.org/10.1016/j.janxdis.2006.10.008>

- Perez, L. M., Jones, J., Englert, D. R., & Sachau, D. (2010). Secondary traumatic stress and burnout among law enforcement investigators exposed to disturbing media images. *Journal of Police and Criminal Psychology, 25*(2), 113–124.
- Pfefferbaum, B., Newman, E., Nelson, S. D., Nitiéma, P., Pfefferbaum, R. L., & Rahman, A. (2014). Disaster Media Coverage and Psychological Outcomes: Descriptive Findings in the Extant Research. *Current Psychiatry Reports, 16*(9). <https://doi.org/10.1007/s11920-014-0464-x>
- Pfefferbaum, B., Nitiéma, P., Pfefferbaum, R. L., Houston, J. B., Tucker, P., Jeon-Slaughter, H., & North, C. S. (2016). Reactions of Oklahoma City bombing survivors to media coverage of the September 11, 2001, attacks. *Comprehensive Psychiatry, 65*, 70–78. <https://doi.org/10.1016/j.comppsy.2015.09.010>
- Plessow, F., Schade, S., Kirschbaum, C., & Fischer, R. (2012). Better not to deal with two tasks at the same time when stressed? Acute psychosocial stress reduces task shielding in dual-task performance. *Cognitive, Affective, & Behavioral Neuroscience, 12*(3), 557–570. <https://doi.org/10.3758/s13415-012-0098-6>
- Propper, R. E., Stickgold, R., Keeley, R., & Christman, S. D. (2007). Is Television Traumatic?: Dreams, Stress, and Media Exposure in the Aftermath of September 11, 2001. *Psychological Science, 18*(4), 334–340. <https://doi.org/10.1111/j.1467-9280.2007.01900.x>
- Qin, S., Hermans, E. J., van Marle, H. J. F., Luo, J., & Fernández, G. (2009). Acute Psychological Stress Reduces Working Memory-Related Activity in the Dorsolateral Prefrontal Cortex. *Biological Psychiatry, 66*(1), 25–32. <https://doi.org/10.1016/j.biopsych.2009.03.006>

- Reeves, D., Winter, K., Bleiberg, J., & Kane, R. (2007). ANAM® Genogram: Historical perspectives, description, and current endeavors☆. *Archives of Clinical Neuropsychology*, 22, 15–37. <https://doi.org/10.1016/j.acn.2006.10.013>
- Roberg, R. R., Hayhurst, D. L., & Allen, H. E. (1988). Job burnout in law enforcement dispatchers: A comparative analysis. *Journal of Criminal Justice*, 16(5), 385–393.
- Robinson, M. D., Ode, S., Moeller, S. K., & Goetz, P. W. (2007). Neuroticism and affective priming: Evidence for a neuroticism-linked negative schema. *Personality and Individual Differences*, 42(7), 1221–1231. <https://doi.org/10.1016/j.paid.2006.09.027>
- Russell, L. M., Cole, B. M., & Jones III, R. J. (2014). High-risk occupations: How leadership, stress, and ability to cope influence burnout in law enforcement. *Journal of Leadership, Accountability and Ethics*, 11(3), 49.
- Sagone, E., & Caroli, M. E. D. (2010). LEVELS OF BURNOUT AND PROFESSIONAL SELF IN A GROUP OF JUNIOR HIGH SCHOOL TEACHERS: A CONTRIBUTION OF RESEARCH IN SICILIAN CONTEXT. *International Journal of Developmental and Educational Psychology*, 1, 13.
- Sandi, C., & Pinelo-Nava, M. T. (2007). Stress and Memory: Behavioral Effects and Neurobiological Mechanisms. *Neural Plasticity*, 2007, 1–20. <https://doi.org/10.1155/2007/78970>
- Saylor, C. F., Cowart, B. L., Lipovsky, J. A., Jackson, C., & Finch, A. J. (2003). Media Exposure to September 11: Elementary School Students' Experiences and Posttraumatic Symptoms. *American Behavioral Scientist*, 46(12), 1622–1642. <https://doi.org/10.1177/0002764203254619>

- Schoofs, D., Pabst, S., Brand, M., & Wolf, O. T. (2013). Working memory is differentially affected by stress in men and women. *Behavioural Brain Research, 241*, 144–153.
<https://doi.org/10.1016/j.bbr.2012.12.004>
- Schoofs, D., Preuß, D., & Wolf, O. T. (2008). Psychosocial stress induces working memory impairments in an n-back paradigm. *Psychoneuroendocrinology, 33*(5), 643–653.
<https://doi.org/10.1016/j.psyneuen.2008.02.004>
- Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., ... Berry, S. H. (2001). A national survey of stress reactions after the September 11, 2001, terrorist attacks. *New England Journal of Medicine, 345*(20), 1507–1512.
- Schwabe, L., & Wolf, O. T. (2010). Learning under stress impairs memory formation. *Neurobiology of Learning and Memory, 93*(2), 183–188.
<https://doi.org/10.1016/j.nlm.2009.09.009>
- Schwabe, L., Wolf, O. T., & Oitzl, M. S. (2010). Memory formation under stress: Quantity and quality. *Neuroscience & Biobehavioral Reviews, 34*(4), 584–591.
<https://doi.org/10.1016/j.neubiorev.2009.11.015>
- Scott, R. K., & Goff, D. H. (1988). How Excitation from Prior Programming Affects Television News Recall. *Journalism Quarterly, 65*(3), 615–620.
<https://doi.org/10.1177/107769908806500308>
- Shenk, D. (1997). *Data smog: Surviving the information glut*. HarperCollins Publishers.
- Shields, G. S., Sazma, M. A., & Yonelinas, A. P. (2016). The effects of acute stress on core executive functions: A meta-analysis and comparison with cortisol. *Neuroscience & Biobehavioral Reviews, 68*, 651–668. <https://doi.org/10.1016/j.neubiorev.2016.06.038>

- Short, P., Cernich, A., Wilken, J. A., & Kane, R. L. (2007). Initial construct validation of frequently employed ANAM measures through structural equation modeling. *Archives of Clinical Neuropsychology*, 22, 63–77.
- Sinha, R. (2008). Chronic Stress, Drug Use, and Vulnerability to Addiction. *Annals of the New York Academy of Sciences*, 1141(1), 105–130. <https://doi.org/10.1196/annals.1441.030>
- Smith, N. K., Cacioppo, J. T., Larsen, J. T., & Chartrand, T. L. (2003). May I have your attention, please: Electrocortical responses to positive and negative stimuli. *Neuropsychologia*, 41(2), 171–183. [https://doi.org/10.1016/S0028-3932\(02\)00147-1](https://doi.org/10.1016/S0028-3932(02)00147-1)
- Solianik, R., Sujeta, A., Terentjevienė, A., & Skurvydas, A. (2016). Effect of 48 h fasting on autonomic function, brain activity, cognition, and mood in amateur weight lifters. *BioMed Research International*, 2016.
- Staal, M. A. (2004). Stress, Cognition, and Human Performance: a Literature Review and Conceptual Framework. NASA Center for Aerospace Information. Retrieved from https://scholar-google-com.ezproxy.lib.ou.edu/scholar?hl=en&as_sdt=0%2C37&q=stress%2C+cognition%2C+and+human+performance%3A+a+literature+review+and+conceptual+framework&btnG=
- Starcke, K., Wiesen, C., Trotzke, P., & Brand, M. (2016). Effects of Acute Laboratory Stress on Executive Functions. *Frontiers in Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.00461>
- Suchy, Y. (2009). Executive Functioning: Overview, Assessment, and Research Issues for Non-Neuropsychologists. *Annals of Behavioral Medicine*, 37(2), 106–116. <https://doi.org/10.1007/s12160-009-9097-4>

- Szabo, A., & Hopkinson, K. L. (2007). Negative psychological effects of watching the news in the television: Relaxation or another intervention may be needed to buffer them! *International Journal of Behavioral Medicine*, *14*(2), 57–62.
<https://doi.org/10.1007/BF03004169>
- Taylor, D. J., & McFatter, R. M. (2003). Cognitive performance after sleep deprivation: does personality make a difference? *Personality and Individual Differences*, *34*(7), 1179–1193.
- Taylor, S. E. (1991). Asymmetrical Effects of Positive and Negative Events: The Mobilization-Minimization Hypothesis. *Psychological Bulletin*, *110*(1), 67–85.
<http://dx.doi.org/10.1037/0033-2909.110.1.67>
- Terr, L. C., Bloch, D. A., Michel, B. A., Shi, H., Reinhardt, J. A., & Metayer, S. (1999). Children's Symptoms in the Wake of *Challenger* : A Field Study of Distant-Traumatic Effects and an Outline of Related Conditions. *American Journal of Psychiatry*, *156*(10), 1536–1544. <https://doi.org/10.1176/ajp.156.10.1536>
- Thorne, D. R. (2006). Throughput: a simple performance index with desirable characteristics. *Behavior Research Methods*, *38*(4), 569–573.
- van der Meer, T. G. L. A., Kroon, A. C., Verhoeven, P., & Jonkman, J. (2018). Mediatization and the Disproportionate Attention to Negative News: The case of airplane crashes. *Journalism Studies*, 1–21. <https://doi.org/10.1080/1461670X.2018.1423632>
- Vasterman, P., Yzermans, C. J., & Dirkzwager, A. J. E. (2005). The Role of the Media and Media Hypes in the Aftermath of Disasters. *Epidemiologic Reviews*, *27*(1), 107–114.
<https://doi.org/10.1093/epirev/mxi002>

- Vedhara, K., Hyde, J., Gilchrist, I. ., Tytherleigh, M., & Plummer, S. (2000). Acute stress, memory, attention and cortisol. *Psychoneuroendocrinology*, *25*(6), 535–549.
[https://doi.org/10.1016/S0306-4530\(00\)00008-1](https://doi.org/10.1016/S0306-4530(00)00008-1)
- Wachtel, P. L. (1968). Anxiety, Attention, and Coping with Threat. *Journal of Abnormal Psychology*, *73*(2), 137–143. <https://doi.org/10.1037/h0020118>
- Wexler, J., & Logan, D. (1983). Sources of Stress Among Women Police Officers. *Journal of Police Science and Administration*, *11*(1), 46–53.
- Williams, B. T., Horvath, P. J., Burton, H. W., Leddy, J., Wilding, G. E., Rosney, D. M., & Shan, G. (2017). The Effect of Pre Exercise Carbohydrate Consumption on Cognitive Function. *Journal of Athletic Enhancement*, *2015*. <https://doi.org/10.4172/2324-9080.1000192>
- Wilson, B. J., Martins, N., & Marske, A. L. (2005). Children’s and Parents’ Fright Reactions to Kidnapping Stories in the News. *Communication Monographs*, *72*(1), 46–70.
<https://doi.org/10.1080/0363775052000342526>
- Wolf, O. T. (2009). Stress and memory in humans: Twelve years of progress? *Brain Research*, *1293*, 142–154. <https://doi.org/10.1016/j.brainres.2009.04.013>
- Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, *18*(5), 459–482.

Tables

	Total	Negative Group	Positive Group
N	30	14	16
Age, mean \pm SD	43 \pm 7.4	43.73	42.56
Female, n (%)	2 (6.45)	1 (50)	1 (50)
Hispanic, n (%)	1 (3.2)	0 (0)	1 (100)
Race			
White	26 (83.3)	11 (42.3%)	15 (57.7%)
Other	5 (16.7%)	4 (80%)	1 (20%)

Table 1. Demographic Information

Item:	Mean:
My job as a law enforcement officer is an important reflection of who I am.	4.2
Overall, my job in law enforcement is viewed positively by the public.	3.3
Being a law enforcement officer is an important part of my self-image.	3.7
In general, the public does not respect law enforcement officials.	3.2
Being a law enforcement officer is an important part of my self-image.	3.2
Overall, my occupation as a law enforcement officer has little to do with how I feel about myself.	3.2
In general, the public sees law enforcement as trustworthy.	3.6
In general, the public does not respect law enforcement officials.	3.2
More often than not I feel proud to be a member of the law enforcement community.	4.5

Table 2. Professional Self-Representation Questionnaire Item Scores

Over the past year, negative publicity surrounding law enforcement has:	Mean:
Made it more difficult to do your job	4.5
Made it more dangerous to be a law enforcement officer	4.5
Forced some US law enforcement agencies to make policy changes that ultimately threaten officer safety	4.2
Made it more difficult for you to be motivated at work	3.4
Caused you to be less proactive on the job than you were in the past	3.3
Caused you to be more apprehensive about using force even though it may be necessary	3.3
Caused you to be less likely to want to work with community members to solve local problems	3.2
Negatively impacted the way you do your job	3.2
Made it less enjoyable to have a career in law enforcement	3.5

Table 3. Negative Publicity Scale Item Scores

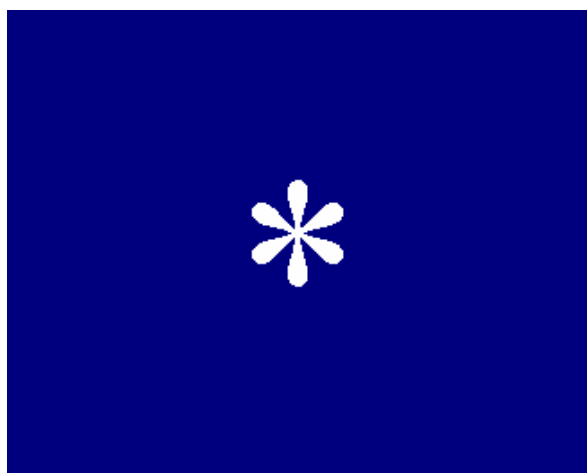
Figures

Figure 1. SRT.

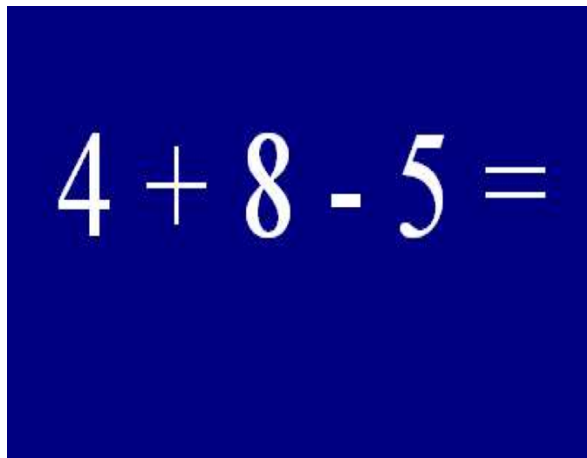

$$4 + 8 - 5 =$$

Figure 2. MATH.

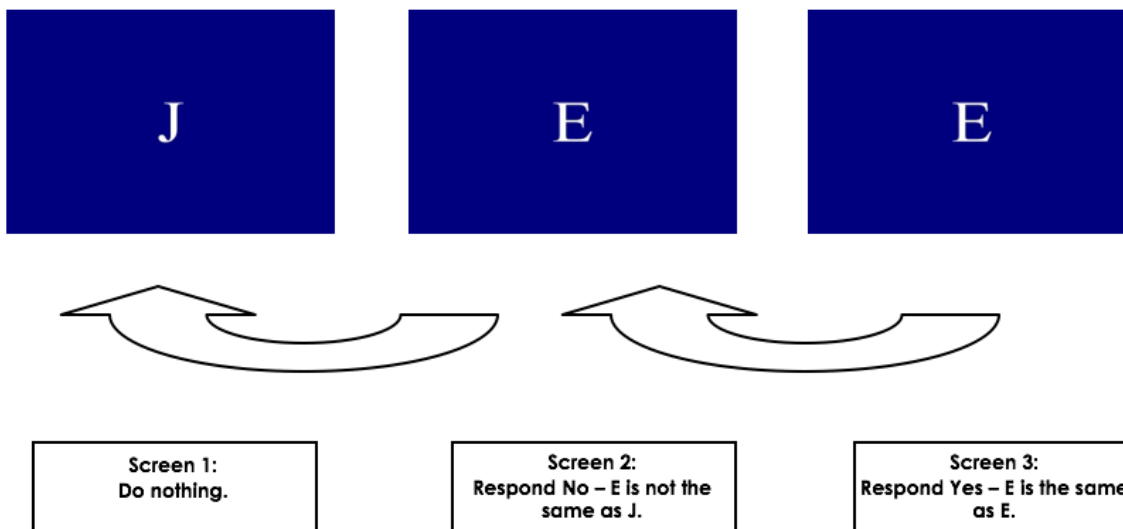


Figure 3. RMCPT.

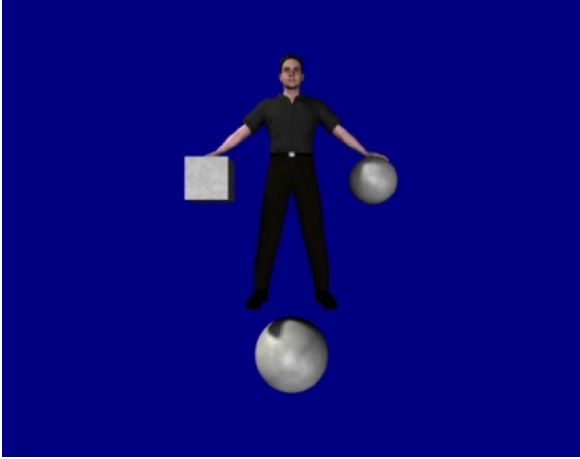
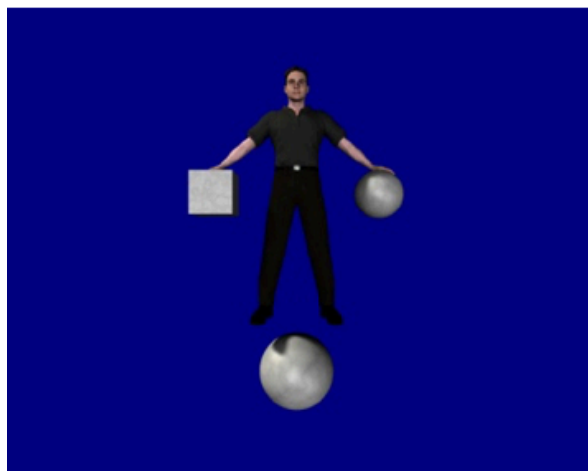


Figure 4. Manikin.



$$4 + 8 - 5 =$$

Figure 5. Switching.

Mood Scale							
Mood Scale							
How much do the following words describe how you feel right now?							
	Not at All		Somewhat			Very Much	
Shaky	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
Alert	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
Depressed	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
Nervous	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
Inactive	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6
Afraid	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6

Figure 6. Mood Scale.

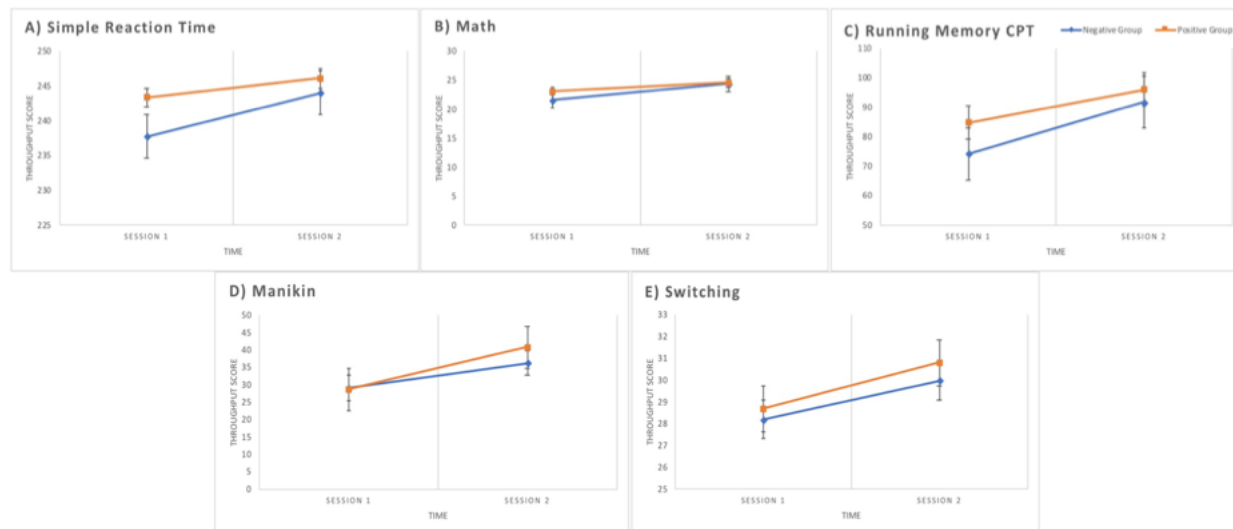


Figure 7. Neurocognitive Test Results.

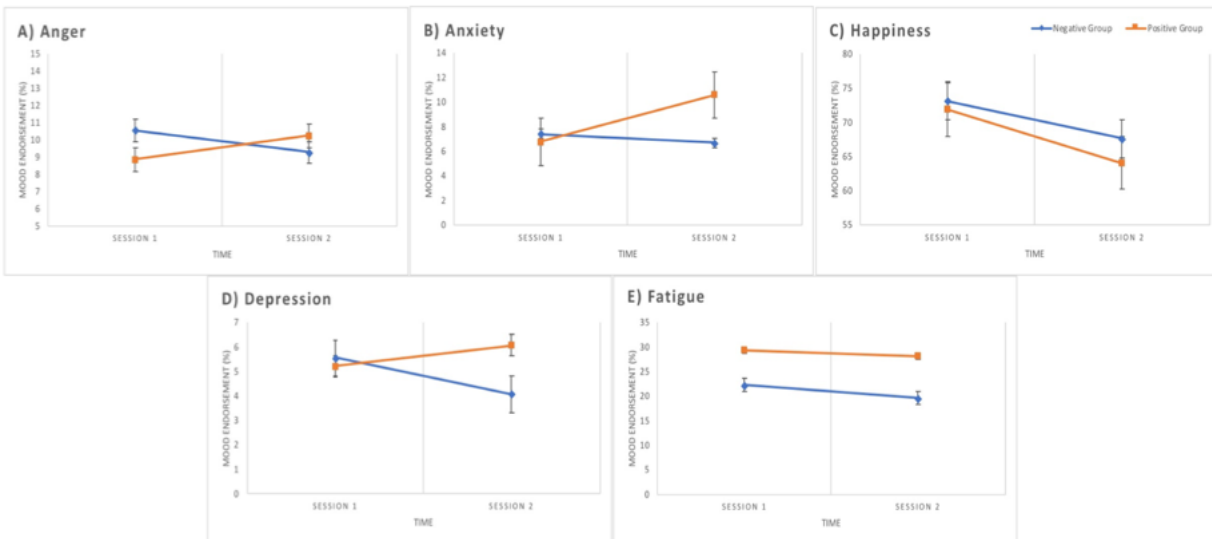


Figure 8. Mood Scale Test Results.

Appendix
Professional Self-Representation Questionnaire

Using the scale provided please indicate how much you agree or disagree with each statement.

1. My job as a law enforcement officer is an important reflection of who I am.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

2. Overall, my job in law enforcement is viewed positively by the public.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

3. Being a law enforcement officer is an important part of my self-image.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

4. In general, the public does not respect law enforcement officials.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

5. Overall, my occupation as a law enforcement officer has little to do with how I feel about myself.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

6. In general, the public sees law enforcement as a noble/honorable profession.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

7. In general, the public sees law enforcement as trustworthy.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree

8. More often than not I feel proud to be a member of the law enforcement community.

1-----2-----3-----4-----5
Strongly disagree Neutral Strongly Agree