


2016

911, What's My Emergency? Emotional Labor, Work-Related Rumination, and Strain Outcomes in Emergency Medical Dispatchers

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911, What's My Emergency? Emotional Labor, Work-Related Rumination, and Strain
Outcomes in Emergency Medical Dispatchers

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A Thesis Submitted in Partial Fulfillment for the Degree of Master of Arts in Industrial
Organizational Psychology

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May 2016

This thesis has been examined and approved by the following members of the student's committee.

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Abstract

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The work of Emergency Medical Dispatchers (EMDs) is filled with a variety of stressors, and one of those being emotional labor. Despite research on emotional labor, few studies have quantitatively examined this construct within EMDs. Compared to the plethora of emotional labor literature that focuses on the display of positive emotions, EMDs are required to suppress or neutralize any negative reactions they may experience. Hence, this study was concerned with the further examination of emotional labor, physical health outcomes, burnout, and job satisfaction in a unique population. Additionally, the construct of work-related rumination is in its infancy. It can be argued that surface acting and deep acting serve as antecedents to work-related rumination. One hundred one participants from a Midwest emergency communications professional group completed self-report surveys on emotional labor, work-related rumination, and strain outcomes. Results showed EMDs experience higher levels of surface acting compared to other professions, and surface acting is more detrimental and leads to more negative outcomes compared to deep acting. The affective rumination component of the work-related rumination was also positively correlated to strain outcomes. Lastly, those that reported higher levels of surface acting also endorsed higher levels of affective rumination. In conclusion, EMDs do experience high levels of emotional labor, and engage in the more taxing surface acting strategy. This also suggests that the relationship between surface acting and affective rumination, contributes to the most strain outcomes, and it may be that affective rumination mediates the relationship between suppression of feelings (surface acting) and strain outcomes. Further directions and limitations are also discussed.

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911, What's My Emergency? Emotional Labor, Work-Related Rumination, and Strain Outcomes in Emergency Medical Dispatchers

The work of an Emergency Medical Dispatcher (EMD) is undeniably stressful, with reports of approximately 268,000 calls to 911 nationwide on a daily basis (Shuler, 2001). Forced to treat every incoming call as an emergency or potential emergency, the dispatcher is a vital link between a distraught caller and the first responder. Once a call comes in, it is the responsibility of the answering dispatcher to dispatch necessary responders (fire, paramedic, police), and to remain on the line with the individual in crisis until the first responders are on the scene according to Spence (as cited in Shakespeare-Finch, Rees, & Armstrong, 2014). This is a daunting task depending on the challenges of the situation.

The tasks a dispatcher must engage in are further complicated by the emotional nature of the job. While gathering information from an emotional caller, and providing pertinent information to police officers or necessary respondents, EMDs must also engage in emotional control strategies of their own. The work of managing one's emotions while on the job, referred to as emotional labor, is a well-documented work-related stressor (Hülshager & Schewe, 2011). Despite the importance of the emergency dispatch role, few studies have quantitatively examined the role of emotional labor in EMDs, and how it may contribute to negative strain outcomes.

One factor that has been found to exacerbate negative strain outcomes is the process of rumination. Rumination generally refers to, "unintentional perseverative thoughts in the absence of obvious external cues," (Cropley & Purvis, 2003, p. 197). For example, if an individual has recently experienced an argument or fight with their

significant other, the individual may continue to think about those events after the initial event, and even when physically removed from the situation. The construct of rumination was originally developed in clinical and health psychology among individuals suffering from mood and anxiety disorders (Nolan-Hoeksma & Morrow, 1991). Recently, researchers have begun expanding this research into a focus on work-related rumination. As this concept is still in its infancy, few studies have examined the antecedents to work-related rumination, or the relationship this has with emotional labor strategies. Thus, the purpose of this study is to further examine emotional labor in a sample of EMDs, and explore the relationship between emotional labor, work-related rumination, and strain outcomes.

Description of Emergency Medical Dispatchers

The profession of being an EMD, as stated previously, is stressful and not without public critique. Often, their important role in saving a life goes without recognition, and attention is only paid when a mistake is made. Their job tasks are diverse, and include, but are not limited to questioning callers, determining the appropriate response requirements, providing emergency medical instructions, maintaining files and access to highly sensitive material, and all while operating a variety of technological devices and systems such as multi-line telephone systems, two-way radios, and 911 information databases (O*NET OnLine, 2015). The complexity of communication an EMD must engage in is further compounded by the fact that there are two separate and distinct audiences they must interact with – the caller and the police or emergency personnel (Shuler, 2001). An EMD must have the skills to communicate with a caller to obtain

vital information, and then articulate and effectively communicate that information to another third-party.

Lastly, little regard is given to the fact that in addition to completing these tasks, there are additional stressors that may further compound the complexities of the job. For example, EMDs are needed 24 hours a day and 7 days a week, and emergencies do not rest on the holidays. Long shifts, and overnights shifts are not uncommon. Additionally, for those EMDs working in rural communities, it is common to know or be familiar with the individuals involved in a crisis call (C. Janecek, personal communication, September 2, 2015; Donnermeyer, DeKeseredy, Dragiewicz, 2012).

When discussing EMDs, it is important to differentiate them from call-takers. Call-takers differ in their function in that these individuals answer an emergency call, inquire and determine what service is necessary, and then transfer the call to an EMD if an ambulance is required (Shakespeare-Finch, Rees, & Armstrong, 2014). Thus, call-takers are only briefly exposed to the traumatic event, or potentially traumatic event, and are limited in their direct contact with callers. As their interaction is minimal, call-takers may not experience the strains created by the emotional labor of the EMD job.

Emotional Labor

Within our society, the nature of work has been changing, and will continue to change. As the service economy continues to grow (Morris & Feldman, 1996), so has the need for workers to provide high quality care to customers and clients. Interactions with clients are more important, and ways in which the service provider speaks and acts with clients are more of a concern (Morris & Feldman, 1996). As these changes have occurred, more research has focused on the concept of emotional labor. Broadly defined,

this implies that an individual must manage their own feelings and display emotions that are desirable to the organization (Grandey, 2000). Using a more specific definition, Grandey, Diefendorff, and Rupp (2013, p.18) argued that emotional regulation becomes emotional labor when it is “performed in response to job-based emotional requirements in order to produce emotion toward – and to evoke emotion from another person to achieve organizational goals.” According to Hochschild (1983) an emotional labor job has the following characteristics: 1) face-to-face or voice contact with the public, 2) a necessity for employees to change the customer’s emotional state, and 3) employers exert control over their employees through training and supervision.

The requirement to use emotional labor is perpetuated by organizational display rules. An organizational display rule is a standard within the organization that places a demand on an employee to show appropriate expressions on the job (Rafaeli & Sutton, 1987). The purpose of these rules is to dictate how an individual should or should not display an emotion at work. It is these organizationally relevant standards that contribute to the use of emotional labor strategies. More often than not, the demand placed on the individual is to express a positive emotion; however, research has begun to focus on the formal requirement of emotional neutrality and the suppression of negative emotions as display rules that are contributing to emotional labor. Further research into the topic of emotional display rules has yielded some interesting findings. Diefendorff, Richard, and Croyle (2006) examined employee and supervisor perceptions of display rules and found that more employees and supervisors perceived behaviors associated with either displaying positive emotions or suppressing negative emotions as a formal job requirement. For instance, a display of a positive emotion is not the most appropriate

response for certain professions, such as licensed funeral home directors (Smith, Dorsey, & Mosley, 2009). Given that a high proportion of individual employees perceive the suppression of negative emotions as a formal requirement, one might posit that this leads to the performance of one or more emotional regulation strategies – either deep or surface acting. Engaging in either strategy may fulfill the job expectation that EMDs/911 dispatchers must remain composed and manage their emotions (O*Net Online, 2015).

Surface and Deep Acting

Research has explored two types of strategies that employees may employ to cope with emotional labor, either surface acting or deep acting, as introduced by Hochschild (1983). When one engages in the surface acting technique, the individual is suppressing his or her true feelings and outwardly displaying emotions that are organizationally supported. However, surface acting goes beyond the suppression of emotion, and involves the taxing process of displaying fake emotions (Bechtold, Rohrman, De Pater, & Beersma, 2011). These feelings are not felt by the individual displaying them, creating a disconnect in the individual between the outwardly displayed emotion and their inner state. This disconnect is commonly referred to as emotional dissonance. Thus, emotional dissonance can be viewed as a result of emotional labor, and is partially dependent on the specific strategy used. Furthermore, emotional dissonance occurs when an organization requires an employee to either positively display a certain emotion, or prevents them from displaying an emotion. Recently, researchers refined and expanded the concept of surface acting to facilitate a deeper comprehension of emotional labor. Lee and Brotheridge (2011) now break surface acting into two categories: hiding feelings and

faking emotions. This has further highlighted a difference between a hiding, or suppression of emotion, and a faking of organizationally desired emotions.

Contrastingly, deep acting involves a true or authentic display of desired emotions, thus reducing the amount of resources needed to exhibit the emotional display (Brotheridge & Lee, 2002). Essentially, an individual attempts to change his or her internal and underlying affective state to match the outer display of the affective state. Grandey (2000) explored two ways in which one can achieve deep acting, either through cognitive reappraisal or attentional deployment. For example, in a cognitive appraisal process, an individual in the service industry who is working with a difficult customer may appraise the situation as challenging and attempt to learn and grow from the situation or promote empathy through a better understanding of the customer's emotions. In this same scenario, an individual using a surface acting strategy would alter their displayed behavior, yet not put in the effort to appraise the situation, or attempt to become empathetic through a deeper understanding of the customer's point of view and perspective. A second approach, attentional deployment, is a technique that involves an individual thinking about a thought or memory that is relevant to or evokes the same emotion as the one needed to be expressed (Gross, 1998).

Consequences of Emotional Labor

As emotional labor in organizations continues to be a topic of interest due to an increase in the service economy, greater attention is being focused on its consequences. The majority of early work on the topic focused on the negative outcomes associated with emotional labor (Morris & Feldman, 1996). For instance, Hochschild (1983) found that the consequences of emotional labor could be anything from drinking and drug use, or

physiological pains such as headaches, and absenteeism from work. The toll of emotional labor to an organization, and the employee that is faced with the burden of using it is often negative. However, more current research is mixed, and dependent upon the strategy of focus. For instance, it is important to examine not only deep acting and surface acting within emotional labor, but also the authentic and genuine display of emotions. Each of these conceptually different constructs has different outcomes. Surface acting is more so associated with the negative strain outcomes, but as pointed out, in certain scenarios with difficult client interactions, the negative consequences of this strategy can be reduced.

Blau, Bentley, and Eggerichs-Purcell (2012) examined the impact of emotional labor on work exhaustion in three emergency medical service populations. Their examination of emotional labor was similar to other studies in that surface acting involved displaying emotions not felt, and deep acting focused on a modification of inner feelings. Consistent with previous findings, surface acting was found to have a significantly stronger positive impact on work exhaustion, compared to deep acting. Furthermore, compared to deep acting, surface acting had a stronger negative relationship to job satisfaction. These findings are no surprise as previous literature has exposed the negative consequences of surface acting compared to deep acting (Brotheridge & Grandey, 2002; Goodwin, Groth, & Frenkel, 2011; Grandey, 2003; Scott & Barnes, 2011).

Emotional Labor in EMD Work

Research in the field of emotional labor has typically focused on individuals who interact face-to-face with customers, such as airline attendants (Hochschild, 1983), licensed funeral directors (Smith, Dorsey, Mosley, 2009), and bus drivers (Scott & Barnes, 2011). However, those who work in call centers, such as dispatchers, face a unique and distinguishing set of factors relating to emotional labor, specifically having a stronger dependence on their voice (Van Jaarsveld & Poster, 2013). For instance, those in call centers need to ensure emotions are appropriately displayed by their vocal cues, but there is no need to manage visual cues such as body language or facial expression as those in retail customer service would. Thus, employees in such centers are trained to communicate emotions through their voice tone. In addition to a heavier reliance on their voice and communicative strategies, EMDs must also suppress negative emotions and remain neutral, calm, and detached, as opposed to showcasing positive emotions. Similar research in elder care populations and with direct care providers has highlighted that the aim of these employees is to seem caring, but remain calm and detached (Bolton, 2001; Carmack, 1997).

Correspondingly, an important component of the dispatcher role identified by the O*NET (O*NET Online, 2015), and that goes beyond a description of job tasks, is that of self-control. Jobs categorized in this work style require an ability to remain composed, manage emotions, and control negative reactions or behaviors even in the face of difficult situations. The situations that EMDs are faced with are not pleasant, for example in a qualitative study by Adams, Shakespeare-Finch, and Armstrong (2015), a common theme expressed by the survey participants was the exposure to a “darker side” of life. EMDs in

their sample reported facing calls surrounding assault, substance abuse, murder, and mental health problems. Furthermore, individuals within these fields must not display their true feelings (Bolton, 2001) despite encountering calls focusing on this “darker side” of life. Regardless of the profession type that requires employees to suppress their negative emotions, the research is consistent in that there are more detrimental outcomes associated with negative emotion suppression, such as decreased employee well-being, compared to a formal requirement to express positive emotions (Gillespie, Barger, Yugo, Conley, & Ritter, 2011). This illustrates why the role of emotional labor and emotional neutrality within positions, such as EMDs, are so crucial.

Depending on the nature of the situation and the need for complex instructions, EMDs may be required to follow a sequence of steps and treatment protocols. EMDs may manage their emotions through the use of these steps and predetermined algorithmic scripts that are mandatory to the job (Clawson, 1989). It is the duty of the dispatcher to remain compliant with the logical steps, and remain free from deviation. This practice ensures consistency, promotes confidence in the dispatcher’s ability to remain calm, reassures the client, and provides legal safety (Clawson, 1989). Similarly, EMDs are expected to maintain the desired emotional display rules required by their organization. As pointed out by Shuler (2001) in the 911 dispatcher and EMD profession, the emotional display rules required cannot be relaxed. EMDs must remain calm, and suppress any negative emotions, while those in positions required to elicit a positive emotion (flight attendants or clerks) have more flexibility and personal control over their outward display of emotions. The same is not desired of EMDs, and in this sense the demands of the emotional labor cannot be lightened.

Although EMDs may be limited in their ability to deviate from a script, and be more emotionally expressive, previous research has examined ways in which 911 dispatchers manage emotional labor in both the front stage of their work when they are directly involved with a call, as well as in the backstage strategies they employ (Shuler, 2001). Observed front stage communicative strategies included; (1) Questioning, or a verbal and indirect expression of frustration towards callers (i.e., asking the caller a question to have the caller reflect on whether or not the call is a true emergency or not), (2) Hold Please, a direct and clear control of the conversation (i.e., placing the caller on hold in order for the dispatcher to gain composure of their emotions), (3) Not Helping, which is an approach taken towards officers an EMD may not have a positive relationship with (i.e., a dispatcher may know the request of an officer; however, if that officer is not using a correct code, they may be reluctant to assist) and (4) Standby, an approach similar to hold please, yet directed towards officers being rude over the radio or making unrealistic requests. Each strategy serves as a way for dispatchers to communicatively cope with the challenges of emotional labor when dealing with both the public callers and police officers. Furthermore, this highlights the importance of communication in combatting the difficulty of emotional labor within the work setting.

It is clear that EMDs are faced with the taxing work demand of emotional labor, and that emotional labor can lead to negative strain outcomes. Research has also shown the relationship between surface acting and negative strain outcomes. However, despite research suggesting more negative outcomes associated with surface acting, the unique interactions EMDs have with the public, and the lack of flexibility in their ability to use deep acting methods, the employment of surface acting strategies may be the better-

suited alternative. To further support this notion, Hopp, Rohrmann, and Hodapp (2012) found that when there is a formal requirement for a specific display type to either suppress negative emotion, or express positive emotion, both have led to significant increases in surface acting while engaging in a hostile customer interaction.

Additionally, their study supports the notion that when an employee perceives an organizational requirement to suppress a negative emotion, they are more likely to engage in a surface acting strategy. Within their sample of participants, those that suppressed their emotions had overall lower levels of well-being. Therefore, employees, such as EMDs, may tend to use surface acting to ensure a match between individual emotional expressions with organizationally desired display rules (Hopp, Rohrmann, & Hodapp, 2012) even though it leads to poor outcomes. Research in a similar profession, paramedical officers, found that individuals use either strategy (Boyle, 2005). Given the stringency with which the EMDs' algorithmic scripts need to be followed, and the thought that employees may find it necessary to use surface acting strategies, it is hypothesized that EMDs will engage in surface acting and deep acting as a way to comply with their organizational display rules. While dispatchers may have less flexibility to use a deep acting strategy, the literature demonstrates that either strategy can be a viable option. This however, is important to quantitatively examine in this current study of EMDs/911 Dispatchers. Knowing the relationship between surface acting and deep acting and strain outcomes, the following relationships are also hypothesized.

Hypothesis 1a. EMDs will have significantly higher levels of deep acting compared to the general population as measured by the Emotional Labour Scale.

Hypothesis 1b. EMDs will have significantly higher levels of surface acting compared to the general population as measured by the Emotional Labour Scale.

Hypothesis 2a. Surface acting will have a positive relationship to negative physical health outcomes as measured by an index of reported physical symptoms.

Hypothesis 2b. Surface acting will have a positive relationship to burnout.

Hypothesis 3a. Deep acting will be related to fewer negative health outcomes as measured by an index of reported physical symptoms.

Hypothesis 3b. Deep acting will have a weaker relationship to burnout compared to surface acting.

Rumination

Although not new to the literature, recent research has begun to examine the important role rumination plays in the ability of employees to recover from work-related stress during their off-work time. This is referred to as work-related rumination (Hamesch, Cropley, & Lang, 2014). The original concept, dominated by the field of clinical and health psychology (Nolan-Hoeksma & Morrow, 1991), has sparked the interest of those researching the recovery process of individuals from a work-related standpoint.

Work-Related Rumination

Expanding from earlier conceptualizations of the term, work-related rumination focuses on “a thought or thoughts directed to issues relating to work, that is/are repetitive in nature” (Cropley & Zijlstra, 2011, p.491). Thoughts can be anything from thinking about current layoffs, to how to one can develop a solution to improve a work-related

task. While each example reflects a cognitive component, these two thoughts are different, and may yield differential consequences that will be further discussed. One may infer that occupations that are more emotionally or mentally rigorous may be associated with higher levels of work-related rumination, however, many factors may influence whether or not an individual will think about work once they are physically detached from their work. For instance, Cropley and Purvis (2003) found that teachers experiencing high strain at work (high demand, low control) reported a more difficult time not thinking about work in leisure time compared to their low strain (low-demand, high control) counterparts. Cropley, Dijk, and Stanley (2006) further supported the relationship between job strain and ruminative thinking in their findings with teachers. Teachers scoring high on job strain demonstrated a greater likelihood of ruminative thinking.

Research has also suggested that individuals working in stressful environments may experience what is known as “spill over” during times they are removed from work. Adams, Shakespeare-Finch, and Armstrong (2015) described the role of spillover in their sample of EMDs in two ways. In one way, the stress and trauma from one call could spillover into the workplace, and lead to negative morale. Additionally, spillover in this sample was found to occur within the home. Responses indicated that this occurred when individuals felt they lacked resources, which ultimately led to increased levels of stress, anxiety, and in some cases, insomnia. Given the nature of the EMD job, especially the job demand of emotional labor, and the requirement to engage in an emotional labor strategy, it can be suggested that those in this profession may engage in high levels of rumination both after a call, and following a shift; however, the type of rumination they

engage in is less clear. For instance, a participant in their study did report internal turmoil as a result of a challenging call in which the caller would not listen, and so instructions could not be properly relayed. Within this example, it is unknown as to whether this individual ruminated affectively, or attempted to problem-solve and develop solutions for improved communication with the caller (i.e., how to provide more clear instructions to a distraught caller).

Early notions and measures of work-related rumination suggested that all work-related thoughts outside of work time were harmful to the individual (Cropley & Zijlstra, 2011). However, Cropley, Michalianou, Pravettoni, and Millward (2011) conceptualized a three-factor model of work-related rumination including, Affective Rumination, Problem-solving Pondering, and Detachment. They suggest that there are noteworthy differences across ruminative states. While individual characteristics and job demands have been associated with work-related rumination, further research needs to examine the various types of ruminative thinking. Further exploration of this model needs to expand on the different strain outcomes associated with each construct as well as the potential for positive outcomes of rumination.

Affective Rumination.

Early research conceptualized affective rumination as pervasive and recurrent thoughts that have a negative impact in affective terms (Pravettoni, et al., 2007). As earlier described; rumination research is often concentrated on the emotional aspect or on feelings related to a problem (Nolen-Hoeksma, Wisco, & Lyubomirsky, 2008). Previous work has suggested the negative consequences of affective rumination include negative psychological health outcomes (Hamesch, Cropley, & Lang, 2014). In their research

with dental students, Hamesch, et al. (2014) found that thinking about work, from an affective rumination framework, led to poor psychological health outcomes, specifically, depression. This is of no surprise as previous research on repetitive thoughts has shown negative consequences, including depression, anxiety, and negative physical health outcomes (Watkins, 2008), as well as increased levels of loneliness in individuals deemed high on rumination (Zawadzki, Graham, & Gerin, 2013).

Problem-Solving Pondering.

Little attention has been paid to the more positive side of rumination. For example, an individual may have the ability to develop a solution to a problem at work, even when they are not physically at work. This type of thinking does not include the emotional component seen in affective rumination, but focuses on the mental exertion used to develop a solution to a work problem, or to evaluate work in search for improvements (Cropley & Zijlstra, 2011). It may be that people who engage in this type of rumination find their work-related issues interesting, thus impeding their ability to stop thinking about work.

For Querstret and Cropley (2012), the key delineation between affective rumination and problem-solving pondering was how each operated in the recovery process. In their study, the most prominent predictor of chronic work-fatigue and acute work-fatigue was affective rumination. This supports earlier findings by Cropley and Zijlstra (2011) that problem-solving pondering may be less harmful to recovery. According to Cropley and Zijlstra (2011), the difference between the two ruminative states is the emotional arousal component. It is posited that the psychological arousal within the affective state is what hinders the recovery process. In fact, problem-solving

pondering may indeed serve an adaptive function, and help to foster the relaxation process (Watkins, 2008). Unfortunately, for EMDs, the lack of flexibility in how they manage calls (i.e. algorithmic scripts, stringent work policies to ensure safety) may make it difficult to develop solutions to work-related issues; thus they may be less likely to engage in and benefit from this problem-solving style of ruminative thinking.

Furthermore, engaging in problem-solving pondering may yield little benefit in a profession with minimal room for flexibility and creative problem solving.

Detachment.

Contrary to rumination, detachment, more specifically psychological detachment, occurs when an individual disengages from work-related thoughts while away from work (Sonnetag & Bayer, 2005). While those considered low ruminators are more easily able to detach, Cropley and colleagues (Cropley & Millward, 2009; Cropley et al., 2011; Cropley & Zijlstra, 2011; Querstet & Cropley, 2012) distinguish between the two forms of rumination both conceptually and statistically. Unfortunately, for individuals to psychologically detach, more is necessary than simply time away from work, such as a purposeful attempt to eliminate work-related thoughts. Similar to problem-solving pondering, the ability to detach from work has shown positive outcomes, including; positive mood, lower levels of fatigue prior to sleep, and greater relief from burnout and stress (Etzion, Eden, & Lapidot, 1998; Sonnetag & Bayer, 2005).

Research by Fritz, Yankelevich, Zarubin, and Barger (2010) further supported the notion that psychological detachment serves as a means to replenish resources, thus resulting in more positive outcomes, namely lower emotional exhaustion and increased levels of life satisfaction. Despite research highlighting the positive outcomes of

detachment, a variety of factors may impact whether or not an individual may successfully or fully psychologically detach. In fact, both personality characteristics (Sonnentag & Fritz, 2007) and job characteristics have been found to play an important role in detachment. Unfortunately, the job characteristic of emotional labor is not one that can realistically be eliminated for 911 operators (Shuler, 2001) however; psychological detachment may function as a buffer and alleviate some of the strain outcomes. For example, in their study on teachers, Sonnentag and Krueger (2007) found that individuals with a high workload and high job involvement had a more difficult time psychologically detaching, even once physically removed from their work. In addition to the work characteristics, Hamesch, Cropley, and Lang (2014) explored the role of neuroticism as a moderator between work stressors and affective rumination in their sample of dental students. It was suggested that individuals high in neuroticism might experience more rumination and struggle with detachment, even when faced with lower stressor levels.

In its entirety, the literature on rumination and detachment highlight the outcome differences across each of the unique constructs. Affective rumination is regarded as the more detrimental of the rumination types, problem-solving rumination can be positive and engaging, and detachment highlights the most beneficial consequences. However, while there are different outcomes associated with each, it is important to continue this line of research in various job sectors, such as EMDs/911 Dispatchers. Extending from the current literature on rumination and detachment, and what is known about the EMD/911 Dispatcher work, the following relationships are hypothesized.

Hypothesis 4. Affective rumination will be positively related to negative strain outcomes.

Hypothesis 5. Problem-solving pondering will have a weaker relationship to strain outcomes compared to affective rumination.

Hypothesis 6. Detachment will be negatively related to strain outcomes.

Emotional Labor and Work-related Rumination

Work-related rumination, as it has been recently delineated, is in its early stages of research. Little is known about the antecedents of work-related rumination, aside from possible individual differences or job characteristics, such as jobs with high workload demands and few opportunities to exert control over one's work (Cropley & Purvis, 2003). Given the cognitive nature of rumination, regardless of type, the work demand of emotional labor may be a precursor to work-related rumination. Furthermore, research has suggested that the more one attempts to suppress a thought, the more they actually may think about the matter (Wegner, 1994). In the case of surface acting, an employee is often suppressing their true feelings. The frequent attempts to suppress true feelings, as opposed to changing inner feelings, as in deep acting, may contribute more to work-related rumination. However, as both surface acting and deep acting involve a cognitive process, both strategies could independently relate to work-related rumination. What is less clear is the relationship between surface acting and deep acting and each work-related rumination style.

With regard to the evidence about the process of surface acting, a hypothesis can be made that surface acting will have a negative relationship with problem-solving pondering. For instance, when a service employee engages in surface acting to deal with

a difficult customer, once the scenario is complete, the employee may not reflect and strategize what can be done different in a future encounter. So, the surface acting strategy does not necessarily provide for the opportunity to problem-solve once the interaction has passed. Subsequently, the suppression of thoughts may contribute to affective rumination. Alternatively, in deep acting, an individual is altering their inner state, and cognitively reappraising their situation. It is this process that may have a stronger relationship to problem-solving pondering. The relationship between deep acting and affective rumination is one that needs to be further explored. As a result of the above inferences about the relationship between emotional labor strategy (surface acting and deep acting) and work-related rumination (problem-solving pondering, affective rumination, and detachment), I will explore the following hypotheses. See Figure 1 for a visual representation of the proposed model.

Hypothesis 7a. Surface acting will have a positive relationship with affective rumination.

Hypothesis 7b. Surface acting will have a negative relationship with problem-solving pondering.

Hypothesis 7c. Surface acting will have a negative relationship with detachment.

Hypothesis 8a. Deep acting will have a positive relationship with affective rumination.

Hypothesis 8b. Deep acting will have a positive relationship with problem-solving pondering.

Hypothesis 8c. Deep acting will have a negative relationship with detachment.

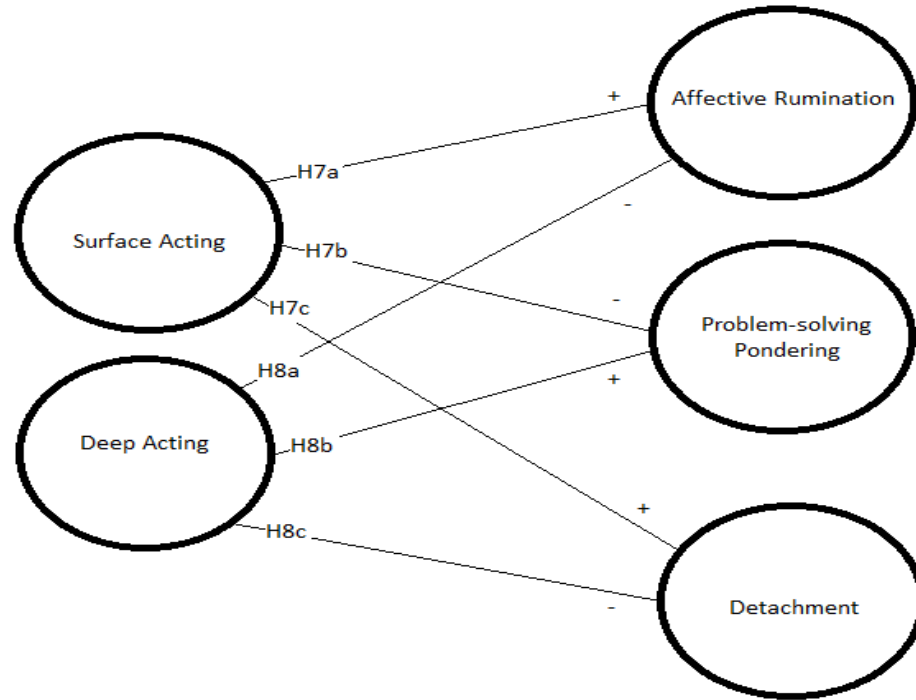


Figure 1: Summary of Hypotheses 7 and 8

EMDs face unique nuances in how they manage their emotional labor, such as relying on their voice, and often suppressing negative emotions. Thus, the main purpose of this study is to examine the impact of two main emotional labor strategies, surface and deep acting, and strain outcomes for a sample of dispatchers. The second aim of this study is to look at the impact rumination, specifically affective, problem-solving pondering, and the opposite, detachment, have on strain outcomes. To my knowledge, no study has examined the relationship between emotional labor strategy, rumination, and strain outcomes within the same study. By exploring which acting strategy and ruminative thinking approach has the strongest relationship to negative strain outcomes, steps can be taken to train EMDs on which emotional labor strategy to use, and ways to manage work-related rumination.

Method

Participants

Through the process of online searches, and contact with a former EMD in the Midwest, an emergency services professional organization was located. Based on the online information, and the membership criteria that aligned with EMD/911 Dispatcher literature, I contacted the organization. To recruit participants for participation, I first spoke with the Past-President and the Training Coordinator to explain the goal of my research. From that point, these internal officials notified organization members of the research I was conducting. Survey packages were then distributed to organizational members. A total of 113 participants responded to the question, “Are you currently an EMD/911 Dispatcher?” Of those that responded, 101 participants were current EMD/911 Dispatchers. The remaining 12 participants did not complete the remainder of the survey. Within the sample of 101 participants that were current EMD/911 Dispatchers, most analyses contained between 90 and 95 participants due to participant dropout and missing data during the course of the survey. Of the 380 surveys sent, 16 were duplicate e-mails, and 16 were no longer in use. A final 348 e-mails were successfully sent, and of those 103 completed the survey, for a response rate of 30 %. Question response rates ranged from 82 % for demographic information, 78 % for questions on work-related rumination, and 75.6 % for questions on emotional labor, burnout, and physical health symptoms. A majority of participants were members of a professional organization for midwestern emergency services communication personnel. Those that were not members of the organization were current EMD/911 Dispatchers employed in the Midwest. Respondents’ mean age was 47.14 ($SD = 12.72$), 55.1% of the participants have been in

their current position for 10 or more years, 64.3% work in a rural area, and 80.6% were women. Complete demographic characteristics can be found in Appendix A.

Measures

Demographics. Participants were asked to provide demographic information. Information related to the following was requested: participants' age, gender, ethnicity, service area, employment status (i.e. full-time or part-time), shift type (day shift, evening shift, over-night shift, rotating), and tenure in current organization. A question related to approximate average duration of call-time, and approximate percent of call-type (i.e. law enforcement, medical, fire, or non emergency) was additionally assessed to provide a more accurate picture of the nature of work this sample engages in.

Emotional Labor Strategy. The Emotional Labour Scale (ELS) revised from Brotheridge and Lee (2003) is a self-report measure designed to measure a variety of emotional labor components, including duration, intensity, variety, and acting strategy. The revised version (Brotheridge & Lee, 2006) includes 2 revised subscales – Faking Emotions (3 items), Deep Acting (3 items), and the newly added Hiding Feelings (3 items). Previous studies reported Cronbach's alpha for each subscale as .77 (Faking Emotions), .87 (Deep Acting) and .71 (Hiding Feelings). In the current study, the Cronbach's alpha coefficients were .74 (Faking Emotions), .70 (Deep Acting) and .80 (Hiding Feelings).

The revision of the scale was an attempt to broaden the scope of examining emotional labor by separating two subcomponents of surface acting - faking and hiding emotions. Lee and Brotheridge's (2011) study of daycare workers highlighted the psychometric properties of this delineation, and found the two concepts to be more

interrelated than deep acting, yet each of the three components highlighted a different relationship with various work background variables. Each question is rated on a five-point rating scale ranging from 1 (*Never*) to 5 (*Always*). Sample questions for each respective subscale include, “Show emotions that I don’t feel,” “Make an effort to actually feel the emotions that I need to display to others,” and “Resist expressing my true feelings.” Additionally, there is one question used to assess the duration of an interaction with a client. The question has been revised to reflect EMD interactions with callers, and is, “A typical interaction I have with a caller takes about (blank) minutes.”

Work-Related Rumination. The Work-Related Rumination Questionnaire (WRRQ) is a self-report measure designed to measure a three-factor model of perseverative thinking about work (Cropley & Zijlstra, 2011). The inventory asks self-report questions on a five-point Likert scale ranging from 1 (*Very Seldom/Rarely*) to 5 (*Very Often/Always*). The measure is comprised of three subscales – Affective Rumination, Problem-solving Pondering, and Detachment. Each subscale contains a total of five items. Previous research has supported the distinction of these three conceptualized factors in a confirmatory factor analysis (Cropley, Michalianou, Pravettoni, & Millward, 2012). Querstret and Cropley (2012) further expanded on the psychometric properties of this newly developed three-factor model, and reported Cronbach’s alpha values of .90 (Affective Rumination), .81 (Problem-solving Pondering), and .88 (Detachment). In the current study, the Cronbach’s alphas were .87 (Affective Rumination), .76 (Problem-solving Pondering), and .80 (Detachment).

Burnout. The Oldenburg Burnout Inventory (Demerouti, 1999) was used to assess burnout. The self-report inventory consists of 16 questions, and comprises two

distinct subscales, Disengagement (8 questions) and Exhaustion (8 questions). Items are rated on a four-point Likert scale ranging from 1 (*Strongly Disagree*) to 4 (*Strongly Agree*). Example items include, “I always find new and interesting aspects in my work” and “During my work, I often feel emotionally drained.” Halbesleben and Demerouti (2005) further expanded on the psychometric properties of the English translation of the measure and reported Cronbach’s alpha values ranging from .74 - .79 (Exhaustion) and .76 - .83 (Disengagement) for a sample of working adults. In the current study, Cronbach’s alpha scores were .83 (Exhaustion) and .74 (Disengagement).

Physical Symptoms Inventory. The Physical Symptoms Inventory (Spector & Jex, 1997) is a self-report measure designed to assess the physical symptoms that an individual would be aware of experiencing, such as backaches or fatigue. For purposes of this study, the 12-item version was used. Individuals were asked to rate the frequency of each symptom on a five-point Likert scale ranging from 1 (*Not at All*) to 5 (*Every day*). For this study, the Cronbach’s alpha was .87.

Job Satisfaction. To assess general job satisfaction, one question was used, “All in all, I am satisfied with my job.” This question is a self-report of job satisfaction, and is rated on a five-point Likert scale, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). This is a commonly used single item measure of job satisfaction. The psychometric appropriateness of this single-item measure was established by Wanous, Reichers and Hudy (1997).

Procedure

Data for this research were collected in the Spring of 2016 in the midwestern United States. Members of the professional organization discussed earlier received an

email (Appendix B) regarding the nature of the survey and the research. The email contained a link to the survey questions which were distributed through the Qualtrics survey platform. Interested parties accessed the survey via the survey link, and were directed to the survey questions. A participant consent form was embedded within the start of the on-line survey. A power analysis indicated that for an effect size of .30, a minimum of 88 respondents were required.

Results

Preliminary Analyses

To begin, I reverse-scored item responses as required. I then calculated scale composites by averaging item responses across all items on the scale or subscale. Finally, I assessed scale and subscale reliabilities by calculating Cronbach's alpha for each measure. These values are found in Table 1. All scales had acceptable reliabilities that were comparable to those demonstrated in previous literature and by original authors.

Table 1

Reliability Statistics for Variables

Scale	Cronbach's Alpha	N of Items
WRRQ	---	15
Affective Rumination	.87	5
Problem-solving	.76	5
Pondering		
Detachment	.80	5
Oldenburg Burnout Inventory	.86	16
Disengagement	.74	8
Exhaustion	.83	8
Physical Symptoms Inventory	.87	12
Emotional Labour Scale	.89	17
Surface Acting	.84	6
Hiding Feelings	.80	3
Faking Emotions	.74	3
Deep Acting	.70	3
Frequency of Emotions	.84	3
Intensity of Emotions	.85	2
Variety of Emotions	.72	3

Note. WRRQ = Work Related Rumination Questionnaire

Table 2 shows the percent of types of calls this sample typically responds to.

Results indicate that within this sample, most calls fall into either a law enforcement call ($M = 32.2\%$, $SD = 20.3$), or Non-emergency calls ($M = 35.4\%$, $SD = 22.3$). Additionally, the duration of most calls (67%) was at or below 5 minutes.

Table 2

Description of Call Interactions

	Average %	Range in %	SD
Type of Call			
Law Enforcement Call	32.2%	0-85%	20.3
Medical Call	24.8%	3-100%	13.9
Fire Call	8.0%	0-36%	6.9
Non-Emergency Call	35.4%	0-80%	22.3

Table 3 shows the descriptive statistics for each measure. The means for Surface acting and Deep acting suggest moderate levels for the use of each acting strategy. Within the Surface acting scale, Hiding Feelings had a higher mean score compared to the Faking Emotions subscale. Mean scores for each rumination construct indicate a higher endorsement for this sample's ability to detach from their work after a shift. However, the mean scores of Affective Rumination and Problem-solving Pondering indicate above average tendencies to ruminate, in addition to detach.

Within strain outcomes, the physical symptoms mean indicated low levels of negative physical health symptoms. Burnout scores, however, suggested that within this sample, participants are experiencing moderate levels of overall burnout, and disengagement and exhaustion. In terms of job satisfaction, the mean was relatively high. Thus, despite the use of emotional labor within this sample, respondents were generally satisfied with their job, experienced low negative health outcomes, and experienced moderate levels of burnout.

Table 3.
Descriptive Statistics for All Study Variables

Scale	Mean (Total)	Possible Range	SD	N
Affective Rumination	2.63	1-5	.83	95
Problem-solving Pondering	2.78	1-5	.69	95
Detachment	3.22	1-5	.78	95
Oldenburg Burnout Inventory	2.33	1-4	.44	92
Disengagement	2.30	1-4	.45	92
Exhaustion	2.35	1-4	.51	92
Physical Symptoms Inventory	1.88	1-5	.65	91
Surface Acting	2.79	1-5	.80	91

Deep Acting	2.65	1-5	.75	89
Hiding Feelings	3.17	1-5	.90	90
Faking Emotions	2.44	1-5	.86	91
Frequency of Emotions	3.25	1-5	.84	90
Intensity of Emotions	2.50	1-5	.73	91
Variety of Emotions	2.74	1-5	.71	91
Job Satisfaction	3.97	1-5	1.13	92

Tests of Hypotheses

Hypothesis 1a predicted that EMDs would have significantly higher levels of deep acting compared to the general population as measured by the Emotional Labour Scale. Normative data could not be obtained for this relatively newly revised measure. However, compared to samples obtained by the original measure's author, EMDs did have higher mean levels of deep acting compared to a sample of Canadian physicians, but lower levels of deep acting compared to the sample of child care workers (Lee & Brotheridge, 2011; Lee, Lovell, & Brotheridge, 2010;). Refer to Table 4. Independent-samples t-tests were conducted to compare the deep acting scores between the current sample, the Canadian physicians, and the child care workers. There was no significant difference in scores for EMDs ($M = 2.65$, $SD = .75$) and Canadian physicians, $M = 2.49$, $SD = 1.04$; $t(365) = 1.58$, $p = .114$ (two-tailed), or EMDs and child care workers, $M = 2.85$, $SD = .89$; $t(255) = -1.9$, $p = .058$ (two-tailed.).

Hypothesis 1b predicted that EMDs would have significantly higher levels of surface acting compared to the general population as measured by the Emotional Labour Scale. In comparison to the previously mentioned samples, this sample of EMDs had higher mean levels of both faking and hiding emotions. Independent-samples t-tests were conducted to compare the hiding feelings and faking emotions scores between each sample. There were significant differences in scores for EMDs ($M = 2.44$, $SD = .86$) and

the Canadian physicians, $M = 1.91$, $SD = .83$; $t(367) = 5.146$, $p < .0001$ (two-tailed) on the Faking Emotions subscale, and for EMDs ($M = 3.17$, $SD = .9$) and the Canadian physicians, $M = 2.86$, $SD = .73$; $t(366) = 2.967$, $p = .003$ (two-tailed) on the Hiding Feelings subscale. There were also significant differences in scores for EMDs ($M = 2.44$, $SD = .86$) and the child care workers, $M = 2.1$, $SD = .68$; $t(257) = 3.26$, $p = .001$ (two-tailed) on the Faking Emotions subscale, and for EMDs ($M = 3.17$, $SD = .9$), and the child care workers, $M = 2.46$, $SD = .76$; $t(256) = 6.366$, $p < .0001$ (two-tailed) on the Hiding Feelings subscale. Comparisons between these samples highlights differences in emotional labor across various professional sectors, and indicates that emotional labor, whether surface or deep acting is typically higher in the work of EMDs; however, only significantly higher for surface acting.

Table 4

Comparison of Means and Standard Deviations Across Samples

	Current Sample		Sample of Canadian Physicians		Sample of Child Care Workers	
	M	SD	M	SD	M	SD
Emotional Labor						
Deep acting	2.65	.75	2.49	1.04	2.85	.89
Faking	2.44	.86	1.91	.83	2.10	.68
Hiding	3.17	.90	2.86	.73	2.46	.76

Notes. Current Sample $n = 89$ for Deep acting, $n = 91$ for Faking, and $n = 90$ for Hiding; Canadian Physicians $n = 278$, Child Care Workers $n = 168$.

Correlations

Preliminary analyses noted no correlations between participant demographics and strain outcomes (i.e. burnout, physical symptoms, job satisfaction). Thus, I proceeded to evaluate Hypotheses 2a through 8c with correlations.

Hypothesis 2a predicted that Surface acting would be positively correlated to negative physical health outcomes, and this was supported. There was a strong, positive correlation between the two variables, $r = .42, n = 91, p < .01$. Furthermore, the Surface acting subscales of Hiding Feelings, $r = .37, n = 90, p < .01$, and Faking Emotions, $r = .37, n = 91, p < .01$ were also positively correlated with physical symptoms. Individuals who engaged in more surface acting experienced more physical symptoms. Table 5 shows the correlation matrix between acting strategy, and average score on the Physical Symptoms Inventory.

Table 5
Correlation Matrix of Acting Strategy and Physical Symptoms Inventory

	PSI	N
Surface Acting (composite)	.42**	91
Hiding Feelings (subscale)	.37**	90
Faking Emotions (subscale)	.37**	91
Deep Acting	.118	89

** $p < .01$

Hypothesis 2b predicted that surface acting would be positively related to burnout. This hypothesis was fully supported in that Surface acting was positively correlated with Total Burnout ($r = .47, n = 91, p < .01$), and with the Exhaustion ($r = .51, n = 91, p < .01$) and Disengagement ($r = .34, n = 91, p < .01$) subscales of burnout. Individuals who engaged in more surface acting had higher levels of burnout. Both the Hiding Feelings and Faking Emotions subscales were also positively correlated with Burnout. There were generally stronger relationships found for Hiding Emotions. The complete correlation matrix for surface acting, the surface acting subscales, and burnout can be seen in Table 6.

Table 6
Correlation Matrix for Acting Strategy and Burnout

Measure	1	2	3	4	5	6
1. OBI						
2. EXH	.923**					
3. DIS	.899**	.662**				
4. SA	.472**	.51**	.339**			
5. HID	.444**	.495**	.302**	.902**		
6. FAK	.395**	.414**	.301**	.891**	.602**	
7. DA	.119	.168	.041	.367**	.284**	.375**

Note: All Correlations are significant at the .01 level (2-tailed).

Hypothesis 3a predicted that deep acting would be related to fewer negative health outcomes. This hypothesis was not supported. Deep acting was not significantly correlated to physical health symptoms, $r = .12$, $n = 89$, $p = .27$. Refer to Table 5.

Hypothesis 3b predicted that deep acting would have a weaker relationship to burnout compared to surface acting. Deep acting was not significantly correlated to burnout ($r = .12$, $n = 89$, $p = .27$) or either burnout subscale ($r = .04$ for Disengagement, $r = .17$ for Exhaustion). See Table 6. To test whether this relationship was weaker than the relationship between surface acting and burnout, I conducted a test of the differences between two dependent correlations using Fisher's r-to-z transformations and using software developed by Lee and Preacher (2013). This test supported Hypothesis 3b. The relationship between deep acting and burnout was significantly weaker than the relationship between surface acting and burnout ($z = 2.496$, $p = .006$).

Hypothesis 4 predicted that the affective rumination style would be positively related to strain outcomes. Support for this hypothesis was provided in that Affective Rumination was positively related to Total Burnout ($r = .55$, $n = 92$, $p < .01$), Exhaustion ($r = .62$, $n = 92$, $p < .01$), Disengagement ($r = .37$, $n = 92$, $p < .01$), and Physical Health Symptoms ($r = .62$, $n = 91$, $p < .01$). Furthermore, there was a strong, negative

correlation between Affective Rumination and Job Satisfaction, $r = -.31$, $n = 92$, $p < .01$.

Thus, individuals who engage in affective rumination are more burnt out, less healthy, and less satisfied with their job.

Hypothesis 5 predicted that problem-solving pondering would have a weaker relationship to strain outcomes than affective rumination. Results indicated Problem-solving Pondering was not significantly correlated with Total Burnout ($r = -.013$, $n = 92$), Disengagement ($r = -.15$, $n = 92$), Exhaustion ($r = .109$, $n = 92$), Physical Health Symptoms ($r = .17$, $n = 91$), or Job Satisfaction ($r = .03$, $n = 92$). To test whether these relationships were weaker than the relationships between Affective Rumination and strain outcomes, I tested the differences between two dependent correlations using Fisher's r -to- z transformations (Lee & Preacher; 2013). The relationship between Problem-solving Pondering and each strain outcome was significantly weaker than the relationship between Affective Rumination and Physical Health Symptoms ($z = -4.73$, $p < .001$), Total Burnout ($z = -5.586$, $p < .001$), Exhaustion ($z = -5.586$, $p < .001$), Disengagement ($z = -4.87$, $p < .001$), and Job Satisfaction ($z = 3.112$, $p < .001$). This test supported the hypothesis.

Hypothesis 6 predicted that Detachment would be negatively related to strain outcomes. Detachment was negatively correlated to Total Burnout ($r = -.32$, $n = 92$, $p < .01$), Exhaustion ($r = -.43$, $n = 92$, $p < .01$), Disengagement ($r = -.12$, $n = 92$, $p = .24$), and Physical Health Symptoms ($r = -.39$, $n = 91$, $p < .01$). There was a strong, positive correlation between Detachment and Job Satisfaction, $r = .24$, $n = 92$, $p < .05$. As there was a non-significant relationship between Detachment and Disengagement the

hypothesis was partially supported. Overall, the more one is able to detach following their shift, the less likely they are to experience strain.

Table 7
Correlation Matrix of Rumination Type and Outcome Variables

Scale	OBI	EXH	DIS	PSI	JOB_SAT
Affective Ruminations	.548**	.615**	.369**	.622**	-.314**
Problem-solving Pondering	-.013	.109	-.151	.170	.025
Detachment	-.317**	-.434**	-.124	-.393**	.242*

** $p < .01$, * $p < .05$

Table 8 shows a complete correlation matrix for Hypothesis 7a – 8c. The following hypotheses are focused on the relationship between acting strategy and rumination type.

Hypothesis 7a predicted that surface acting would be positively related to affective rumination. This hypothesis was supported as there was a strong, positive correlation between the two variables, $r = .44$, $n = 91$, $p < .01$. There were also positive correlations between affective rumination and both surface acting subscales. Individuals who engage in high levels of surface acting are more likely to also engage in affective rumination. Table 8 shows a complete breakdown of the relationship between surface acting, and each surface acting subscale and affective rumination.

Hypothesis 7b predicted that surface acting would have a negative relationship with problem-solving pondering. This hypothesis was not supported. There was a non-significant relationship between all types of surface acting and problem-solving pondering.

Hypothesis 7c predicted that surface acting would have a negative relationship with detachment. There was not a significant relationship between surface acting and detachment, $r = -.20$, $n = 91$, $p = .05$. However, an examination of the Surface acting subscales revealed Faking Emotions was negatively related to Detachment, $r = -.22$, $n = 91$, $p < .05$, with high levels of Faking Emotions associated with lower levels of detachment. This provided partial support for the hypothesis.

Hypothesis 8a predicted that deep acting would have a positive relationship with affective rumination. There was no significant relationship between the two variables, $r = .11$, $n = 89$; thus, this hypothesis was not supported.

Hypothesis 8b predicted that deep acting would have a positive relationship with problem-solving pondering. There was no significant correlation between the two variables, $r = .12$, $n = 89$, thus, this hypothesis was not supported.

Hypothesis 8c predicted that deep acting would have a negative relationship with Detachment. There was not a significant relationship between the two variables, $r = -.07$, $n = 89$, thus, this hypothesis was not supported.

Table 8

Correlation Matrix for Acting Strategy and Rumination

Measure	AR	PSP	DET
SA	.440**	.107	-.203
HID	.365**	.107	-.126
FAK	.395**	.107	-.207*
DA	.111	.120	-.069

* $p < .05$, ** $p < .01$

Discussion

The main purpose of this study was to expand on the literature on emotional labor within a specific profession, EMDs/911 Dispatchers. Most research within this profession is qualitative in nature, and does not address the unique emotional labor components within this profession. An additional purpose was to explore the relationship between rumination and strain outcomes within this specific sample. It was hypothesized that EMDs/911 Dispatchers would have higher scores on the revised Emotional Labour Scale compared to the general public. Comparisons were unable to be made with the general public, due to lack of normative data, but comparisons were drawn between dispatchers and other samples using the newly revised Brotheridge and Lee Scale (Lee & Brotheridge, 2011; Lee, Lovell, & Brotheridge, 2010). The current sample does engage in higher levels of both facets of surface acting, and similar levels of deep acting compared to the Canadian Physicians sample, and the Child Care Workers sample. Knowing the negative outcomes associated with emotional labor, it is essential that researchers continue to examine the drivers of emotional labor strategies and the mechanisms behind them.

Acting Strategy and Strain Outcomes

Consistent with previous research regarding emotional labor strategies, surface acting has a significantly stronger impact on physical health symptoms and burnout than deep acting. Specifically, there was a strong correlation between surface acting and exhaustion, similar to findings in a sample of Emergency Medical Service professionals (Blau, Bentley, & Eggerichs-Purcell, 2012). These findings may be explained by the taxing nature of EMD work. Through the process of faking or suppressing emotions during their shift, EMDs may have overused their resources during a day of work. The

Conservation of Resources Model (Hobfoll, 1989) can be used to explain how EMDs expend their resources during call interactions when they engage in surface or deep acting. This model has been applied to emotional labor work, and has provided support that surface acting does deplete one's emotional resources more so than deep acting (Brotheridge & Lee, 2002). A depletion of these resources necessary to recover from the emotionally taxing interactions with callers can further contribute to exhaustion, disengagement, and depersonalization (Brotheridge & Lee, 2002).

Further support can be found in the stronger correlations between hiding emotions and burnout. Research has attested to the relationship between hiding negative emotions and emotional exhaustion, and that the suppression of negative emotions is more detrimental than the positive display of faking emotions (Brotheridge & Grandey, 2002). In fact, the suppression of anger in a sample of female undergraduates was found to be costly to immune system functioning (Gross & Levenson, 1997). So, while the suppression of emotion is required within the job, hiding of negative emotions reflective of this work may have far-reaching and negative consequences. Contrastingly, deep acting was not correlated with physical health symptoms. Deep acting was not related to burnout, and had lower mean scores compared to surface acting. This finding is consistent with the literature in that overall, surface acting is related to more strain outcomes compared to deep acting, and that within this profession, both strategies are used to manage emotions on the job though deep acting is used less.

The Relationship of Work-Related Rumination and Strain Outcomes

The most compelling contribution of this research was an examination of the outcomes of work-related rumination strategies and of the relationship between work-

related rumination strategies and emotional labor strategies. Affective rumination was more positively and strongly correlated to strain outcomes than problem-solving pondering or detachment. Thus, affective rumination appears to be the most detrimental of rumination styles. Previous research has drawn a similar conclusion in that high affective ruminators make unhealthier eating choices following work (Cropley, Michalianou, Pravettoni, & Millward, 2012), and those that ruminate experience more negative health outcomes, and higher levels of depression and anxiety (Watkins, 2008). Although not hypothesized in the current study, it is noteworthy that despite the nature of this work, higher mean scores were reported for detachment and problem-solving pondering, than for affective rumination. Given that affective rumination is the most problematic style, this suggests that dispatchers tend to rely on the more effective rumination styles. As this sample of EMDs was very tenured in their roles, it may be that these individuals have already adapted strategies to detach themselves from their work. An interesting future line of research should examine whether there are differences in rumination across employees new to the position and profession, compared to those with years of experience.

Consistent with the hypothesis, problem-solving did have a weaker relationship to strain outcomes compared to affective rumination. This finding provides further support that problem-solving pondering is not as problematic compared to affective rumination. This is especially important because in this particular sample, problem-solving pondering levels were higher than affective rumination. Despite the minimal opportunity for flexibility and problem-solving within the profession, individuals are finding ways to problem-solve about work-related issues. What is unknown is the type of work-related

issues EMDs are problem-solving about. It may be that the problem-solving is not related to the nature of the caller interactions with the public in emergency situation, but with the process, with interactions with supervisors and police officers, or with organizational policies.

The Relationship Between Work-Related Rumination and Acting Strategy

I explored the relationship between rumination and acting strategy in the final set of hypotheses. This research is the first of its kind to explore these relationships. There were positive relationships between surface acting and both of its subcomponents with affective rumination. The suppression of emotion, a subcomponent of surface acting, has been shown to increase thoughts surrounding the matter one is attempting to suppress (Wegner, 1994). Based on this line of research, I hypothesized that as EMDs suppress their negative emotions (i.e. worry, anger, fear), they would be more likely to ruminate about the events of a call. It may be that surface acting, specifically suppression of emotion, leads to many negative outcomes through affective rumination. In other words, affective rumination may act as a mediator between emotion suppression and strain. Given the relatively small sample size here, it was impractical to test this in the current study.

Practical Implications and Future Research

The current literature on EMDs/911 Dispatchers, compared to professions working with the same populations (i.e. Emergency medical technicians, police officers), is relatively scarce. Furthermore, research on emotional suppression as a strategy is uncommon. More specifically, the plethora of studies examining emotional labor tends to focus on the faking of positive emotions. However, within certain professions, a

suppression of emotions is more appropriate. This study further highlights the unique differences between faking emotions and hiding emotions. Not only are there mean score differences between the two in that hiding emotions is higher, but the moderate, negative relationship between faking and detachment suggests that conceptually and statistically these are two distinct facets of surface acting; each worthy of independent examination. This shows additional support for the delineation of faking and hiding emotions, as they have different relationships with various strain outcomes.

There are many future directions this research can take, as the expansion and deeper understanding of both emotional labor and rumination are concurrently occurring. For instance, as people in this profession engage in both acting strategies, the reasons to employ one strategy over the other should be explored. Furthermore, certification programs and training programs for EMDs are more often focused on the technical aspects of the job, such as Emergency Telecommunicator Certification that focuses on roles, technologies, call and stress management, and classification of calls (International Academies of Emergency Dispatch, 2016). However, as emotional labor is an important component of this work, opportunities to train new staff on strategies to manage their emotions, and train them on ways to reduce rumination to increase the likelihood of detachment are imperative.

Scarce in the literature on emotional labor is what is referred to as emotional authenticity (Salmela, 2005) or the genuine and spontaneous expression of emotion. The line between faking of emotions, through either surface or deep acting, and authentic emotions is unclear. How can we clearly understand and know whether an emotion displayed is a facsimile or genuine? This piece is missing, and needs to be explored.

More explicitly, it may be that there is a “type” of person that is better suited towards the EMD profession, or professions with high emotional labor in general. Individuals more successful in these roles may be more genuine in their client reactions, or may be more emotionally neutral and less emotionally labile.

Expanding on the aforementioned notion of differences, individual differences should be explored. For instance, individuals with high emotional competence (i.e. emotional intelligence) may be better at emotional labor. Giardini & Frese (2006) found that most emotionally competent individuals were not negatively impacted by emotional dissonance while those low in emotional competence experienced more negative outcomes when emotional dissonance was high. Bechtold, Rohrmann, De Pater, and Beersma (2011) explored the role of emotional recognition in the emotional labor process. A summary of their findings indicated emotion recognition was viewed as a personal resource that could buffer the negative effect surface acting has on well-being and work engagement. They found that the ability to recognize emotions in another positively impacted work engagement, regardless of strategy used. So, individuals that are more emotionally intelligent, may not be as negatively impacted by emotional labor – either deep or surface acting. Scott and Barnes (2011) in their study of bus drivers, also focused on individual differences and their role in the emotional labor process. Results of their study showed differences within and between individuals. For example, an individual may use surface acting for one interaction, but deep acting at another time. This shows the dynamic nature of surface acting and deep acting, compared to the static perspective explored in most studies.

Lastly, this current research has shown that despite the nature of the work, EMDs are generally satisfied with their work. Previous research has shown that not all outcomes associated with EMD work are negative. Research within this profession and professions whose work deals with traumatic scenarios do experience job satisfaction (Holt & Blevin, 2011), find more meaning in their work (Britt, Adler, & Bartone, 2001), and can experience post-traumatic growth (Arnold, Calhoun, Tedeschi, & Cann, 2005; Shakespeare-Finch, Rees, & Armstrong, 2015). More research on the positive outcomes of this type of work, and the mechanism behind these positive outcomes should be conducted.

Limitations

The most noteworthy limitation within this study is within the design itself. As a cross-sectional design, the cause of the relationships cannot be determined. Additionally, as these were all self-report measures, common method variance issues may occur that are a threat to internal validity. The sample size of approximately 89 to 95 per survey question reached the minimum requirement for an adequate effect size of .3. Although the response rate within the survey was relatively high, a larger sample of EMD/911 Dispatchers could produce a larger effect size, thus making the results more meaningful.

Further limitations were related to the sample of participants themselves. For instance, this sample lacked diversity in terms of gender, ethnicity, tenure, and work setting (i.e. rural, urban, suburban), and conclusions cannot be generalized across other samples. Sampling in one geographical location, thus is a direct threat to external validity. However, it is important to note that while the results cannot be generalized, this sample was demographically (ethnically) representative of the region. Additionally,

within the sample itself, over 50% of the participants had been in their current position for over 10 years. This may be of no concern; however, literature does support a positive relationship between tenure and job satisfaction (Bedeian, Ferris, & Kacmar, 1992), it is unknown whether this also applies to EMDs.

The last set of limitations focus on the region of this sample, and the nature of EMD/911 Dispatcher work within this region. A majority of the sample was recruited from the same professional organization, 64.3% worked in a rural area. Compared to an urban setting, the stressors faced in a rural setting may be quite different and unique. Payne, Berg, and Sun (2004) examined the types of calls police responded to in rural community in Pennsylvania. The content analysis identified the following types of calls frequently responded to: concerns of animals (i.e. loose, lost, or dead), cases involving intoxicated individuals, “dysfunction” in interpersonal relationships (i.e. family violence or problems with neighbors), or disorder of peace (i.e. harassment, traffic offenses, or vandalism). While the nature of these calls may not be as violent compared to those in urban areas (Payne, Berg, & Sun, 2004), violent crimes still exist in rural areas, and those in rural areas handling these calls often do not have the specialized teams or resources to manage these calls. Additionally, within their study, rural police were more likely to respond to nuisance calls or calls that required a problem be solved. There is also the conflict of familiarity with the victim, and often the perpetrator (Donnermeyer, DeKeseredy, Dragiewicz, 2012). Knowing those involved in the call can add a deeper level of complexity to the interaction that may contribute to which acting strategy an EMD uses, however, to this author’s knowledge, this is yet to be explored.

The stressors identified as more unique to rural settings highlights another limitation in that there are many stressors associated with this type of work. Emotional labor and rumination, while significant, do not even begin to encompass the many stressors unique to this sample. This makes it difficult to tease apart what variable is truly related to rumination, is it the emotional labor, or is it another stressor related to this profession, such as stressors related to the organizational structure, policy, relationships with colleagues, or the communications systems?

Conclusions

While this research is not the first of its kind to examine emotional labor and work-related rumination, it is an expansion of the literature, within a unique population. EMDS/911 dispatchers do experience high levels of emotional labor, and engage in acting strategies. Moreover, those who use surface acting and affectively ruminate do experience more strain outcomes. Therefore, a better understanding of the relationship between surface acting, specifically hiding feelings and affective rumination should be explored. Additional quantitative research within this profession should also examine additional stressors that contribute to affective rumination. Lastly, expanding on the emotional labor literature, more emphasis needs to be focused on understanding emotional authenticity in the workplace.

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Appendices

Appendix A:

Demographic Characteristics of Sample

	N	%
EMD		
Yes	101	82.1%
No	12	9.8%
No Response	10	8.1%
Employment Status		
Full-time	92	94.8%
Part-time	3	3.1%
Other	2	2.1%
Shift Type		
Day	53	54.6%
Evening	14	14.4%
Overnight	30	30.9%
Time in Current Position		
Less than 1 year	3	3.1%
1-3 years	13	13.3%
3-5 years	4	4.1%
5-10 years	24	24.5%
10 or more years	54	55.1%
Service Area		
Urban	13	13.3%
Suburban	9	9.2%

Rural	63	64.3%
Other	13	13.3%
Gender		
Male	19	19.4%
Female	79	80.6%
Ethnicity		
White/Caucasian	93	94.9%
Hispanic/Latino	1	1.0%
Black/African American	1	1.0%
Native American/American Indian	1	1.0%
Asian/Pacific Islander	1	1.0%
Other	1	1.0%
Age		
18-20	0	0%
21-30	9	8.2%
31-40	23	24.8%
41-50	22	22.7%
51-60	25	25.7%
Older than 60	18	18.6%

Appendix B: Recruitment Script

Hello,

My name is Jessica Deselms, and I am a 2nd year graduate student at Minnesota State University, Mankato. I am inviting you to take part in a research project I am conducting for my thesis. I have connected with the Past-President of NESCA, and with the NESCA Training Coordinator. They have provided me your member e-mail contact information for the sole purpose of conducting this research project. We will not contact you for any other purpose than this study.

I have an interest in the topic of stress and occupational health, and I am particularly interested in the unique workplace experiences faced by 911/Emergency Medical Dispatchers. I am also interested in how employees use their off-work time to help them recuperate from daily workplace stress.

Qualified individuals for the survey are current Emergency Medical Dispatchers/ 911 Dispatchers. If you are interested in taking part in this research project, you will anonymously take an online survey. This survey is optional, and will take approximately 10 – 15 minutes to complete.

The link to the survey can be found below.

Qualified individuals that complete the survey will be entered in a random drawing for a \$50 gift card.

Please let me know if you have any questions. Thank you for your time!

{link inserted here}

MSU IRB # 868101

Appendix C: Emotional Labor

A typical interaction I have with a caller takes about _____ minutes.

Please read each statement and indicate on an average day at work, how frequently do you:

1. Display specific emotions required by your job.
2. Adopt certain emotions as part of your job
3. Express intense emotions.
4. Express particular emotions needed for your job.
5. Show some strong emotions.
6. Display many different kinds of emotions
7. Make an effort to actually feel the emotions that I need to display to others.
8. Show emotions that I don't feel.
9. Conceal what I'm feeling.
10. Try to actually experience the emotions that I must show.
11. Express many different emotions when dealing with people.
12. Show emotions that are expected rather than what I feel.
13. Really try to feel the emotions I have to show as part of my job.
14. Display many different emotions when interacting with others.
15. Pretend to have emotions that I don't really have
16. Resist expressing my true feelings.
17. Hide my true feelings about a situation.

Appendix D: Work-Related Rumination.

The following questions relate to your time after work. Please indicate the number that applies to you.

1. Do you become tense when you think about work related issues in your free time?
2. I find solutions to work-related problems in my free time.
3. I make myself switch off from work as soon as I leave.
4. In my free time I find myself reevaluating something I have done at work.
5. Are you troubled by work-related issues when not at work?
6. Do you feel unable to switch off from work?
7. Do you become fatigued by thinking about work-related issues during your free time?
8. After work I tend to think of how I can improve my work-related performance.
9. Are you irritated by work issues when not at work?
10. I am able to stop thinking about work-related issues in my free time.
11. I find thinking about work during my free time helps me to be creative.
12. Do you leave work issues behind when you leave work?
13. Do you think about tasks that need to be done at work the next day?
14. Do you find it easy to unwind after work?
15. Are you annoyed by thinking about work-related issues when not at work?

Appendix E: Burnout

Below you will find a series of statements with which you may agree or disagree. Please indicate the degree of your agreement.

1. I always find new and interesting aspects in my work.
2. There are days when I feel tired before I arrive at work
3. It happens more and more that I talk about my work in a negative way.
4. After work, I tend to need more time than in the past in order to relax and feel better.
5. I can tolerate the pressure of my work very well.
6. Lately, I tend to think less at work and do my job almost mechanically.
7. I find my work to be a positive challenge.
8. During my work, I often feel emotional drained.
9. Over time, one can become disconnected from this type of work.
10. After working, I have enough energy for my leisure activities.
11. Sometimes I feel sickened by my work tasks.
12. After my work, I usually feel worn out and weary.
13. This is the only type of work that I can imagine myself doing.
14. Usually, I can manage the amount of my work well.
15. I feel more and more engaged in my work.
16. When I work, I usually feel energized.

Appendix F: Physical Symptoms

Please read each statement, and indicate over the past month, how often have you experienced each of the following symptoms?

1. An upset stomach or nausea
2. A backache
3. Trouble sleeping
4. Headache
5. Acid ingestion or heartburn
6. Eye strain
7. Diarrhea
8. Stomach cramps (Not menstrual)
9. Constipation
10. Ringing in the ears
11. Loss of appetite
12. Dizziness
13. Tiredness or fatigue