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Feeling the Heat: Developing a Psychological Needs-based Theory of Performance Pressure at Work

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FEELING THE HEAT: DEVELOPING A PSYCHOLOGICAL NEEDS-BASED THEORY OF
PERFORMANCE PRESSURE AT WORK

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
In partial fulfillment of the
Requirements for the degree of
Doctor of Philosophy

in

The Department of Management

by
Jacob Henry Smith
B.B.A., University of Wisconsin—Whitewater, 2005
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ABSTRACT

The concept of performance pressure has been prevalent in management research for decades. Ranging from the impact of time constraints on productivity to the influence of social evaluation on the performance of individuals and teams, pressure is a ubiquitous phenomenon that has generated significant interest in the social sciences. Despite its substantive footprint within management research, there is a lack of agreement among scholars regarding what performance pressure actually is (i.e., an internal or external phenomenon). Further, research on the subject has proliferated without a coherent theoretical understanding of *why* and *how* performance pressure arises as well as *why* and *how* it affects behavior in the workplace. These theoretical inadequacies limit our ability to more fully understand a pervasive phenomenon that affects the productivity and well-being of people across work domains. Consequently, in this dissertation, I draw from theories of motivation and cognition to articulate a theory of performance pressure that contends that the interaction between goal importance and outcome uncertainty explains *why* and *how* this pressure arises, whereby goal importance is determined by the perceived capacity of the goal to satisfy or frustrate core psychological needs. Aligned with this conceptualization, I define performance pressure as a perceived tension reflecting an increase in the importance and/or uncertainty of goal accomplishment. As a conceptual connecting point between the emergence and behavioral impact of performance pressure, I apply the core principles of attentional control theory to explain *why* and *how* this pressure affects behavior through the cognitive processes induced by the anxiety of uncertainty surrounding important goal accomplishment. To assess the legitimacy of my theoretical expectations regarding the nature and emergence of the phenomenon, I utilize qualitative interview data to study the lived experience of performance pressure by professionals across a range of vocations – fire services, police services, nursing, administration, and physical training. Through this investigation, the data broadly support my theoretical expectations regarding the nature and emergence of performance pressure and provides a foundation off which future pressure research may be based.

CHAPTER I. THE DISSERTATION TOPIC

Organizational effectiveness is dependent on the successful performance of a committed workforce (Klein & Ritti, 1970). However, decades of empirical research has demonstrated that pressure at work not only has the ability to undermine individual and team performance (e.g., Baumeister, 1984; Maruping, Venkatesh, Thatcher, & Patel, 2015), but to also increase the likelihood that employees will experience burnout and de-commit from the organization (Bakker, Demerouti, & Verbeke, 2004). Considering this, the significance of performance pressure at work can be witnessed through the impact that it has on the productivity and well-being of the individuals who support and advance the interests of organizations.

The construct of performance pressure is deeply rooted within management research. Whether empirically investigated at the individual (e.g., Ewen, 1973; D. T. Hall & Lawler, 1970; Lehman, 1935; Mitchell, Greenbaum, Vogel, Mawritz, & Keating, 2019; Organ, 1975; Sutton & Rafaeli, 1988; Triandis, 1959) or team level (e.g., Baumeister & Steinhilber, 1984; Bechky & Okhuysen, 2011; Durham, Locke, Poon, & McLeod, 2000; Janz, Colquitt, & Noe, 1997; Pepinsky, Pepinsky, & Pavlik, 1960), pressure is a ubiquitous phenomenon that has drawn significant interest from management scholars across many decades. However, despite the breadth of empirical attention that pressure has received in the literature, there remains a lack of theoretical depth and cohesion to the research regarding the mere nature, emergence, and impact of the construct.

First, there is a general lack of agreement regarding what performance pressure actually is (i.e., an internal or external phenomenon). Second, there has been a complete absence of theory regarding *why* and *how* performance pressure arises in the first place. Further, multiple competing and often-conflicting views have attempted to explain *why* and *how* performance pressure affects behavior in organizations. Without a connected and coherent response to the questions of *why* and *how*, the current theoretical inadequacies place a ceiling on our knowledge of a pervasive phenomenon that affects the productivity and well-being of people across work domains. Not only do these theoretical deficiencies limit our ability to better predict, understand, and evaluate performance pressure, its antecedents, and its outcomes, it also

inhibits our ability to develop theoretically-linked coping interventions with the aim of attenuating the negative effects of performance pressure on individuals and teams within organizations.

To address these theoretical shortcomings, I center this dissertation at the individual level of analysis to establish the psychological foundation of the construct and more fully articulate the emergence and behavioral impact of performance pressure at its origin. In order to achieve these ends, I draw from theories of motivation and cognition to articulate a theory of performance pressure that contends that the interaction between goal importance and outcome uncertainty explains *why* and *how* this pressure arises. Thus, I define performance pressure as *a perceived tension reflecting an increase in the importance and/or uncertainty of goal accomplishment*. As a conceptual connecting point between the emergence and behavioral impact of performance pressure, I apply the core principles of attentional control theory (Eysenck & Derakshan, 2011; Eysenck, Derakshan, Santos, & Calvo, 2007) to explain *why* and *how* this pressure affects behavior through the cognitive processes induced by the anxiety of uncertainty surrounding important goal accomplishment.

To assess the legitimacy of my theoretical expectations regarding the nature and emergence of performance pressure, I utilized the Gioia Methodology (Gioia, Corley, & Hamilton, 2013) by conducting a series of in-depth semi-structured interviews to study the lived experience of performance pressure by professionals across a range of professions – fire services, police services, nursing, administration, and physical trainers. I employed a qualitative approach in order to more openly evaluate the nature and emergence of performance pressure without priming the claims of my theory that this perceptual phenomenon is a result of the interaction between the psychological needs-based construct of goal importance and outcome uncertainty. Through this investigation, the data broadly support my theoretical expectations regarding the nature and emergence of performance pressure and provide a foundation off which future pressure research may be based.

This dissertation contributes to management scholarship and practice in several important ways. First, unlike previous attempts to conceptually develop the construct of performance pressure, I articulate a well-connected and coherent theory that provides a thorough explanation regarding *why* and *how* this

pressure arises in the first place. By providing this explanation regarding the emergence of the construct, scholars will have a sound theoretical foundation from which previous and future empirical research regarding the antecedents and outcomes of performance pressure can be better interpreted. Second, I also contribute to the literature by theoretically connecting the emergence of performance pressure with *why* and *how* this pressure affects behavior via the cognitive impact of anxiety created by outcome uncertainty. Organizational scholars have long contended that answering the questions of *why* and *how* are paramount to theory development (Bacharach, 1989; Kaplan, 1964; Merton, 1967; Sutton & Staw, 1995). By answering these essential questions and connecting the theoretical emergence with the effect of performance pressure, future scholarship may be able to coalesce around a coherent explanation as opposed to the patchwork theorizing that currently exists.

Third, by taking an inductive approach to assess the legitimacy of the theory regarding the nature and emergence of performance pressure, I was able to prudently evaluate whether or not the interaction between the subconscious, psychological needs-based construct of goal importance and outcome uncertainty is what gives rise to this pressure. Finally, from a practical perspective, this dissertation will inform organizational leaders of how performance pressure arises, how it affects behavior, and provide them with the knowledge to create theoretically-linked coping interventions to use with their employees to help attenuate the negative effects of this pressure at its origin.

In order to achieve these ends, I begin Chapter 2 by thoroughly reviewing the extant literature on performance pressure. Specifically, I elaborate on how scholars have described the broader concept of pressure, explain how the nature of performance pressure has been conceptualized (i.e., an internal or external phenomenon), articulate the ways in which scholars have implied pressure emerges, and examine the varied theoretical explanations regarding the impact of performance pressure on behavior. After detailing the primary theoretical shortcomings of the current performance pressure literature in Chapter 2, I propose a coherent theory of performance pressure that improves on existing work in Chapter 3.

CHAPTER II. A REVIEW OF THE PERFORMANCE PRESSURE LITERATURE

The Nature, Emergence, and Impact of Performance Pressure

Before articulating a coherent theory of performance pressure at work, it is prudent to first describe how the broader concept of ‘pressure’ has been considered and studied for over a century. Specifically, it is imperative to understand how scholars have previously expressed what the broader phenomenon actually is as well as the nature of the construct within the more focused context of goal-striving behavior (i.e., performing). Literature on the broader concept of pressure has proliferated by examining pressure ‘types’ (e.g., time pressure, social pressure, job pressure, etc.) in either a goal-selection (i.e., conforming) or goal-striving (i.e., performing) context.

Further, some scholars, either directly or indirectly, have contended that pressure is a subjective, internal perception (e.g., Durham et al., 2000; Maruping et al., 2015; Mitchell et al., 2019; Vallerand et al., 2003), while others frame it as an objective, external entity imposed on individuals and teams (e.g., Baumeister, 1984; Gardner, 2012; Van Yperen, Blaga, & Postmes, 2015; Zhang, Jex, Peng, & Wang, 2017). Consequently, research on performance pressure provides mixed theoretical reasoning behind why and how pressure arises in the first place. Further, empirical work on performance pressure provides several explanations regarding why and how pressure affects behavior; however, some of these theoretical views conflict with explanations regarding why and how this phenomenon influences behavior and outcomes.

Below, I first describe how the broad concept of pressure has been previously considered in the literature and then provide a review of the two dominant perspectives surrounding the nature of pressure (i.e., an internal vs. external phenomenon). Additionally, I highlight the manner in which scholars have previously attempted to explain the emergence and impact of pressure in goal-striving contexts (i.e., performing). By taking this approach, I detail and address the contradictions and shortcomings in the existing literature by developing a theory of performance pressure at work that directly addresses these theoretical issues and provides a more coherent theoretical basis for the phenomenon.

The Concept of Pressure

Within management and social science research, pressure studies are bifurcated between two contexts: (1) goal-selection (i.e., conforming) and (2) goal-striving (i.e., performing). Further, pressure is often explored in the literature by conceptually and empirically examining various ‘types’ of pressure (e.g., time pressure, social pressure, job pressure, etc.). I focus this dissertation within the goal-striving context in order to more deeply understand a phenomenon that may negatively impact employee productivity and well-being. However, despite this focus, the related literature of pressure within the goal-selection domain is noteworthy since it provides us with additional insight regarding the manner in which the pressure phenomenon has been more broadly conceptualized.

The current literature surrounding pressure in a goal-selection context has a longstanding history across multiple social scientific domains. In particular, the constructs of *social pressure* (e.g., Becker, 1998; Condie, Warner, & Gillman, 1976; Davy & Shipper, 1993; Erdelyi, 1940; Taylor et al., 2010), *normative pressure* (e.g., Feldman, 1974; Jonah, 1984; Kidder & Brickman, 1971; Michener & Burt, 1975; Pinter et al., 2007), *regulatory pressure* (Desai, 2016; DiMaggio & Powell, 1983; McCaffrey, 1982), *peer pressure* (e.g., Allen & Newton, 1972; Asch, 1951; Liden & Parsons, 1986; Milgram, 1965a; Schachter, Ellertson, McBride, & Gregory, 1951; Sears, 1967), *compliance pressure* (e.g., Bond & Smith, 1996; Carlsmith, Collins, & Helmreich, 1966; Lee, Han, Cheong, Kim, & Yun, 2017; Milgram, 1965b, 1974), and *citizenship pressure* (e.g., Bolino, Hsiung, Harvey, & LePine, 2015; Bolino, Turnley, Gilstrap, & Suazo, 2010; Vigoda-Gadot, 2007) are a few notable constructs. However, these types of pressure all coalesce around a common theme: the urge for one to conform to the demands or preferences of another entity by selecting the mandated or favored goal of the referenced entity. For example, citizenship pressure is conceptualized as a job demand where an individual feels compelled to engage in organizational citizenship behaviors (i.e., OCBs; Bolino et al., 2010) due to the expectations of others (e.g., leaders, coworkers) for them to act in a helpful manner. In other words, an employee feels compelled to select the goal of engaging in extra-role behaviors due to the perception that management expects these actions.

Although the goal-striving context of pressure is the focus of this dissertation, the current literature on the goal-selection context can be interpreted to provide us with initial evidence that the nature of pressure, in general, is rooted within a psychosocial context. In other words, individual perceptions regarding the demands and preferences of a social entity are related to the emergence of pressure. The emergence of pressure is dependent on one major underlying assumption: there is a reward (or punishment) for the individual to conform (or not conform) to the demands of the social entity, otherwise, conformity aligned with the pressure would not occur. This concept of a socially-linked reward aligns with the foundation for the theory of pressure that I develop in the next chapter.

Similar to research on pressure within a goal-selection context (i.e., conformity pressure), the extant literature surrounding pressure in a goal-striving environment (i.e., performance pressure) has received significant consideration within the social sciences. In particular, the constructs of *time pressure* (e.g., F. M. Andrews & Farris, 1972; Malhotra, 2010; Maruping et al., 2015; Sutton & Rafaeli, 1988), *crisis pressure* (e.g., Billings, Milburn, & Schaalman, 1980; Dutton, 1986; Sheremata, 2000), *job pressure* (e.g., Sims & LaFollette, 1975), and *work pressure* (e.g., Frone, Russell, & Cooper, 1995) have all received substantive attention in the literature. Further, the concepts of *production pressure* (e.g., Klein & Ritti, 1970; Triandis, 1959), and *evaluation pressure* (e.g., Baumeister, 1984; Lehman, 1935; Triplett, 1898) have also been invoked as types of pressure that influence multiple organizational outcomes across a variety of tasks and work domains. In other words, each of these types of pressure have been directly or indirectly tied to the overarching construct of performance pressure.

First, the concept of time pressure is one of the most widely studied ‘types’ of performance pressure within the goal-striving context. *Time pressure* is defined as a perceived deficiency of time available to accomplish a goal relative to the temporal demands required for goal attainment (Maruping et al., 2015) that leads to a perceived necessity to make quick decisions and act promptly (Malhotra, 2010). Although some have modeled time pressure as a mediator (e.g., Madjar & Oldham, 2006) or an outcome in studies of employee behavior (e.g., DeVoe & Pfeffer, 2011), the majority of research has examined the phenomenon in other ways. Time pressure is often investigated as an independent variable (e.g., F. M.

Andrews & Farris, 1972; Fritz & Sonnentag, 2009; Maruping et al., 2015; Parkinson, 1957; Sutton & Rafaeli, 1988; Van Quaquebeke & Felps, 2018), a moderator (e.g., De Dreu, 2003; Kinicki & Vecchio, 1994), or an experimental manipulation (e.g., Bryan & Locke, 1967; Dubno, 1968; Latham & Locke, 1975; Pepinsky et al., 1960; Sinha & Wherry, 1965; Wright, 1974). Specifically, time pressure is typically investigated in regard to its effect on decision-making (e.g., Durham et al., 2000; Phillips, Fletcher, Marks, & Hine, 2016) which ultimately impacts valued outcomes such as teamwork (Janz et al., 1997), ethical behavior (Stenmark & Mumford, 2011), creativity (Baer & Oldham, 2006), and task performance (Alison, Power, van den Heuvel, Humann, et al., 2015; Bechky & Okhuysen, 2011).

Second, below are additional ‘types’ of pressure within the goal-striving context that have received less, yet still notable, attention in the literature as compared to that of time pressure. Specifically, the performance pressure-linked concepts of crisis pressure, job pressure, work pressure, production pressure, and evaluation pressure each make valuable contributions to our understanding of pressure in the goal-striving context. *Crisis pressure*—broadly defined as a time-pressured event where the value and probability of loss are perceived to be substantial (Billings et al., 1980)—has been connected with outcomes ranging from radical product development (Sheremata, 2000) to CEO performance (Moretti, Morken, & Borkowski, 1991) and strategic decision-making (Dutton, 1986). Further, *job pressure* (i.e., a perceived emphasis for one to do a good job and improve performance; Sims & Lafollette, 1975) and *work pressure* (i.e., a perception of stressful job demands due to excessive workloads and responsibilities; Frone, Russell, & Cooper, 1995) have been investigated regarding their impact on a wide range of outcomes. Notably, scholars have investigated how these pressures influence group dynamics (Klein, 1996), performance and productivity (Klein & Ritti, 1970), employee well-being (Bakker et al., 2004; Sparks & Cooper, 1999), long-term worker health (Suadicani, Andersen, Holtermann, Mortensen, & Gyntelberg, 2011), and even spillover effects on the health and well-being of employees’ children (Crouter, Bumpus, Maguire, & McHale, 1999; G. B. Hall, Dollard, Tuckey, Winefield, & Thompson, 2010).

Additionally, *production pressure*—broadly defined as a perceived emphasis to generate greater quantity and/or higher quality outputs—has been tied to a multitude of consequential work-related criteria. These outcomes include job satisfaction (Triandis, 1959), group cohesion (Klein & Ritti, 1970), unethical practices in medical (Jasanoff, 1993) and management research (Bedeian, Taylor, & Miller, 2010), and various types of task performance (Ewen, 1973; Triandis, 1959). Finally, the impact on task performance due to the social influence of *evaluation pressure* and the presence of others while striving toward a goal has been widely examined for well over a century in the social scientific literature (e.g., Baumeister, 1984; Heaton & Sigall, 1991; Lehman, 1935; Marr & Thau, 2014; Taylor et al., 2010; Triplett, 1898).

I contend that each of these goal-striving types of pressure conceptually coalesce around a broader, higher-order construct of *performance pressure*. The extant literature that directly addresses performance pressure centers itself within a goal-striving environment, and conceptualizes pressure as something that increases the importance of performing at a high level (e.g., Baucus, 1994; Mitchell, Baer, Ambrose, Folger, & Palmer, 2018; Ness & Connelly, 2017) or succeeding when it matters the most (e.g., Baumeister & Steinhilber, 1984; Bechky & Okhuysen, 2011; H. K. Gardner, 2012). The various factors explored above (e.g., time demands, job characteristics, production priorities, social evaluation) are all considered ‘types’ of pressure that ultimately impact subsequent goal-striving performance and outcomes in the workplace. I later contend that each of these factors contribute to the existence and intensity of pressure when engaged in goal-striving behaviors at work.

Although research indicates that pressure influences a variety of behavioral outcomes (e.g., task performance, creativity, well-being, etc.), there are still few, if any, answers to questions of *why*—why does a lack of time contribute to pressure and subsequently affect task performance? Why do production demands by organizational leaders increase pressure and influence employee performance? Why do employees perceive that performance ‘matters the most’ at a given point in time? Why does the presence of others affect how an individual performs when striving toward a goal? Not only does the current

literature lack coherent answers to these (and other) questions, scholars have yet to agree on the mere nature of performance pressure and whether it is an internal or external phenomenon.

The Nature of Pressure

The External Perspective. The first viewpoint regarding the nature of performance pressure is one that contends pressure to be an external element of the environment. More specifically, the external perspective proposes that the phenomenon is an objective entity—or a combination of external factors—within the performance environment that increase the importance of performing sufficiently or at a high level when an outcome is consequential (Baumeister, 1984). Within this view of performance pressure, the construct is conceptualized as an external force imposed on individuals and teams. Since Baumeister’s (1984) influential work on performance pressure, many scholars have also articulated a congruent view that pressure is external to the individual (H. K. Gardner, 2012; Van Yperen et al., 2015; Zhang et al., 2017). In his definition of pressure, Baumeister contends that pressure “may be defined as any factor or combination of factors that increases the importance of performing well on a particular occasion” (Baumeister, 1984, p. 610). In other words, Baumeister contends that pressure *is* the external factor or collection of factors in the performance environment. However, based on this definition—which is frequently utilized by a contingent of scholars over the past three decades—an important question arises: if pressure is truly an external entity, then why does the performance and its outcome need to be ‘important’ to the individual? Further, is this determination of importance an internal perception—or are goals objectively and equally important across all individuals? To date, the external perspective has yet to explicitly provide answers to these questions.

The Internal Perspective. The second perspective regarding the nature of performance pressure is the view that contends pressure to be an internal perception. As elaborated in Chapter 3, this is the viewpoint with which I align in this dissertation. The internal perspective contends that performance pressure is a subjective perception, experience, and evaluation of one’s goal-striving environment (Durham et al., 2000; Maruping et al., 2015; Mitchell et al., 2018). Within this view of performance pressure, highly-related constructs such as ‘perceived pressure’ (Shaw & Weekley, 1985), ‘internal

pressure’ (Vallerand et al., 2003), and ‘psychological pressure’ (Ito et al., 2011; Kocher, Lenz, & Sutter, 2012) each articulate a congruent sentiment that the phenomenon is psychological in nature. Indeed, one of the earliest mentions of the internal perspective was an attempt to explain the failure of qualified candidates on the CPA exam by way of ‘psychological pressure’ (Daniels, 1947). Many scholars have echoed this sentiment by either directly noting (e.g., Mitchell et al., 2018) or methodologically implying (e.g., *perceived time pressure*; Durham et al., 2000) that performance pressure is a subjective, perceptual phenomenon. In short, this view contends that pressure is a psychological construct and does not objectively exist in the performance environment outside the perception of the individual. Subsequently, the disagreement between the two competing perspectives regarding what pressure is (i.e., an internal or external phenomenon), leads us to further inquire as to why and how performance pressure arises in the first place.

Current Explanations Regarding the Emergence of Performance Pressure

Whether considering performance pressure from an internal or external perspective, scholars have proposed that there are numerous antecedents to the emergence of this pressure. Currently, there is an absence of research that clearly and formally articulates why and how performance pressure arises. Most of the conceptual work regarding the emergence of performance pressure has not elaborated beyond implying that pressure arises when: (1) an outcome is important, and (2) elements of the environment increase that importance (e.g., evaluation pressure) or make it more difficult to achieve (e.g. time pressure). Below, I detail each of these different conceptualizations regarding the emergence of performance pressure, illustrate how these perspectives can be connected, and contend that there are many significant theoretical questions that have yet to be answered.

First, some scholars indicate that performance pressure arises from increased levels of internal performance expectations within the individual as well as external incentives—such as social approval and financial rewards—that lie outside of the individual (Allsop, Lawrence, Gray, & Khan, 2017). Conversely, others posit that pressure is a result of the perceived threat from potential negative outcomes—both personal and social—that would result from poor performance or simply failing to

accomplish a valued goal (Eisenberger & Aselage, 2009; Organ, 1975; Pervin, 1963). Additionally, scholars often connect the emergence of performance pressure at work with the sheer volume of mentally and physically stressful job demands that inhibit a person's ability to strive toward and achieve a particular goal (Kabanoff & O'Brien, 1980; Ness & Connelly, 2017).

Researchers also contend that pressure emerges in what can be considered 'high-stakes' performance environments (Beilock, 2008; Byrne, Silasi-Mansat, & Worthy, 2015). In other words, when performance matters the most and the outcome (i.e., goal accomplishment) is highly consequential to the individual (or team), performance pressure arises (H. K. Gardner, 2012). Empirical examinations ranging from high-stakes negotiations (e.g., Benton, Kelley, & Liebling, 1972; De Dreu, 2003; Hamner, 1974), to athletic competitions (e.g., professional baseball and basketball, Baumeister & Steinhilber, 1984; professional basketball, Cao, Price, & Stone, 2011; professional soccer, Jordet, 2009; professional baseball, Marr & Thau, 2014), to life or death missions (e.g., SWAT teams, Bechky & Okhuysen, 2011; military units, Bons, Bass, & Komorita, 1970; police officers, Oudejans, 2008) have each empirically contended that performance pressure arises when a successful outcome is critically important to those engaged in goal-striving.

Additionally, some of the research examined earlier highlight key antecedents that are also proposed—often implicitly—to give rise to pressure. For example, within the time pressure literature, scholars contend that a deficiency of time or opportunity to successfully strive toward and accomplish a goal is a major factor giving rise to performance pressure at work (e.g., Andrews & Farris, 1972; Fritz & Sonnentag, 2009; Malhotra, 2010; Maruping et al., 2015; Sutton & Rafaeli, 1988). Further, the literature regarding crisis pressure also proposes that situations where there is a high level of uncertainty and a lack of control are those that elicit performance pressure (e.g., Billings et al., 1980; Dutton, 1986).

Research has also empirically examined the link between organizational leaders and the emergence of performance pressure among employees. Whether examining the influence of supervision intensity (Hammer & Turk, 1987; Lee et al., 2017), the managerial performance expectations of their subordinates (Carmeli & Schaubroeck, 2007), or the increased productivity demands coming from

management (Klein, 1996; Triandis, 1959), the emergence of pressure has been regularly associated with the perceived demands of organizational leaders. Aligned with the notion of socially-influenced pressure, numerous empirical studies have examined a broader social effect on the emergence of pressure. For example, scholars have proposed that pressure arises due to the mere presence of others within the performance environment (Triplett, 1898), the perceived performance expectations of others (Gibson, Sachau, Doll, & Shumate, 2002), as well as the presence of an evaluative audience (Allsop et al., 2017; Baumeister, 1984; Baumeister, Hamilton, & Tice, 1985; Baumeister & Showers, 1986; Taylor et al., 2010). In short, scholars have articulated that both external and internal characteristics are those elements that contribute to the emergence of performance pressure at work (D. T. Hall & Lawler, 1970).

As indicated by the extant research reviewed, a central theme that connects the varied pressure ‘types’ is the idea that in order for performance pressure to exist, an outcome must be perceived as important to the individual. However, despite scholarly agreement that an outcome must be important for pressure to emerge, research has yet to develop a theoretical explanation regarding why an outcome is important in the first place. The literature has yet to meaningfully explain why and how these various factors and antecedents actually contribute to the emergence of performance pressure. These theoretical deficiencies have created many important questions in the literature that have yet to be answered. For example, why does an evaluative audience contribute to the emergence of performance pressure? Why are some performance environments considered more important than others? Why does a deficiency of time lead to the emergence of pressure? Why does the uncertainty of a crisis give rise to performance pressure? Considering the lack of answers to these fundamental and theoretically-relevant questions, it comes as no surprise that existing research is fragmented and contradictory in explaining why and how performance pressure affects behavior.

Current Explanations Regarding the Impact of Performance Pressure

Current theoretical explanations regarding why and how performance pressure affects behavior are better developed than those regarding the emergence of performance pressure (see Table 1). A variety of theoretical lenses has been utilized to explain and elaborate why and how performance pressure affects

behavior in organizations. For example, activation and arousal theories (D. G. Gardner, 1990; D. G. Gardner & Cummings, 1988; Ku, Malhotra, & Murnighan, 2005; Zillmann, Bryant, Cantor, & Day, 1975), the attentional focus model (Karau & Kelly, 1992; Kelly & Loving, 2004), explicit monitoring theories (Baumeister, 1984; Beilock & Carr, 2001; Langer & Imber, 1979), and distraction theories (Lewis & Linder, 1997; Wine, 1971) have all been invoked and dominate the literature in explaining why and how pressure affects the behavior of individuals at work. I next elaborate on these different theoretical views regarding the impact of performance pressure and attempt to highlight commonalities for my theory of performance pressure in Chapter 3.

Table 1. Current Theoretical Explanations on the Impact of Performance Pressure

Theoretical Viewpoint	Explanation
Activation & Arousal	Behavior is largely affected by changes in one's neural activity due to sources of stimulation, such as performance pressure. There is a linear relationship between performance pressure and activation level, but there is an inverted U-shaped relationship between activation level and performance outcomes. Too much or too little neural stimulation negatively affects one's performance.
Attentional Focus	Performance pressure reduces cognitive resources, which forces people to focus their attention to a limited range of task-significant information, often resulting in the reliance upon cognitive scripts. As less information is considered and processed due to the cognitive overload, individual performance is negatively impacted unless the activated cognitive scripts align with the task in which one is engaged.
Explicit Monitoring	Performance pressure negatively affects individual working memory capacity (i.e., WMC - short-term working memory). When under pressure, individuals consciously focus on task performance processes that are normally subconscious and automatic in nature. People turn their focus inward onto the specific processes in which they are engaged due to performance pressure.
Distraction	Performance pressure causes individuals to be cognitively distracted away from task processes and toward non-relevant thoughts and fears. This distraction negatively affects one's performance and the outcomes that result from this distracted performance under pressure.

Multiple Theories on the Impact of Performance Pressure

Activation and Arousal Theories. According to activation and arousal theories, behavior is largely affected by changes in one's neural activity due to various sources of stimulation (D. G. Gardner, 1990; D. G. Gardner & Cummings, 1988; Malhotra, 2010), including pressure. This viewpoint has been often invoked to explain an inverted U-shaped relationship between time pressure and various outcomes such as creativity (Baer & Oldham, 2006; Binnewies & Wornlein, 2011; Ohly & Fritz, 2010; Ohly, Sonnentag, & Pluntke, 2006), and work engagement (Schmitt, Ohly, & Kleespies, 2015). Specifically, a moderate (i.e., optimal) amount of pressure influences positive behaviors and outcomes while pressure at the extremes (i.e., low or high pressure) have the opposite effect by providing too little or too much stimulation (Yerkes & Dodson, 1908). This viewpoint assumes a linear relationship between performance pressure and activation level (i.e., the more pressure, the higher the arousal), whereby an intermediate level of pressure and activation is proposed to be beneficial to performance outcomes (Baer & Oldham, 2006). Thus, there is an expected inverted U-shaped relationship between performance pressure and performance outcomes. Essentially, both high and low levels of pressure are detrimental to valued performance outcomes since they provide either too much or too little neural activation within the individual (D. G. Gardner, 1990).

In the case of too much neural activation (i.e., high pressure), the individual is too cognitively overwhelmed to function at a sufficient level to achieve a successful performance outcome. According to activation and arousal theories, this mental overload leads individuals to rely on familiar cognitive scripts which are typically insufficient for problems and tasks that may be more nuanced, complex, or unfamiliar in nature (J. Andrews & Smith, 1996). Conversely, in the case of too little neural activation (i.e., low pressure), this theoretical position contends that this provides suboptimal cognitive stimulation and provides little impetus for the individual to put forth the necessary effort to engage in successful goal-striving action (Baer & Oldham, 2006). This theoretical viewpoint is typically invoked within empirical studies of time pressure (Binnewies & Wornlein, 2011; Malhotra, 2010; Ohly & Fritz, 2010; Ohly et al., 2006; Schmitt et al., 2015), but is rarely considered in examinations of other types of pressure.

The Attentional Focus Model. The impact of performance pressure has also been examined and explained through the attentional focus model (Karau & Kelly, 1992). According to scholars who utilize this model, performance pressure forces people to focus their attention to a more limited range of task-significant information (Lopez-Kidwell, Grosser, Dineen, & Borgatti, 2013). When pressure increases within the goal-striving work environment, employees' cognitive resources diminish. Due to the reduction in cognitive resources, employees may be forced to focus their attention on the limited amount of relevant information that they are capable of processing (Kelly & Loving, 2004).

Similar to the theories of activation and arousal, a high level of pressure leads one to enact and utilize cognitive scripts in order to efficiently process information. Consequently, performance pressure ultimately has a negative impact on performance outcomes due to the restricted amount of information actually considered and effectively processed at a given point in time (Lopez-Kidwell et al., 2013). Due to this cognitive overload, individual performance is negatively impacted unless the activated cognitive scripts align with the task in which one is engaged. Also similar to theories of activation and arousal, the attentional focus model has typically been utilized to explain the effects of time pressure while other types of pressure have been largely neglected.

Explicit Monitoring Theories. Holding slight differences with the attentional focus model, explicit monitoring theories also propose a narrowed focus of attention. However, the narrowed focus in explicit monitoring theories is centered specifically on task execution processes via one's working memory capacity (i.e., WMC - short-term working memory) that would otherwise be automatically executed through the long-term memory of the brain. That is, explicit monitoring theories contend that pressure drives people to consciously focus on task performance processes that are normally subconscious and automatic in nature (Beilock, Jellison, Rydell, McConnell, & Carr, 2006). Essentially, this viewpoint contends that when under pressure, individuals turn their focus inward onto the specific processes in which they are engaged in the goal-striving environment.

Additionally, this theoretical lens is one that broadly encompasses the congruent viewpoints of *self-consciousness* (e.g., Baumeister, 1984; Baumeister et al., 1985), *self-focus* (e.g., Butler & Baumeister,

1998; Lewis & Linder, 1997), *self-monitoring* (e.g., Baumeister & Showers, 1986; Jordet, 2009), and *self-presentation* (Baumeister & Steinhilber, 1984). Explicit monitoring theories contend that performance pressure drives individuals to consciously focus their attention so intently on execution processes – normally subconscious in nature – that it disrupts proper task performance execution which, ultimately, negatively impacts outcomes (Beilock & Carr, 2001; Ehrlenspiel, Wei, & Sternad, 2010; Wan & Huon, 2005). The explicit monitoring viewpoint has generated significant interest in the literature, and it has been empirically examined across multiple ‘types’ of performance pressure, as opposed to the time pressure-focused studies of the previously explored theoretical lenses.

Distraction Theories. Taking an opposing stance relative to explicit monitoring theories, distraction theories contend that rather than increasing focus on the task processes at-hand, pressure leads to performance decrements due to one’s attention being misdirected away from the task and toward non-relevant thoughts and fears (DeCaro, Thomas, Albert, & Beilock, 2011). Some scholars who contend that performance pressure causes individuals to be cognitively distracted away from task processes propose that performance pressure may prime and activate certain character traits—such as anxiety, narcissism, and fear of negative social evaluation—which, in turn, distract the individual away from the task and onto non-relevant thoughts and fears (Byrne et al., 2015). Similar to explicit monitoring theories, the distraction viewpoint has been broadly examined across multiple ‘types’ of performance pressure.

In an attempt to assess some of these theoretical differences, some scholars have attempted to empirically test both explicit monitoring and distraction theories within the same studies. For example, DeCaro, Thomas, Albert, and Beilock (2011) conducted multiple experiments to determine if particular characteristics of the goal-striving pressure environment would elicit distraction and/or explicit monitoring. Ultimately, the researchers found that participant success or failure was partially-determined by how the performance environment affects attention and the extent to which sufficient task process execution depended on explicit attentional control (DeCaro et al., 2011). In other words, the explanation for why and how performance pressure affects behavior was largely dependent on the specific task environment (i.e., context-dependence).

Considering the support found for both of these theories as being somewhat contextually-dependent, future empirical examinations may benefit from a theoretical reasoning where explanations regarding the impact of pressure can be articulated across all performance contexts. In other words, the literature would benefit by reconciling the differences among these viewpoints and harnessing what each have in common (e.g., an implied recognition that pressure creates anxiety within the individual) and embrace a contextually-independent explanation regarding why and how performance pressure influences behavior and outcomes in the workplace. Aligned with this aim, a contextually-independent theoretical explanation will be proposed in the next chapter as a way to bring the literature even closer together regarding why and how performance pressure affects behavior.

CHAPTER III. A THEORY OF PERFORMANCE PRESSURE

To address the current theoretical shortcomings of the performance pressure literature, I center the ensuing theoretical development at the individual level of analysis to establish the psychological foundation of the construct and more fully articulate the emergence and behavioral impact of performance pressure at the perceptual level from where it originates. In order to achieve these ends, I draw from theories of motivation and cognition to articulate that the interaction between goal importance and outcome uncertainty explains *why* and *how* performance pressure arises. Aligned with the theoretical explanation for the emergence of this pressure, I define *performance pressure* as a perceived tension reflecting an increase in the importance and/or uncertainty of goal accomplishment. As a conceptual connecting point between the emergence and behavioral impact of performance pressure, I apply the core principles of attentional control theory (Eysenck & Derakshan, 2011; Eysenck et al., 2007) to explain *why* and *how* this pressure affects behavior through the cognitive processes induced by the anxiety of uncertainty surrounding important goal accomplishment (see Figure 1). Although some scholars have invoked a few of the underlying principles of attentional control theory (e.g., distraction, Baumeister & Showers, 1986; impact on working memory, Sattizahn, Moser, & Beilock, 2016), extant research has yet to directly apply this theory to explain why and how performance pressure influences behavior.

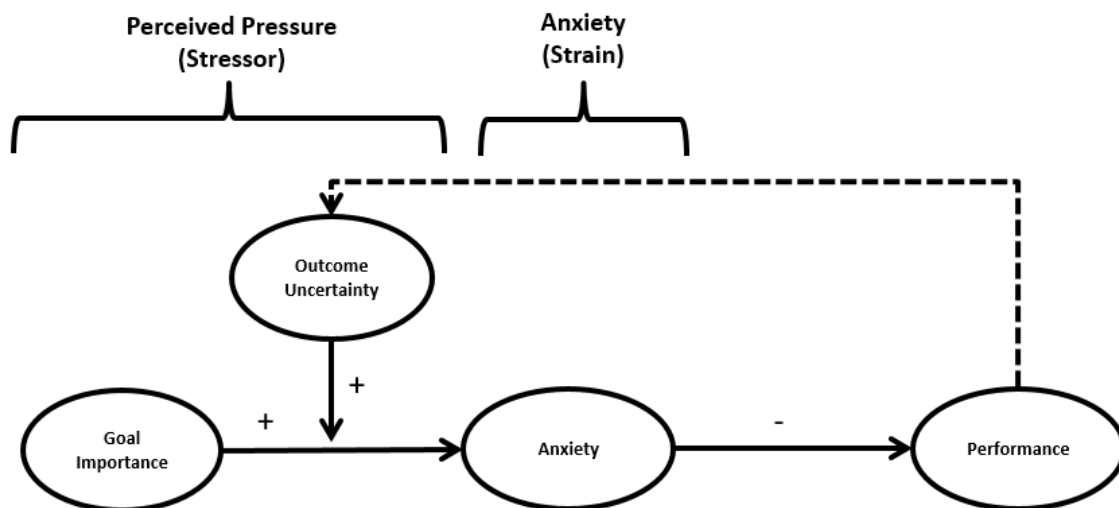


Figure 1. Theoretical Model of Performance Pressure

What is Performance Pressure?

The existing literature has lacked clarity and agreement regarding what performance pressure actually is. As previously noted, some scholars have contended that this pressure is a subjective, internal perception of the performance environment, while others propose that the phenomenon is an objective, external element of the goal-striving context. Although these perspectives contend that performance pressure represents two different things, the logic surrounding the external perspective contains a major contradiction that has yet to be reconciled in the literature. Specifically, this view contends that the ‘external’ factors that increase the importance of performing well and/or accomplishing a particular goal are what constitute ‘pressure’ (e.g., Baumeister, 1984; H. K. Gardner, 2012).

However, this research has not articulated any reasoning regarding why or how a goal becomes important in the first place, nonetheless why or how these pressure factors can objectively increase this importance outside of the perception of the individual. In other words, the implied logic utilized by the external perspective is that these external factors are consistent and perceived equally across individuals regarding their impact on goal importance. Thus, if performance pressure were truly external in nature, then everyone striving in the same performance context would perceive these elements to represent identical levels of pressure. For example, at a busy restaurant, a sous chef demands that two of her line cooks work more quickly or otherwise be fired. Within the external view of performance pressure, the pressure to cook faster is assumed to be identically-perceived by the two line cooks. In other words, the line cooks are both presumed to perceive an increase in pressure due to the demand of the sous chef without a consideration of the individual within this situation (e.g., one of the line cooks needs this job to financially support her family while the other line cook is the son of the head chef and knows that he will not be fired). Consequently, there is currently an oversight by the external view of performance pressure that the concept of ‘goal importance’ is a subjective perception of the individual (Austin & Vancouver, 1996). Therefore, any changes in the importance of a goal would need to first occur within the individual through the perceptual evaluation of the environment regarding its impact on the importance of the referenced goal.

This notion that goal importance is a subjective determination of the individual is supported by decades of empirical and theoretical work surrounding goals and motivation (e.g., Locke & Latham, 1990) that indicates that goal importance varies across individuals (Austin & Vancouver, 1996; Diefendorff & Chandler, 2011). In other words, people perceive goals to be of unique importance to them as individuals. Consequently, I contend that the environmental factors indicated in the external perspective are not pressure, in and of themselves, but rather they are *antecedents to pressure*. Thus, I assert that performance pressure *is*, in fact, a subjective perception within the individual regarding these factors of the goal-striving environment. Considering this alignment with the internal perspective of performance pressure, the explanation of why and how this pressure emerges can be more clearly articulated.

Why and How Does Performance Pressure Emerge?

Even scholars who have articulated divergent views regarding the nature of performance pressure appear to agree on one particular point: in order for this pressure to emerge, the goal toward which one is striving must be ‘important’ to the individual. Without a goal having some level of importance to the individual, pressure ceases to exist when one is striving toward that goal. This idea of goal importance will establish a central foundation for the theorizing that follows in this chapter. Additionally, people have an innate drive to reduce uncertainty due to the anxiety that accompanies it (Berlyne, 1966; Lanzetta, 1971; Monat, Averill, & Lazarus, 1972; Mushtaq, Bland, & Schaefer, 2011; Rafferty & Griffin, 2006). Below, I propose that performance pressure emerges during the process of striving toward a goal in which there is (1) uncertainty as to whether or not one will be able to accomplish the goal that (2) is important to the individual due to its capacity to satisfy or frustrate one’s core psychological needs. Therefore, I define performance pressure as a perceived tension reflecting an increase in the importance and/or uncertainty of goal accomplishment.

The Role of Psychological Needs and Goal Importance

The broad concept of goal importance is featured both explicitly (e.g., Hollenbeck & Williams, 1987; Locke & Latham, 2002) and implicitly (e.g., *valence*, Vroom, 1964) within the extant research on

motivation and human behavior. However, absent from the literature is an accepted theoretical definition or explanation regarding why a goal is important. Vroom's (1964) expectancy theory provided one of the earliest, albeit implicit, treatments surrounding the importance of a goal through the concept of *valence*. Valence is considered the magnetism, attractiveness, importance, or predicted gratification with the outcome of goal-striving. In this view, the importance (i.e., valence) for a particular goal is based on an evaluation of both the anticipated positive and negative outcomes associated with striving for that particular goal (Donovan, 2002). Despite the work surrounding valence, there remain many unanswered questions. For example, what specifically constitutes the perceived value of these anticipated outcomes to begin with? Why is a goal perceived to be attractive and important? To date, scholars have yet to provide direct answers to these questions. However, through the current literature, we are able to connect what we know about goals and motivated action with this concept of goal importance.

Decades of theoretical and empirical research have provided us with an abundance of knowledge in regard to goals and motivated behavior (for a review, see Diefendorff & Chandler, 2011; Kanfer, Frese, & Johnson, 2017). In particular, scholars have coalesced around two specific assumptions regarding human action. First, there is a recognition that goals guide all human activity (Locke & Latham, 1990), whereby goals may be defined as desired end-states (Austin & Vancouver, 1996) and are influenced by both personal and situational elements (Kanfer, Chen, & Pritchard, 2008; Kanfer et al., 2017). Second, individuals possess a large number of these goals (Austin & Vancouver, 1996) which are arranged in a hierarchical manner (Bandura, 1997).

Most research and theories of motivation focus at the mid-level of the goal hierarchy—called *action goals*—which are those goals that guide conscious action at any given point in time (Diefendorff & Chandler, 2011). For example, a journalist writes furiously attempting to make an afternoon deadline in order to have his article published in the newspaper on the following day. In this scenario, the action goal of the journalist is to successfully complete his writing before the deadline, and this drives his action of writing more quickly in order to accomplish that goal. Due to the focus of the existing literature at this level of the goal hierarchy, scholars often refer to these action goals more simply as *goals*. Unless stated

otherwise, references of ‘goals’ in this dissertation are done so in alignment with current scholarship regarding conscious, mid-level action goals.

Moving upward, at the top of the goal hierarchy lie one’s subconscious, core psychological needs (DeShon & Gillespie, 2005) that represent the “internal forces that are essential for supporting life and growth” (Kanfer et al., 2017, p. 340). These internal forces are considered vital for the well-being and ideal functioning of people (Pittman & Zeigler, 2007; van Hoof & Geurts, 2015), and they are considered universal across all people (Deci & Ryan, 2000). Needs are never permanently fulfilled, rather, humans naturally engage in an ongoing effort directed toward homeostasis (i.e., internal stability) to ensure that these needs are being adequately satisfied (Mace, 1953). When needs are frustrated or go unfulfilled, this generates a psychological tension that motivates individuals to engage in action with the aim of sufficiently satisfying those needs (Murray, 1938), whereby the magnitude of unfulfilled needs parallels the tension that they produce (Kanfer et al., 2017). In short, need satisfaction is the essential element for healthy human functioning.

These two levels (i.e., high- and mid-level) of the goal hierarchy are critical to note since goals do not exist in a vacuum (Powers, 1973), whereby the goals at lower levels link upward through the hierarchy with the purpose of serving the higher-level goals. In other words, the action goals in which people are engaged at any point in time are subconsciously done so in an attempt to satisfy one or more of their psychological needs. As a result of this, some scholars have implied that the importance of action goals are at least partly determined by their connection to serving goals at a higher level (Diefendorff & Chandler, 2011). In regard to these high-level goals, Pittman and Zeigler (2007) conducted a thorough review of the literature regarding basic human needs. Ultimately, the authors determined that the need theory literature is centered on three core themes: basic biological needs (e.g., self-preservation, safety), social needs (e.g., relatedness, belongingness), and individual needs (e.g., self-esteem, autonomy, competence). However, the authors note that none of the examined need theories incorporates all three of these themes. Considering this, I contend that one of the contemporary theories of motivation—motivated action theory (DeShon & Gillespie, 2005)—includes all three of these need themes. Specifically,

motivated action theory proposes that all individuals possess three core psychological needs as human beings: the needs of *agency*, *affiliation*, *esteem*—whereby I contend that agency needs encompass basic biological needs, affiliation needs represent social needs, and both agency and esteem needs characterize individual needs.

Agency Needs. The need for agency represents the inherent drive to have personal control or influence over one's environment (Bandura, 1997, 2001). As it relates to Pittman and Zeigler's (2007) need themes, the individual need for agency also encompasses the basic biological needs of safety and self-preservation since these may be considered as the aim for one to have agency in the first place. In other words, the foundational purpose of having control over oneself and one's environment is to preserve the self. Bandura (2001) contends that having faith in and developing our agency is the most vital component of our existence. Without agency, the environment in which one operates would appear to be completely erratic, whereby an individual has no chance to improve their current situation – including their safety and self-preservation. Establishing agency “is so fundamental to human pursuits that individuals will delude themselves into believing that they are able to control aspects of their environment that are, in fact, uncontrollable or random” (DeShon & Gillespie, 2005, p. 1108). Once again, consider the journalist who is striving to meet his afternoon deadline. By writing furiously to meet his deadline, it may be interpreted that the journalist is doing so, in part, to satisfy his need for agency as he strives to improve his situation and exert control over an uncontrollable deadline.

Affiliation Needs. The social need for affiliation exemplifies the innate compulsion people have to belong with others and be accepted by them (Baumeister & Leary, 1995). This particular need is incorporated into essentially all models of goals and motivated action (DeShon & Gillespie, 2005) since the drive to create meaningful connections with others is a foundational characteristic of the human existence (Bartz & Lydon, 2006). By forming and preserving interpersonal connections, one is better able to survive and advance in the social experience that epitomizes human life. Further, when individuals are confronted with social rejection, they experience severe anxiety that results in a multitude of negative physical and psychological health outcomes (Barden, Garber, Leiman, Ford, & Masters, 1985; Bartz &

Lydon, 2006). Utilizing our example of the journalist once again, his attempt to complete the article by the deadline may also be interpreted as partly done in service to his need for affiliation. Specifically, he may perceive that by accomplishing this goal, he will, consequently, be viewed positively by his editor and fellow colleagues. Likewise, he may perceive that by failing to meet the deadline, he may be negatively viewed by his editor and colleagues.

Esteem Needs. The individual need for esteem is best considered as the inherent drive to have a positive view of oneself (Allport, 1955; Baumeister, 1993). The vast majority of research regarding personality and theories of the self contend that esteem needs are central to an individual's existence and ability to operate (DeShon & Gillespie, 2005). Although research contends that individuals typically have over-elevated levels of self-esteem (e.g., Baumeister, Tice, & Hutton, 1989), scholars contend that having this positive view of the self is vital to psychological health (e.g., Leary, Tambor, Terdal, & Downs, 1995; Taylor & Brown, 1988). In this final consideration of the journalist who is attempting to meet his afternoon deadline, his effort to finish his writing before the deadline may also be interpreted to serve his need for esteem. In particular, the journalist may perceive that if he can achieve this goal then this achievement validates that he is, indeed, a good and competent writer.

Considering the lingering and vital questions that have remained unanswered in the literature regarding what goal importance actually is—along with what we know about the purpose of mid-level action goals to serve higher-level needs—I define *goal importance* as the perceived significance of an action goal due to its capacity to satisfy or frustrate psychological needs. More specifically, the more directly related and salient an action goal is in its capacity to satisfy or frustrate one's core psychological needs, the greater the importance of the goal. Therefore, I propose that it is the perceived capacity of a goal to satisfy or frustrate these three specific needs—agency, affiliation, and esteem—that gives rise to the construct of goal importance:

Proposition 1: The importance of a goal is derived from the perceived capacity of the goal to satisfy or frustrate the core psychological needs of agency, affiliation, and esteem

As it relates to the emergence of pressure, goal importance is a necessary but insufficient requirement for pressure to arise. The extant literature fully recognizes that performance pressure emerges as one is striving toward an important goal. However, if one is pursuing a goal in which there is full certainty surrounding the outcome—regardless of importance—I contend that pressure theoretically does not exist. Therefore, I posit that the concept of outcome uncertainty plays a critical role in the emergence of performance pressure.

The Role of Outcome Uncertainty

Individuals perceive either certainty or uncertainty regarding their ability to accomplish important goals. Uncertainty has been conceptualized as a psychological state of doubt (DiFonzo & Bordia, 1998) that may result from some form of change in one's environment (Rafferty & Griffin, 2006). Further, uncertainty is considered an unpleasant, anxiety-creating state that individuals are inherently motivated to reduce (Bar-Anan, Wilson, & Gilbert, 2009). To date, the literature regarding performance pressure has largely ignored the critical role that uncertainty plays in the emergence of performance pressure. Scholars in other domains, however, have contended that uncertainty can be divided into two categories: (1) endogenous uncertainty and (2) exogenous uncertainty (Alison, Power, van den Heuvel, & Waring, 2015). First, *endogenous uncertainty* represents uncertainty surrounding the goal-striving environment. High levels of endogenous uncertainty emerges “when situational information is sparse, overwhelming, contradictory, or novel” (Alison, Power, van den Heuvel, & Waring, 2015, p. 1311). Second, *exogenous uncertainty* represents uncertainty surrounding one's ability to achieve the goal toward which they are striving. High levels of exogenous uncertainty exist when an individual's efficacy toward achieving the goal is inconclusive or unclear. These two types of uncertainty are not mutually exclusive, as endogenous uncertainty (e.g., a lack of necessary information) can potentially affect one's belief in being able to achieve the goal (e.g., whether one can or cannot make up for the lack of information to still achieve the goal).

Within the present context, uncertainty may occur due to changes in the goal-striving environment. For example, a medical device sales professional who was expecting to give a thirty-minute

product presentation is informed at the last minute that she will only be given ten minutes to give her pitch to the surgical team. In this scenario, the change in the goal-striving environment (i.e., endogenous uncertainty created by having less time to give an effective sales pitch) may create a heightened level of uncertainty for the sales professional. As it relates to this example, exogenous uncertainty (i.e., outcome uncertainty) represents the uncertainty as to what degree the sales professional perceives that she might be able to achieve a successful outcome despite the endogenous uncertainty (i.e., uncertainty of the goal-striving environment) introduced by the reduction in time to make her pitch. In other words, if she has either extremely high (or low) self-efficacy (i.e., the belief that one can perform the necessary actions to attain a particular level of performance; Bandura, 1991), there will be greater perceived certainty regarding a successful (or unsuccessful) outcome. Therefore, the efficacy of the sales professional that she can adapt to the reduction in time and still have a successful outcome may be influenced by her previous experience in such scenarios. If she previously encountered and successfully handled this type of environmental change in the past, it is likely that she will not experience much change concerning her overall level of certainty in the goal-striving environment. However, if the sales professional were encountering this for the first time, her efficacy would likely be inconclusive or unclear (i.e., greater outcome uncertainty).

Considering the previous theorizing regarding goal importance combined with what we know about uncertainty in the goal-striving environment, I make the following propositions:

Proposition 2: The interaction between goal importance and outcome uncertainty gives rise to performance pressure such that the more important the goal is and the more uncertain the outcome surrounding the goal, the higher the level of performance pressure.

Not only does uncertainty play a central role in explaining the emergence of performance pressure, it also provides part of the theoretical link between the emergence of pressure and the subsequent impact that this pressure has on behavior in the workplace. This connection is made through the anxiety created by both endogenous and exogenous uncertainty, and it serves as the theoretical link –

along with goal importance – for explaining why and how performance pressure affects behavior and outcomes.

Why and How Does Performance Pressure Affect Behavior?

The two critical components that give rise to performance pressure—goal importance and outcome uncertainty—are also connected to why and how this pressure ultimately influences behavior. As noted earlier, when an individual’s core needs are frustrated or unsatisfied, it generates a psychological tension. Scholars propose that this tension motivates individuals to engage in action with the aim of sufficiently satisfying those needs (Murray, 1938), whereby the magnitude of unfulfilled needs parallels the tension that they produce (Kanfer et al., 2017). I contend that the ‘tension’ that scholars have considered in this literature represents an experience of psychological anxiety.

Additionally, uncertainty is considered as an unpleasant, anxiety-creating state that individuals are inherently motivated to reduce (Bar-Anan et al., 2009), and outcome uncertainty in the goal-striving environment is one type of uncertainty that enhances this anxiety. Scholars have long noted that uncertainty creates anxiety which, in turn, drives individuals to act in an attempt to reduce this anxiety (Bar-Anan et al., 2009; Berlyne, 1966; Hogg, 2000; Lanzetta, 1971; Monat et al., 1972; Rafferty & Griffin, 2006). Below, I utilize the core principles of attentional control theory (Eysenck & Derakshan, 2011; Eysenck et al., 2007) to elaborate on the impact of this pressure-created anxiety on cognition and, ultimately, performance outcomes. Additionally, I address how coping may be enacted in an attempt to attenuate the negative relationship between performance pressure and performance effectiveness.

The Impact of Anxiety on Cognition and Behavior

State anxiety (i.e., the currently experienced level of anxiety) is determined interactively by trait anxiety and situational stress (Eysenck, 1992) such as performance pressure. In other words, performance pressure helps to create state anxiety within the mind of the individual. According to attentional control theory (Eysenck et al., 2007), anxiety triggers a multitude of cognitive progressions that negatively impair efficient information processing (i.e., the relationship between the effectiveness of performance and the resources spent in task performance). Consequently, this decrease in cognitive efficiency influences

performance effectiveness. This process ultimately affects behavior through its impact on working memory (Baddeley, 1986). *Working memory* is the human cognitive system involved with the short-term preservation and management of information (Baddeley, 2001). In other words, working memory is the memory system that is centered on the conscious processing of information that guides our ability to notice and react to our environment. However, anxiety impairs this important cognitive process of healthy human functioning.

As a result of this cognitive dysfunction, individuals pursuing a goal are more susceptible to distraction. Additionally, this inefficient cognition leads to a reduced ability for people to inhibit inappropriate automatic responses to the task or problem environment, as well as impair one's ability to switch from one task to another in the pursuit of goals that are multifaceted. Specifically, there are two attentional systems of the brain: (1) goal-directed and (2) stimulus-directed. Ultimately, anxiety undermines the efficient performance of the goal-directed attentional system of the brain and expands the degree to which information processing is determined by the stimulus-driven attentional system (Eysenck & Derakshan, 2011).

The *goal-directed attentional system* of the brain represents the cognitive, top-down control of attention. Conversely, the *stimulus-driven attentional system* is the sensory, bottom-up control of attention. Both of these systems frequently interact with one another in order for our working memory to efficiently and effectively process information and stimuli in our environment (Corbetta & Shulman, 2002). However, pressure-induced anxiety disrupts the equilibrium between these two interacting systems by enhancing the influence of the stimulus-driven system and reducing the effect of the goal-directed system (Corbetta & Shulman, 2002; Eysenck et al., 2007). Specifically, anxiety influences the stimulus-driven system by automatically processing threat-related stimuli that, in turn, decrease the impact of the goal-directed system (Fox, Russo, & Georgiou, 2005). Considering that performance pressure may induce anxiety based on the threat to psychological need satisfaction (i.e., the frustration of needs), this performance context further exacerbates these cognitive influences. Consequently, when performance pressure and anxiety are high, these effects will be even more pronounced (Eysenck et al., 2007).

For example, consider a CEO who is fighting for her job and attempting to convince the board of directors that a recent earnings shortfall was outside of her control. The CEO perceives pressure to perform well in order to eloquently articulate why the firm underperformance was not her fault and maintain favor with the board. As this performance pressure induces anxiety within the CEO while making her case, she begins to notice every verbal sigh, pen tap, and skeptical glare of the board members seated around the table. In other words, because of the imbalance between the goal-directed and stimulus-directed attentional systems, the CEO became much more affected by threatening and salient stimuli rather than focusing on the message that she was trying to convey.

To further emphasize this point within a different context, consider a copywriter for an advertising agency who has until the end of the day to provide his creative director with five unique ideas for an important client meeting. As he sits in his office with a sketchpad and a pencil, he feels the anxiety generated by the pressure of an impending deadline for a key account. Consequently, the copywriter begins to focus on the threat of the deadline by continuing to check the clock in his office. He may also start thinking about how he does not want to disappoint his creative director, because this may threaten his reputation within the company or even cost him his job. In line with attentional control theory, the anxiety experienced by the copywriter impairs his processing efficiency because it reduces attentional control on the task at-hand and redirects it to those things perceived as threatening. (Eysenck & Derakshan, 2011; Eysenck et al., 2007). In other words, there is a much higher probability that cognitive processing resources will be diverted from task-relevant stimuli to task-irrelevant stimuli when one is facing performance pressure.

Therefore, I propose that performance pressure creates state anxiety which disrupts the balance between the two attentional systems of the brain (i.e., goal-directed and stimulus-directed, Eysenck et al., 2007). This disruption impairs efficient cognitive processing (i.e., working memory) and, consequently, negatively affects performance effectiveness. Thus, I propose the following:

Proposition 3: Performance pressure creates anxiety, which subsequently impairs efficient cognitive processing thereby negatively affecting performance effectiveness.

The Impact of Coping

As proposed, the imbalance between the goal-directed and stimulus-directed attentional systems negatively affects working memory and cognitive processing efficiency. However, some scholars (e.g., Eysenck & Calvo, 1992) have noted that the imbalance between these attentional systems are expected to decrease performance outcomes unless the anxiety is reduced or coping is enacted and able to override the effect of the stimulus-driven attentional system. In other words, anxiety may not always lead to performance decrements when it instigates the use of compensatory strategies. For example, consider again the copywriter who is working under a deadline. The copywriter may feel the anxiety generated by the pressure to meet the afternoon deadline; however, this may motivate him to work harder to get as many ideas on paper as possible from which he will then select the best five to submit to the creative director at the end of the day.

Coping can be defined as the thoughts and actions one uses in response to stressful situational demands (Cooper, Dewe, & O'Driscoll, 2001). The literature regarding the human response to various stressors (e.g., performance pressure) has a long history in the social sciences (e.g., 'fight-or-flight', Cannon, 1932). Further, it is widely-accepted that people differ in their response to various stressful situations in which anxiety is created (e.g., Bliese, Edwards, & Sonnentag, 2017; Folkman & Lazarus, 1980, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Folkman, Lazarus, Gruen, & DeLongis, 1986; Taylor et al., 2000). Some contemporary theories of stress contend that the appraisal of the stressor is central in understanding the coping processes enacted (e.g., Lazarus, 1984; LePine, Podsakoff, & LePine, 2005) which may even include a re-appraisal of the task environment itself as a challenge rather than as a threat (Weisinger & Pawliw-Fry, 2015).

As it relates to performance pressure at work, I have theorized that this pressure emerges when a goal is perceived as important and there is uncertainty surrounding the accomplishment of that goal. Considering this, a coping strategy through which an individual consciously reduces the perceived importance of the goal or increases certainty regarding the outcome will attenuate the negative performance effects that result from pressure. Therefore, I propose the following:

Proposition 4: The negative affect of performance pressure on performance effectiveness is attenuated by coping that reduces the perceived uncertainty and/or the importance of the goal.

Summary

To address the current theoretical shortcomings of the performance pressure literature, I centered the theoretical development in this chapter at the individual level of analysis to establish the psychological foundation of the construct at the perceptual level from where it originates. Further, I drew from theories of motivation and cognition to articulate that the interaction between goal importance and outcome uncertainty explains *why* and *how* performance pressure arises. As a conceptual connecting point between the emergence and behavioral impact of performance pressure, I applied the core principles of attentional control theory to explain *why* and *how* this pressure affects behavior through the cognitive processes induced by the anxiety of uncertainty surrounding important goal accomplishment.

In the next chapter, I detail the method that I utilized in order to empirically assess the legitimacy of my initial theoretical expectations regarding the nature of performance pressure as well as why and how this pressure arises. As noted in Chapter 2, research has yet to prudently address why or how performance pressure *emerges*, while examinations of why and how performance pressure *influences* behavior is abundant. Without a sound theoretical understanding of why or how performance pressure arises and exists, our ability to predict its emergence, test its impact, and interpret its effect is severely limited. Therefore, empirically assessing the emergence of performance pressure is a necessary precursor to subsequently evaluating the effects that it has on behavior and performance outcomes.

Further, without fully understanding the emergence of performance pressure, previous attempts to develop effective coping intervention strategies to attenuate the negative effects of pressure have been limited since these interventions may target the symptoms rather than the root cause of performance pressure. Despite the substantial theoretical work that has been done in regard to work stress and coping, there has been a relative absence of scholarly research that details how people specifically cope with performance pressure in the workplace (Bliese et al., 2017). Therefore, from a theoretical and practical standpoint, empirically assessing why and how performance pressure arises as well as how people

specifically cope with this pressure will aid future scholarly attempts to develop more effective coping strategies within organizations. In short, an empirical assessment of the theoretical expectations regarding the nature and emergence of performance pressure, as well as how people cope with this pressure, is a necessary and worthy focus of this dissertation.

CHAPTER IV. METHODS

Introduction

The purpose of this chapter is to detail the sample, provide justification for the study design, and describe the data analysis procedure for this dissertation. First, I explain the logic behind the sampling strategy that I used with an aim of obtaining a theoretically appropriate sample. Second, I provide justification for the qualitative semi-structured interview design and detail the benefits of taking such an approach. Finally, I review my data analysis procedure for interpreting the qualitative interview data that culminates in the creation of a process model to represent the data. Ultimately, this chapter outlines the manner in which I empirically assessed the legitimacy of my initial theoretical expectations regarding the nature of performance pressure (i.e., an internal or external phenomenon) as well as why and how this pressure arises through the lived experiences of my informants.

Sampling Strategy

Due to the pervasiveness of performance pressure across work domains, it was prudent that I obtain a similarly diverse sample of informants who work in different professions. In order to study the nature of performance pressure as well as why and how this pressure emerges, it was sensible for me to employ a thoughtful set of criteria for selecting a theoretically-relevant sample. Bearing in mind my initial theoretical expectations, performance pressure arises when there is uncertainty surrounding the accomplishment of important goals, whereby the level of goal importance is determined by its capacity to satisfy or frustrate core psychological needs. Considering this, it is inappropriate to consider vocations as markedly different from one another based on ‘goal importance’ since this—according to my theorizing—is internal and subconscious in nature and, therefore, highly individualized across people rather than across vocations.

However, it was more reasonable and appropriate for me to find sample diversity in vocations based on some of the core task responsibilities and their relationship with the uncertainty of outcomes regarding central elements of their task performance. In other words, in vocations with relatively high *endogenous uncertainty* (i.e. when information is scarce, overbearing, conflicting, or unusual, Alison,

Power, van den Heuvel, & Waring, 2015) surrounding the core tasks of the job, we can reasonably consider those vocations to be sufficiently different from vocations that have much greater certainty around the core tasks of the job. Therefore, when selecting informants from different vocations, I include those who engage in core job tasks that may be considered as having low-to-medium or medium-to-high uncertainty in order to enhance the applicability of this study across a wider range of jobs rather than focusing solely on a single profession. To aid in this determination, I conducted an analysis of the core job tasks for various vocations using the Occupational Information Network (O*NET; <https://www.onetonline.org>). Additionally, within each selected vocation, I considered each informants' level of experience and managerial responsibility to enhance the diversity of experiences and capture the nuance of tasks completed across all levels of a profession from those just starting out in the profession to those who are about to retire.

Low-to-Medium Uncertainty

Administrative Professionals. Considered as a relatively low-to-medium uncertainty vocation, I selected administrative professionals (e.g., administrative assistants) to be interviewed. Some of the core job tasks that are completed by administrative professionals may include—but are not limited to—making travel arrangements, coordinating office services (e.g., records, finances, budgets, personnel issues, etc.), and preparing various documents such as invoices, reports, memos, letters, and financial statements. Considering that these are some of the core job tasks completed by a wide range of administrative professionals, I contend that there is relatively low-to-medium task uncertainty for those who are working in this vocation.

Physical Training Professionals. Considered as a relatively low-to-medium uncertainty vocation, I selected physical trainers (i.e., athletic and fitness trainers) to be interviewed. Some of the core job tasks that are completed by athletic and fitness trainers include—but are not limited to—evaluating individuals' fitness abilities, needs, and physical conditions, developing suitable training programs to meet any special health requirements, monitoring participants' progress and adapt programs as needed, and instruct participants in maintaining exertion levels to maximize benefits from exercise routines.

Considering that these constitute some of the central job tasks associated with athletic and fitness training professionals, I contend that this vocation is relatively low-to-medium regarding the uncertainty surrounding the tasks in this job.

Medium-to-High Uncertainty

Fire Service Professionals. Considered as a relatively medium-to-high-uncertainty vocation, I selected fire service professionals to be interviewed. Some of the central job tasks conducted by firefighters include—but are not limited to—search burning buildings to locate fire victims, rescue victims from burning buildings, accident sites, and water hazards, administer first aid and cardiopulmonary resuscitation to injured people, and respond to fire alarms or other calls for assistance. Considering that these are some of the core tasks associated with the job of a fire service professional, I contend that this vocation is relatively medium-to-high in the uncertainty surrounding the main tasks in this job.

Police Service Professionals. Considered as a relatively medium-to-high-uncertainty vocation, I selected police service professionals to be interviewed. Some of the central job tasks conducted by police service professionals include—but are not limited to—identifying, pursuing, and arresting suspects of criminal acts, providing for public safety by maintaining order, responding to emergencies, and enforcing laws. Considering that these represent some of the core tasks associated with police service professionals, I contend that this vocation is relatively medium-to-high in uncertainty surrounding the central tasks of this vocation.

Nursing Professionals. Considered as a relatively medium-to-high-uncertainty vocation, I selected nursing professionals to be interviewed. Some of the central job tasks conducted by nurses include—but are not limited to—providing health care, first aid, and immunizations, perform physical examinations, make tentative diagnoses, and treat patients, monitor, record, and report symptoms or changes in patients' conditions, and modify patient treatment plans as indicated by patients' responses and conditions. Considering that these are a few of the central tasks associated with nursing professionals,

I contend that this vocation is relatively medium-to-high in uncertainty surrounding the core tasks of this profession.

The Sample

I required that individual participants in this study meet a set of criteria to be included as an informant. First, participants needed to be engaged in any one of the five targeted vocations – administration, physical training, fire services, police services, or nursing. Second, I selected participants based on either referral or my own proactive prospecting. As the researcher, I had no prior substantive relationship with any of the individuals who I interviewed for the study. Third, I deliberately selected participants who had different levels of experience (e.g., ranging from less than one year to over thirty years of experience) and managerial responsibility (e.g., ranging from front-line employees to upper-level managers) within their vocations to capture a vast collection of professional experiences.

As a result, I sampled a wide range of participants from each of the five target vocations until I reached a point of theoretical saturation (Eisenhardt, 1989; Glaser & Strauss, 1967). In other words, there came a time in the research process when the marginal knowledge gained from adding more participants had reduced to a point of yielding trivial new information. I began seeing data saturation after the twenty-first interview. However, to ensure that the saturation was not vocation-specific, I interviewed additional participants in certain vocations where I had a lower number of informants than others (e.g., police service professionals, administrative professionals, nursing professionals) to evaluate whether or not saturation was indeed occurring across all professions. Consequently, I interviewed an additional seven participants which ultimately resulted in twenty-eight total informants. By sampling a diverse range of professional experiences across five substantively different vocations, I enhanced the generalizability of this study by reducing job or industry-specific biases as well as range restriction as it related to an informant's level of experience or managerial responsibility.

Justification of Research Design

The qualitative empirical design of this dissertation (i.e., the Gioia Methodology, Gioia et al., 2013) is a departure from the traditional method in which studies of performance pressure have typically

been conducted. With few exceptions (e.g., Bechky & Okhuysen, 2011; Perlow, Okhuysen, & Repenning, 2002; Sutton & Rafaeli, 1988), most of the extant research on performance pressure has taken a purely quantitative approach to examine the *effects* of performance pressure. Quantitative empirical approaches have been incredibly effective for scholars to study the relationship between various types of pressure (e.g., the lack of time to perform, Maruping et al., 2015) and a multitude of behavioral outcomes (e.g., task performance, decision-making, creativity, teamwork, etc.). However, there is a complete absence of research that theoretically or empirically addresses why and how performance pressure *emerges*. Without a sound theoretical understanding of why and how performance pressure arises and exists, our ability to predict its emergence, test its impact, interpret its effects, and develop effective coping interventions to attenuate its negative effects is severely limited.

Consequently, I utilized a systematic inductive approach guided by the Gioia Methodology (Gioia et al., 2013) to explore the nature and emergence of performance pressure. This widely-accepted empirical approach is an evolving methodology that is well-suited for theoretical construct development with a focus on achieving systematic rigor in the research design, data collection, data analysis, and theoretical articulation stages of qualitative research. There are compelling reasons to utilize a qualitative, inductive study design within this dissertation. First, this study empirically assesses the legitimacy of the theoretical construct development in Chapter 3 regarding what performance pressure actually is and why and how it *emerges*. The extant literature has yet to clearly or fully explain why and how pressure even exists. Therefore, this study was somewhat exploratory in nature whereby qualitative methods were certainly warranted (Eisenhardt, 1989).

Second, the psychological needs-based construct of goal importance is largely subconscious in nature unless these needs are primed (Diefendorff & Chandler, 2011). By taking a qualitative approach, I am able to evaluate the nature and emergence of the phenomenon without priming the claims of my initial theory that: (1) goal importance is based on the capacity of the goal to satisfy or frustrate core psychological needs, and (2) the interaction between goal importance and outcome uncertainty is what gives rise to performance pressure in the first place. I accomplished this end by thoughtfully structuring

my line of questioning (see Appendix A) in a way that allows my informants to freely describe their experiences with performance pressure in their own terms (Gioia et al., 2013). In other words, I was able to conduct the interviews in a manner that did not impose my prior theoretical views on the informants. Had I taken a quantitative approach and created scale items directly tapping these subconscious needs—whether measured before or after a performance episode—it is highly probable that the items would prime these needs in a way that it would be impossible to know if individuals perceived or felt these things prior to responding to the items. In other words, taking a quantitative approach to establish why and how performance pressure *emerges* could have potentially resulted in a self-fulfilling theoretical prophecy.

Lastly, although coping with performance pressure is not directly a part of the focal research question, the interviews also aimed to provide ancillary insight to discover how individuals perceive the elements of dynamic task performance environments and how they ultimately cope with performance pressure at work. The recognition, perception, and response to the elements of the task environment is an ongoing process. These types of process-related research questions are often best answered through a qualitative approach (Langley, 1999). By taking this approach, I have established a firmer theoretical basis for future empirical assessments (quantitative or qualitative) of the experience and effects of performance pressure at work. Additionally, I have also established a foundation for the development of theoretically-linked coping interventions that can be implemented in future studies of performance pressure as well as within organizations.

Data Sources and Analysis

This study utilizes two main sources of data: (1) face-to-face, semi-structured interviews and (2) supplementary data (e.g., field notes, websites). Although the semi-structured interviews are the main data source for this dissertation, the supplementary data were very useful in making sampling decisions as well as enhancing the interview process. See Table 2 for a summary of interview sources.

Table 2. Summary of Interview Sources

Interview Source	Number of Interviews	Face-to-Face Interview Location	Informant Acquisition Method
In-depth, semi-structured interview: <i>Administrative Professionals</i>	6	Informant's workplace: 5 Off-site location: 1	Prospected: 0 Referred: 6
In-depth, semi-structured interview: <i>Physical Trainers</i>	6	Informant's workplace: 2 Off-site location: 4	Prospected: 3 Referred: 3
In-depth, semi-structured interview: <i>Fire Service Professionals</i>	5	Informant's workplace: 0 Off-site location: 5	Prospected: 0 Referred: 5
In-depth, semi-structured interview: <i>Police Service Professionals</i>	5	Informant's workplace: 4 Off-site location: 1	Prospected: 0 Referred: 5
In-depth, semi-structured interview: <i>Nursing Professionals</i>	6	Informant's workplace: 0 Off-site location: 6	Prospected: 0 Referred: 6
<i>Total</i>	28	Informant's workplace: 11 Off-site location: 17	Prospected: 3 Referred: 25

Supplementary Data

To aid in my determination of vocations from which I selected informants, I utilized the O*NET to locate and analyze the core job tasks for each vocation and determine the level of uncertainty for those jobs in order to enhance the sample diversity and study generalizability. Additionally, I leveraged online sources such as LinkedIn as well as two fitness center websites to aid in proactively prospecting some of the study participants¹. Lastly, I kept an ongoing set of self-reflective field notes and observations during the entire data collection process to help me refine and enhance how I conducted future interviews and identify any trends in the data as well as notable characteristics of the informants².

Semi-Structured Interviews

I utilized in-depth, semi-structured interviews as a key source of data in exploring the nature and emergence of performance pressure at work. After creating a set of pilot questions to utilize in the interviews, I worked with two subject matter experts (SMEs) to help me refine the structured questions I

¹ These online sources were used to help me locate and proactively connect with three of my athletic/fitness training informants through LinkedIn messaging (one informant) or email addresses/phone numbers (two informants) provided by these online sources. Additionally, I specifically prospected one of the informants due to his position listed on the website as Director of Personal Training at his facility with the aim of obtaining high-quality referrals from him to interview other trainers working on his team. Ultimately, I interviewed one of the referred trainers.

² There is one more field note (29) than total interviews (28) since one interview that I conducted with a regional police officer was inhibited from verbatim transcription due to an audio recording error. Therefore, I was only able to create field notes for that interview.

began to ask at the start of the interview process (see Appendix A for complete details regarding the primary questions posed). For example, I asked participants to respond to questions including – but not limited to – *what are some of the most stressful things about your job; what does the concept of working under pressure mean to you; what do you think contributes to the pressure that you feel; and how do you manage this pressure?* Upon conducting the initial set of interviews and reflecting on the process, I revised the ordering of the structured questions by inquiring about more broad job stressors near the end of the interviews (if time permitted) as they were not as imperative in providing information directly pertinent to the research questions at-hand. Therefore, the questions specific to performance pressure and coping with pressure took priority over those related to more general work stress.

Final Sample

The final sample included interviews with 28 working professionals across 5 vocations, a wide-range of years of experience, and varying levels of managerial responsibilities. I conducted each interview for this study in a face-to-face setting. As detailed in Table 2, I interviewed 11 informants at their place of work, whereas the other 17 interviews were conducted off-site (e.g., coffee shop, restaurant, informant's private home). The interviews ranged from 29 minutes to 1 hour and 15 minutes in length with a mean average of around 44 minutes per interview. In total, the informants provided me with over 20 recorded hours of interview data. After I completed the transcribing process, the interview transcriptions totaled 401 single spaced pages of text. The sample included 50% of informants who were front line employees, 36% of participants working in middle management roles, and 14% of informants engaged in upper management jobs. The sample also included a relatively diverse sample as it related to sex with 46% women and 54% men interviewed. See Table 3 for additional details regarding the final sample of working professionals who participated in this study.

Table 3. Summary of Sample Working Professionals

Informant Type	Sex	Position Level	Years of Experience
Office Administration Assistant	Female	Front-Line Employee	5-10 Years
Office Budget Administrator	Female	Middle Management	10-15 Years
Program Coordination Administrator	Female	Front-Line Employee	0-5 Years
Public Relations Administrator	Female	Middle Management	5-10 Years
Budget & Finance Administrator	Male	Middle Management	5-10 Years
Organizational Services Administrator	Female	Middle Management	0-5 Years
Regional Fire Chief (a)	Male	Upper Management	30+ Years
Municipal Fire Captain (a)	Male	Middle Management	10-15 Years
Regional Fire Chief (b)	Male	Upper Management	30+ Years
Municipal Fire Captain (b)	Male	Middle Management	20-25 Years
Municipal Fire Operator	Male	Front-Line Employee	5-10 Years
Emergency Room Charge Nurse	Female	Middle Management	20-25 Years
Emergency Room Registered Nurse (a)	Female	Front-Line Employee	0-5 Years
Emergency Room Registered Nurse (b)	Female	Front-Line Employee	10-15 Years
Operating Room Charge Nurse	Female	Middle Management	5-10 Years
Nurse Technician	Female	Front-Line Employee	0-5 Years
Intensive Care Unit Registered Nurse	Female	Front-Line Employee	0-5 Years
Municipal Police Chief	Male	Upper Management	30+ Years
State Patrol Police Officer	Male	Front-Line Employee	0-5 Years
State Patrol Specialty Division Officer (a)	Male	Front-Line Employee	10-15 Years
Former SWAT, Current Specialty Division Sergeant	Male	Middle Management	15-20 Years
State Patrol Specialty Division Officer (b)	Male	Front-Line Employee	25-30 Years
Personal Fitness Trainer (a)	Female	Front-Line Employee	10-15 Years
Director of Personal Training	Male	Upper Management	30+ Years
Personal Fitness Trainer (b)	Male	Front-Line Employee	0-5 Years
Professional Athletic Performance Trainer	Male	Middle Management	0-5 Years
Collegiate Athletic Team Physical Trainer	Female	Front-Line Employee	5-10 Years
Collegiate Athletic Strength & Conditioning Trainer	Male	Front-Line Employee	5-10 Years

Data Analysis

After speaking individually with my informants, the first step that I took was to transcribe each interview in its entirety. Upon completion of the transcription process, I entered the data into the computer-aided text analysis software program NVivo 12 to aid in the management and organization of the analysis process. After I uploaded the data into the analysis program, I individually coded each interview into first and second order categories (labelled as ‘nodes’ in NVivo) through an evolving coding process (Thomas, 2006). Throughout this process, I specifically coded all quotes that were in any way

related to the informants' lived experiences with performance pressure. In other words, I initially coded all data related to the phenomenon of performance pressure to ensure that I was capturing anything relevant to the construct without regard to whether or not the data was primarily about the nature, emergence, or effect of performance pressure.

The first order category codes arose directly from the voice of the informants in the data. In other words, the first order codes were in terms provided by my participants in the raw data. Combined with my purposeful line of questioning that was deliberately structured to avoid a potential theoretical self-fulfilling prophecy, this step of informant-centric coding was critical to ensure that the participants' recollection of their lived experiences with performance pressure was free from my own potential biases as the researcher. Ultimately, this process resulted in the creation of 91 first order codes.

Subsequently, I created second order codes in my terms as the researcher (Van Maanen, 1979) to help make sense of the data and reflect the broader themes that I was finding through which multiple first order codes appeared to coalesce. This process aided in reducing overlap and redundancy between multiple first order codes, which ultimately helped in making much greater sense of the entire data. From this process, 15 second order codes were created of which I retained 11 (encompassing 76 of the original first order codes) that represented themes with direct relevance to the driving research questions regarding the nature and emergence of performance pressure.

To help determine the validity of the second order codes and the reliability of my initial coding, I enlisted the assistance of two SMEs to look at a sample of the data to help me determine if these codes were understandable and useful (Erlandson, Harris, Skipper, & Allen, 1993). Through an iterative process with my SMEs, I was able to further develop and enhance the second order coding which ultimately resulted in 7 distinct and clear themes that better represented the data as a whole. As a coding reliability check, I also had these SMEs independently code 20 sample interview quotes which resulted in a 95% (SME-1) and 90% (SME-2) level of agreement which supported the continuation of my coding process.

To illustrate the process of how I moved from the first order to second order codes, multiple informants – such as an Emergency Room Charge Nurse and a Regional Fire Chief – described performance pressure situations that included “many unknowns” within the performance environment:

It's...so unexpected, you don't know what's coming in. You know? You're managing this entire ER. Everything is thrown on your shoulders.

Emergency Room Charge Nurse

You know, and the crazy part is we never know what we're responding to. There's so many unknowns in the emergency response – whether it be law enforcement, fire, EMS, I mean – they can all turn real bad real fast.

Regional Fire Chief (a)

The two above quotes were categorized to include a first order code that relates to performance pressure situations containing “many unknowns.” As the ongoing, iterative coding process evolved, an emergent second order theme began to develop from the informants' quotes describing pressure situations to occur in environments where they did not know what to expect. Other participants described pressure to occur in very new or relatively novel performance environments whereby they lacked clarity and encountered high levels of uncertainty. Thus, an emergent second order theme arose and was labelled “performance environment uncertainty” in order to capture the informants' recognition of performance environments that possessed unknown, novel, and uncertain elements that contributed to their experience with performance pressure at work.

Ultimately, I collapsed the second order codes to form a set of three superordinate themes (i.e., performance importance, performance environment, and coping attribution) that depicted aggregate dimensions of the informants' experiences with performance pressure that will enlighten us regarding the nature and emergence of the phenomenon. *Performance importance* represents the informants' perception that their successful (or failed) performance in the pressure situation was consequential to themselves (i.e., personal importance of performance) and/or others (i.e., social importance of performance.) *Performance environment* represents the informants' perception of how the performance context in which they were engaged lacked clarity (i.e., performance environment uncertainty), had certain difficulties (i.e., performance environment difficulty), and/or made them feel overwhelmed (i.e., lack of control over

performance environment). Lastly, *coping attribution* represents the informants' perception regarding how they were able to alleviate performance pressure within themselves (i.e., personally-attributed coping) and/or with the help of others (i.e., socially-attributed coping). Table 4 provides an overview of the data structure that illustrates the sensemaking process through which I uncovered the emergent themes from the interview data. In Chapter 5, I discuss each of the themes that arose from this iterative process in greater detail.

Table 4. Overview of the Data Structure

First Order Codes	Second Order Codes	Aggregate Dimensions
<ul style="list-style-type: none"> • Describing that their performance has a notable impact on others • Perceiving that their performance is being evaluated by others • Noting that their performance is important to others 	Social Importance of Performance	Performance Importance
<ul style="list-style-type: none"> • Acknowledging that they have an internal drive to succeed • Articulating a self-imposed pressure to succeed or avoid failure • Holding high performance expectations for themselves 	Personal Importance of Performance	
<ul style="list-style-type: none"> • Lacking clarity or certainty within the performance environment • Not knowing what to expect in the performance environment • New or novel performance environments to the individual 	Performance Environment Uncertainty	Performance Environment
<ul style="list-style-type: none"> • Difficulties or challenges within the performance environment • Lacking resources to aid in successful performance • Recognizing that the task performance environment is complex 	Performance Environment Difficulty	
<ul style="list-style-type: none"> • Sensing that they are unable to positively affect change with their effort or performance • Feeling overwhelmed by the performance environment • Perceiving that they lack control over the performance context 	Lack of Control Over Performance Environment	
<ul style="list-style-type: none"> • Articulating that they are able to alleviate pressure by leaning on others • Attributing their reduced pressure and enhanced performance due to help and resources provided by leaders and coworkers • Trusting in coworkers helps alleviate pressure 	Socially-Attributed Coping	Coping Attribution
<ul style="list-style-type: none"> • Articulating that they had an automatic response to pressure from prior training and experience • Highlighting the importance of past experience in pressure situations to help alleviate pressure in present or future situations • Dealing with pressure through enhanced focus and effort 	Personally-Attributed Coping	

CHAPTER V. FINDINGS

Introduction

The purpose of this chapter is to discuss the findings and results of the data collection effort. I ultimately uncovered three emergent themes from the interview data as they relate to participants' lived experience of performance pressure – *performance importance*, *performance environment*, and *coping attribution*. In the sections below, I detail how each of these themes arose which will help answer the central research questions surrounding the nature and emergence of performance pressure at work. Specifically, participants consistently articulated that their experiences with performance pressure occurred in situations where their success or failure to perform was consequential to themselves and/or other people. Additionally, informants regularly described performance pressure scenarios to occur in performance environments that lacked certainty, control, or made it difficult for them to have a successful outcome. Lastly, these professionals routinely articulated their ability (or inability) to successfully (or unsuccessfully) cope with performance pressure in a manner substantively congruent with the way they articulated the core elements often associated with this pressure. In other words, informants consistently described tactics and resources – utilized independently or with others – that aimed to reduce the importance of the performance, enhance their clarity or control over the environment, and/or make it easier to have a successful outcome.

Performance Importance: The Personal and Social Importance of Goal Attainment

The first emergent theme of *performance importance* was extensively and strongly represented in the data, as 28 out of 28 professionals mentioned that their success or failure to perform under pressure was perceived as consequential to themselves (personal importance of performance; 20 out of 28 participants) and/or to others (social importance of performance; 28 out of 28 participants). Below, I describe how both of these themes emerged in the interview data through various quotes and insights provided by my informants.

Personal Importance of Performance

Many of the participants described performance pressure as occurring in situations where succeeding (or avoiding failure) was personally-important to themselves. In other words, the primary contention made by my informants was that they aimed for success in these performance pressure situations for personal reasons as illustrated by the two professionals below:

The first time I took it [the Certified Strength and Conditioning Specialist Exam]...it was a lot of pressure. I was really, really new to the game and I didn't pass it – and it's a pretty expensive test, too. So, the second time, I felt all of the pressure. It's a four hour exam, and I was just like, "Man, I have to pass this test!" **And I had some job offers on the line as well at the time when I was taking the exam. So I was like, "If I don't pass it, all that goes out the window."**

Professional Athletic Performance Trainer

But I guess subconsciously I'm thinking, "Is this going to end up good? Is this going to end up bad? What's going to happen?" And I guess that would go back to my instincts of **wanting to preserve my life and to go home.**

State Patrol Specialty Division Officer (a)

From the first statement made by the Professional Athletic Performance Trainer, there appears to be a major financial importance for him to pass the exam from both a cost (i.e., he noted that he thought the test expensive) as well as an income and job stability perspective (i.e., he emphasized that job offers and future income would disappear if he failed). Considering this, there seems to be notable personal reasons for him to have success in this situation which contributed to his perception of performance pressure. Similarly, the State Patrol Specialty Division Officer (a) made a clear statement of personal importance regarding his performance under pressure. His primary aim was one of self-preservation. In other words, his performance was personally-important because he wanted to ensure that he did not lose his life. Therefore, it appears that the aim to preserve his own life made the officer's successful performance especially important for him as an individual and contributed to his perception of performance pressure in that situation.

Many of my interview participants echoed a similar sentiment that their performance was of particular importance to them as individuals. Informants who emphasized that success was personally-important to them seemed to articulate that pressure is derived from within the self. In other words, this data suggests that pressure is an internal, subjective perception. For these informants, at least part of this

perception is grounded in how subjectively important the performance is to them as individuals. See Table 5 for additional supporting quotations from informants describing their experiences with pressure as well as why they felt this pressure that further illustrate the personal importance of performance.

Table 5. Illustrative Personal Importance of Performance Quotes

Informant	Personal Importance of Performance
Nurse Technician	...But in my mind, I feel like okay, I'm working from 7 a.m. to 7 p.m. In that amount of time when the next shift gets there, there should be nothing for them to do. There shouldn't be. And it should be my responsibility to get these things done, whether it's two things or 50 things, it's my responsibility on my shift to get these things done.
Budget & Finance Administrator	Probably it's some sort of realm of pride I would say...for me I want to get the job done for myself ...But even more than something reflecting badly on me, I just know that that's my duty. And if I'm not going to be able to fulfill that duty, I would be disappointed with it.
Collegiate Athletic Strength & Conditioning Trainer	And that's a different level of added pressure because you feel kind of like...especially when you're trying to earn your way. You never get to really put your shoulders down. You're kind of on edge at every turn. You're making sure that if something happens I know what I'm doing . And then eventually you're long enough or ready, where you start to realize that you really truly understand what's going on, and then you might be able to slowly put down your shoulders. I still have some stages that I would like to progress here and as far as promotions and different positions before I ever leave [redacted]. And so that pressure hasn't really totally left because I wanna show that, "Okay, now I've showed that I can do this role but I need to show now I can do the next role, and I can be the guy to do this."
Municipal Fire Captain (a)	...because I don't want to look like an idiot out there, you know?
Municipal Police Chief	On a traffic stop. Seen a guy broke down. Hood was up on the interstate. I pull up behind him. I'm walking up on the side of the car, and I see a sawed off shotgun sitting right at his seat. Now he was outside the car, but he saw and realized I saw that shotgun. So he started walking at me, and there was a moment there that I actually thought I was going to have to shoot him. And it's just, it's those split second decisions that you have to make that you don't have time to think about how stressful they are until after it's over with.
Personal Fitness Trainer (b)	I sort of put pressure on myself when it comes to writing programs, because I want to write an effective program. Writing programs is a creative art. It's not just like 'okay, do ten push-ups, do ten squats, do this and that'. You know? You can do that, but that's not a program. That's just you spewing out commands. Like, writing programs is like saying, "this is the vision I have for an individual or a team or whatever."

Social Importance of Performance

Additionally, many of the participants reported that performance pressure arises in situations where succeeding (or avoiding failure) was socially-important in some manner. In other words, informants perceived that their own performance under pressure was consequential to others. For example, some participants described feeling the pressure to perform well in situations where they did not want to let others down as illustrated by the two professionals below:

Then it was about a hundred-something people being on our campus, **and you want to please them. You want to make sure they have fun.** You want to make sure the competition goes smoothly...that there's no hiccups along the way. I think that's where the pressure came from.

Program Coordination Administrator

It was definitely a stressful time...SWAT – being the new guy, **letting the guy down next to you – that's the biggest thing. That's the biggest stress.** If you're talking about stress, getting shot or something – that's put in the back. You don't really think of it. You think when you get off the truck and you're going up to the house, **my main mission is to hit the door with the ram to open it up and let those guys go in and do their thing...I wasn't worried about taking a round through the door. I was worried about not being able to get that door open to let them do their job...That's the pressure.** Or forgetting something and going up to the house. Just not being prepared, that was the highest level of pressure for SWAT...**letting the guy down next to you probably is the top one. Not so much for yourself, but causing issues for the guy next to you.**

Former SWAT, Current Specialty Division Sergeant

Similarly, many informants also articulated a socially-linked importance of performance in situations when they perceived that they were being evaluated by others as they engaged in their work. In other words, participants often mentioned feeling that they were under pressure to perform up to a standard because others were observing and, potentially, evaluating their performance as illustrated in the two quotes below:

It's very stressful when you have all your supervisors out there looking at you like, "What you gonna do, man? What you gonna do?" You gotta talk to the coroner. You gotta investigate...The first thing you gotta do is find out what happened. Is anybody else injured? Who's deceased? You gotta contact the family. You gotta take roadway measurements. You gotta do all kinds of things. I think that the very first time out there was very overwhelming...'Cause you're kinda worried about like, "What are they thinking right now? Am I messing this up? Am I messing that up? How am I gonna be graded here?" **It's basically how you get graded for that...it's how you're being evaluated.** "Is this guy gonna be able to do this on his own or what?" And usually you never work a scene like that on your own. Usually you have other troopers out there helping. **But it's kinda like I got nervous. "Oh, they looking at me. They looking at me."**

State Patrol Police Officer

So, the pressure of being prepared. The pressure of coming down here and wanting to stay here. I can think of a situation where out of the blue, Coach [redacted] was like, “You’re gonna run the 10:30 group’s warm-up.” And I’m like, “Oh, shit.” **One, the pressure of he’s gonna be watching. Two, the pressure that the other assistants on staff who have been with him for a long time are gonna be watching and the other interns at the time. So, I’m in front of the whole football team, and I’m still the new guy.** They don’t know who I am. They know I’ve been around for the last couple months, but they don’t really know me and now I got to...it’s a whole different dynamic when you’re the one blowing the whistle...giving the instructions.

Collegiate Athletic Strength & Conditioning Trainer

Further, due to the nature of the work some of my participants were engaged in (e.g., police services, fire services, nursing professionals), they noted that there were potential life or death consequences for others due to their performance success or failure, as highlighted by the two professionals below:

As far as when I’m working in the ER, **working under pressure to me is when we have a really busy day and we have really sick patients come in.** We’re having traumas come in and it’s like you have a set amount of time that you have that these things need to be done. You have to stay on your A-game. You cannot steer away from what you’re doing at that time. **It’s a life or death situation in your hands.**

Nurse Technician

There are fires where...we had a two story house that the family had – there were eight people living in the house. And six kids were piled up around a chimney, and they were staying warm. They had their pilot cut off so they had candles in the house and they were all sleeping around the chimney...the fireplace trying to stay warm. And one of the candles caught a curtain on fire and we lost all six kids in that house. **So, we knew there were kids in there. So there was a lot of pressure to keep going trying to find them** – which we eventually did find all of them. But that’s a pressure I can’t describe.

Regional Fire Chief (b)

Combined, the social importance of performance quotes help illustrate a major, socially-connected element that helps give rise to performance pressure. The drive to not let others down, the importance of how others evaluate oneself, and the major implications that one’s work may have on other people all connect to this over-arching theme of the social importance of performance. Similar to those who articulated a personal importance of performance, participants who emphasized that their performance was important to others also seemed to imply that pressure is an internal, subjective perception. In other words, participants not only develop a perception of what others expect from them, but they also create their own perception of the impact that their performance may have on others within

these situations. For these informants, at least part of their experience with performance pressure is grounded in their perception of the social consequences of their performance. See Table 6 for additional supporting quotations that further illustrate the social importance of performance as detailed by my participants.

Table 6. Illustrative Social Importance of Performance Quotes

Informant	Social Importance of Performance
Collegiate Athletic Team Physical Trainer	I think of, initially, like taping an ankle and, say, our last competitor on beam, [redacted], she's the last girl up. And then we have to go to floor right after that, but she needs her ankle taped. So, I've got everything ready - go, go, go. You have to have it done in a certain time so she could move and warm up in that allotment. So, I think of pressure like that.
Intensive Care Unit Registered Nurse	So it's just a lot on your plate, but still try to keep up that bar of what's been known for your unit and not letting down any of these patients. And at the same time you want to make someone feel comfortable. They're coming out of brain surgery, you don't want to make them feel like they're not heard, like you're ignoring them and that kind of thing. And so if you put into the mind of one patient that you may have been running around and act too quickly, that might be the one thing they remember. My nurse ran in and gave a med and ran out.
Office Administration Assistant	But then again, I guess time...if it's due today or I have to get it together for first thing in the morning for him (manager) to take somewhere, I'd rather... I just don't want anyone to be disappointed in me that I didn't have something together, so that's one.
Office Budget Administrator	Okay, I told him I can get it to him. I told him within a week. Okay, what do I do?...I didn't want to make myself, nor my department, look bad.... I don't ever want it to be that Department A didn't get what they needed, because [redacted] didn't do what she was supposed to do. That's why I stress to people, whenever I have to do something myself, but it's going to affect other departments, I need you to give it to me when I need it.
Organizational Services Administrator	...And doing that in a very donor friendly, public friendly kind of way with lots of major events that you're having to communicate and broadcast at the same time would be what I would consider a high pressure situation. Because you have lots of people trying to please and you can't please everyone. But you can do your very best to help with and make sure that you're helping and not hurting.
Municipal Fire Operator	But there are some serious medical calls. Like if a patient's not breathing or something like that. Then the pressure kind of gets you...I guess, CPR calls would be the most under pressure, because – I mean, there's obviously a lot is at stake. If I do something a little bit wrong, then – you know – this person's definitely not gonna make it.

Combination: Personal & Social Importance of Performance

Additionally, many of my informants described performance pressure scenarios that clearly had both personal and social importance for them to perform well. In other words, informants did not always separate the personal and social significance of their performance under pressure to occur in different contexts. For some participants, a single performance context contained multiple reasons as to why they perceived their performance to be important as emphasized in the quote below:

Anytime I help an athlete to accomplish their goals, it feels amazing to me, **because if they have a goal, it's my goal as well. If they don't eat, I don't eat. And if I don't eat, they don't eat. It's a teamwork type of deal.** And not just talking about extrinsically – **I can't feel good about myself and my profession if I know what I'm doing isn't working...**I'm very results-oriented – so if I know that I'm doing something and it's not turning out results and my athletes aren't doing well, I have to go back and self-reflect and be like, okay what do we need to fix? What needs to be done?

Professional Athletic Performance Trainer

Similar to the Professional Athletic Performance Trainer above, the duality of having both personal and social reasons to perform well is a characteristic that I found articulated by some participants when I asked them about why they felt pressure in certain situations. Ultimately, I found that these categories (i.e., personal importance of performance; social importance of performance) are distinct but not mutually-exclusive. In other words, my informants often described that there were performance pressure contexts that held a combined-importance (i.e., personal and social importance) for their performance. See Table 7 for additional supporting quotations that further highlight the dual personal and social importance of performance as articulated by my informants.

Table 7. Illustrative Personal & Social Importance of Performance Quotes

Informant	Personal & Social Importance of Performance
Collegiate Athletic Strength & Conditioning Trainer	One, you don't wanna look stupid. I don't wanna look stupid. But two, I wanna work here. I want him to look at me as somebody that, "This is a guy that I could hire" or something. That was my thought process. I wanna show him that I have the ability to do this at this level and there was pressure on me. It was a goal of mine but it wasn't, till you do it you're never really sure if you're gonna get that opportunity. 'Cause a lot of people would kill to be in a position that I'm in right now.

(table cont'd.)

Informant	Personal & Social Importance of Performance
Collegiate Athletic Team Physical Trainer	I think of, in athletics especially, there's that internal pressure. I want to be able to help the athletes out the best that I can. They have the pressure of competing and performing. There's pressure from the coaches, from them to compete and to perform, for me to get 'em back and get 'em healthy. There's a lot of pressure in different avenues in athletics...in my position.
Personal Fitness Trainer (b)	I think ultimately, I want to make my boss happy. I want to make the people participating in the program happy. I want what they say about me to reflect who I believe I am. My reputation is at stake, especially in a small town. Especially for a guy who's not from here coming into here, and in the career that I am – your reputation is the make or break. If people go, “Oh yeah, I've trained with [redacted]. He sucks.” No one's going to train with me. I'm not going to be able to pay off the house. So, you know, there is that self-centered component – where my reputation matters... And so there's that aspect to it. And then, you know, for the career, I want people to say positive things about the experience they've had with me so other people will desire my service.
Emergency Room Registered Nurse (a)	A patient comes in and they have a lot going on. They have a lot they want to tell you, and you're very short with them, you cut them off – saying “I just need to know this, this, and this” – then they don't trust you. They think, “Okay, she doesn't really care, so I'll just go somewhere else.” Or you know, maybe it's really not that big of an issue since she didn't ask about this. So that stresses me out. It's like, I don't like anything to be missed. I like to be very thorough, and I like my patients to know that I care.

Considered in combination, I found that participant descriptions of their perceived personal and social importance of performance—and the aggregate theme of *performance importance*—provide supporting evidence that pressure is an internal, subjective phenomenon. Additionally, I found that, without exception, every performance pressure scenario described by my informants centered on accomplishing goals that were meaningfully important to the participants for personal and/or social reasons. Ultimately, the theme of *performance importance* helps to solidify that this goal-striving importance is a foundational element contributing to the emergence of performance pressure at work.

Performance Environment: Contextual Impediments to Important Goal Attainment

The second emergent theme of *performance environment* was strongly represented in the data, as 27 out of 28 participants indicated that the performance pressure context in which they were engaged lacked clarity (performance environment uncertainty; 22 out of 28 participants), had certain difficulties (performance environment difficulty; 27 out of 28 participants), and/or made them feel overwhelmed

(lack of control over performance environment; 17 out of 28 participants). Below, I describe how each of these themes emerged in the interview data through the rich descriptions articulated by my informants.

Performance Environment Uncertainty

First, many of the participants described performance pressure occurring in environments in which they did not know what to expect, lacked clarity, or were novel to them. In describing their experiences in various performance pressure contexts, participants often characterized these situations to contain a high level of uncertainty for them as illustrated by the two professionals below:

Because when I was told, “You got to do it,” the deadline seemed very short to me. I was like, **“Oh my God. I’ve never done anything like this before and I have to get it done in a month.”** A month was from finding the company that was going to help me host it – to it being up...I don’t know how to build a website at all, and [redacted], being a public university, has a very limited budget. I did find this place called [redacted] that helped me get the bare bones up, **but I really had to figure this out on my own. How to build this website and to do an accompanying app with it. I had never done any of this before.**

Public Relations Administrator

I had a patient for four hours in the ER. They were waiting on a bed upstairs, like, all day. He was on the cardiac monitor all day. Everything was fine. He was in because he had something on his foot – no big deal. **So I’m bringing him upstairs, and he goes unconscious in the elevator with me by myself. That was the most stress I’ve ever felt at work.** So, I’m like, “Oh my God – this is not happening to me right now.” So we get off at the floor and I tell the nurses I need help right now. The nurses, they come – they don’t really know what’s going on, so they kind of took their time, and I’m like, “Now!”

Emergency Room Registered Nurse (a)

In the quote above from the Public Relations Administrator, she emphasizes that she had never built a website or accompanying application before; however, building both of these technologies was precisely what she was tasked to accomplish in a short amount of time. In other words, she lacked clarity as to how she could successfully accomplish this new task primarily on her own without any prior experience. Additionally, in the elevator situation described by the Emergency Room Registered Nurse (a), she encountered an environment in which she lacked an understanding as to why the patient went unconscious and described a feeling of being overwhelmed in this unique performance environment.

Many of my interview participants echoed a similar sentiment that they felt performance pressure when engaged in performance environments riddled with multiple unfamiliar elements. I found that informants who emphasized that there was a high level of uncertainty within the performance pressure

environment typically attributed this to the novelty of the situation and their lack of experience with or exposure to similar situations in the past. In other words, participants experienced a heightened level of performance pressure when trying to accomplish an important goal but lacking clarity as to how they can successfully pursue and accomplish that goal. See Table 8 for additional supporting quotations that further illustrate performance pressure experiences occurring within environments filled with uncertainty.

Table 8. Illustrative Performance Environment Uncertainty Quotes

Informant	Performance Environment Uncertainty
Emergency Room Charge Nurse	But then the job, I mean – it's always intriguing to not know what's walking in the door – or not walking in the door, you know? You never know – when I was at [redacted], you never know if the person was going to get kicked out the car because they were shot, and the family didn't want us to notice them or whoever kick them out the car and drive away... so I never knew if I was going to get a gunshot victim laying on the street or just some older person out of their medicine. So it's always interesting in the ER... It's so unexpected, you don't know what's coming in. You're managing this entire ER. Everything is thrown on your shoulders
Former SWAT, Current Specialty Division Sergeant	I was put in charge of a makeshift unit that they put into the French Quarter. It only lasted four months, but we didn't have a mission. They wanted us just to "go make a difference." Initially right off the bat, the stress was there. Because I wasn't an official supervisor there. I was put into a supervisory position, yet, I hadn't proven myself or gotten officially commissioned... The pressure is on now because not only are you not a "real" supervisor...but we're putting together just a team of people that really are forced associated. It's not like it's a bunch of narcotics guys. We had people from all different kind of disciplines, and then we had no mission. The mission was just to go and do things, go make things happen.
Intensive Care Unit Registered Nurse	I would say the ICU is a very high stress environment. Not all days are, but you never know what you're walking into in the morning. You could be walking into a patient coding at shift change or you could be walking into a patient that just had surgery and they're up in the chair already eating their breakfast...So it kinda does come in waves, but sometimes a patient can just kind of go bad in a matter of seconds. We deal with a lot of aneurysms, so we had a patient just sitting up in a chair and next thing you know...unresponsive.
Municipal Fire Operator	I put the truck in park and I just started running. You know, and the mom met us out with the kid. He's laying limp in her arms at the street. It was intense.
Municipal Police Chief	The calls we get, you know – I'm gonna go back to our injured officers from a few weeks ago. I was eating lunch. Relaxed. Everything was fine. And in the matter of ten seconds, my world turned upside down that day. All of a sudden, I had an officer that was down. He was in critical condition.

(table cont'd.)

Informant	Performance Environment Uncertainty
Office Administration Assistant	I feel like those happened every day in the first five years, not just because I didn't know how to do them, but because they were that different, that unique of "let's see if we can figure this out, how we can get this accomplished." Now, these days there's a few things that come up that I've never seen before or am familiar with.
State Patrol Specialty Division Officer (a)	...he crashes and then after he crashes, he wasn't wearing a seatbelt. So he kind of flung to one side of the truck and was shooting up, 'cause he crashed in a ditch. He was shooting up at where we were... the whole time all that was going on was really, really high stress. 'Cause you don't know what's going to happen. You don't know who's going to get hurt and just a lot of unknowns. And trying to make sure that I go home, to my wife and my son. That's your motivation, at least for me. That was my biggest motivation. I got to go home.

Performance Environment Difficulty

Additionally, many of the participants reported performance pressure as arising in situations ripe with difficulties, challenges, or hurdles to overcome in order to have a successful outcome. For example, some participants described experiencing performance pressure when having difficulty in choosing between multiple courses of action as illustrated by the two professionals below:

In the ER...if you had a critical patient, you only had two [total patients]. **But when having two critical patients...who do you choose as your main priority?** It's trying to decide what to do first, but also in the back of your mind thinking there's this and this and this going on with another patient. And **just trying to divide your attention but still provide the same care.**

Operating Room Charge Nurse

...but every building was connected and, every one that was, had a business in the bottom and apartment complexes or homes in the top. So they were all completely connected. **So, if you had one fire downtown, it became an issue for the whole community. A lot of times it came to a point of "where are we gonna cut it off at?"**

Regional Fire Chief (b)

Similarly, other informants acknowledged specific hurdles they faced in the performance environment that contributed to the pressure they experienced. In other words, participants often described that explicit difficulties increased pressure and impeded their ability to ensure that a successful outcome would occur as illustrated in the two quotes below:

That was a huge challenge to overcome because...this is two days before the competition, and then even during the competition when I have ten thousand other things I have to do, I'm trying to coordinate with this lady. Then the furniture people, "What color do you want for this? What color do you want for that? This is going to cost this." Meanwhile, I have ten other people calling me, "Hey, I'm at the airport. Where are the people? I don't know." **It's a lot. It's a lot to handle.**

Program Coordination Administrator

I don't know if they [babies] just seem more fragile or just – you want to give them every possible chance that you can. You don't want to make any mistakes. You feel like you have a few more mistakes with adults. **Adults can verbalize or gesture to help you understand what the problem is. But you just have a baby and you don't know what's going on. They can't tell you what's wrong.** You know? It's just that much added pressure, I guess.

Municipal Fire Captain (a)

Combined, the informants regularly articulated performance pressure scenarios as occurring in situations in which specific elements of the environment made it more difficult for them to have a successful outcome. Whether it was the difficulty of selecting between multiple courses of action, trying to actively respond to various demands while completing multiple tasks, or recognizing that some performance contexts have greater complexity and challenges than others, the informants regularly described experiences with performance pressure in environments they perceived to have a high level of difficulty.

I found that informants who emphasized that there was a high level of difficulty within the performance pressure environment often attributed this perception of difficulty to a lack of knowledge, a lack of help from others who possess the requisite knowledge, a lack of confidence in their ability to overcome these difficulties, and the inability to meet every demand required of them within the performance environment by themselves. In other words, participants experienced a heightened level of performance pressure when trying to accomplish an important goal but lacked the resources (i.e., knowledge, help from others) or the self-efficacy necessary to achieve a successful outcome. See Table 9 for additional supporting quotations that further illustrate the informants' articulation of difficulties within the performance environment when working under pressure.

Table 9. Illustrative Performance Environment Difficulty Quotes

Informant	Performance Environment Difficulty
Director of Personal Training	<p>In that description of the putting in a new workout – probably that’s the most pressure, because there is – you have five or six or eight people in a room all doing different exercises. And then you have some trainers there that also need nudging along and haven’t quite gotten there – so, when you have all that going on it’s kind of like juggling in a circus where you’re trying to make everything run just right and everybody have a good experience. That’s probably the most, I guess...So let’s say you have a group of four or five people and you’re trying to get them all to do the right thing and you’re trying to dispense the information and all that – I guess that’s the pressure part of it. At least...you feel that little adrenaline or you feel that tension goes on.</p>
Former SWAT, Current Specialty Division Sergeant	<p>Throw that right off the bat, having to prove myself...coming up with a mission, also making sure that everybody's up to speed on the training, the kind of things that go down on in the city...guns and robberies and stuff like that. You need to make sure. It's easier to handle something like that when you have people around you that are alike, of the same mindset and up to speed. Where you don't take somebody who checks license plates every day and then you want him as your backup to go after armed robbery...That was another thing that was stressful. Not due to their inability to learn. Everybody was open to it, and willing to, but it was getting up to that level as fast as possible to meet the demands that were being put on us. Whereas we didn't have the luxury of six months, get up to speed, and start looking. They wanted stuff right away, which is understandable. Basically that was three or four things right there started the pressure crunch.</p>
Intensive Care Unit Registered Nurse	<p>So I was the charge nurse. We're a 12 bed unit and we were short staffed. So we should have six nurses for a 12 bed unit, two patients per nurse in the ICU and we are short...So under pressure for me is my more high acuity patients but sometimes it's, like I said, two doctors fighting and you have to make a decision and, you know, you're trying to think back, legally, what's right. "What's right for my patient? What's the best outcome?"</p>
Municipal Fire Captain (b)	<p>It means making split decisions. I mean think about it this way: you’re sleeping at two o’clock in the morning. The radio goes off. Says it's a structure fire. That’s the first thing that sticks in your mind. That’s like the big call – structure fire. Well, you have sixty seconds to be in the truck and out the door. Then they give you an update on the radio once you say you’re in route. That update might be two people could possibly be inside the fire. Homeless people could’ve been in this house before. They got a family of five lives there, and none of the neighbors have seen anybody. They don’t know anything. So, now, you’ve got a four minute response time – say – you’ve got four minutes to think about what you’re gonna do to get there. What’s the first thing you gonna do? Are we gonna put the fire out or we gonna look for people? Then when you pull up, you got another split second decision you gotta make. Can I send my two guys in that house? Not only them – me too. I gotta go with them. So, do I go in this house? Is the value of their life worth my three guys?</p>

(table cont’d.)

Informant	Performance Environment Difficulty
Office Budget Administrator	Now that's pressure. That's one thing I should've said...that when they give you that little, that journal of things that needs to be done from April to June 30th, you're on it. You have to make sure everything is done.
Operating Room Charge Nurse	So, one of the biggest things that we faced is that we would get put in the situation where we would get a bed for a patient and you had thirty minutes to call report and get the patient to the floor. Well, somebody's putting pressure on you to get the patient to the floor but you're trying to provide for anywhere from two to three other patients. And then, if you're at a spot that you can get report on the patient, you'd have to hope that the floor nurse can take report on the patient. And then we had to transport our own patients up. So then you're leaving your other three patients to take the patient up and by the time you get back you already have a new one. So then it's like, what's rolling in as I'm walking out the door? So it's like you're always trying to think and be prepared for what you're coming back to.
Organizational Services Administrator	Pressure is such a multi-faceted word. You could have pressure of imminent deadlines , you could have pressure of a very visible position where you're constantly looked at under a microscope. There could be pressure of multiple different bosses all demanding different things from you. There could be pressure of the sensitivity of the work that you do.

Lack of Control Over Performance Environment

Lastly, multiple participants described performance pressure occurring in environments where they lacked control. In other words, informants would often describe a sense of helplessness and inability to positively affect change in the performance environment when they experienced pressure. Similarly, many of my participants articulated that they were working in environments that made them feel significantly overwhelmed. This direct acknowledgement of losing control is particularly salient in the description provided by the administrative professional below:

Just because there's so many people that are coming into town, and you're responsible for them. In a nutshell, you're essentially responsible for anybody getting left at the airport, or if somebody misses their flight, or...if their flight gets delayed. You're still responsible for that person to make sure that they get from point A to point B. **If something goes wrong, that's on you. It was a lot of pressure to make everything perfect, even though some things may not be in your control. I guess loss of control is a lot of pressure.**

Program Coordination Administrator

Similarly, other participants described their experiences with performance pressure occurring during times when unanticipated or unwelcomed changes occurred in the performance environment where they were forced to accept altered context and take action. These unanticipated changes in an uncontrolled

environment are highlighted in the following quotes regarding informants' lived experiences with performance pressure at work:

One thing is another financial stressor...of central administration potentially changing policy midyear that would be of detriment to our college's budget situation for that year. **Without proper forewarning that it was coming or ample time to be able to deal with such a change.**

Budget & Finance Administrator

So, we got the call of the first one [stroke patient], and I informed the physician. I informed the nurses that they were getting this patient, **and then the radio rang again, and it's overhead.** And it was the second one [stroke patient], and we activated overhead in the hospital. So then I was like, "Okay, two nurses will do this one. Two nurses are gonna have to do that one." Told the physician we were still okay. **And then the STEMI [serious heart attack] came through and I was like "Oh crap-oh-la"...**

Emergency Room Charge Nurse

Considered all together, these illustrative quotes highlight that the participants often experienced performance pressure when they lacked a certain level of control over their task environment. Whether it was the recognition that there are certain things they could not have reasonably anticipated, being forced to accept an environmental change that negatively impacted their ability to achieve an important goal, or encountering an overwhelming number of challenges within the task environment, the informants would often describe their experiences with performance pressure occurring in environments where they lacked situational control.

I found that informants who emphasized that there was a lack of situational control within the performance pressure environment often considered this to be a major impediment to their ability to accomplish an important goal due to their perceived inability to successfully cope with and overcome those challenges. Often, participants who described a lack of control would attribute this to their inability to foresee or anticipate changes in the task environment. Similar to participants' experiences with performance environment difficulty, those who experienced a lack of control indicated that they also lacked resources and help from others which would aid them in successfully responding to these overpowering changes and challenges in the performance environment. See Table 10 for additional supporting quotations that further illustrate participant experiences with performance pressure in which they felt overwhelmed or lacked control over their task performance environment.

Table 10. Illustrative Lack of Control Over Performance Environment Quotes

Informant	Lack of Control Over Performance Environment
Collegiate Athletic Team Physical Trainer	I think that anytime you have to make a decision, like a game time decision or a meet time decision, I think that can be a lot of pressure 'cause you are constrained by time, you know?
Emergency Room Registered Nurse (a)	But then there's pressures, too, of staffing. If you're short staffed, "okay, how am I gonna handle all of these patients?" They're giving me all of these patients, I don't know how I'm going to do this today. I'm so behind. The doctors are upset. You know? There's those kind of pressures, too...I think the stress comes from not feeling like you can manage what we have on our plate.
Municipal Fire Captain (b)	Knowing we know that the son was probably dead already, because the whole house was on fire. He was a viable life they could've saved, and I'm sitting in the tanker like a dummy, instead of just going to the scene. But I was told to get the tanker, and we had already made that decision to go get it – so there's nothing I could do. I mean...you feel like you could do something...That was one that I just thought I was overwhelmed. Because, first off, I couldn't go into the fire. I was told to get the tanker. When I got there, they were pulling the guy – they had the guy out. They were looking for the kid. And then we got guys in this fire that I'm looking at the whole time like "Why is anybody in this house?" The whole house – the back of the house was collapsed already. Fire coming out the front of it. We got guys in the house – of course, they're looking for the kid. So, I was done. Done at that fire. I mean I just spent.
Nurse Technician	So I remember one day we had a doctor who is notorious for ordering blood cultures on just about every patient. And we had a very, very big patient load. I remember I was just about on the verge of tears. I was so stressed out. Was just having to go from room to room to do these things, plus I had other things that needed to be done. And on top of that, the nurses that were on my team were not very helpful. It was one of those days, and I just remember really being stressed out and just wanting to throw in the towel. Just be like, "You know what? It's time for me to leave. My shift's up and I'm going to leave."
Operating Room Charge Nurse	I honestly think you felt more, because there's always things that you second guess yourself – and fire is something that has a life of its own. What you do here can affect what it does here, and some things you can do you just can't change it no matter what you do.
Regional Fire Chief (b)	I honestly think you felt more, because there's always things that you second guess yourself – and fire is something that has a life of its own. What you do here can affect what it does here, and some things you can do you just can't change it no matter what you do.

(table cont'd.)

Informant	Lack of Control Over Performance Environment
State Patrol Specialty Division Officer (a)	So, it's just me behind him at this point while the other trooper is trying to do some kind of secondary action. Well, the car doesn't go where that second trooper thought he was going to go. So, now it's just me in the bad guy and the other trooper's in another area trying to get back to where we are, but it's hard to do because we're driving very fast. So, he never kept caught up to us. It was just me in the bad guy. And I'm calling it out and there's other troopers that are trying to get to me, but we're only working with maybe two or three troopers that are in my area. So, we don't have a lot of help to begin with, and everything's happened really, really quick. I didn't really have a lot. It was just me and him the whole time.

Considered in combination, I found that the performance uncertainty, performance difficulty, and lack of control over performance environment categories—and the aggregate theme of *performance environment*—represent a perceived evaluation of the performance context in regard to how the context affects the likelihood that one will be able to achieve an important goal (i.e., contributors to *outcome uncertainty*). As this is a perceptual process of evaluating the performance environment, this provides additional support that performance pressure is an internal, subjective phenomenon. Additionally, I found that nearly every performance pressure scenario described by my informants occurred in challenging environments while pursuing an important goal. In other words, the findings surrounding the theme of *performance environment* further helps to solidify that performance pressure emerges when there is uncertainty surrounding the accomplishment of an important goal at work.

Coping Attribution: Personal and Social Sources to Alleviate Performance Pressure

Although not formally a part of my initial theoretical model, the final emergent theme of *coping attribution* was widely and strongly represented in the data as 28 out of 28 informants indicated that they were able to achieve successful outcomes by alleviating performance pressure within themselves (personally-attributed coping; 28 out of 28 participants) and/or with the help of others (socially-attributed coping; 23 out of 28 participants). Below, I describe how both of these themes emerged in the interview data through the lived experiences of performance pressure as provided by my informants.

Personally-Attributed Coping

Many participants attributed their ability to cope with performance pressure internally. In other words, informants often described their ability (or inability) to successfully overcome the negative effects performance pressure due to tactics and strategies that were primarily a result of their own individual efforts. For example, some informants attributed their ability to cope with pressure as a result of prior learning and proactively preparing for these types of future performance environments as is illustrated by the three professionals below:

I had to prioritize myself and really focus on what's most important...When I finally put a timeline together of the entire year – what happens when – and following that for two years now, it's the only way I've been able to stay on top of it. Like, "Okay, this is what we have next month. If we have to meet this deadline, we've gotta back this up and here's the deadline for this, this, and this." So, just playing it backwards was the only way I was able to somewhat figure it out.

Office Administration Assistant

So when I prepare for something and I feel prepared, my confidence level is significantly higher. If I write a good program and I prepare well for it, I feel confident in what I'm doing. Standing in front of the team and my confidence level projecting what we're doing is so much higher than when something got thrown in my lap and I'm just trying to scramble and almost fake it till you make it type of a deal. I don't want them to know that I'm scrambling...So, I think the pressure of making sure that I don't procrastinate on stuff... 'cause it never ends.

Collegiate Athletic Strength & Conditioning Trainer

A death is something you never forget. Especially when you feel like it's on your hands...So, a patient didn't make it, and it was devastating to me...At that moment, I was like, "Okay, what can be done differently?" And as a nurse, you're always saying that. **You take every scenario, good or bad, and you're like, "How can I make it better? How can I make it better for next time so this doesn't happen again?"** Either be a pressure sore somebody may get or a death from a medication – you look at all of that and you're like, **"How can I make it better?"...trying to revamp it to make it better for the next patient.**

Emergency Room Charge Nurse

In each of the above quotes, the participants articulated a personal desire to either learn from past experiences or to proactively prepare for future performance pressure situations in order to alleviate potential future anxiety and achieve success in similar environments. Similarly, many participants reported the impact that experience and training had on alleviating pressure and ultimately aiding their ability to have a successful performance outcome. The perceived value of training and experience is particularly salient in the following quote from the fire services professional:

I think the fire department in itself is a kind of paramilitary organization. So, **that means we train, train, train, train, train, train – so the pressure isn't really there when you have to respond and do something. I don't really feel that pressure, because we're doing stuff that's kind of second nature due to the extensive amount of training that we have...** I mean, I think that pressure is kind of fleeting...It may pass over in the mind real quick like, "Ah, we better make sure we're on top of this." But then you just kind of revert back to training and...do what you have to do, and that seems to get it done...**So now, that I've done it for twelve years, I guess I feel a little more comfortable. It doesn't really bother me quite as much...** You know, after running twelve years of medicals, I guess I don't have that fear anymore or that pressure of "Oh God, I really got to perform."

Municipal Fire Captain (a)

Many participants echoed a similar sentiment that experience played an important role in their ability to effectively overcome an otherwise high pressure performance situation. For example, even when engaging in an identical task performance environment, the Professional Athletic Performance Trainer indicated that his experience is what drove him from perceiving a high level of performance pressure to very little pressure at two different times as illustrated below:

When I first started out, there was definitely more pressure because I didn't know all the way how to do it the correct way. Now, there's not as much pressure because of the results. The science is the science. I've cross-checked, fact-checked, worked with a team of people and what we're doing is right. Holistically, it's just correct. **So, that takes the pressure off. So when these guys come in, I am confident that the things I'm instilling into them are the correct things, they're the correct cues.** I'm gonna be teaching them the right things for them to perform at the highest level.

Professional Athletic Performance Trainer

The sentiment expressed by the Professional Athletic Performance Trainer was echoed regularly throughout the interviews I conducted. In other words, the task objective—in his case, training elite athletes—was identical from the first day that he started the job to the present day. Over this time, the only thing that changed was his perception of the task objective and his perceived ability to succeed in training athletes. In other words, he felt performance pressure when he had less experience and less confidence in his abilities. Over time, the task objective did not change, but his perception of it shifted to one that perceived that the same task no longer had pressure with it. In accordance with the initially-theorized model of performance pressure, scenarios like this help to support the feedback loop running from *performance* to subsequent *outcome uncertainty* over time.

Additionally, other participants reported utilizing personal coping strategies that were centered primarily on consciously adjusting their perspective regarding how they perceived the situation while they were experiencing performance pressure. As a coping strategy, this internally-driven change of perspective is well-illustrated by the two informants below:

I just took a step back and took a few deep breaths and **reminded myself that it'll be okay. It's not the end of the world that I have all this work to do**, even though it feels like it at the time.
Nurse Technician

If I was stressed for a test or assignments or something professionally...what can you do? **The only thing you can do is do one thing at a time and hope for the best. That's all you can do.** I guess...partially from my upbringing and then just learning from experience...what has stressing myself out done for me in the past? Nothing. **Might as well just stay calm and do one thing at a time. Come up with the best solution that I can come up with....If you stress yourself out, if you get angry, you're not going to get the solution that you need.** So you might as well deal with it the best way you can, and then learn from it in the future.

Program Coordination Administrator

Combined, each set of illustrative informant quotes emphasizes how the participants either responded to or prepared for performance pressure within themselves. In other words, these individually-enacted coping strategies allowed them to alleviate the pressure they were experiencing at that moment as well as alleviate potential pressure in future similar performance environments. These data provide new, important information that are incorporated into the revised model (see Discussion—Figure 2).

I found that participants who described an inward focus to cope with performance pressure primarily did so with one of four aims: (1) to reduce the difficulty of the current performance environment in order to alleviate the current pressure experienced (e.g., trust and reliance on their training; seeking feedback from the environment to determine current discrepancies from goal attainment); (2) to increase the perceived control they have over the current performance environment in order to reduce the current experienced performance pressure (e.g., attempts to rationalize what is within and outside of one's control and accepting what they cannot control); (3) to reduce the potential difficulty or uncertainty that would otherwise be part of a future performance environment (e.g., proactively preparing for potential future performance pressure situations); or (4) to reduce the level of importance of the performance (e.g., consciously changing one's perspective of the situation.) See Table 11 for

additional supporting quotations that further illustrate the personally-attributed coping strategies utilized by the participants during their experiences with performance pressure at work.

Table 11. Illustrative Personally-Attributed Coping Quotes

Informant	Personally-Attributed Coping
Budget & Finance Administrator	I basically try to rationalize, at work or in life, what is within my control . And honestly, for the problem that was set forth was not in my control . And the solution, I could work towards a solution, but there wasn't anything I could do that would just sort of make money appear to solve the problem. So I just try to deal with it with that sort of mentality where I'm doing the best job that I can with the hand that I'm dealt . And we ended up making it work, but it was definitely stressful with that kind of hanging over my head. And the ambiguity of not actually knowing if we would be able to make ends meet at that time.
Director of Personal Training	When you're moving around and you're really executing and hitting on all the bases – getting to everybody. Nobody is standing around wondering what to do. That dissipates the anxiety that goes on when you're under that pressure. And it helps...I guess the sense of people moving and doing their exercises and moving from one thing to the next in an orderly fashion is what does it .
Emergency Room Registered Nurse (a)	I think the biggest pressure is when your patient is going down and you have to act immediately or else it's not going to end well. So, that's a huge pressure – and the thing with that is all the training they put you through – it comes into place then and there, on the spot... So, I think that made the difference. But doing it enough...you still think. You're still going through those lists in your head of, "It could be this. It could be this. It could be this. Did you check this?" So your mind is racing, but you know what to look for and what to think about...
Intensive Care Unit Registered Nurse	I try to keep confidence. I try not to break down and get overwhelmed. And my list, I kind of have in my head. I kind of have a running list of everything we need to get done, and you have to cluster your care. So you can't go into this room and give ice, and then go get a med and go back in the room and give a med, and then go run and do this. It's very important to get everything together, so when you go in that room, you get multiple things done, assess your patient, and get it all done.
Office Administration Assistant	Unfortunately to me, working under pressure is the only way to actually make me choose that idea and go with it , and actually what I feel turn out with a fairly decent product. Whereas if I have time, I go back and forth and I decide "Do I want to do it this way? What about this way?" That's one side of it...I do feel like getting a little pressure is motivational. I gotta get it done, and then you finally start moving and I guess that's where those ideas come from to me where I'm like, "Oh great idea," and just roll with it and get it done , and then you actually have a completed product.
State Patrol Police Officer	We just gotta breathe. We just go through it. Just push through it. It's nothing you can't handle . But, working under pressure, it can get stressful sometimes... But once you slow it down, it's your scene . You don't have to rush or anything. So once I figured out you can slow it down and get to work, that's when the pressure was relieved.

Socially-Attributed Coping

Many participants attributed their ability to cope with performance pressure externally. In other words, informants often described their ability (or inability) to cope with pressure due to the help, expertise, and trust that they had in their coworkers, managers, and leaders. Some informants were emphatic that there are many benefits from having the assistance of others while performing under pressure. The importance of obtaining social assistance was clearly and succinctly articulated by the professional below:

I just prayed all that time, “**please let somebody come help just for five minutes so that I can breathe.**”

Operating Room Charge Nurse

From the above quote, the Operating Room Charge Nurse emphasizes that the breathtaking anxiety that can accompany performance pressure can also be alleviated by having others assist her in the task performance environment. Similar to the nursing professional’s sentiment, other participants indicated proactively seeking the assistance of leaders, managers, and coworkers to help them cope with pressure. Proactively soliciting help from others to handle performance pressure is reflected by the administrative professional below:

I called HR. Talked to them. Met with one of the ladies over there. “Okay, I need to provide [redacted] with this. How do I do this?” She explained it to me. “Okay, I kind of get it. Okay. So you do X, Y, Z.” **I bothered that lady so much – so much. But I knew that it was something I needed to do if I would get this to [redacted].**”

Office Budget Administrator

By proactively soliciting coworker assistance, the administrative professional was able to reduce the uncertainty of how to complete the task and do so in a timely fashion. Conversely, many informants attributed their ability to cope and succeed while performing under pressure due to the proactive efforts *by others toward them* when they needed it the most. This acceptance of pressure-alleviating, proactive coworker assistance is highlighted by the two professionals below:

They rolled two ambulances in at the same time [with critically ill patients], they were both my rooms, and I was like, “Well, what do you do?” You have to know when to ask for help. Thankfully, I worked with a good team, **so they saw it before it even became an issue...I felt like I was supported and that I wasn’t left to dry. I didn’t have to decide between patients so we could still provide the best care for both of them.**

Operating Room Charge Nurse

So, I was just under a lot of pressure. I haven’t been charging as long as a lot of these other nurses have, **but what I can say is my team was amazing that day. Everyone was like, “[redacted], what do I need to do? Let me do some of your charting.” Like the regular shift-required stuff. “Let me run and get something for your patient.”...So, under pressure are all of those things, but the things that helped me work under pressure was having better nurses and having managers that I can run things by very quickly and get their opinions on.**

Intensive Care Unit Registered Nurse

Considered together, each of the previous quotes illustrate how socially-related coping, either proactively-initiated or reactively-accepted, aided in reducing the pressure felt by participants and aided in their ability to succeed. Similar to the previous descriptions regarding the value of coworkers to alleviate pressure, other participants indicated similar benefits of having trust in the team around them as is the case in the quote below:

I would say SWAT tactics in itself are very easy, but when you add the high level of stress with not letting the guy next to me down, going into a dangerous situation, high risk, where there could be bullets or dogs or explosives or something like that – and then on top of that it just being a volatile situation, just knowing the unknown is behind that door...it can get clouded by all that kind of stuff. **I think everything that trumps it right away is the trust in the guy next to you...You need to be able to trust the guy next to you. He’s not going to hesitate. He’s taking the training seriously...I need to know if I go in a door and I go left, you’re not going to blow it. You’re going to the right and cover my back, my six.**

Former SWAT, Current Specialty Division Sergeant

The social attribution that informants made throughout the interviews primarily centered on the contention that through the help, trust, and experiences of others, the participants were able to reduce the performance pressure they felt which aided them in having successful outcomes. Similar to the personally-attributed coping strategies, I found that most of the tactics and strategies enacted via others—or attributed to others—were primarily aimed at enhancing their environment. Specifically, I found that participants who proactively solicited social assistance did so to reduce uncertainty (e.g., enlist more experienced coworkers to make sense of a novel performance environment), reduce difficulty (e.g., engaging in the same challenging task with other knowledgeable people), and regain control over the

environment (e.g., delegating different tasks to coworkers). I also found that these benefits were similarly received by participants who accepted the proactive assistance from others as well as those who placed complete trust that others would fulfill their duty in the task performance environment. See Table 12 for additional supporting quotations that further illustrate the socially-attributed coping strategies utilized by the participants regarding their lived experiences with performance pressure at work.

Table 12. Illustrative Socially-Attributed Coping Quotes

Informant	Socially-Attributed Coping
Collegiate Athletic Team Physical Trainer	Just feeling the pressure and uncertainty from the coaches. "Is she gonna be able to go, is she not gonna be able to go?" I think I'm the type of person that I like to utilize my resources, especially in an instance of pressure, so getting in touch with our team doctor "Hey, when are you gonna be here? I need you to do X, Y and Z for me." ...I like utilizing my coworkers. A lot of times they have dealt with similar situations. To know that I'm not alone, that everyone has dealt with some sort of pressure or adversity, so, not keeping it all in, utilizing my coworkers for support. You know, sometimes that motivational pep talk you need to keep moving, I think that helps.
Emergency Room Charge Nurse	So we had a patient [a coworker, a fellow nurse] who came in who should've died... So immediately I told the physician, "This is what's going on. It's really bad." You know, give him vitals and everything so we were all ready. And then I called the team, and I was like "everyone to the nurses station." So, again, huddling beforehand and letting everyone know what's going on. So, all the attention went from the other patients to this one patient... We were waiting for the patient to roll in the door, and like five nurses jumped on this patient. The patient was in CT within like two minutes and in surgery within less than an hour. And after a twelve to fourteen hour surgery...she was home a week later.
Emergency Room Registered Nurse (b)	So I'm with this lady [ER patient]...I just remember looking in the bed and sort of being embarrassed, because I had all these blood tubes and needle packs...From like what I had been trying to do the previous forty-five minutes and gotten nowhere...This nurse came in and helped me, but I was just like "Oh my gosh! What am I doing? I can't do anything. Nothing is working." And then she came in and helped and it was just a different process. Like she came in and got my blood and once that got rolling, okay, I got my IV, I can do things.
Municipal Fire Captain (a)	That's human nature (replaying what happened after the fact). But, I also think that's where you get the best ideas from – you know, did we do this the right way? Is there a better way we could've done it? And I think I've probably used that as one of my leadership techniques is – what could we have done better? Do you have any ideas? What would you have done in the situation? Just to kind of spitball and see if we ever do encounter a scenario that's similar, maybe we can try that out – or do we need to train extra? Things of that nature.

(table cont'd.)

Informant	Socially-Attributed Coping
Program Coordination Administrator	Then just being such a small staff....It was a lot of pressure on each of us. It wasn't just me. Initially it was, but then...it was all hands on deck... At that point, I knew, "Okay, I have these people that I can rely on." It definitely felt a lot better. I felt not as pressured...I felt pretty calm then, too, because I knew that if anything, I couldn't get, if I dropped anything, our office would pick it up. It was a team effort. It wasn't just me. I didn't feel alone. I felt like we were all going to do it together.
Regional Fire Chief (b)	It comes with time. It comes with mentoring. It comes with building trust and a relationship with the people that you have working directly under you. Knowing what their abilities are. Knowing what their strengths are. It's like anything else – I can have a particular type of incident today, and I know who's on duty and I'll just keep working....
State Patrol Police Officer	Through my training officer. He pulled me to the side and said, "Look, slow it down. Calm it down. This is your scene, no one else's. This is your scene. You're the investigating officer. Do what you gotta do. Tell everybody what to do." When he told me that, I kinda was like, "All right. All right. Now I know what I gotta do. Now I know how I gotta do it." All my training kinda took into play from there on out.

Considered in combination, I found that the personally-attributed and socially-attributed coping categories—and the aggregate theme of *coping attribution*—represent a window through which we can see not just how participants responded to performance pressure, but why and how pressure emerged to begin with. In other words, participants regularly described coping tactics—and attributed their ability to overcome the negative effects of performance pressure—that were directly related to the emergent themes of *personal importance* and *performance environment*. Informants described their ability to cope with performance pressure in a way that reduces the perceived importance of their performance and/or increasing their clarity, lessening the difficulty, or gaining greater control over the performance environment. Therefore, not only do the data regarding coping provide practically-useful insights into how individuals attempt to achieve a successful outcome while performing under pressure, these data also validate the themes of *performance importance* and *performance environment*, offering insight regarding the nature and emergence of performance pressure at work.

CHAPTER VI. DISCUSSION

Introduction

The purpose of this chapter is to discuss the theoretical and practical implications as well as the limitations of this study upon which future research may be able to improve. First, I describe the theoretical implications of this study for the performance pressure literature. Specifically, I discuss the extent to which the findings support or challenge my previous theorizing regarding the nature and emergence of performance pressure at work. Second, I discuss the practical implications for this work as it relates to the everyday experiences of working professionals. Lastly, I detail the empirical limitations of the qualitative approach taken and highlight the future research implications of this dissertation.

Theoretical Implications

The focus of the empirical investigation for this dissertation was to assess the legitimacy of my theoretical expectations regarding the nature and emergence of performance pressure at work. Although the data broadly support my theoretical positioning, I found that there were certain areas where the theory was lacking or incomplete. Below, I highlight the relationship between the findings of the semi-structured interviews and to what extent they support or challenge my theoretical contentions regarding the nature and emergence of performance pressure at work.

The Nature of Performance Pressure: Internal vs. External

One of the central contributions of the empirical investigation of this dissertation was determining whether the mere nature of performance pressure is an internal, subjective perception or an external, objective entity. Overall, the interview data strongly support that pressure is, indeed, a perceptual phenomenon. The support for the internal nature of performance pressure was found regularly throughout these interviews as indicated in the findings regarding all three of the emergent themes that arose from the interview data—performance importance, performance environment, and coping attribution.

First, the data surrounding performance importance support that performance pressure is a perceptual phenomenon. Informants who emphasized that success was personally-important to them seemed to articulate that pressure was derived from within the self. Similarly, participants who described

that their performance was socially-important primarily did so not through others stating this explicitly, but rather by their own perception of how others may view or evaluate their performance. In other words, informants often described the expectations or importance of performance to others through their own perceptual lens rather than through any direct expression of expectations or importance from those referent others.

Second, the data regarding the theme of performance environment were also perceptual in nature. For example, when describing their performance environment, informants emphasized a heightened level of endogenous uncertainty whereby contextual information was lacking, overwhelming, or new (Alison, Power, van den Heuvel, & Waring, 2015). However, what may be lacking, overwhelming, or new to one individual may not be so for another person in that identical situation due to their familiarity of comparable situations. Similarly, the category of performance difficulty is also perceptually-based in nature as participants regularly acknowledged that the performance environments in which they felt pressure early in their careers were no longer viewed as such later in their careers. In other words, the knowledge and efficacy gained with experience changed their perception of the difficulty contained in identical task performance environments at two different points in time.

Third, the interview data also indicate that in order to attenuate the negative effects of pressure, participants engaged in perceptual strategies such as reframing their perception of how important their performance was to themselves or others. Similarly, participants would also articulate that their perception of trust in their teammates helped in alleviating the negative effects of performance pressure as they perceived that they had a strong level of social support at work. In other words, perceptions not only drove the emergence but also the alleviation of performance pressure.

Ultimately, the interview data support that performance pressure is, indeed, an internal, subjective perception. Specifically, these interviews support that when people perceive their performance to be important and also perceive that elements of the performance environment impede their ability to have a successful outcome, performance pressure arises. Previously, the literature had been theoretically divided between two camps: the internal and external perspective. Consequently, this research helps to solidify

the legitimacy of the internal perspective of performance pressure within the literature, and should aid in how scholars describe the nature of the phenomenon in future research endeavors.

The Emergence of Performance Pressure: Goal Importance

Unlike previous attempts to conceptually develop the construct of performance pressure, I articulated and empirically assessed the legitimacy of a well-connected and coherent theory that provided a thorough explanation regarding *why* and *how* this pressure arises in the first place due to the interaction between goal importance and outcome uncertainty. A central component to the creation of this theory was the conceptual development of the goal importance construct. This conceptual development was essential if we aim to better understand the construct of performance pressure, as goal importance is a necessary yet insufficient element for performance pressure to arise.

The interview data provided support that pressure emerges when participants perceived that their performance was important to themselves and/or others (i.e., *goal importance*) and the context in which the performance occurred provided impediments for them to ultimately achieve that valued outcome (i.e., *outcome uncertainty*). In other words, my findings suggest that the interaction of goal importance and outcome uncertainty is that which gives rise to performance pressure at work. Consequently, a central aim of this research was to determine why a goal is important in the first place. Through the interview data, I found broad support that goal importance is the perceived capacity of a goal to satisfy or frustrate core psychological needs. However, the findings also suggest that the needs initially proposed to be at the heart of the basis of goal importance (i.e., agency, affiliation, and esteem) is incomplete and only partially-supported.

As it relates to the psychological needs-based construct of goal importance, the informants who perceived a level of personal significance with their performance (see Table 5) did so by alluding to performance situations in which some of their individual needs would be satisfied (or frustrated) by their success or failure. For example, the need for agency is the inherent drive to have personal control or influence over one's environment (Bandura, 1997). Often, the participants would describe performance pressure scenarios in which their jobs or future employment prospects were on the line. Considering this,

paid employment may increase personal financial stability, whereby this increase in stability could be considered an increase in individual agency or control over that element of the person's life. By performing sufficiently under pressure, these participants could improve their current professional and financial circumstances, and this ability to improve their present situation is at the core of the need for agency (Bandura, 1997, 2001). Similarly, other informants articulated that their success or failure to perform under pressure may have life or death consequences for themselves. As previously indicated, the basic biological needs of safety and self-preservation are theoretically encompassed by the psychological need for agency since the need to preserve oneself may be considered as the aim for one to have agency in the first place.

However, the interviews uncovered additional individual needs that I had not previously considered or theorized that were often connected to the personal importance of performance described by my informants. Specifically, the *need for achievement* (i.e., the need to compete and attain standards of excellence, McClelland, Atkinson, Clark, & Lowell, 1953), and the agency-related *need for competence* (i.e., the desire to feel that one has a positive effect on their environment and can successfully pursue activities, Deci & Ryan, 1985) were regularly found during the data analysis phase. For example, some informants articulated performance pressure situations in which they possessed a sense of duty to do a good job and complete their work. This dutiful striving may be more directly related to the need for achievement than the individual needs for agency or esteem.

Similarly, when I asked informants to reflect on why they believe they felt pressure in a particular situation, some informants would describe the deep desire they had to not look or feel stupid in the given performance context. This may be more directly related to their need for competence rather than any other individual need as the focus of their responses was centered on their competence. As I discuss in the limitations section of this chapter, the expansion of individual needs considered regarding goal importance—and their role in the emergence of performance pressure—would be very beneficial for future research on the subject.

Further, I originally theorized that the social need for affiliation is a major component of goal importance—contributing to the emergence of performance pressure at work—and this was strongly supported throughout the informant interviews. The balance of participant quotes regarding the social importance of performance supports a multitude of performance pressure scenarios (see Table 6) that are directly tied to those that may satisfy or frustrate the need for affiliation. Additionally, through these interviews, it became apparent that the social need for affiliation may often be satisfied by helping others fulfill their own individual needs. This was particularly salient for professionals who work in vocations that often encounter life or death situations with others. In other words, informants’ description of these scenarios may also be interpreted as fulfilling their need for affiliation by helping others fulfill their individual needs for self-preservation and agency.

Similarly, multiple informants described their experiences with performance pressure whereby esteem needs were tightly-coupled with the need for affiliation (see Table 7). In other words, the vast majority of informants who communicated an esteem-related importance of goal accomplishment did so by describing that their enhanced or diminished esteem was often based upon how they thought others perceived their competence and worth as a result of their performance. This was unexpected as I anticipated finding clear need fulfillment for each of the three proposed psychological needs constituting goal importance (i.e., agency, affiliation, and esteem). However, esteem needs appeared to be exclusively satisfied or frustrated through the perceptions of others. In other words, it appears as though the informants’ desire to have a positive view of themselves was primarily driven by their perception of how others view them.

The Emergence of Performance Pressure: Outcome Uncertainty

Consistent with my theoretical explanation for why and how performance pressure arises, the informants’ insights regarding performance environment uncertainty (see Table 8) directly relate to the construct of outcome uncertainty. In other words, the informants emphasized a heightened level of endogenous uncertainty whereby contextual information is lacking, overwhelming, or new (Alison, Power, van den Heuvel, & Waring, 2015). Similarly, the participants’ descriptions of performance

environment difficulties (see Table 9) represented specific impediments to goal accomplishment directly related to the construct of outcome uncertainty. Specifically, these illustrated scenarios represent elements that may increase the exogenous uncertainty within the performance environment. In other words, these impediments affected participants' level of certainty that they have the ability to succeed in the performance environment (Alison, Power, van den Heuvel, & Waring, 2015).

Additionally, the informants' descriptions regarding a lack of control over the performance environment (see Table 10) highlight yet another element that increased the level of performance pressure experienced by the participants. This lack of control may also represent a loss of agency which, when pursuing an important goal, ultimately exacerbates performance pressure as it theoretically not only increases outcome uncertainty, but it also increases the importance of one's performance in order to satisfy the need for agency and restore a sense of personal control over oneself and one's environment.

Coping: Reducing Goal Importance and Outcome Uncertainty

Further, I found that the interview participants described their strategies and tactics to cope with performance pressure in a manner that was often closely associated the themes of performance importance and performance environment which epitomized their lived experiences with performance pressure at work. Ultimately, the findings surrounding the theme of *coping attribution* help to reinforce that performance pressure emerges as a result of the interaction between striving toward an important goal in an environment that impedes one from having certainty of attaining that significant outcome. Additionally, the findings also provide significant insights that are incorporated and emphasized within the revised model of performance pressure (see Figure 2) that depict the subconscious and conscious coping factors that influence the extent to which pressure leads to anxiety (i.e., the extent to which subconscious coping reduces outcome uncertainty), and if anxiety arises as a result of pressure, the extent to which it affects performance outcomes (i.e., the extent to which conscious coping reduces goal importance and/or outcome uncertainty).

For example, some informants described personal coping tactics (see Table 11) whereby they consciously adjusted their perspective on the performance pressure situation. This change in perspective

may have helped them to lower the personal importance of their performance by regaining a sense of agency. Similarly, others acknowledged that there were some elements of the performance environment outside of their control. Consequently, they coped with this by focusing on what was within their control. This strategy provided a return of personal control to the participants, which likely reduced not only the importance of the performance but also the perceived ‘lack of control’ within their performance environment.

I also found that socially-attributed coping (see Table 12) appeared to provide significant benefits to the participants. In particular, much of the assistance provided by others helped my informants to reduce outcome uncertainty and difficulty within the performance environment. However, it is also worth considering that by receiving help from others, the participants may have also been able to channel that social support to aid in satisfying their need for affiliation. Therefore, when social coping was proactively enacted or reactively received, it provided informants with substantial benefits in both reducing outcome uncertainty and, perhaps, goal importance.

Ultimately, the findings support that performance pressure emerges through the interaction between goal importance and outcome uncertainty. The findings also indicate that goal importance is at least partly-driven by the satisfaction or frustration of agency and affiliation needs, whereas esteem needs appear to be tightly-coupled with the fulfillment of affiliation needs. In other words, the vast majority of informants who articulated the esteem-related importance of goal accomplishment did so in conjunction with how *others* would perceive their competence and worth as the source of their *own* enhanced (or diminished) view of themselves. The findings also suggest that the psychological needs-based construct of goal importance may be better developed by expanding the scope of needs to more explicitly include additional individual psychological needs not covered by the need for esteem (e.g., need for competence; need for achievement).

By taking an inductive approach to assess the legitimacy of the theory regarding the nature and emergence of performance pressure, I was able to prudently evaluate whether or not the interaction between the subconscious, psychological needs-based construct of goal importance and outcome

uncertainty is what gives rise to this pressure. Ultimately, I found initial evidence to support that goal importance is rooted in the satisfaction (or frustration) of psychological needs—and these needs appear to expand beyond the three initially-proposed needs for agency, affiliation, and esteem. Further, through my informants’ descriptions of the lived experience of performance pressure and the resulting emergent themes of *performance importance*, *performance environment*, and *coping attribution*, I found strong support that the interaction between goal importance and outcome uncertainty is what gives rise to performance pressure. Consequently, by developing and empirically assessing the theoretical explanation regarding the emergence of performance pressure, I have helped establish a more theoretically-sound foundation from which previous and future empirical research regarding the antecedents and outcomes of performance pressure can be better interpreted.

Although not a part of the empirical investigation, I also contributed to the literature by conceptually-connecting the emergence of performance pressure with *why* and *how* this pressure affects behavior via the cognitive impact of anxiety created by outcome uncertainty. Organizational scholars have long contended that answering the questions of *why* and *how* are paramount to theory development (Bacharach, 1989; Kaplan, 1964; Merton, 1967; Sutton & Staw, 1995). Consequently, by connecting *why* and *how* pressure emerges with *why* and *how* it impacts behavior, future scholarship may be able to finally coalesce around a coherent theory of performance pressure as opposed to the current disconnected theorizing that currently exists.

Performance Pressure at Work: A Revised Model

As I indicated, the findings from this study provide general support for the initially-theorized model of performance pressure at work. However, the data that I found in regard to how participants attributed their ability to cope with pressure provided me with significant additional insight that help to refine and increase our understanding of this pervasive phenomenon. Considering this, Figure 2 (below) provides a graphic depiction of the revised and enhanced theoretical model of performance pressure at work.

First, a key enhancement to the original model is an explicit consideration that the interaction between goal importance and outcome uncertainty gives rise to performance pressure. In other words, the previous model only implied that this interaction represented performance pressure, and I assumed that this interaction gave rise to anxiety. Thus, to be clear and complete, I added the separate construct of *performance pressure* to the model that resulted from the interaction between *goal importance* and *outcome uncertainty*, because upon analysis of the interview data, it became very clear to me that performance pressure does not necessarily always give rise to anxiety.

Therefore, a second major revision to the original model is that performance pressure elicits a subconscious, automatic response that ultimately determines to what extent pressure creates anxiety. Many informants described their ability to cope with performance pressure through the automatic responses that those situations elicited as a result of prior experience in similar situations, previous training, or their own proactive preparation for future situations like the one in which they were engaged. Ultimately, these subconscious, automatic coping responses directly impacted the level of outcome uncertainty they perceived toward having a successful or unsuccessful performance in the pressure situation. The informants described that they did not feel the anxiety normally associated with those situations due to their previous experience or preparation for those performance contexts. Often, it was not until after the performance was completed that the participants consciously acknowledged the gravity of and pressure within the performance situation. In other words, this subconscious coping affected the extent to which pressure impacted one's outcome uncertainty and, thus, to what extent pressure led to anxiety.

Similarly, a third critical revision to the model was to more fully acknowledge the role of anxiety in eliciting conscious responses and affecting subsequent performance. When speaking with my informants, they often articulated that if pressure induced anxiety, they attempted to cope with this consciously in order to (1) reduce the uncertainty of the outcome and/or (2) reduce the perceived importance of the goal itself. For example, the conscious coping response to anxiety may compel one to seek help from others or put forth greater effort in order to reduce outcome uncertainty. Similarly, the

conscious coping responses articulated by the participants also indicated that they may also attempt to minimize the anxiety resulting from pressure by cognitively reframing their perspective on the situation in order to reduce the perceived importance of the focal goal. In turn, these conscious responses aimed to attenuate the anxiety resulting from pressure by addressing its root causes—goal importance and/or outcome uncertainty. Ultimately, the reduction in anxiety through coping is what many participants articulated to aid in their ability to succeed under pressure.

Lastly, although not a change to the original model, the feedback loop from performance to subsequent levels of outcome uncertainty is critical to acknowledge due to the dynamic, ongoing nature of goal pursuit. In other words, the knowledge gained regarding one's performance and progress toward important goal accomplishment aids in the increased (or decreased) certainty of the outcome which, subsequently, decreases (or increases) the performance pressure experienced. As an individual makes substantive advancement toward accomplishing an important goal, this knowledge of positive goal progress decreases their outcome uncertainty which, in turn, reduces the performance pressure they experience.

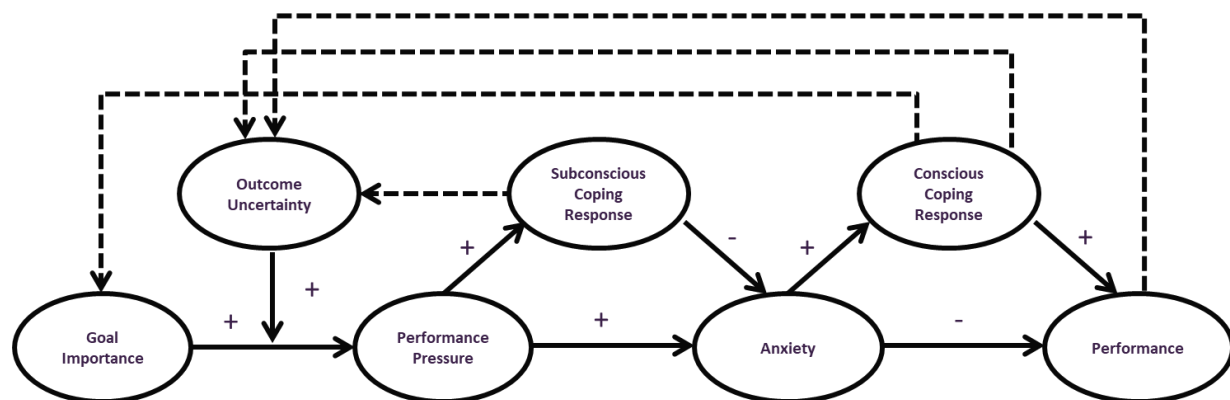


Figure 2. Updated Theoretical Model of Performance Pressure

Practical Implications

Performance pressure is a pervasive phenomenon that affects the productivity and well-being of employees across all vocations. The implications of success or failure while performing under pressure may have drastically different outcomes for different professions (e.g., a deadline might be missed versus

a person's life may be lost), but it has an impact on all working professionals nonetheless. From a practical perspective, this dissertation helps to inform organizational leaders that performance pressure seems to arise through the interaction between goal importance and outcome uncertainty. This dissertation also provides leaders with the understanding of how pressure negatively impacts various cognitive processes through the anxiety that pressure creates. These cognitive outcomes resulting from pressure-induced anxiety can have negative effects on employee performance unless coping is enacted that helps to alleviate this pressure, thereby, reducing this anxiety.

As a result, this dissertation also provides organizational leaders with the knowledge to create theoretically-linked coping interventions to help employees attenuate the negative effects of performance pressure at its origin. As described by my informants, the ability that one has to overcome performance pressure and have a successful outcome is largely dependent on engaging in coping strategies that target the root cause of the pressure. In other words, leaders can help their employees who are working under pressure to reduce the uncertainty, difficulty, or gain back control over the task environment in which they are engaged. For example, organizational leaders may implement high-pressure training sessions that ultimately aim to better prepare their teams for working under similar pressure situations in the future. In other words, they can help reduce future performance difficulty for their employees by enhancing their skills and, ultimately, aid in the development of effective automatic responses before they encounter these 'real world' performance pressure situations.

Additionally, as a result of our new understanding regarding goal importance and the role that it plays in the creation of performance pressure, organizational leaders would be well-served to find ways to help employees cope with performance pressure through social means. In other words, by enlisting the assistance of others when an employee is working under pressure, a leader will increase the likelihood that the outcome uncertainty perceived by the employee will be reduced while also supporting the satisfaction of the core psychological need for affiliation. For example, organizational leaders may foster a work environment in which helping behaviors are encouraged and even rewarded. This will increase the likelihood that when a team member is performing under pressure, others may step up to provide expert

assistance which may remove some of the environmental impediments encountered as well as help satisfy their need for affiliation that may be provided by this social assistance. Ultimately, this new knowledge has the potential to result in not only improved performance outcomes, but it also has the ability to enhance the well-being of employees across work domains.

Limitations and Future Research

This dissertation is not without its limitations. Specifically, (1) the overly-narrow focus of psychological needs considered in the construct of goal importance and (2) the potential for retrospective biases due to nature of the semi-structured interview process.

First, a major theoretical limitation of the dissertation was uncovered during the interview data analysis phase. Specifically, the narrow and sole theoretical focus on the three psychological needs of agency, affiliation, and esteem—which constitute the elements of goal importance—was short-sighted. Throughout the interview process, participants often indicated to me that there are multiple personally-important reasons for them to have success during their experiences with performance pressure. As previously noted, the psychological need for agency played a central role in the experience that informants had with performance pressure. However, the need for esteem was largely absent and often subsumed within the social need for affiliation. Additionally, other individual needs—such as the need for achievement and the need for competence—appeared to play a much more central role in the lived experience of performance pressure among informants.

Considering this, future research and development of the goal importance construct would greatly benefit from expanding the psychological needs that are included within the conceptualization of goal importance. There are currently numerous need theories that exist in the literature (Diefendorff & Chandler, 2011; Pittman & Zeigler, 2007), and there does not appear to be a single widely-accepted theory of needs. However, Pittman and Zeigler (2007) provide a blueprint for connecting the various different need theories and place them into the much broader categories of: basic biological needs, individual needs, and social needs. Although I still contend that basic biological needs are encompassed by individual psychological needs (i.e., need for agency), future research may benefit from casting a

wider conceptual net as it relates to developing the concept of goal importance that is central to the construct of performance pressure.

Second, although using semi-structured interviews allowed participants to freely describe their experiences with performance pressure without imposing my own theoretical biases onto them, I captured purely retrospective descriptions of situations rather than obtaining data while participants experienced performance pressure. It is possible that the informants' attempts to recall past instances of working under pressure could have impacted the findings. Some instances that were described occurred many years ago, and the clarity and accuracy regarding how participants perceived and reacted to those situations back then may be incomplete (Henry, Moffitt, Caspi, Langley, & Silva, 1994). Therefore, if researchers employed a similar qualitative, semi-structured interview design, they would be well-served by conducting debriefing interviews with employees who are currently working—or very recently finished working—under pressure. To obtain real-time data from informants may prove to be invaluable as it relates to the study of the central elements that contribute to the experience of performance pressure at work.

Similarly, when participants attribute their ability to cope with pressure through their prior training, it is unclear as to what extent the training actually impacted their ability to perform well under pressure. In other words, was it the training or was it something else (e.g., proactive preparation, general experience) that actually contributed to their enhanced ability to perform under pressure? To address these shortcomings, future research may benefit from employing a more longitudinal research design. For example, it would be informative to investigate the extent to which proactive preparation for pressure influences future perceptions of pressure and subsequent outcomes over time. Is it the proactive preparation or the actual experience of performing under pressure that helps individuals cope more productively with it over time?

CHAPTER VII. CONCLUSION

The purpose of this dissertation was to develop a connected and coherent theory of performance pressure at work. Specifically, the empirical study aimed to assess (1) the nature of performance pressure (i.e., an internal, subjective or external, objective phenomenon) and (2) why and how performance pressure emerges in the first place. The answers to these questions regarding the nature and emergence of performance pressure had previously been under-developed and largely neglected in the social scientific literature. By providing answers to these foundational questions regarding performance pressure, I was able to meaningfully contribute to both theory and practice alike.

I contended that performance pressure is an internal, subjective individual experience that does not objectively exist outside of one's perception. Throughout the empirical investigation by interviewing a wide range of working professionals across multiple vocations, it became clear that performance pressure is, indeed, a perceptual phenomenon. From a theoretical standpoint, this is an important contribution since the performance pressure literature tends to be divided between whether performance pressure is a subjective or objective phenomenon. This theory of performance pressure also helps organize and make better sense of the existing literature regarding the various 'types' of pressure (e.g., time pressure, production pressure). To achieve this end, I conceptualized performance pressure in a way that encompasses all other types of goal-striving pressure in the literature, whereby this pressure is a perception of the various elements of the goal-striving environment that increase the importance and/or uncertainty of goal accomplishment. Consequently, I provide a more theoretically-sound foundation around which future research may be able to productively coalesce.

Similar to establishing a foundation for the nature of performance pressure, this dissertation was the first real attempt to theoretically develop the construct of this pressure and explain why and how it emerges in the first place. Through my initial theoretical development of the construct and subsequent empirical assessment of its legitimacy, I was able to reinforce my initial contention that the interaction between goal importance and outcome uncertainty is what gives rise to pressure. In order to more prudently answer the questions of why and how, I conceptually developed the construct of goal

importance and contended that the more salient a goal is in its ability to satisfy or frustrate the core psychological needs of agency, affiliation, and esteem, the more important the goal is perceived to be. Based on semi-structured interviews with a variety of informants, it became apparent that these psychological needs should be expanded to include other individual needs such as the need for achievement and the need for competency. Although this casts a wider net from a psychological needs standpoint, it does not change the central tenet of the theoretical argument that one's individual and social needs lie at the core of what makes a goal important in the first place.

Ultimately, this dissertation develops and empirically assesses the legitimacy of performance pressure at work. In turn, this work provides a theoretical foundation for the construct of performance pressure off of which future research may be based. In service of this theoretical development, I also theoretically developed and empirically assessed the vital construct of goal importance. This conceptual development also holds value for future research regarding an understudied yet potentially useful construct in the motivation literature. This dissertation advances our understanding of a pervasive phenomenon that affects the productivity and well-being of working professionals across multiple domains, and it provides the theoretical tools to create effective coping interventions to help attenuate the negative effects of performance pressure at work. Consequently, this dissertation holds great potential value for both scholars and practitioners alike.

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APPENDIX A. INITIAL SEMI-STRUCTURED INTERVIEW QUESTIONS



PART I: Open-ended Interview

Motivation for Vocation

Tell me a little bit about yourself and what you do as a _____ (insert vocation).

Why did you initially become a _____(insert vocation)?

What gets you up every day to do this job?

What does this job mean to you?

Job Stress

What are some things about your job that you find to be the most enjoyable? Why?

What are some of the most stressful things about your job? Why?

Pressure & Coping

What does the concept of ‘working under pressure’ mean to you as it relates to your job?

How often do you feel under pressure at work?

What do you think contributes to the pressure that you feel?

Are you feeling any performance pressure in your job right now? Tell me more about this.

Describe how you feel when you’re performing under pressure at work.

Why do you think you feel pressure in these situations?

How do you manage this pressure?

When do you feel the most pressure in this job?

When do you feel the least pressure in this job?

PART II: General Information

1. What is your age? _____

2. How many years of experience do you have as a _____ (insert vocation)? _____

Thanks so much for your time. I really appreciate you meeting with me. Is there anyone else you know who might be willing to be interviewed? If so, would you mind if I mention your name when I contact them?

APPENDIX B. DISSERTATION STUDY IRB EXEMPTION APPROVAL

ACTION ON EXEMPTION APPROVAL REQUEST



TO: Jacob Smith
Management

FROM: Dennis Landin
Chair, Institutional Review Board

DATE: June 6, 2018

RE: IRB# E11093

TITLE: Stress and Performance Pressure at Work

Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8892
F: 225.578.5983
irb@lsu.edu
lsu.edu/research

New Protocol/Modification/Continuation: New Protocol

Review Date: 6/4/2018

Approved X Disapproved _____

Approval Date: 6/5/2018 Approval Expiration Date: 6/4/2021

Exemption Category/Paragraph: 2a

Signed Consent Waived?: No

Re-review frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable):

Protocol Matches Scope of Work in Grant proposal: (if applicable)

By: Dennis Landin, Chairman 

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. **SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.**

* All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>

APPENDIX C. INTERVIEW CONSENT FORM



Consent Form

Study Title: Stress and Performance Pressure at Work

Performance Site: The interview will be conducted at a time and place convenient to the participant.

Investigators: If you have questions about this study, you can reach the principal investigator, Jacob Smith, between the hours of 8am-5pm central time at 262.344.0071 or by email at jsmi476@lsu.edu. You can also reach co-investigator Jeremy Beus at 225.578.6150.

Purpose of the Study: You are invited to participate as an interviewee/informant in a study of work stress. You understand that the study is to better understand how and why people feel performance pressure and stress in their jobs.

Number of Subjects: Approximately 30 full-time employed individuals will be interviewed.

Study Procedures: Your participation in this study requires you to be interviewed by a member of our research team at a time and place convenient to you. The interview will last about 60 minutes and will be audio recorded unless you request that it not be recorded. During the interview you will be asked to identify and describe different work experiences in which you have dealt with performance pressure or stress.

Benefits: The results of the study might contribute to the body of knowledge about work stress and professional well-being, but participating does not necessitate any personal, professional, or financial benefit.

Risks: Your participation in this interview should not pose any physical, personal, or professional risks.

Support Services: Work stress and pressure are common, and there are services available to you if you ever need assistance in managing this stress such as your HR department, formal counseling, the HopeLine (1-877-235-4525), as well as the Crisis Text Line (Text CONNECT to 741741 in the United States) for immediate help.

Right to Refuse: Your participation is voluntary, and you may decline to participate at any time without penalty or loss of benefits. Should you withdraw from the study before data collection is completed, your data will be destroyed.

Privacy: The records from your interview will be kept confidential. The data from all the study's interviews will be stored securely and will be made available only to persons conducting the study unless you specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link you to the study.

Signatures: This study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the lead investigator. If I have any questions about subjects' rights or other concerns, I can contact Dennis Landin, Institutional Review Board at 225.578.8692, irb@lsu.edu. I agree to participate in the study described above and acknowledge the investigator's obligation to provide me with a signed copy of this consent form.

Participant's Signature: _____ Date: _____

VITA

Jacob Smith earned his Bachelor's degree from the University of Wisconsin—Whitewater in 2005. He subsequently worked for nearly a decade in the United States and Australia for Russell Investments before making the wise decision to give up his balcony overlooking the Sydney Opera House for a view of Interstate 10 in Baton Rouge, Louisiana. As a child, Jacob once fooled his dad into thinking he was a genius by covertly watching the 4:30 p.m. showing of *Jeopardy!* and then nonchalantly proceeding to get numerous answers correct watching the 5 p.m. rerun while eating at the dinner table with his family. He still has everyone fooled.