Summer 8-2018

Pay-for-Performance Attitudes and Their Effect on Burnout and Job Satisfaction in Pennsylvania Nurses

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PAY-FOR-PERFORMANCE ATTITUDES AND THEIR EFFECT ON BURNOUT AND JOB SATISFACTION IN PENNSYLVANIA NURSES

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

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August 2018

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This study was performed in order to determine the impact of nursing attitudes towards Pay -For -Performance (P4P) Initiatives. P4P often requires specific, defined steps be taken during the care of a patient, and compliance with the defined steps impacts an organization's quality score card and reimbursement. While the P4P requirements meet generally accepted clinical practice guidelines, this project sought to determine whether the mandatory nature of the requirements impacted nursing autonomy, role conflict, burnout, and job satisfaction.

Performance of this study included the creation of three scales to measure nursing attitude towards P4P: a P4P Quality Scale; a P4P Reporting Scale; and a P4P Cynicism Scale. The data showed that these three P4P Attitudinal factors did affect autonomy, role conflict, burnout, and job satisfaction. The study provides health care organizations with insight into how P4P impacts nurses and suggest that nursing buy-in for P4P initiatives may be an important nurse retention tool.

TABLE OF CONTENTS

Chapter Page

Chapter Page

Chapter Page

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Problem Statement

This study sought to determine whether there is a correlation between staff nurses' attitudes towards Pay-for-Performance (P4P) and burnout and job satisfaction. Healthcare organizations are aware that meeting their P4P goals affects both their reputation and financial success. Some strategies created in order to meet P4P goals require specific, defined actions be taken by nurses when caring for the patient; these actions must be taken whether or not the nurse believes this is in the best interest of the patient. The use of defined P4P strategies may relate to nurses' perception of autonomy and role conflict, which in turn may also correlate with the perception of burnout and job satisfaction.

Theoretical Context

Nurses are a vital component of the health care system and critical to maintaining quality in healthcare (Juraschek, Zhang, Ranganathan, & Lin, 2012; Silber et al, 2016; Toh, Ang, & Devi, 2012). Nursing shortages threaten to affect healthcare quality (Chan, Tam, Lung, Wong, & Chau, 2013; Juraschek et al., 2012; Silber et al., 2016). In an effort to maintain healthcare quality by maintaining an adequate nursing force, researchers are interested in studying factors that affect nursing shortages, such as burnout and job satisfaction.

Burnout is known to negatively affect nursing job satisfaction (Laschinger, Borgoni, Consiglio, & Read, 2015; Laschinger, Leiter, Day & Gilin, 2009) which in turn affects nursing absenteeism rates (Westman & Etzion, 2001) and nursing retention (intent to leave the workplace) (Leiter & Maslach, 2009; Maslach, Schaufeli, & Leiter, 2001). Nursing burnout also correlates with a decrease in patient satisfaction (Vahey, Aiken, Sloane, Clark, & Varga, 2004) as well as a decrease in the quality of patient care (Van Bogart et al., 2014). Because of the many

known negative results of nursing burnout, researchers have studied a number of factors thought to contribute to burnout, including the concepts of role conflict and autonomy.

Researchers have shown the link between role conflict and burnout (Maslach et al., 2001; Peiro, Gonzalez-Roma, Tordera, & Manas, 2001). Understanding role conflict falls within the context of role theory, a construct concerned with the processes that affect behavior (Biddle & Thomas, 1966; Tarrant & Sabo, 2010). Role theory assumes that conflicting role expectations can lead to frustration and anxiety in individuals (Biddle & Thomas, 1966; Hardy & Conway, 1978). Role conflict has a negative effect on an organization's ability to implement change, such as the implementation of new policies (Iverson, 1996).

Autonomy is the ability to make independent decisions (Kramer & Schmalenberg, 2008). Autonomy helps employees deal with job-related demands (Fried & Ferris, 1987). Like role conflict, researchers recognize a link between autonomy and burnout (Shirom, Nirel, & Vinokur, 2010; Bakker, LeBlanc, & Schaufeli, 2005). Autonomy also plays a role in safe and quality patient care (Kramer & Schalenberg, 2008).

Safe and quality patient care has gradually become an area of greater emphasis in healthcare. The Center for Medicaid and Medicare Services (CMS) believes that healthcare quality improvement will occur by creating financial incentives for adherence to quality measures (Christianson, Leatherman, & Sutherland, 2008) by creating Pay-for-Performance (P4P) incentive programs to encourage improvement in healthcare quality (Kruse, Polsky, Stuart, & Werner, 2012). The Affordable Care Act mandated nationwide participation in P4P initiatives by October 2012 (Kruse et al., 2012).

While there have been numerous articles published on P4P, evidence of its effectiveness` s is limited (Eijkenaar, Emmert, Scheppach, & Schoffski, 2013). Some studies imply that

improvements in quality attributed to quality measures may not always reflect true quality improvements (Christianson et al., 2008). Other authors have questioned the use of quality measures, expressing concerns about whether there is enough evidence to justify their adoption (Nicks, Manthey, & Fitch, 2009). Tanenabum (2009) argues that P4P has not proven it can improve quality or costs but instead, "P4P programs may actually compromise the quality of health care" (p. 735) because healthcare providers may be more concerned with meeting P4P guidelines than with meeting the needs of the individual patient. Nicks at al. (2009) suggests that pressure to show compliance with P4P measures raises the concern that health care providers may treat patients according to the quality measurement requirement even if the measure is not the best solution for the patient.

While the evidence to support P4P's role in improving quality is limited, healthcare organizations are under pressure to comply because the results of their P4P measures appear on a number of public sites, including the website for Medicare. Measures posted on Hospital Compare represent wide agreement from CMS, the hospital industry, and public- sector stakeholders such as The Joint Commission (TJC), the National Quality Forum (NQF) and the Agency for Healthcare Research and Quality (AHRQ) (CMS.gov, 2008). In addition to the effect on reputation that can occur due to the public reporting of P4P results, P4P results also impact payment for healthcare services.

In order to insure success with P4P initiatives, healthcare organizations have adopted a number of strategies. Ahmad, Metlay, Barg, Henderson, & Werner (2012) performed a qualitative study in which they identified six different categories of strategies used by hospitals in order to reduce readmissions. Sokos et al. (2007) published the strategies implemented by the University of Pittsburg Medical Center-Presbyterian as a way to improve the inpatient

vaccination rate. Chassin, Mayer, & Nether (2015) identified eight hospitals that implemented strategies for improving hand hygiene rates. These examples of P4P strategies published in the literature require specific and defined actions be taken by the nurse when caring for the patient.

Although staff nurses are the individuals who ultimately implement P4P strategies when caring for patients, I have not found any research that shows nursing attitudes towards P4P. A few studies exist which look at the attitudes of healthcare executives towards P4P measures (Berwick & Wald, 1990; Billiter, 2011; Lindenauer et al. (2011). Physician attitudes towards P4P have also been measured (Casalino, Alexander, Jin & Konetzka, 2007). I believe that the lack of studies looking at the attitude of staff nurses towards P4P represents a gap in the literature worth exploring.

In addition to an apparent gap in the literature related to nursing attitudes towards P4P, I also believe there is a gap in the literature related to how attitudes towards P4P impact nursing perceptions of autonomy and role conflict, and ultimately levels of burnout and job satisfaction. Researchers have suggested that P4P impacts provider autonomy (Gazewood, Longo, & Madden, 2000; Larrieviere & Barnat, 2008; Young, Beckman, & Baker, 2012), and I believe that if a nurse perceives P4P as a threat to independent thinking then there will likely be a correlation between a negative attitude towards P4P and perceived decrease in autonomy. While I have not found studies related to P4P and role conflict, I believe that the confusion nurses may experience as they decide whether P4P is allowing them to provide quality patient care, or whether P4P is simply a regulatory requirement, may lead to role conflict. Because reduced autonomy and role conflict are concepts known to contribute to burnout, if nurses experience role conflict and reduced perceived autonomy due to P4P, then it appears that this in turn can increase nursing burnout and subsequently decrease job satisfaction. This research project seeks to investigate the

potential relationship between nursing attitudes towards P4P, role conflict, autonomy, burnout, and job satisfaction.

Assumptions and Definitions of Terms

Staff Nurse

For the purpose of this study, a staff nurse is a nurse directly involved in the care of patients. Perceptions of organizational culture vary between executive level staff and frontline staff (Sinkowitz-Cochran et al., 2012). While there may be differences between executive level staff and frontline staff, this study is most interested in exploring how the nurse providing the care perceives their work climate as a function of their knowledge of P4P strategies.

P4P

Pay for Performance (P4P) is an incentive program developed by the Center for Medicaid and Medicare Services (CMS) that provide financial incentives to healthcare providers as a way to encourage improvement in healthcare quality (Kruse et al., 2012).

P4P Strategies

Strategies developed by healthcare organizations in order to meet P4P initiatives.

Position Statement

I have worked in healthcare in a variety of roles for over thirty years. I have been in a small hospital for the last twenty-eight years; this hospital is part of a large health system. As P4P has developed I have watched how both my hospital and my health system have responded. My organization has formed committees, developed strategies, and offered education in order to help our staff comply with P4P requirements. As I have participated in many of these activities, I have questioned whether staff truly understand what P4P initiatives are designed to accomplish.

My experience as a healthcare employee in an administrative role creates a personal bias towards my research. I recognize that my personal concerns about how staff view P4P initiatives may influence how I interpret data. I also recognize that my experience is limited to one small hospital that is part of a large health system and this experience may influence my thought process.

Limitations and Delimitations

This study was limited to nurses working in hospitals in Pennsylvania. While a nationwide survey of all nurses would provide additional data points and better opportunities to generalize the data, time and financial restraints do not allow a larger study sample. In order to analyze whether differences exist in P4P perceptions related to nurse specialty and hospital characteristics, I will also collect variables such as hospital size and specialty.

This study will also be limited to providing correlational data as opposed to casual data. Some P4P requirements already exists in Pennsylvania Hospitals. Because the individuals completing the survey are already working in a P4P environment it is not possible to collect before and after data related to the individual's perceptions of P4P in order to see how this perception affects burnout and job satisfaction.

The study will also be unable to provide data directly related to improvement in nursing retention. The study will only measure nurses' perceptions of job satisfaction and burnout, which other researchers have found to impact nursing retention.

The inability to obtain a strictly random sample of Pennsylvania nurses is another weakness of this study. Because of financial constraints I am unable to purchase a complete list of Pennsylvania registered nurses. In order to maximize the number of responses, I have chosen to use a convenience sample of nurses using three different sources: asking the Pennsylvania

State Nurses Association to distribute the questionnaire to their membership; asking hospital Chief Nursing Officers to agree to distribute the questionnaire to their membership; and sending the questionnaire link to a sample of nurses obtained by purchasing contact information from the Pennsylvania Department of Health.

Research Question and Hypotheses

This project was completed in order to study the attitude of staff nurses towards P4P and how attitudes towards P4P relate to role conflict, autonomy, burnout, and job satisfaction. The following research questions were addressed

1) Do nursing attitudes towards P4P relate to the level of perceived nursing autonomy?
2) Do nursing attitudes towards P4P relate to the level of perceived nursing role conflict?
3) Do nursing attitudes towards P4P relate to the level of perceived nursing burnout?
4) Do nursing attitudes towards P4P relate to the level of perceived nursing job satisfaction?
5) Do perceived levels of nursing autonomy and role conflict relate to the level of perceived burnout and nursing satisfaction?

Five hypotheses were developed in response to this research questions; these are presented below:

H1: As attitudes towards P4P become more negative, the level of perceived autonomy will decrease.

H2: As attitudes towards P4P become more negative, the level or perceived role conflict will increase.

H3: As attitudes towards P4P become more negative, the level of perceived burnout will increase.

H4: As attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease.

H5: As levels of perceived autonomy decreases and role conflict increases, burnout will increase and job satisfaction will decrease.

Subject Relevance

Value based purchasing (VBP) in healthcare is a broad term that encompasses three different type of payment models: pay-for-performance (P4P); accountable care organization (ACO); and bundled payments (Damberg at al., 2014). In general, the intent of VBP programs is to both enhance quality in healthcare as well as decrease costs. Whareham et al. (2009) note that P4P systems are "based on fundamentally acceptable ethical principles" (p. 854) yet have in many instances been created without a complete understanding of their impact on quality. Other authors, such as Christianson et al., (2008) conclude that it is often not possible to show a direct link between increased quality and VBP programs, such as P4P.

Despite meager evidence supporting the impact of P4P on quality, the stakes involved in the public reporting of P4P results are relatively high in terms of both reputation and financial well-being for healthcare organizations. In order to achieve success in P4P programs, healthcare organizations have adapted a number of strategies. Some of the strategies adopted by organizations working under public reporting models can lead to unintended consequences; such as "gaming", a concept which has been described within the literature as an unintended consequence of the No Child Left Behind (NCLB) legislation (Amrein-Beardsley, 2009; Chakrabarti & Schwart, 2013). Similar concerns about gaming have been expressed in the

healthcare literature relative to P4P; Christianson et al., (2008) note that "the 'gaming' of P4P rules also can be expected during early periods of P4P initiatives" (p. 31S) as providers may "take advantage of rules" (p 31S).

Some literature exists related to how healthcare employees perceive P4P. Lindenauer et al. (2014) conducted a study in which they determined that healthcare executives believed that P4P initiatives could have unintended consequences such as gaming but also contribute to quality improvement initiatives. Billiter (2011) completed a dissertation in which he studied hospital executive's attitudes towards another type of P4P program, the public reporting of results of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). While there is research about the attitude of hospital executive towards P4P programs, I have been unable to find similar research into the attitudes and concerns of non-executive hospital employees, such as nurses, towards P4P.

I believe that understanding how employees perceive P4P may have implications for P4P implementation. If employees view P4P as additional work, and in the worst case as a way to game the healthcare reimbursement system, I believe that employees will experience role conflict. As described in the research literature, role conflict can negatively affect policy implementation. Organizational use and reliance on strategies to implement P4P programs may also affect nurses' perception of autonomy. Decreased autonomy and/or role conflict may lead to burnout and job dissatisfaction in nurses. Since burnout and job satisfaction have consequences for both healthcare employers and the quality of patient care, understanding that how employees perceive P4P may allow healthcare managers to frame P4P efforts in a way that decreases concerns about autonomy and role conflict.

Chapter Summary

The intent of this project is to explore how attitudes towards P4P programs impact burnout and job satisfaction in nurses. This chapter provided a brief introduction to the proposed research project and the reason for its importance. Chapter 2 will include the literature review related to P4P as well as the concepts of job satisfaction and burnout.

CHAPTER 2

LITERATURE REVIEW

Chapter Overview

Chapter 2 begins with an introduction to quality in healthcare and the role nurses play in maintaining quality. Since healthcare quality is affected by nurses, researchers are interested in studying factors that influence nursing shortages, which includes burnout and job satisfaction. After discussing burnout and its effects on nursing job satisfaction and patient care, I move to a discussion of autonomy and role conflict. After establishing the links between autonomy, role conflict and burnout, I then review the literature on P4P. I conclude by suggesting that the links between P4P perception, autonomy, and role conflict may lead to job burnout and dissatisfaction. Understanding how P4P perceptions impact nursing burnout and job satisfaction may influence healthcare executives as they work to influence organizational change and implement mandatory P4P programs.

Healthcare Quality and Nurses

There seems to be no generally agreed-upon definition of quality health care services. Currie, Harvey, West, McKenna, & Keeney (2005) note that "the concept of quality of care is complex, multidimensional, and widely contested" (p. 79). Researchers use a number of key indicators in order to measure quality, including thirty-day mortality, in-hospital and 30-day complications, readmissions within 30 days of discharge, length of stay, cost per patient day, and intensive care unit (ICU) use (Silber et al., 2016). Researchers also recognize the role of nurses in providing quality healthcare, specifically registered nurses (RNs) (Juraschek et al., 2012; Silber et al, 2016; Toh, Ang, & Devi, 2012).

The Pennsylvania Department of Health Bureau of Health Planning (2013) notes that nurses have important roles in the healthcare delivery system related to the treatment and education of patients. The importance of nurses to healthcare quality is also evident in studies that show that nurse staffing ratios (number of nurses per patient) play an important role in lowering patient mortality (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Kane, Shamliyan, Mueller, Duval, & Wilt, 2007). Because nurse staffing ratios are important to healthcare quality, maintaining an adequate nursing workforce is important to maintaining healthcare quality.

Researchers are also aware that a current and looming shortage of nurses is not only a problem in the United States but also world-wide (Chan et al., 2013; Juraschek et al., 2012; Silber et al., 2016). Nurses play a critical part in the health care delivery system (Toh et al., 2012) and the nurse shortage problem leads "not only to stressful working environments but also numerous problems concerning the quality of care and cost" (Chan et al., 2012, p. 606). Because of the pivotal role nurses play in healthcare, researchers have conducted a number of studies looking at factors that influence reasons a nurse leaves the workplace (Chan et al., 2012). In their literature review examining reasons nurses intend to leave, Chan et al., 2012, found three general categories that influence nursing retention: nurse demographics, job satisfaction, and burnout.

The amount of literature related to preventing burnout suggests that understanding ways to prevent burnout may be an important factor in preventing nurses from leaving the workforce. Given the importance of nurses to healthcare quality, it seems to follow that preventing nursing burnout, and ultimately keeping nurses in the workforce, is therefore important for maintaining quality in healthcare. My research project sought to look at another factor that may affect burnout, notably, pay for performance initiatives.

Burnout

Researchers have studied burnout extensively in the field of nursing as a way to better understand the factors that affect nursing retention (Chan et al., 2012; Leiter & Maslach, 2009; Maslach et al., 2001). Researchers recognize that burnout negatively affects nursing job satisfaction (Laschinger et al., 2015; Laschinger et al., 2009) and nursing absenteeism rates (Westman & Etzion, 2001). Pennsylvania nurses under the age of 50 report burnout as the number one reason they would leave the field in the next five years (PA DOH, 2013). Understanding factors that decrease burnout thus becomes important as a strategy for improving attendance, job satisfaction and enhancing retention in nursing staff. For example, Aiken et al. (2002) found that nurses were more likely to experience burnout and job dissatisfaction with high patient to nurse ratios, implying nurse managers can likely decrease burnout and enhance retention by decreasing nurse to patient ratios.

Burnout also impacts the provision of nursing care, in terms of both patient satisfaction and patient outcomes. Vahey et al. (2004) concluded that the presence of burnout in nurses influences how satisfied patients are with their care. In another study, Van Bogaert et al. (2014) concluded that "higher levels of burnout were associated with unfavorable job outcomes, patient and family complaints, and patient and family verbal abuse" (p. 1129). Overall, Van Bogart et al. (2014) determined that there is a direct link between nursing burnout and important factors such as quality of care and patient satisfaction.

In a similar vein, Cimiotti, Aiken, Sloane & Wu (2012) found that higher levels of burnout in nursing staff is linked to higher rates of hospital acquired infections. The authors used nurse survey data from the Pennsylvania Health Care Cost Containment Council report on hospital infections and from the American Hospital Association Annual Survey. Cimiotti et al.

(2012) concluded that rates of surgical site and urinary tract infections were significantly associated with both nurse staffing ratios and nursing burnout.

Aiken et al. (2002) studied the relationship between burnout, job satisfaction, and patient outcomes. The authors conducted their study using discharge data and nurse staffing ratios from 210 Pennsylvania adult general hospitals; nurse job satisfaction and burnout were determined by random sampling. Aiken et al. (2002) concluded that increased patient mortality directly correlated to decreased job satisfaction and increased nurse burnout.

In another study involving six different countries, including the United States, Poghosyan, Clarke, Finlayson, and Aiken (2010) looked at nursing burnout and its relationship to nurse-reported quality of care. The authors asked nurses to self-report a rating for the quality of care provided during their last shift worked. The researchers determined that independent of nurse characteristics and working conditions, a decreased level of nurse-reported care quality was associated with an increased level of burnout. Poghosyan et al. (2010), as with other researchers, suggest that patient care quality can improve with a better understanding of nurse burnout.

Maslach & Jackson pioneered burnout research by studying stress experienced by human service workers (Maslach et al., 2001). In this early research, Maslach & Jackson determined that there were a variety of implications that occurred as a result of strategies used by employees handling job stress. The desire for a better understanding of burnout and how it affects human service workers led to more research in the field of burnout. As a result of the desire for an empirical method for measuring burnout, Maslach & Jackson developed the Maslach Burnout Inventory (MBI).

The MBI measures three generally accepted dimensions of burnout: exhaustion, cynicism, and inefficiency (Maslach et al., 2001). Researchers believe that exhaustion, the most commonly reported aspect of burnout, develops due to job stressors (Maslach et al., 2001). As an individual develops exhaustion, cynicism and lack of attachment to the job can develop (Leiter & Maslach, 2009; Maslach et al., 2001). Either sequentially, or in parallel, the combination of exhaustion and cynicism ultimately creates a situation in which individuals experience a decreased sense of accomplishment and efficiency (Leiter & Maslach, 2009; Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001). Leiter & Maslach (2009) consider burnout as the least desirable state individuals experience in their work, with engagement being the most desirable state.

While researchers have used the MBI extensively, some researchers have criticized the tool. Critics note that the MBI is limited in its definition of burnout; does not take into consideration cultural differences; is limited to use in occupations dealing with people; and is only available for use if purchased through a commercial company (Borritz et al., 2006; Kristensen, Borritz, Villadsen & Christensen, 2005; Milfont, Denny, Ameratunga, Robinson, & Merrry, 2007). Kristensen et al. (2005) further argue that the MBI creates a "circular argument" to define burnout: "burnout is what the MBI measures, and the MBI measures what burnout is" (p. 193). In response to these and other concerns related to the use of the MBI, the Copenhagen Burnout Inventory (CBI) was developed (Borritz et al., 2006; Kristensen et al., 2005; Milfont et al., 2007).

Developed initially for use in the PUMA study (project on burnout, motivation and job satisfaction), the CBI is a public domain burnout measure that measures three burnout dimensions by responses to 19 different questions (Borritz et al., 2006; Kristensen et al., 2005;

Milfont et al., 2007). The personal burnout dimension is a generic measure of physical and psychological fatigue unrelated to work; the work-related burnout scale measures physical and psychological fatigue related to work; and the client-burnout scale measures physical and psychological fatigue related to working with clients (Kristensen et al., 2005; Milfont et al., 2007). Researchers using the CBI have concluded that the tool is a valid and reliable tool to measure burnout (Borritz et al., 2006; Chakrabory, Chatterjee, & Chaundhury 2012; Maroco, Campos & Alvares, 2012; Milfont et al., 2007). Chakrabory et al. (2012) concluded that the CBI is an appropriate tool for measuring burnout in hospital employees.

A number of researchers have used the CBI in studying burnout in health care professionals. Shoorideh, Ashktorab, Yaghmaei & Majd (2015) used the CBI in their study on the relationship between moral distress and burnout in ICU nurses. Eagle, Creel, & Alexandrov (2012) theorized that grief may impact nurses and used the CBI to assess the relationship between peer support and burnout in pediatric intensive care nurses. Advanced life support paramedics were the subject of another study using the CBI performed by Stassen, Nugteren, & Stein (2013). Chakraborty et al. (2012) used the CBI for a study of psychiatric nurses in India.

Burnout and Role Conflict

Nursing researchers have found a correlation between burnout and role conflict (Maslach, Schaufeli, & Leiter, 2001; Peiro et al., 2001). Peiro et al. (2001) describe the relevance of the role construct in the study of burnout, noting that organizations often consider role demands as a root cause of burnout. Per Peiro et al. (2001)

> In fact, the perception of enduring incompatible demands from one or several role senders (role conflict), the lack of clarity about what is expected of the individual (role ambiguity), and the excessive qualitative or quantitative role overload may be

> experienced by professionals as lack of equity in their organizations and interpersonal exchanges, and thus may be significant antecedents of burnout (p. 512).

Role conflict is a construct within role theory, which generally seeks to understand human behavior (Biddle & Thomas, 1966). Contributors to the development of role theory include individuals such as Mead, Moreno, Parsons, and Merton (Biddle & Thomas, 1966). One of the arguments of role theory is that roles exist as a result of consequences and are part of an organization's culture (Tarrant & Sabo, 2010). Hardy and Conway (1978) explain that demands within an organization can create role stress. Individuals feeling role stress may subsequently develop role strain, leading to confusion about expectations. Studies have shown that role strain influences productivity, which can impact patient care and be costly for organizations (Hardy & Conway, 1978). There are six major categories of issues that can cause role strain: role ambiguity, role conflict, role incongruity, role overload, role incompetence, and role over-qualification.

According to role theory, individuals with role conflict may become dissatisfied and perform less effectively in the workplace (Rizzo, House & Lirtzman, 1970). Role conflict occurs when there are competing or mutually exclusive role expectations (Hardy & Conway, 1978). As explained by Valentine, Godkin, & Varca (2009):

> In a hospital, for example, a nurse may lack the decision authority, the time, the equipment, or perhaps the clear directives and policy guidelines required in adequately attending a patient. Irrespective of the missing resource, the "gap" between what the nurse wishes to do (or thinks should be done) for the patient, and what is unaccomplished, results in role conflict (p.455).

The presence of role conflict is associated with a number of undesirable situations. For example, Baillienn and DeWitte (2009) found that when organizational change creates high role conflict, workplace bullying increases. Iverson (1996) noted that role conflict was a negative predictor of organizational change. And like burnout, role conflict is also associated with nurses' intent to leave the field (Chan et al., 2013).

A number of researchers have used Role Theory as a framework for a studies of healthcare professionals. Hardy & Conway (1978) devoted a number of chapters in their book on role theory to examples of research that have used this framework. Tarrant and Sabo (2010) used Role Theory in their study of job satisfaction in nursing executives. Valentine et al. (2009) used an established role conflict measurement scale in order to look at the impact of role conflict on nurse educator satisfaction. Brookes, Daly, Davidson, & Halcomb (2007) discussed the use of role theory in looking at community nurses. The use of role theory by other researchers interested in nursing attitudes, combined with the known interaction between role conflict and burnout, makes me believe that role theory can be a solid theoretical framework for nursing research involving burnout.

Burnout and Autonomy

Nursing researchers also provide a link between burnout and autonomy. Bakker, LeBlanc, & Schaufeli (2005) reported that "a lower degree of freedom in accomplishing the work task coincided with increased feelings of emotional exhaustion" (p. 281). This finding implies that decreased autonomy (the ability to make independent decisions) correlates with an increased level of burnout (as measured by emotional exhaustion). Shirom, Nirel, & Vinokur (2010) likewise concluded that decreased autonomy correlated with increased burnout. In their work, Newton, McLachlan, Willis, & Forster (2014) suggested that autonomy could be one

factor that protected midwives from higher levels of burnout. Autonomy helps employees deal with job-related demands (Fried & Ferris, 1987) and, like burnout, autonomy influences nursing job satisfaction (Atkins, Marshall & Javalgi, 1996; Gazewood et al., 2000; Kovener, Brewer, Wu, Cheng, & Suzuki, 2006; Kramer & Schmalenberg, 2008; Zurmehly, 2008).

Autonomy is the "the freedom to act in the best interests of patients, to make independent decisions in the nursing sphere of practice and interdependent decisions in those spheres in which other disciplines overlap with nursing" (Kramer & Schmalenberg, 2008, p. 70.) Autonomy is also a factor known to influence nursing and physician job satisfaction (Atkins et al., 1996; Gazewood at al., 2000; Kovener, Brewer, Wu, Cheng, & Suzuki, 2006; Kramer & Schmalenberg, 2008; Zurmehly, 2008) and is included as a variable on a number of nursing job satisfaction tools such as Stamp's (1997) Index of Work Satisfaction. Job satisfaction correlates with the intent to remain in a job, and nurses indicate that the ability to make decisions related to the patient's care [autonomy] affects their desire to remain in the profession (DeCola & Riggins, 2010). Like burnout and role conflict, lack of autonomy is associated with nurses' intent to leave their employment (Chan et al., 2013).

In addition to impacting job satisfaction, autonomy is also necessary for safe and quality patient care (Kramer and Schmalenberg, 2008). Ulrich, Lavandero, Woods, & Early (2013) indicated that nurses perceive a link between the quality of patient care and the level of job satisfaction. Job satisfaction, with its correlation to nursing retention, also affects the quality of care received by patients by assuring that the appropriate number of nursing staff are available (DeCola & Riggins, 2010). Other items affected by nurse staffing levels include infection, error, and mortality rates (DeCola & Riggins, 2010). Quality of care may be a subjective concept, but

nurses believe that improvement in the patient's health is an important indicator of quality (Alrashdi & Al Qasmi, 2012).

Pay for Performance

The search for quality in healthcare follows the story of the provision of healthcare in the United States. The passage of the 1965 Social Security Amendments helped to increase access to health care services for a large number of Americans without health insurance by creating the Medicare and Medicaid programs (Trisolini, 2011). Increased coverage equated to increased utilization, and by the 1970's there was a recognition that the cost of healthcare was increasing. The traditional fee for service (FFS) reimbursement model reimbursed healthcare services based on volume, and in an attempt to bring healthcare costs under control, new models were developed. The development of the diagnosis related group (DRG) model for hospital reimbursement occurred in the 1980s; capitation models which set a fixed reimbursement for providing healthcare services developed during the 1990's. In addition to concerns related to cost containment, the 1990's also ushered in an era when concerns about the quality of the healthcare delivery system developed.

In an attempt to improve the quality of healthcare by standardizing the delivery, The Joint Commission developed an incentive program that focused on achieving pre-defined goals (TJC, Core Measures, 2015). Introduced in 1999, the incentive program model has gained national momentum. Originally called core measures, these programs now go by a number of different descriptive names. One of the terms currently used to describe these programs is pay for performance (P4P). Trisoloini (2011) notes that "a good general definition of P4P is an approach used to provide incentives to physicians and healthcare provider organizations to achieve improved performance by increasing quality of care or reducing costs" (p. 7). While other terms,

such as value- based purchasing, also appear in descriptions of healthcare incentive programs, for the purposes of this paper I refer to these programs as P4P.

By 2003, The Joint Commission and The Center for Medicare and Medicaid Services (CMS) were working together to standardize their P4P programs (Blumenthal & Jenu, 2013; jointcommission.org). In 2005, CMS began publishing hospital performance data on the Hospital Compare website. CMS started withholding payment to hospitals when patients developed hospital acquired conditions, such as urinary tract infections, in 2008. Most recently, the Patient Protection and Affordable Care Act (ACA) of 2010 added to the 1965 Social Security Amendment by requiring P4P programs for inpatient hospitals.

In addition to specific patient care requirements, the ACA requires hospitals to use specific survey questions when they ask patients about their experiences. Patients are able to view hospital results from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey on the Hospital Compare Website along with results of the clinical indicators. In 2015, CMS announced the addition of a Star Rating program in order to help patients better understand the information on the Hospital Compare Website (cms.gov).

Pay for Performance Evidence and Concerns

Created as part of the ACA, The Hospital Value-Based Purchasing Program (HVBP) is a P4P program that uses incentives to encourage hospitals to provide quality care (Blumenthal & Jena, 2013). While the premise is that this P4P program will lower costs while improving quality, the literature related to P4P programs raises a number of concerns and indicates mixed results in regards to outcomes. A review of some of the relevant literature related to the pros and cons of P4P follows.

Ethical concerns. Wharam et al. (2009) evaluated ethical questions that surround physician P4P systems. While the authors noted that P4P systems are "based on fundamentally acceptable ethical principles" (p. 854), P4P systems have in many instances been created without a complete understanding of their impact on quality. The authors noted ethical questions such as the absence of proven safety in P4P, the lack of a good definition for quality in healthcare, and the absence of good measures for P4P quality. In order to help address these potential ethical problems in P4P schemes, the Society of General Internal Medicine prepared a policy analysis that recommended four broad strategies to address ethical questions around P4P. The strategies presented by the authors included implementing safeguards, creating consensus, producing good measures, and using caution when implementing P4P. In their conclusion, the authors noted that expansion of P4P programs requires close monitoring until better data exists to support the ethics of these programs.

Some of the ethical concerns related to P4P exists in how these initiatives may potentially impact current disparities in the level of care of disadvantaged populations. A 2007 survey of physicians by Casalino et al. found that physicians had concerns about how P4P would impact their willingness to treat high risk patients. The authors also noted that physicians indicated a potential unwillingness to treat noncompliant patients; one physician commented: "If my pay depended on A1C values, I have 10-15 patients who I would have to fire. The poor, unmotivated, obese, and noncompliant would all have to find a new physician" (Casalino et al., 2007, p. 495). McDonald and Martin (2009) also reported that physicians indicated they would not be willing to treat patients who would not comply with the actions needed to meet P4P goals.

Borah, et al. (2012) conducted a study using secondary datasets in order to determine if there was any correlation between hospital characteristics and the predicted mean Medicare

value-base purchasing (VBP) scores. VBP scores impact incentive payments to hospitals, and there has been an assumption that hospitals with higher proportions of minority and elderly patients would achieve lower VBP scores, leading to lower payments to the facilities serving needier populations. While the disincentive for poor performance on VBP scores is a maximum one percent reduction in reimbursement, this amount can have a significantly negative impact on struggling facilities, which intuitively would appear to include those facilities serving a higher proportion of the underserved population. The authors used ordinary least squares (OLS) regression and quantile regression (QR) to analyze data obtained from the Medicare Hospital Compare (HC) Access Database, the 2010 American Hospital Association (AHA) Annual Survey database, and the 2009 Medicare Impact File. Descriptive statistics and regression estimate tables were included. The authors noted significant variations in mean VBP scores. Those items with a positive correlation to mean VBP score included for-profit status, smaller bed size, and the use of four specific clinical process of care (CPC) scores. Those items with a negative correlation to mean VBP score included an increased number of reported CPCs and a bed size of 400-499. Borah, et al. (2012) concluded that while there was some correlation between mean VBP score and the population served, a hospital's profit status, geographic location, and number and type of CPC reported explained most of the variation in mean VBP score.

Zhao, Spaulding, & Balogh (2015) also completed a study to determine how hospital characteristics relate to HVBP. The authors used data from the 2013 American Hospital Association Survey database and the 2013 Medicare Hospital Compare (HC) database. The dependent variables were obtained from the HC database and were derived from the weighted clinical process of care score, weighted patient experience of care domain scores, and the total

performance score (TPS). The authors defined the primary independent variable as spending per hospital patient with Medicare, which they derived from the Medicare HC data base. Bivariate regression of the variables demonstrated a number of statistically significant results. The authors concluded that less efficient hospitals (those demonstrating a higher spending per Medicare beneficiary) had lower patient satisfaction and lower total performance scores than more efficient hospitals. Small hospitals and hospitals with a high percentage of Medicare and Medicaid patients also had lower performance scores. These results led the authors to question whether smaller hospitals, and those serving the poorer populations, lack the resources necessary to increase performance scores. Assuming that hospitals will divert resources in order to enhance performance scores led the authors to question whether a potential unintended consequence of HVBP could be "further exacerbating health care disparities across racial, ethnic, and socioeconomic groups" (p. 11).

Damberg, Elliott and Ewing (2015) identified two characteristics related to disadvantaged patients that could also lead to unintended consequences of P4P programs. The authors noted that the treatment of disadvantaged patients tends to create an inaccurate measurement of performance. In addition, organizations serving a large number of disadvantaged patients tend to be those organizations that are also most lacking in resources. Similar to the conclusions reached by Borah at al. (2012) and Zhoa et al. (2015), Damberg et al (2015) concluded that P4P could essentially limit funding to those organizations that most need the resources in order to better serve the disadvantaged population.

The results reported by Damberg et al. (2015) were also presented in a study completed by the Robert Wood Johnson Foundation (RWJF) (Geisz, 2014). The introduction to the report sums up some researchers concerns about P4P:

> Proponents of pay-for performance argue that, by focusing on quality improvements, providers will improve care for *all* of their patients, likely leading to reductions in disparities. Critics worry that pay-for-performance programs will worsen disparities; providers with large numbers of minority patients may lack the resources to respond adequately to quality improvement efforts. Some providers may choose to restrict access for patients they perceive as high risk, such as racial/ethnic minorities. Empirical data would shed light on how pay-for-performance affects care for racial/ethnic minorities. (Geisz, 2014, p. 2).

The conclusion of the RWJF (2014) analysis of six different P4P schemes is mixed in relationship to the effect on disadvantaged populations; half of the programs were found to increase disparities while the other half were found to have no effect (Geisz, 2014).

In contrast to the studies that look at how disadvantaged patients would fare under P4P schemes, Shoemaker (2012) analyzed the cost per patient day for hospitals in relationship to their P4P total performance score (TPS). Shoemaker (2012) found that those hospitals with higher TPS had higher costs. According to Shoemaker (2012), "These data verify what experienced hospital professionals might expect. The highest level of quality is supported by the highest costs per day" (p. 54). These results seem to illustrate one of the seemingly incongruent principals of P4P: programs meant to increase quality likely increase cost, but the P4P environment requires both increased quality and decreased costs.

Unintended consequences. In addition to potential ethical concerns, researchers have identified a number of potential unintended consequence of P4P. One unintended consequence of P4P appears to be service consolidation. Hospital mergers increased from 52% to 62%, representing an increase of almost 400 hospitals joining systems between 2009 and 2013

(Lineen, 2014). Physicians also continue to join health systems; 24% of physicians were employed by health systems (as opposed to being in independent practice) in 2004 compared to 54% in 2012. Lineen (2014) postulates that the consolidation trend is likely due to the recognized need for resources in order to meet the challenge of a P4P environment.

Other unintended consequences of P4P may be a result of patient care mandates. For example, Nicks et al. (2009) reviewed the requirement that patients presenting to the hospital with community acquired pneumonia (CAP) receive specific antibiotics within four hours of presentation to the hospital. The review found that emergency department physicians indicated concerns about the requirements, noting the controversial data used to support the requirement. In an effort to avoid non-compliance, fifty-five percent of the physicians surveyed indicated that they prescribed antibiotics to patients who they were not sure had clinical pneumonia. Nicks et al. (2009) noted that "the consequences of inappropriate administration of antibiotics are considered less important than the consequences of being held in noncompliance with controversial CMS guidelines" (p. 186).

Various researchers have also identified other unintended consequences of P4P. McDonald and Martin (2009) found that physicians reported that P4P compliance required them to enter more data into the electronic health record (EHR) which in turn created a situation where the physician felt that they had reduced eye contact and personalized interaction with their patients. The same study also found that physicians reported ignoring patient informed consent for testing by ordering tests for *chlamydia trachomatis* on patients without their knowledge as a way to meet P4P goals. The American Hospital Association (AHA) (2015) published an analysis of the hospital readmissions reduction program (HRRP) that concludes that efforts to reduce

discharges may actually increase readmission rates; Ahmad et al. (2012) also noted that efforts to comply with the HRRP pull needed resources from other efforts.

Other unintended consequences of P4P initiatives have lent to the elimination of a specific measure. In 2012, CMS announced an immediate removal of a troponin P4P requirement, noting safety concerns (Halim & Poyer, 2012). In 2014, TJC determined that compliance with a requirement for breast feeding as part of a new mother's initial feeding plan was not feasible (Joint Commission Online, 2015). I believe that it seems reasonable that nurses involved in these measures understand these and other P4P concerns, and this may lead to nurses questioning the overall P4P programs.

Pay for Performance and Role Conflict

Because of the risk P4P imposes on a healthcare organization's financial success, both in terms of reimbursement for services as well as in reputation, healthcare organizations have adopted a number of strategies in order to assure success in complying with P4P measures. Numerous organizations have submitted their success stories, creating contributions to the P4P literature. These organizations have also assisted other organizations by publishing their findings so that other organizations can learn. Unfortunately, the use of specific strategies to meet policy goals may create competing demands for nurses as they try to provide the best possible care for the individual patient, ultimately resulting in role conflict.

An early example of an initiative that required public reporting was the administration of pneumococcal polysaccharide vaccine (PPV). The Pennsylvania Elderly Immunization Act of 2004 required healthcare institutions to offer PPV to hospitalized patients; TJC and CMS both now require reporting of PPV vaccination status (Sokos et al., 2007). Changes in the federal regulations that occurred in 2002 allowed healthcare organizations the ability to adopt standard

operating procedures (SOPs) that would create standing orders in the electronic health record (EHR) for inpatient PPV vaccination (Middleton et al., 2005). The creation of these standing orders required the organization to change policies to eliminate the requirement for a physician order for the vaccination; Middleton at el. (2005) noted that overcoming staff concerns about the standing orders was one of the barriers to the SOP implementation. Other barriers to the PPV SOP included staff perception that the SOP would increase workload and staff concerns about the safety of administering PPV to hospitalized patients. If nurses are torn between requirements to provide a vaccination using a standing order to meet regulatory requirements and their belief that immunizing hospitalized patients is bad for the patient, this situation could result in role conflict.

Another example of P4P strategies is in response to the Hospital Readmissions Reduction Program (HRRP). CMS established the HRRP, which requires reduced payments to inpatient prospective payment system (IPPS) hospitals for excess readmissions for a number of diagnostic conditions (CMS.gov). As of FY 2015, excess readmissions for diagnosis such as heart attack, heart failure, pneumonia, chronic obstructive pulmonary disease (COPD), and total hip and knee replacement incur a payment penalty. The American Hospital Association (2015) notes that "hospitals are intensely focused on reducing avoidable readmissions using a number of strategies" (p. 4). White, Carney, Flynn, Marino & Fields (2014) published the results of a study that showed that coordinated care management, using a multicomponent intervention between primary care physicians and the hospital, can reduce readmissions. In another study, Ahmad et al. (2012) interviewed hospital administrators from six different hospitals in which they identified six categories of strategies used by hospitals in order to reduce readmissions. In order to minimize the potential financial penalties that can occur with excess readmissions,

"administrators have allocated significant resources to readmission reduction strategies even during a time of increasingly scarce resources" (Ahmad et al., 2012, p.8). Efforts to reduce readmission may create role conflict in a nurse who believes that resources used to prevent readmissions should be used for the care of the patient. Likewise, a nurse may experience role conflict if she is encouraged to discourage hospitalization of a patient she believes would benefit from hospitalization, even if that hospitalization is a readmission.

I also believe that P4P strategies may cause conflict even if the nurse believes in the goal of the initiative. For example, while Nicks et al. (2009) used emergency department physicians for their study, who indicated that they possibly treated patients according to the standards and not according to that the patient needs, it may be that nurses have similar concerns about their role in caring for patients with pneumonia and giving potentially unnecessary antibiotics. The conflict over giving potentially unnecessary antibiotics could lead to role conflict if the nurse could not reconcile their role of being the patient advocate with their role as a good employee who will help the facility succeed in the P4P goals.

Similarly, preventing central line-associated bloodstream infections (CLABSIs) is another P4P initiative; both the Joint Commission and CMS have implemented policies with goals of zero CLABSIs (McAlearney, Hefner, Robbins, Harrision, & Garman, 2015). McAlearney et al (2015) conducted 194 interviews of staff from eight different hospitals. Analysis of the interview data yielded six important strategies for preventing CLABSI: aggressive goal setting and support, strategic alignment and information sharing; systematic education, interprofessional collaboration, meaningful data use, and recognition of success. The authors concluded that adoption of these six management strategies could help lower-performing hospitals reach the desired goal of zero CLABSI. Although I believe that nurses would agree

with a goal of zero CLABSI, the extensive efforts set forth to achieve this goal may create role conflict if the nurse feels that the resources used on this initiative take away from resources that may help the care of other patients.

Pay for Performance and Autonomy

Since P4P initiatives stress safe and quality patient care, it would seem that maintaining provider autonomy (acting in the best interest of the patient) would then be important for successful P4P implementation. Unfortunately, P4P initiatives seem to have a negative effect of perceived autonomy. Gazewood et al. (2000) reported that physicians believed that Medicaid managed care plans decrease physician autonomy. Marshall, Shekelle, Leatherman, & Brook (2000) go as far as commenting that the public reporting of healthcare data "represents a potential challenge to health professional's traditional concept of autonomy" (p.1873).

Other researchers have also linked physician's loss of autonomy to P4P. Larriviere and Barnat (2008) suggested that physicians fear the effect of P4P on their clinical autonomy, indicating a concern that the use of pre-defined clinical practice guidelines would prevent physicians from using their own judgement when treating patients. In a Rochester, NY, study, Waddimba, Burgess, Young, Beckman, & Meterko (2013) concluded that physicians believe autonomy is critical to their job satisfaction. In another physician study related to P4P attitudes, Young et al. (2012) concluded that autonomy was a moderating factor between financial incentives and performance. Given that "autonomy and control are necessary components of satisfying work in a profession as complex as medicine" (Waddimba et al., 2013, p.286), it seems reasonable to conclude that nurses may experience similar correlations between autonomy, job satisfaction, and P4P.

Like physicians, nurses also value autonomy, an attribute specifically measured in some nursing satisfaction surveys. For example, in response to a Joint Commission requirement that organizations measure staff expectations, Whitley and Putzier (1994) developed the Work Quality Index (WQI). The WQI contains 38 items, and measures six different subscales: work environment, autonomy, work worth, professional relationships, role enactment, and benefits. There are five items from the WQI related to autonomy; of note to P4P initiatives is that one of the items on the scale refers to the ability of the nurse to make autonomous nursing care decisions. While I have not read any literature that discusses nurse's perception of autonomy as it relates to P4P, I believe that like physicians, nurses may feel that P4P decreases their ability to make autonomous decisions.

Nursing Perception Towards Pay for Performance

Since nurses play an integral role in implementing P4P strategies, understanding how nurses perceive P4P is likely an important factor in decreasing concerns about role conflict and autonomy related to P4P. I was only able to locate limited information related to nursing attitudes towards P4P. Instead it appears that the literature to date concentrates on how healthcare administrators perceive P4P programs.

Healthcare executives voiced concerns about the impact of publicly reported healthcare data prior to the 2005 development of the Hospital Compare Website. Berwick and Wald (1990) published a study they performed about executive attitudes towards hospital mortality data released to the public by the Health Care Financing Agency (HCFA, now CMS) in 1987. The authors argued that results of their 12-item survey indicated an overall mistrust in the information. These results included a 95% response rate of fair or poor (70% poor/ 25% fair)

when asked about the usefulness of the data for improving quality, and a 97% response rate of fair or poor (85% poor/ 12% fair) when asked about the usefulness of the data for consumers.

A 2007 study of physicians by Casalino et al. produced results similar to Berwick and Wald. In a survey of randomly selected general internists, Casalino et al. (2007) found that 43% of the 556 respondents somewhat disagreed, and 27% strongly disagreed, that quality measures are generally accurate. In addition, 22% strongly agreed and 39% agreed that measuring quality will divert physician attention from other types of care. Overall, the physicians surveyed were opposed to public reporting but appeared to support payment for quality if results are accurate.

Healthcare executive attitudes towards public reporting seemed to have improved by 2011. Patrick Billiter (2011) wrote his doctoral dissertation as a descriptive study to investigate the attitudes that healthcare executives have about public reporting of results of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). He combined a review of changes in hospital HCAHPS scores over a four -year period (2006-2010) with his assessment of the healthcare executive's attitudes. As a method to survey attitudes, Billiter developed a ten-question survey tool; six questions were demographic questions while the remaining four assessed the attitude of healthcare executives. Using responses from 314 Chief Executive Officers (CEOs), Chief Operating Officers (COOs), Chief Nursing Officers (CNOs), and Chief Financial Officers (CFOs), Billiter concluded that healthcare executives believed that quality is important for their organizations and that HCAHPS reporting is positive, but executives had mixed feelings about whether they believed HCAHPS reporting should be used to justify CMS reimbursement.

In 2014, Lindenauer et al. conducted a study to assess hospital leaders' attitudes towards publicly reported quality measures. The authors created and mailed a questionnaire to hospital

executives from 630 US hospitals. Respondents to the questionnaire indicated their level of agreement, based on a 4 item Likert-like scale, with 21 statements. The authors concluded that hospital administrators are paying attention to quality indicators. Seventy percent of administrators agreed that "public reporting stimulates quality improvement at my institution" (p. 1907). Administrators also agreed (89.7%) that publicly reported quality measures could affect a hospital's reputation. A high percentage of respondents agreed they had concerns about the clinical meaningfulness and unintended consequences of quality measures. A low percentage of administrators believed that measures comparing mortality and readmission rates were useful to determine quality of care, and between 45.7% and 58.6% of respondents were concerned that resources needed for other projects may be used in efforts to improve quality scores. In addition, a similar number of respondents were concerned that efforts to improve public reporting data could lead to gaming. The authors pointed out that "there were important concerns about the adequacy of risk adjustment and unintended consequences of public reporting, including neglect of other clinically important areas (teaching to the test) and improving performance primarily through changes in documentation and coding (gaming)" (p. 1907).

While not a study conducted to determine the attitudes of staff nurses towards P4P, a 2008 study completed by Kurtzman et al. (2011) did provide some data on staff nurses' perceptions of P4P. The authors interviewed hospital leaders as well as nurse managers and staff nurses, asking about perceived effects of P4P. The researchers noted a number of themes as a result of the study. Respondents noted concern that poor performance in P4P could lead to decreased reimbursement and subsequently lead to cuts in nurse staffing. Another view expressed by those surveyed was that P4P would increase demands on nurse staff in terms of paperwork required for documentation, which in turn would decrease time spent with patients.

Kurtman et al. (2011) concluded that nurses are important for P4P success and that understanding nurses' concerns and views is an important component of P4P development.

Pay for Performance Impact on Organizational Change

Because P4P implementation takes away the ability of nurses to exercise their own clinical judgement, I believe that nurses' attitudes towards P4P impact their feelings on role conflict and autonomy, making it is possible that these attitudes subsequently impact levels of nursing burnout. In order to minimize potential burnout, healthcare leaders may want to understand how to implement P4P while minimizing any negative impact. In order to better understand how to implement P4P programs, healthcare leaders may benefit from an understanding of how organizational culture is impacted, as well as impacts, policy implementation.

The study of organizational culture has roots in organizational psychology, social psychology, and social anthropology (Scott, Mannion, Davies, & Marshall, 2003a). There does not appear to be any one concise definition of organizational culture, but there does appear to be agreement that organizational culture consists of shared norms, assumptions, and values (Bloor, 1994; Parmelli, Flodgren, Baille, Schaafsma, & Eccles, 2011; Sinkowitz-Cochran at al., 2012). Scott, Mannion, Marshal and Davies (2003b) note that while there are many different definitions of organizational culture, what makes one culture different than another is the "vast pool of tacit knowledge, which natives understand, but are not conscious of knowing" (p.106).

Schein (1996) adds the concept of group perceptions to the definition or organizational culture, suggesting that the norms a group holds are a result of group assumptions. According to Schein (1996), norms are then the "visible manifestation of these assumptions" (p. 236). By

differentiating norms from assumptions, Schein (1984) creates a slightly different definition of organizational culture:

> Organizational culture is the *pattern of basic assumptions* that a *given group has invented, discovered, or developed in learning to with its problems of external adaptations and internal integration*, and that have *worked well enough to be considered valid*, and, therefore, to be *taught to new members as the correct way to perceive, think, and feel* in relation to those problems (p. 3).

Scott et al. (2003b) explain that Schein's definition of organizational culture is a layered concept, and consists of three layers: artifacts, beliefs and values, and assumptions.

Organizational culture can impact the success of the organization and be difficult to change (Bloor, 1994; Sinkowitz-Cochran et al., 2012). Some researchers also believe that organizational culture can affect an organization's ability to implement change (Bloor, 1994; Sinkowitz-Cochran et al., 2012); the desired change may require a change in the norms and beliefs of the group. Glisson (2007) notes that organizational culture may either inhibit or assist the adoption of best practices. Given that proponents of P4P models argue that these programs are medical best practices, I believe it is likely that organizational culture plays a role in the adoption of P4P.

Policy implementation, such as the adoption of P4P programs, can create organizational change (O'Neil and Krane, 2012). Researchers have recognized the effect of organizational change in respect to P4P compliance; for example, McAlearney et al (2015) included questions about organizational change in their study of a P4P initiative related to CLABSI. Thus, it appears possible to argue that the development of various strategies in order to meet P4P goals

makes it likely to assume that some level of organizational change occurs within organizations as a result of P4P.

Organizational change can be complicated in the healthcare industry (Hinnings et al., 2003). Hinnings et al. (2003) point out the diversity of services, locations, and professional groups that participate in healthcare change can complicate the change process. In an industry where these multiple groups must interact in order to provide needed services, Hinnings et al. (2003) note that the very process of change adds a further complication. Parmelli et al. (2011) concluded that there was no known effective strategy that will change organizational culture. Schein (1984) appears to agree, arguing that there is no one change model that works in all situations.

Based on the results of their study on organizational change, Shin, Taylor, and Seo (2012) suggested four strategies that managers must be aware of when attempting organizational change. Shin et al. (2012) first note the importance of the employee and their commitment to the change. The authors' second suggestion is the use of inducements, both material rewards and social support, as a way to improve the employee commitment to change. Third, the authors suggest that managers should recruit employees that have a "psychological resilience" (p. 743) to change. Finally, Shin et al. (2012) acknowledge the role of a positive attitude and encourage managers to "display positive emotions and communicate the process of change to employees by using words connoting optimism and excitement" (p. 743).

While management plays a role in defining policy implementation, the individuals responsible for carrying out the policy change also play an important role. McLaughlin (1987) argues that understanding individual beliefs and values are important for understanding the response to change. As stated by McLaughlin (1987), "organizations do not innovate or

implement change, individuals do" (p.174). Shin et al. (2012) also note that importance of individual employee in successful implementation of change. Understanding how individuals, such as nurses, respond to policy implementation may be an important aspect of understanding the success of P4P initiatives.

Davies, Nutley, & Mannion (2000) suggest that organizational change cannot be accomplished by a "top down" (p.116) approach. Outside forces, such as the media and regulatory agencies, may influence organizational change (Davies et al., 2000). Employees will have different levels of fear and motivation during the change process, and organizations must consider the concerns of all levels of staff in order to accomplish change (Davies et al., 2000). Parmelli et al. (2011) concluded that there was no known effective strategy that will change organizational culture. Schein (1984) appears to agree, arguing that there is no one change model that works in all situations.

Given that P4P implementation takes place within an existing organizational culture, healthcare executives may be able to learn from the literature on organizational change in order to manage successful implementation. Jones, Jimmieson, & Griffiths (2005) performed a study in order to determine what attributes would allow employees to be more accepting of change. The authors noted that change readiness is not only impacted by how willing employees are to accept change, but also by how much employees believe that the change will have a positive effect on them as individuals. In order to influence employee acceptance of change, Jones et al. (2005) indicate that management should use strategies, such as extensive communication and employee involvement, in planning change. In their study of high performing hospitals within the United Kingdom, Mannion, Davies, and Marshall (2005) likewise found that information sharing was more prevalent in high performing hospitals than in low performing hospitals.

Giauque (2015) also notes the importance of communication and employee voice in creating a positive employee attitude towards change. Based on these findings, healthcare administrators may find that they can influence nurses' attitudes towards P4P in a positive manner by communicating the reason for, and including nurses in, the P4P implementation planning process, perhaps in a manner that lessens the impact on role conflict, autonomy, and burnout.

Control Variables

It is important to understand those variables related to the dependent variables, but not the focus of interest in any study. These variables are known as control variables. A discussion of some of the variables known to impact job satisfaction and burnout follows.

Spector (1997) notes that there are a number of characteristics related to job satisfaction. An individual's age correlates to their level of job satisfaction, although the exact nature of the relationship between age and job satisfaction is not clear. The correlation between an individual's gender and their job satisfaction varies, but gender appears to be important in the age and job satisfaction relationship. Levels of job satisfaction also differ depending on the country in which the employee works.

A variety of studies related to nursing job satisfaction illustrate other useful control variables. Poghosyan et al. (2010) used years worked at the hospital, hours worked per week, and the number of patients cared for per shift. At least two studies used hospital characteristics such as bed size, teaching status, and illness severity as control variables (Aiken et al., 2002; Cimiotti et al., 2012). In another study, control variables included average daily census, unit staffing, and unit skill mix (Vahey et al., 2004).

Many of the control variables useful when studying job satisfaction are also useful control variables for predicting burnout. Similar to those variables found to impact job

satisfaction, variables such as age, number of years' experience in nursing, gender, hospital size and nursing unit type have been used in research studying burnout (Chakraborty, Chatterjee, & Chaudjury, 2012; Milfont et al., 2008; Vahey et al., 2004). Vahey et al. (2008) also found that prior military service was important for preventing burnout indicating that a history of military service is a variable that should potentially be included with burnout studies.

Conceptual Framework

The literature review provides the information and background needed to develop and support the conceptual framework for the proposed study. I have reviewed the literature related to P4P and made the argument that there are still a number of unanswered questions about these initiatives. In particular, the perception of nursing staff related to P4P is an area that presents a gap in the research.

The literature review also discusses organizational theory and the concept of organizational change. Role conflict can negatively affect attempts at organizational change and is a factor in the development of staff burnout. P4P implementation may also affect nursing autonomy, and like role conflict, autonomy may be a factor in the development of burnout. If P4P concerns create role conflict and autonomy, leading to staff burnout, it is also possible that there is an additional effect on nurse job satisfaction. I suggest that understanding how staff nurses' attitudes towards P4P correlate with role conflict and autonomy may help healthcare managers as they try to successfully implement the goals of P4P initiatives while preventing staff burnout and job dissatisfaction. Finally, in addition to preventing problems with burnout and job satisfaction, if nursing perception of P4P also impacts the overall P4P results, organizations may benefit twofold by doing what they can to change their culture to one that views P4P not as a necessary evil but a reality that is good for patient care and quality.

Figure 1 shows the conceptual framework for this study.

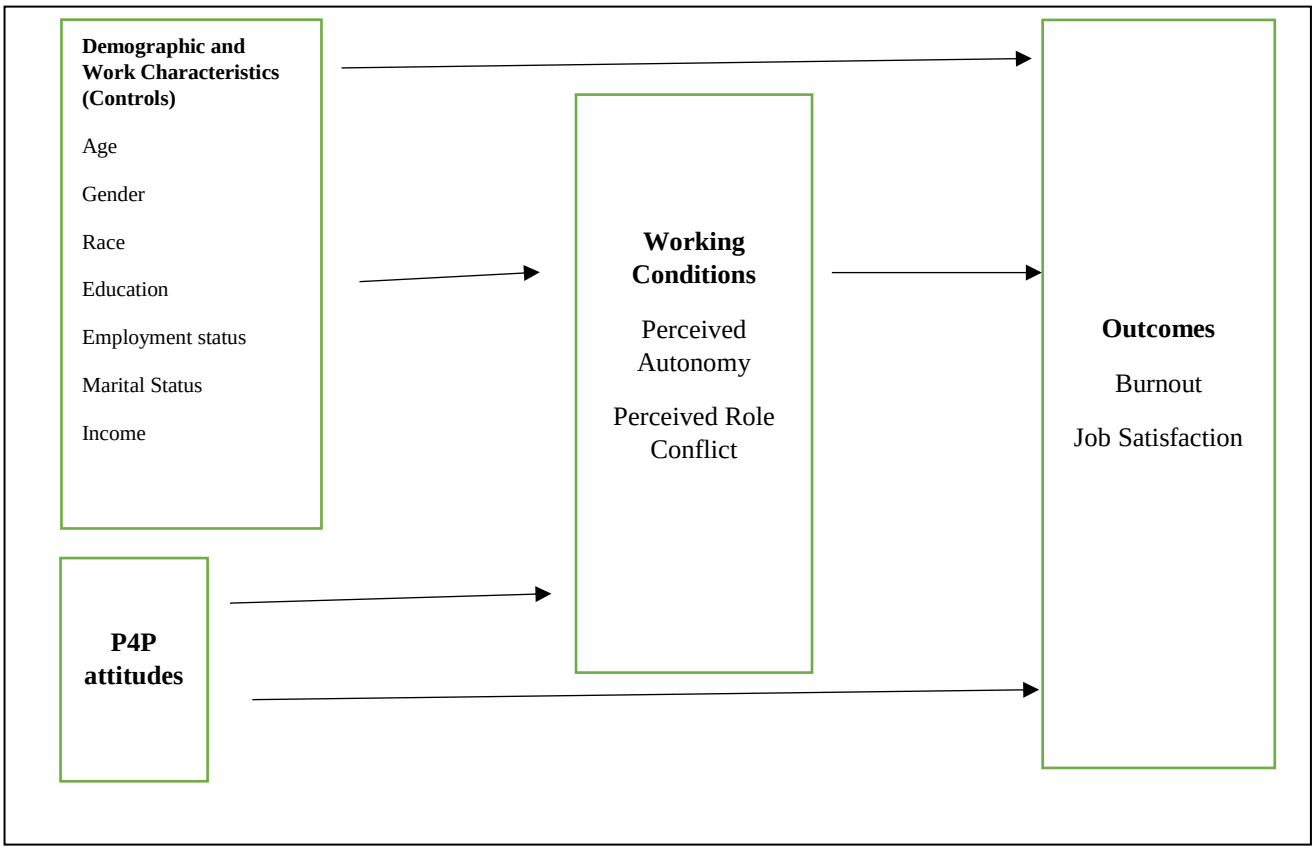

Figure 1. Conceptual framework.

Hypotheses

I have used the information from the literature review and the conceptual framework in order to develop a number of hypothesis that I plan to test with this study:

H1: As attitudes towards P4P become more negative, the level of perceived autonomy will decrease. I believe that negative attitudes towards P4P may occur if a nurse believes that P4P requirements take away the independent nursing judgement, and this decrease in clinical judgement may decrease the nurse's perception of autonomy.

H2: As attitudes towards P4P become more negative, the level of perceived role conflict will increase. I believe that negative attitudes towards P4P may occur if a nurse is confused by the demands required by P4P mandates as opposed to providing what the nurse feels is the best care for the patient, and this in turn will result in role conflict for the nurse.

H3: As attitudes towards P4P become more negative, the level of perceived burnout will increase. I believe that negative attitudes towards P4P may occur when a nurse views P4P as adding extra work when taking care of the patient, and this will in turn lead to increased levels of burnout.

H4: As attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease. I believe that negative attitudes towards P4P may occur when a nurse resents the demands of P4P and this will in turn lead to decreased job satisfaction.

H5: As levels of perceived autonomy decreases and role conflict increases, burnout will increase and job satisfaction will decrease. The existing literature supports a correlation between autonomy/role conflict and burnout/job satisfaction.

Chapter Summary

This project seeks to explore the relationship between P4P attitudes and job satisfaction and burnout. In Chapter 2 I presented an extensive literature review related to the concepts of autonomy, role conflict, burnout, and job satisfaction. I also presented the literature related to P4P. Using the existing literature, I developed and presented the five hypotheses for this research project. In Chapter 3 I will describe the methods I used to test the hypotheses.

CHAPTER 3

METHODS

Introduction

As previously described, this research project sought to understand nursing attitudes about P4P in a number of ways. First, the research was intended to determine if attitudes towards P4P initiatives are associated with a perceived increase in role conflict and decrease in autonomy. In addition to autonomy and role conflict, the research sought to determine whether attitudes towards P4P are associated with burnout and job satisfaction. Finally, if sufficient data were obtained, I hoped to determine if there is any correlation between nursing attitudes towards P4P and an organization's success in meeting P4P goals.

This chapter describes the methods used to test how attitudes towards P4P programs affect role conflict, autonomy, burnout, job satisfaction, and P4P success. First, I will introduce the research methodology and design, including the choice of survey population. Next, I will discuss the assessment of operational validity and reliability for the research variables. Finally, I will complete a discussion of the analytical processes used in testing the hypothesis.

Research Methodology and Design

This study used a post-positivist paradigm in order to complete a quantitative research project. Quantitative methods involve the use of numbers and measurements, and can use tools such as questionnaires, in order to study social phenomena (Monette, Sullivan & DeJong, 2011). A survey was created using Qualtrics, an online survey software program located at http://www.qualtrics.com (Qualtrics, Provo. UT). The survey tool is found in Appendix A.

The Indiana University of Pennsylvania (IUP) Institutional Review Board (IRB) for the Protection of Human Subjects approved this study. Two requests for change were also approved

by the IRB during the data collection process. The Research Topic Approval form is found in Appendix B and the three IRB approval letters are included in Appendix C.

A 2014 report by the RAND Corporation identified 129 different types of VBP programs (Damberg et al.). Because of the large number of P4P programs, I did not feel it was feasible within the scope of this project to study attitudes towards P4P in general. In order to address concerns about conflicting results that may occur due to differences in P4P programs, I limited my study to nurses working in Pennsylvania hospitals. By choosing Pennsylvania Hospitals I selected organizations that follow the same State Department of Health standards and receive information from the same Hospital Association, The Hospital and Healthsystem Association of Pennsylvania (HAP).

Data Collection

Because a survey of every nurse in the state of Pennsylvania was not financially feasible, I used a convenience sample for this study. Nurses were approached as potential participants in the survey through three sources. The first method of obtaining survey participants came from nursing administrators at UPMC Bedford, UPMC Altoona, and Monongahela Valley Hospital; these CNOs sent e-mails to nurses in their facilities, explaining the research project and asking the nurses to use a link to reach the survey tool. The second method of obtaining survey participants was through the Pennsylvania State Nurses Association (PSNA), who published the research details and the link to the survey tool so their members could participate in the research project. The final method to obtain survey participants came from purchasing a list of PA RN names and addresses from Clearfield, Montour, and York County, and subsequently mailing 300 letters describing the research project and asking participates to go to a link or use the available qrl code in order to complete the survey tool.

The various attempts at reaching participants occurred over the course of twelve months. At the end of the year, there were 254 respondents, with 148 respondents reporting "yes" to the first question indicating that they were RNs working in the hospital. Of the 148 respondents who entered the survey tool, 36 did not continue past the half-way point. This left the final sample size at 112. While recognizing that the low response rate would impact analysis, my dissertation committee agreed to allow the project to continue with the response rate limitation in mind.

Control Variables

Control variables. Control variables are those variables that are held constant (Monette et al., 2011). A number of variables known to impact burnout and job satisfaction were used to control for potential sources of spuriousness. These variables are described below.

Age. Survey participants were asked to indicated their year of birth and age was then calculated in years. Six of the 112 respondents, or 5%, did not provide a birth year. Respondent age ranged from 21-71, with a mean of 48 years.

Race. Five respondents indicated a race of black and two respondents indicated other as race; these 7 were recoded into non-white. For the multivariate analysis, race was indicated by a dummy variable with 1=non-white and 0=white.

Sex. Sex was represented by a dichotomous variable (coded 0=female, 1=male).

Marital status. Marital status was measured as 1=never married; 2=married/cohabitating; 3=divorced/separated; 4=widowed; 5=other. For the multivariate analysis, a dichotomous variable was created with married (married/cohabitating) as the zero category and 1= not married (all other responses).

Education. Level of education was measured as 1= RN, certificate; 2=Associate Degree; 3=Bachelor Degree; 4=Master's Degree; 5=DNP; and 6=PhD. For multivariate analysis, a

dichotomous variable was created with other than advanced (Bachelor Degree or below) as the zero category and 1= advanced (Master's Degree and above).

Employment status. Employment status was measured as 1=full-time; 2=part time seeking full time; 3=part time choosing part time; 4=casual seeking more; 5=casual by choice; and 6=other. For multivariate analysis, a dichotomous variable was created with full-time being the zero category and 1= other than full-time.

Primary nursing function. The nurse's primary function was measured as 1=direct patient care; 2=administration; and 3=other. For multivariate analysis, a dichotomous variable was created with direct patient care being the zero category and 1= not direct patient care (administration plus other).

Years working. Survey participants were asked to indicate how many years they had worked as a nurse, with an average of 20.8 years. Survey participants indicated they had worked at their current position between 0 and 49 years, with an average of 12.8 years with the current employer.

Income. Survey participants were asked to indicate their individual income level. One-third of respondents indicated they made $40,000-$59,999 annually while 35.2% indicated they made $60,000-$79,000 annually. For analysis a dichotomous variable was created with 0=>60,000 and 1=<$59,999 annually.

Independent and Mediating Variables

Measurement of P4P attitudes. At least three different researchers have previously completed research on attitudes towards P4P. Casalino et al. (2007) performed a study on the opinion of internists towards P4P programs. Lindenauer et al. (2014) completed a survey on the attitudes of hospital leaders towards P4P, and Billiter (2011) completed a doctoral dissertation on

the attitude of hospital executives towards P4P. Each of the three researcher(s) indicated that their survey questions exhibited content validity and reliability. Each of these three sets of survey questions are in Appendix D-F

Relevant questions from the surveys used by Casalino, Lindenauer, and Billiter were modified for use in my survey in order to measure nursing attitudes. Responses were measured using a seven- point Likert-like scaled, ranging from a score of "1" indicating strongly disagree to "7" indicating strongly agree. A choice of "8" was also given to indicate "don't know". Responses of "don't know" and system missing responses were coded as "4" to indicate neither agree nor disagree. Appendix M includes the mean and standard deviation for each item used to measure P4P attitudes.

I completed an exploratory factor analysis of the questions in the P4P attitude section. Both the scree plot and the eigenvalues suggest a three- factor solution for P4P attitudes. Table 1 shows the initial results and eigenvalues for the P4P attitude questions.

Table 1

Eigenvalues for P4P Attitudes (Unrotated)

Factor	Eigenvalue	Proportion	Cumulative
1	4.835	28.439	28.439
2	1.885	11.089	39.529
3	1.520	8.940	48.463

Figure 2 shows the scree plot for the exploratory factor loading of the P4P attitude questions.

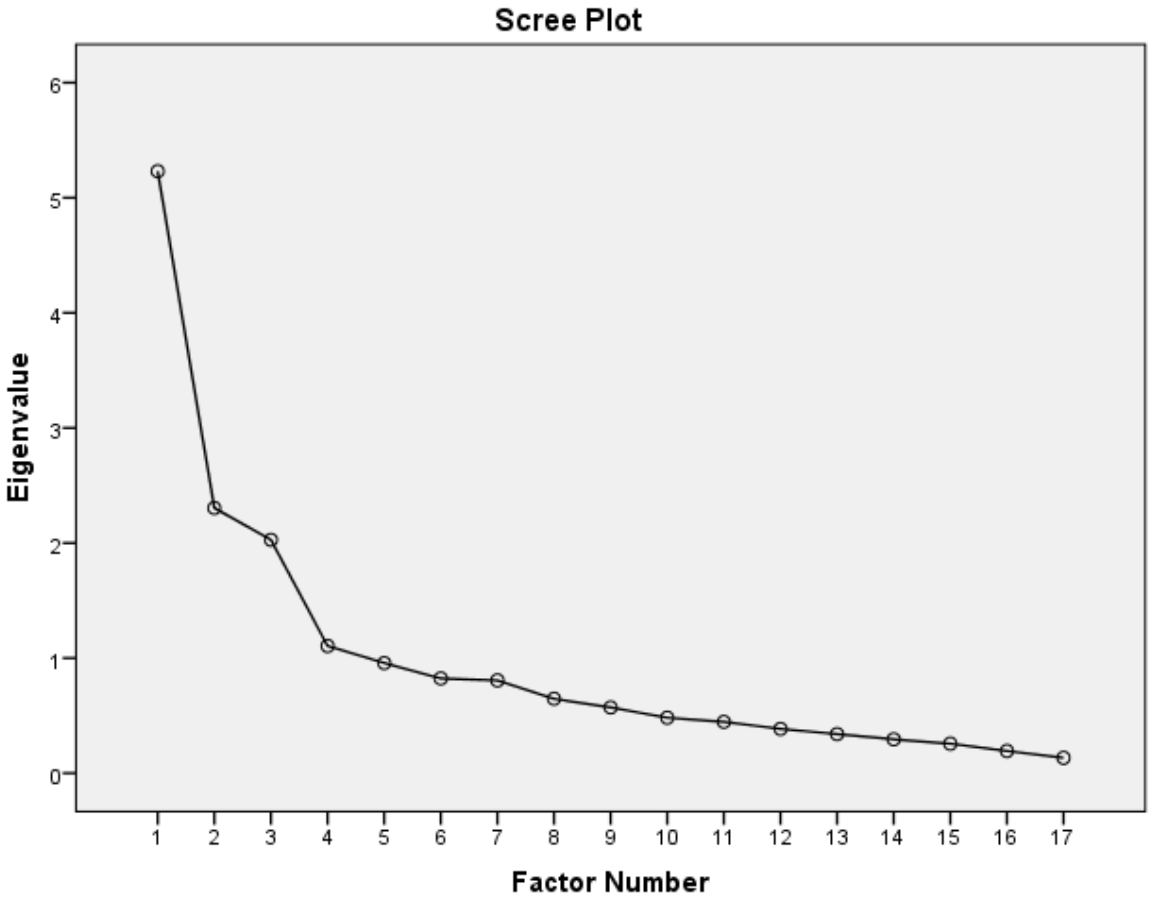

Figure 2. Scree plot of eigenvalues for P4P attitude measurement.

The exploratory factor analysis for the P4P attitude responses was performed using both oblique promax rotation and orthogonal varimax rotation with similar results. The factor loadings for the three retained factors, as determined following orthogonal varimax rotation, are shown in Table 2.

Table 2

Factor Loadings After Orthogonal Varimax Rotation for P4P Attitude Factors

Variable	Factor 1 Quality alpha =.85 mean = 5.17 SD = 1.02	Factor 2 Reporting alpha = .86 mean = 4.09 SD = 1.25	Factor 3 Cynicism alpha = .61 mean = 4.05 SD = 1.12	Item Key
Item 1	**.497**	.166	-.001	Service is the primary quality driver in my organization.
Item 2	.180	**.801**	-.113	The CMS HCAHPS survey questions are a proper tool to measure. service quality levels.
Item 3	.140	**.728**	-.207	The CMS quality measures are a generally accurate measure of care quality.
Item 4	.262	-.305	**.454**	Efforts meant to improve quality measure scores may result in neglect of more important matters.
Item 5	**.580**	.251	.064	Public reporting stimulates quality improvement activities in my organization.
Item 6	.404	**.550**	-.095	Publicly shared HCAHPS data is positive.
Item 7	.156	**.854**	.024	HCAHPS survey results are a good way to justify CMS reimbursement.
Item 8	**.654**	.155	.169	Public reporting influences my organization's reputation.
Item 9	**.564**	.340	.320	My organization is able to influence performance on publicly reported measures.
Item 10	.437	**.530**	.110	Performance on publicly reported measures is useful for making inferences about the general quality of care at my hospital.
Item 11	-.073	.140	**.546**	Hospitals may try to maximize performances on quality measures by altering documentation and coding practices.
Item 12	.101	**.443***	.140	When calculating performance scores, risk adjustments appropriately account for differences in patient mix.

Variable	Factor 1 Quality alpha =.85 mean = 5.17 SD = 1.02	Factor 2 Reporting alpha = .86 mean = 4.09 SD = 1.25	Factor 3 Cynicism alpha = .61 mean = 4.05 SD = 1.12	Item Key
Item 13	-.132	.050	**.399**	My organization's performance on quality measures is affected by chance.
Item 14	**.622**	.068	-.239	In my organization, performance measures are considered a genuine tool for improving quality of care.
Item 15	.041	-.217	**.727**	In my organization, following CMS guidelines is more important than meeting individual patient care needs.
Item 16	**.764**	.074	-.141	My hospital dutifully complies with P4P requirements.
Item 17	**.768**	.125	-.208	My hospital meaningfully embraces P4P as a way to improve care quality

Note: * indicates item was not used to calculate the alpha presented in the table

The items used in the P4P attitude section had not previously been analyzed as a potential scale. I reviewed the items in each of the three factors in order to name them and determine the reliability of each factor. I labeled Factor 1, consisting of items 1,5,8,9,14,16 and 17, as "Quality" since these questions referred to P4P as a process to impact quality of care. The Quality scale had a Cronbach's alpha of 0.85 I labeled Factor 2, consisting of items 2,3,6,7,10 and 12, as "Reporting" as these items all referred to the aspect of P4P and public reporting. The Reporting scale had a Cronbach's alpha of 0.85. Removal of item 12 increased the Cronbach's to 0.86. Item 12, referring to performance score adjustments, did subtly differ from the other items so I determined that item 12 would not be included the Reporting scale. I labeled Factor 3, consisting of items 4,11,13 and15, as "Cynicism" as these items all related to negative views of P4P. The scale Cynicism had a Cronbach's alpha of 0.61, which, while less than desirable, is still acceptable (DeVellis, 2017).

Measurement of autonomy. The work quality index (WQI) is a 38-question survey meant for use in measuring nursing job satisfaction (Whitley & Putzier, 1994). The WQI consists of 6 different sections, one of which includes an assessment of perceived nursing autonomy (Whitley & Putzier, 1994). The autonomy subsection includes five questions scored on a 7- point likert-like scale, ranging from a score of "1" being not-satisfied to a score of "7" being satisfied. The questions from the WQI subscale are listed in Appendix G.

Whitely and Putzier (1994) reported an alpha reliability coefficient of 0.84 for the questions related to autonomy. The five questions from the autonomy subsection of the WQI were used in order to measure perceived nursing autonomy of practice. The mean for the autonomy scale was 5.00, with and SD of 1.43. Appendix M includes the mean and standard deviation for each item in the autonomy scale.

I completed an exploratory analysis of the autonomy items using principal axis extraction. The scree plot and factor loadings supported a single factor loading. Table 3 shows the initial results and eigenvalues for the autonomy scale.

Table 3

Eigenvalues for Autonomy Scale (Unrotated)

Factor	Eigenvalue	Proportion	Cumulative
1	3.613	72.265	72.265

Figure 3 shows the scree plot for the autonomy scale.

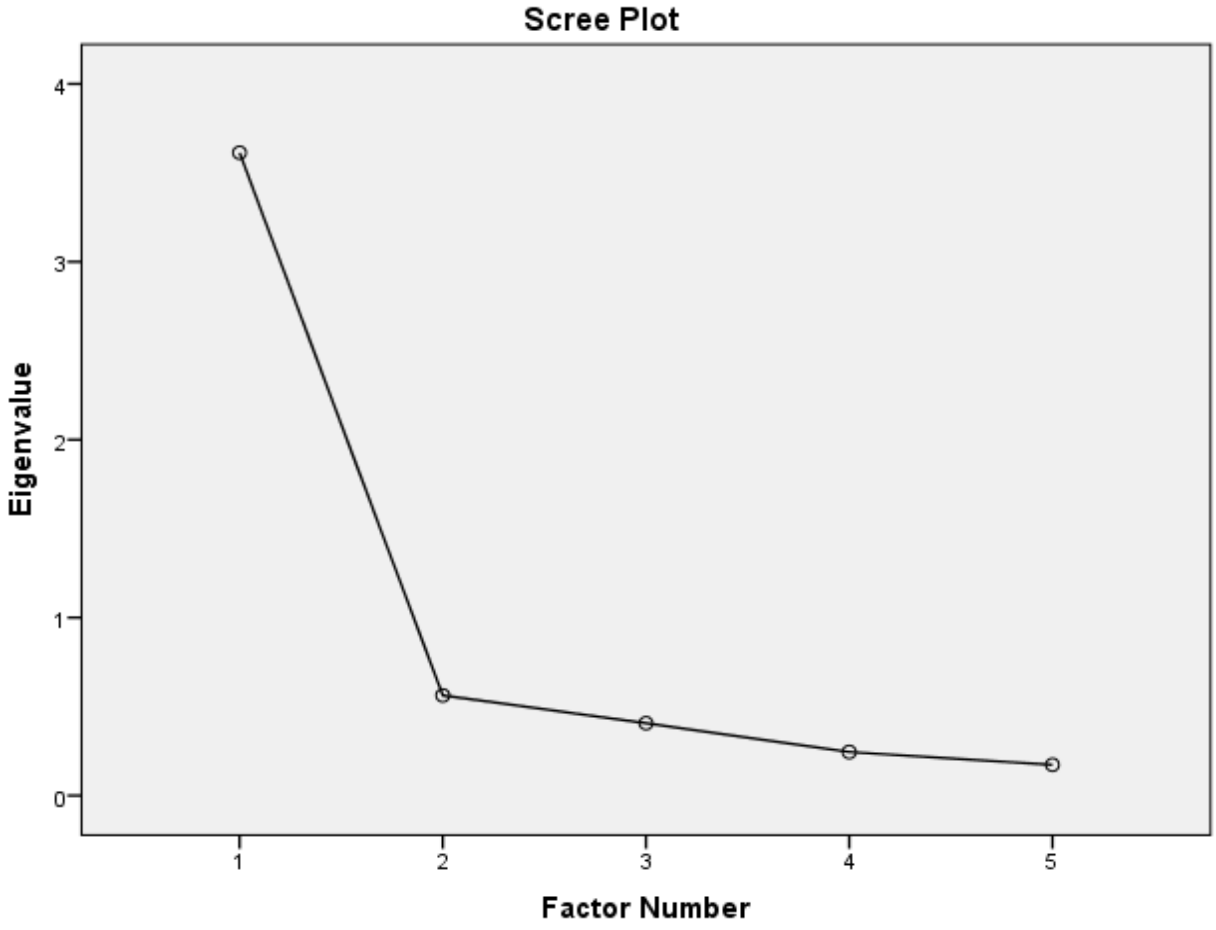

Figure 3. Scree plot of eigenvalues for autonomy.

The Cronbach's alpha for the autonomy scale in this survey was 0.90, which indicates a high level of internal consistency (Devellis, 2017).

Measurement of role conflict. Researchers commonly measure role conflict using an 8-item scale initially developed by J.R. Rizzo in 1970 (Valentine et al., 2009). The eight items are measured using a 7-point likert-like scale, ranging from a score of "1" representing strongly disagree to "7" representing strongly agree; higher scores indicate higher levels of role conflict (Rizzo, House, & Lirtzman, 1970; Valentine et al., 2009). The questions from the role conflict scale are shown in appendix H.

Rizzo reported an alpha reliability coefficient of 0.816 to 0.820 for the questions related to role conflict. The eight items from the Rizzo role conflict scale were used in order to measure perceived role conflict in nursing. The mean of the role conflict scale was 3.89 with and SD of 1.13. Appendix M includes the mean and standard deviation for each item in the autonomy scale.

I completed an exploratory factor analysis of the role conflict items using principal axis extraction. The scree plot and factor loadings supported a single factor loading. Table 4 shows the initial results and eigenvalue for the role conflict scale.

Table 4

Eigenvalues for Role Conflict Scale (Unrotated)

Factor	Eigenvalue	Proportion	Cumulative
1	4.356	54.449	54.449

Figure 4 shows the scree plot for the role conflict scale.

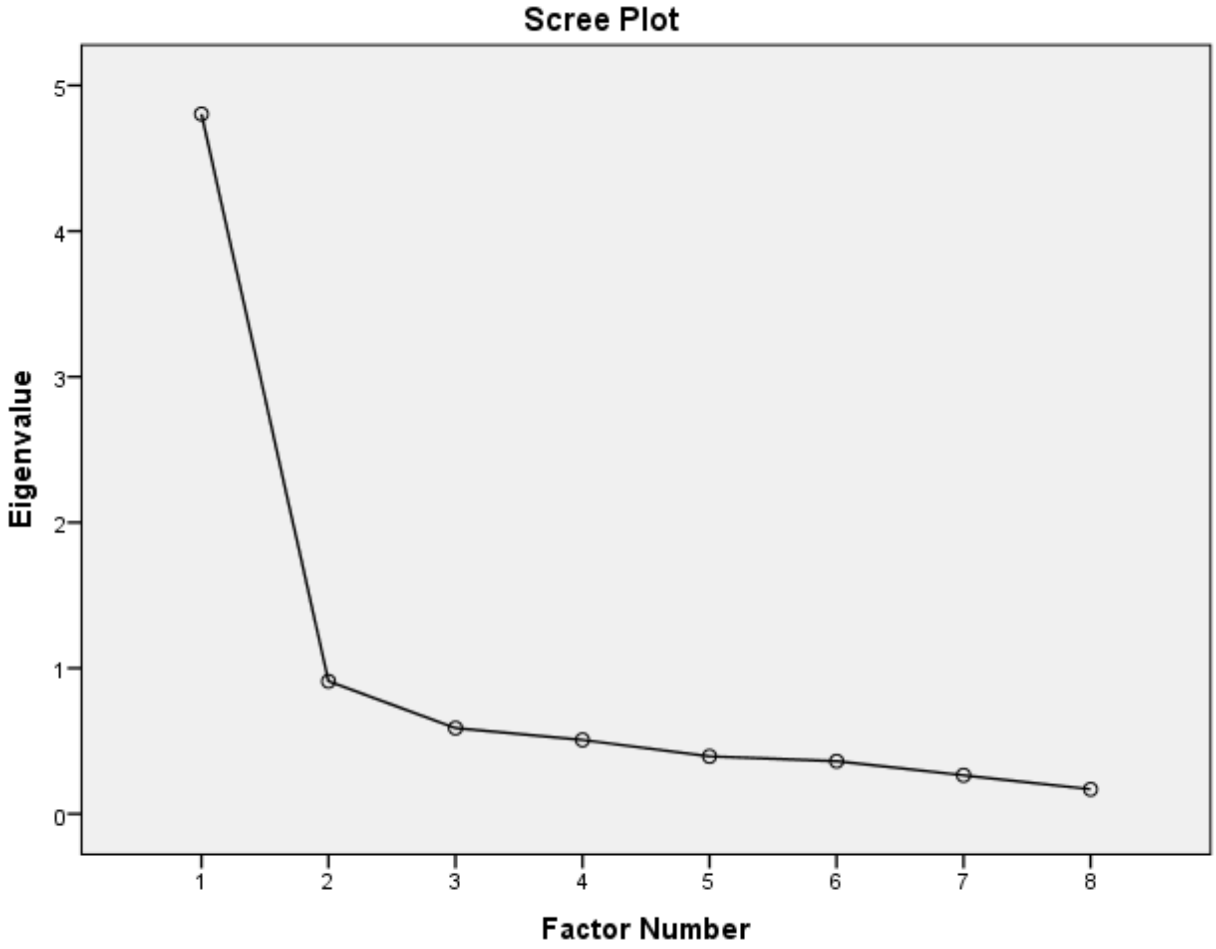

Figure 4: Scree plot of eigenvalues for role conflict.

The Cronbach's alpha for the eight-item role conflict sub-scale in my sample was 0.90, indicating a high level of internal consistency (Devellis, 2017).

Dependent Variables

Measurement of burnout. The CBI is a publicly available tool used to measure burnout (Borritz et al, 2006). Winwood & Winefield (2004) compared the popular MBI burnout tool with the CBI and concluded that "the basic psychometric properties of the CBI appear to be equivalent to the MBI" (p. 287). Designed for use in human service occupations, researchers have also found the CBI to have acceptable reliability and validity when used to study burnout in

teachers (Milfont et al., 2008), veterinarians (Hatch, Winefield, Christie, & Lievart, 2011) and athletic trainers (Naugle, Behar-Hernstein, Dodd, Tillman, & Borsa, 2013).

The CBI measures three components of burnout using 19 different statements. The items are measured using a 5- point Likert-like scale, ranging from a score of "1" as "always or to a very high degree" and "5" as "never or to a very low degree", and these are rescaled to a 0-100 metric scoring. The questions from the CBI are shown in appendix I. One question from the CBI in the personal burnout scale, related to feeling susceptible to illness, was not included in the survey. The CBI question about leisure time was inversely scored, and thus was rescored for analysis.

I conducted an exploratory factor analysis of the CBI using principal axis extraction. The scree plot and factor loadings supported a two- factor loading with a third factor having an eigenvalue of 0.980. Table 5 shows the eigenvalues from the initial results from the analysis of the CBI questions.

Table 5

Eigenvalues for CBI (Unrotated)

Factor	Eigenvalue	Proportion	Cumulative
1	9.287	51.59	51.59
2	2.247	12.48	64.07
3	0.980	5.44	69.52

Figure 5 shows the scree plot for the initial analysis of the CBI data.

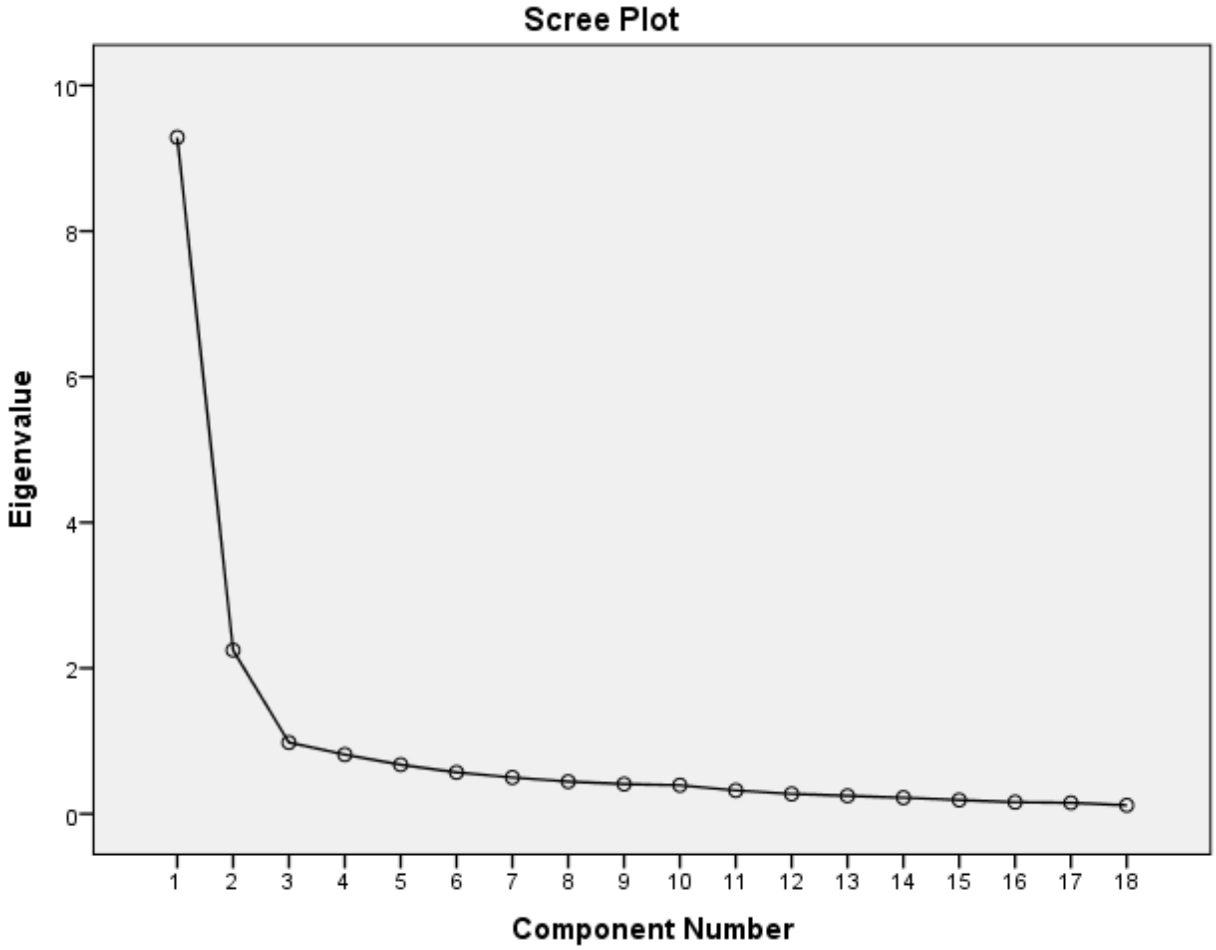

Figure 5: Scree plot of eigenvalues for CBI.

Borritz et al, 2006, reported three factors for the CBI. Although initial analysis of the data in my survey only determined two factors with an eigenvalue greater than 1.0, a third factor was extracted with an eigenvalue of 0.98. Because the literature supported a three-factor solution, I ran the factor analysis forcing a three- factor solution. The factor analysis for the CBI responses were performed using both oblique promax rotation and orthogonal varimax rotation with similar results. The factor loadings for the three- factor solution, as determined following orthogonal varimax rotation, are shown in Table 6.

Table 6

Factor Loadings After Orthogonal Varimax Rotation for CBI Factors

Variable	Factor 1 Work Burnout alpha = 0.92 mean = 2.81 SD = 0.83	Factor 2 Patient Burnout alpha = 0.90 mean = 3.73 SD = 0.81	Factor 3 Personal Burnout alpha = 0.90 mean = 2.54 SD = 0.77	Item Key
Item 1	.274	.180	**.788**	How often do you feel tired?
Item 2	.385	.196	**.793**	How often are you physically exhausted?
Item 3	.471	.185	**.602**	How often are you emotionally exhausted?
Item 4	**.637***	.325	.375	How often do you think "I can't take it anymore"?
Item 5	.446	.246	**.652**	How often do you feel worn out?
Item 6	**.551**	.196	.516	Do you feel worn out at the end of the working day?
Item 7	**.639**	.338	.428	Are you exhausted in the morning at the thought of another day at work?
Item 8	**.714**	.306	.294	Do you feel that every waking hour is tiring for you?
Item 9	**.708**	.155	.359	Is your work emotionally exhausting?
Item 10	**.719**	.188	.209	Does your work frustrate you?
Item 11	**.726**	.304	.329	Do you feel burned out because of your work?
Item 12	.199	**.748**	.057	Do you find it hard to work with patients?
Item 13	.266	**.819**	.089	Does it drain your energy to work with patients?
Item 14	.169	**.740**	.142	Do you find it frustrating to work with patients?
Item 15	.221	**.736**	.249	Do you sometimes wonder how long you will be able to work with patients?

Variable	Factor 1 Work Burnout alpha = 0.92 mean = 2.81 SD = 0.83	Factor 2 Patient Burnout alpha = 0.90 mean = 3.73 SD = 0.81	Factor 3 Personal Burnout alpha = 0.90 mean = 2.54 SD = 0.77	Item Key
Item 16	.132	**.534**	.239	Do you feel that you give more than you get back when you work with patients?
Item 17	.188	**.756**	.198	Are you tired of working with patients?
Item 18	.398	.220	**.432***	Do you have enough energy for family and friends during leisure time?

Note: * indicates item was not used to calculate the alpha presented in the table

Items 1-5 and item 18 (recoded due to reverse scoring) represented the personal burnout scale from the CBI literature. In my data, item 4 loaded more strongly with the work-related burnout questions. I performed reliability analysis of the personal burnout scale with and without item 4; the scale showed a higher level of internal consistency with item 4 removed. Removal of item 18 also increased the internal consistency. The Cronbach's alpha of the CBI personal burnout scale using items 1-3 and item 5 was 0.90, slightly better than the Cronbach's alpha of 0.87 reported by Kristensen et al. (2005).

Items 6-11 represented the work burnout scale reported in the CBI literature. I performed a reliability analysis of the work burnout scale and obtained a Cronbach's alpha 0.915, slightly better than the Cronbach's alpha of 0.87 reported by Kristensen et al. (2005).

Items 12-17 represented the client (patient) related burnout scale in the CBI literature. I performed a reliability analysis of the items and determined that, for my data, removing item 16 provided better internal consistency. The Cronbach's alpha for the patient related burnout scale was 0.895, consistent with the Cronbach's alpha of 0.85 reported by Kristensen et al. (2005).

The mean and standard deviations for each of the three scales developed from the CBI are shown in Appendix M.

Measurement of job satisfaction. Rad & DeMoraes (2009) used Spector's Job Satisfaction Survey (JSS) in their study. The JSS is a 36- item survey measured with a 6-point Likert-like scale; "1" correlates to "disagree very much" and ranges to "6" which correlates to "agree very much". Spector (1997) gives the purchaser of his book the right to use and modify his survey provided the user does not attach a charge for their services. I have reproduced the 36 items from the JSS in appendix J. Twenty-three of the items in the JSS in order were used to

measure job satisfaction in the survey; the items related to pay, promotion, and fringe benefits were not included.

Prior to analysis, items described as reverse coded in the JSS were recoded. I then completed an exploratory factor analysis using principal axis extraction. The factor loadings supported a five- factor solution. Table 7 shows the eigenvalues for the five- factor result for the Job Satisfaction Survey.

Table 7

Eigenvalues for JSS (Unrotated)

Factor	Eigenvalue	Proportion	Cumulative
1	9.842	42.790	72.790
2	1.780	7.740	50.529
3	1.693	7.347	5.7876
4	1.221	5.307	63.183
5	1.064	4.624	67.807

The scree plot for the JSS suggests a three- factor solution; however, using eigenvalue greater than one as the criteria for a factor suggests a five- factor solution which is more consistent with the JSS literature.

Figure 6 shows the scree plot for the Job Satisfaction Survey results.

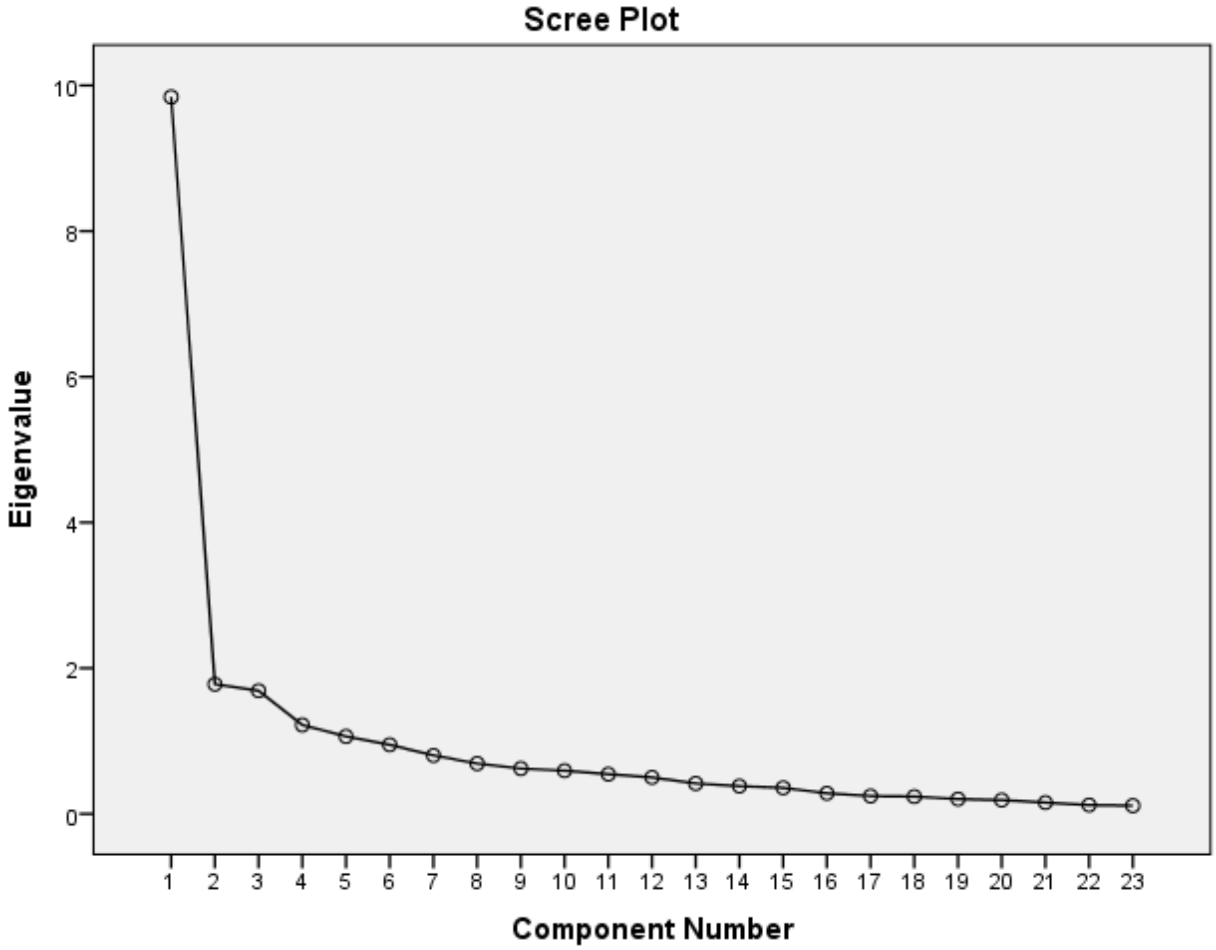

Figure 6. Scree plot of eigenvalues for JSS.

The factor analysis for the JSS responses was performed using both oblique promax rotation and orthogonal varimax rotation with similar results. The factor loadings for the five factors, as determined following orthogonal varimax rotation, are shown in Table 8.

Table 8

Factor Loadings After Orthogonal Varimax Rotation for JSS Factors

Variable	Factor 1 Supervision alpha = 0.91 mean = 4.98 SD = 1.47	Factor 2 Coworker alpha = 0.84 mean = 5.64 SD = 0.98	Factor 3 Contingent alpha = 0.81 mean = 4.02 SD = 1.57	Factor 4 Communication alpha = 0.81 mean = 4.96 SD = 1.48	Factor5 Conditions alpha = 0.74 mean = 3.65 SD = 1.41	Item Key
Item 1	**.577**	.066	.309	.283	.026	My supervisor is quite competent doing his/her job.
Item 2	**.634**	.206	.552	.166	.081	When I do a good job, I receive the recognition for it that I feel I should receive.
Item 3	.336	.156	.104	.290	**.599**	Many of our rules and procedures make doing a good job difficult.
Item 4	.126	**.809**	.231	.122	.002	I like the people I work with.
Item 5	**.425***	.290	.077	.227	.272	I sometimes feel my job is meaningless.
Item 6	.333	.263	**.451**	.401	.175	Communications seem good within my organization.
Item 7	**.687**	.126	.119	.222	.069	My supervisor is unfair to me.
Item 8	**.577**	.252	.485	.059	.130	I do not feel that the work I do is appreciated.
Item 9	**.330***	.080	.041	.259	.098	My efforts to do a good job are seldom blocked by red tape.
Item 10	.131	.303	**.476***	.022	.249	I find I have to work harder at my job because of the incompetence of people I work with.
Item 11	.366	.138	.078	**.686**	.213	The goals of my organization are not clear to me.

Variable	Factor 1 Supervision alpha = 0.91 mean = 4.98 SD = 1.47	Factor 2 Coworker alpha = 0.84 mean = 5.64 SD = 0.98	Factor 3 Contingent alpha = 0.81 mean = 4.02 SD = 1.57	Factor 4 Communication alpha = 0.81 mean = 4.96 SD = 1.48	Factor5 Conditions alpha = 0.74 mean = 3.65 SD = 1.41	Item Key
Item 12	**.690**	.185	.474	.243	-.119	My supervisor shows little interest in the feelings of subordinates.
Item 13	.294	.170	**.553**	.336	.265	There are few rewards for those who work here.
Item 14	.062	.034	.193	-.001	**.704**	I have too much to do at work.
Item 15	.082	**.876**	.236	.160	.021	I enjoy my coworkers.
Item 16	.235	.176	.323	**.736**	.146	I often feel that I do not know what is going on with the organization.
Item 17	.490	**.516**	.004	.215	.145	I feel a sense of pride in doing my job.
Item 18	**.854**	.128	.240	.110	.113	I like my supervisor.
Item 19	.034	.075	.136	.209	**.662**	I have too much paperwork.
Item 20	.303	.207	**.579**	.348	.333	I don't feel my efforts are rewarded the way they should be.
Item 21	.175	**.492***	.420	.086	.237	There is too much bickering and fighting at work.
Item 22	.417	**.546**	.050	.084	.281	My job is enjoyable.
Item 23	**.407***	.215	.110	.348	.227	Work assignments are not fully explained.

Note. * indicates item was not used to calculate the alpha presented in the table

The twenty-three items did not load the same as the six factors found by the JSS as published by Spector. This may be due to a missing item from the JSS "nature of work" scale, or due to the decision not to use all 9 scales. Items 11 and 16 loaded together for the communication scale; items 3,14 and 19 loaded together for the work conditions scale; items 6, 13 and 20 loaded together for the contingent rewards scale; items 4, 15, 17 and 22 loaded together for the coworker's scale; and items 1, 2, 7, 8, 12 and 18 loaded together for the supervisor scale. Items 5, 9, 10, 21 and 23 all had correlations less than 0.500 and removal of these items increased the Cronbach's alpha for their respective factor loadings so these items were excluded.

Forcing the analysis into six factors, as would be expected based on the JSS, did not provide the six expected scales. In addition, analyzing the items as they were designed in the JSS created lower reliability coefficients than either the original JSS or the redesigned scales from the survey. Finally, as shown in Table 9, the redesigned scales from this survey had higher Cronbach's alpha results than the original scales. For this reason, the five scales determined by the exploratory factor analysis for this survey were used for analysis. Appendix M shows the mean and standard deviation for each item in the Job Satisfaction Scales.

Table 9

Cronbach's Alpha for JSS Scales Versus Redesigned JSS Scales

Scale Name	JSS Scale Alpha	Redesigned JSS scale alpha (scale used in this study)
Supervision	0.82	0.912
Contingent Rewards	0.76	0.812
Work Conditions	0.62	0.744
Coworkers	0.60	0.842
Communication	0.71	0.810

Additional Data Collection

Additional questions were included in the survey tool in order to explore a general understanding of the P4P. Vignette questions were also included in order to explore how nurses perceive their decision making related to P4P.

General understanding of P4P. Multiple questions were included in the survey in order to determine if nurses indicate a previous knowledge of P4P. These items had possible responses of 1=yes, 2=no, or 3= not sure and are shown in Appendix K.

Vignette questions. Two sets of vignette questions were created using anecdotal knowledge and understanding of nursing processes. One set of vignettes was created to explore processes related to a P4P flu shot requirement and the other set was created related to a P4P requirement for aspirin with chest pain. Responses for the vignettes were scored as 1=definitely yes; 2=probably yes; 3=might or might not; 4=probably not; and 5=definitely not. The two sets of vignette questions are shown in Appendix L.

Regression analysis. In order to determine whether the independent variables were related to the dependent variables, regression analyses were performed. Additional regression analyses were completed in order to look for potential mediating variables. The results of the regression analyses are presented in Chapter 4.

Chapter Summary

This chapter outlined the methodology used for this study, including the items used for the construction of the survey tool. I also discussed the logic in determining the control, independent and dependent variables. I presented the factor analysis and reliability data used to produce the scales for the survey. Chapter 4 will include the data analysis for the research

project, and Chapter 5 will contain discussion of the study findings, study limitations, and future research suggestions.

CHAPTER 4

RESULTS

Chapter Overview

This study was performed in order to determine whether attitudes related to P4P initiatives predicted nursing burnout and job satisfaction. This was a quantitative study that used a survey in order to collect data. The survey was developed using Qualtrics software and was distributed from September 2016 through September 2017. This chapter describes the univariate statistics from the study. Results from a number of exploratory questions, including some vignette scenarios, are also presented. The chapter then outlines the steps taken to develop a regression model and analysis of the study assumptions. Finally, I present the results from the regressions used to analyze the data.

Univariate Results

Demographics and Other Control Variables

The survey tool began with a question to determine whether the respondent was an RN working in a hospital. If the respondent replied "no", the survey ended and no further data was collected. Of the 254 respondents, only 148 respondents reported "yes" to the first question. One of the 148 respondents did not reply to any other questions; this respondent was also eliminated from the data analysis.

After determining whether the respondents worked in a hospital, the survey tool asked a number of questions related to the sociodemographic and general work-related information for nurses. The frequencies and percentages of responses of these responses are shown in Table 10.

Table 10

Variable Frequencies and Percentages for All Respondents

Demographics/Control Variables	Percent (Respondents)	N
Sex		
Male	4.1	147
Female	95.9	
Race		
White	92.5	147
Black	6.1	
Other	1.4	
Marital Status		
Never Married	15.6	147
Married/cohabitating	70.1	
Divorced/separated	10.9	
Widowed	3.4	
Education		
RN, certificate	6.2	147
Associate Degree	13.7	
Bachelor Degree	45.2	
Master's Degree	28.6	
DNP	3.4	
PhD	2.7	
Employment Status		
Full time	80.3	147
Part time seeking full	3.4	
Part time choosing part	9.5	
Casual seeking more	0.7	
Casual by choice	5.4	
Other	0.7	
Primary Nursing Function		
Direct Patient Care	63.9	147
Administration	15.9	
Other	19.3	
Income		
< $20,000 annually	1.9	147
$20,000-$39,999	3.4	
$40,000-$59,999	30.6	
$60,000-$79,999	25.9	
$80,000-$99,999	15.0	
>$100,000 annually	7.4	

The majority of the individuals who began the survey, indicating they were RNs working in a hospital, were married white females with a Bachelor degree or higher. Most of these individuals were employed full-time working in a direct patient care role and making more than $40,000 annually.

Only 112 respondents who indicated they were RNs working in a hospital completed the survey. There was no apparent difference in the demographics of the 112 respondents who completed the survey compared to the 147 respondents who entered the tool but did not complete the questionnaire. The 112 individuals who completed the survey were married, primarily white females, with a Bachelor degree or higher. Most of these individuals were employed full-time, working in a direct patient care role, and making more than $40,000 annually. The demographics of the respondents were similar to those of Pennsylvania nurses as reported in the 2013 Pulse of Pennsylvania's Registered Nurse Workforce Review (primarily white females working full-time). Only the 112 completed surveys were used for the remainder of the data analysis. The frequencies and percentages for the 112 respondents who completed the survey are shown in Table 11.

Table 11

Variable Frequencies and Percentages for Respondents Who Completed Survey

Demographics/Control Variables	**Percent (Respondents)**	**N**
Sex		
Male	3.6	112
Female	96.4	
Race		
White	93.8	112
Black	4.5	
Other	1.8	
Marital Status		
Never Married	16.1	112
Married/cohabitating	66.1	
Divorced/separated	13.4	
Widowed	4.5	
Education		
RN, certificate	7.1	112
Associate Degree	12.5	
Bachelor Degree	45.5	
Master's Degree	27.7	
DNP	4.5	
PhD	2.4	
Employment Status		
Full time	77.7	112
Part time seeking full	3.6	
Part time choosing part	9.8	
Casual seeking more	0.9	
Casual by choice	7.1	
Other	0.9	
Primary Nursing Function		
Direct Patient Care	60.4	112
Administration	18.0	
Other	21.6	
Income		
< $20,000 annually	1.9	108
$20,000-$39,999	4.6	
$40,000-$59,999	30.6	
$60,000-$79,999	35.2	
$80,000-$99,999	20.4	
>$100,000 annually	7.4	

Exploratory Questions

The survey included a number of questions designed to determine the respondent's general understanding of P4P. While nearly half of the survey respondents (48.2%) indicated that they were familiar with the Hospital Compare Website, most respondents indicated that they had not used the site as either a healthcare employee or consumer. Only 26% of respondents reported receiving training on the Hospital Compare measures, and most respondents were not aware of whether their facility used reference materials to enhance compliance with the measures. The questions and the response frequencies for questions related to the CMS Hospital Compare Measures are shown in Table 12.

Table 12

Exploratory Questions Frequencies and Percentages Related to the Hospital Compare Site

Exploratory Questions	**Percent (Respondents)**	**N**
Q1: Familiar with CMS.gov?		
Yes	48.2	112
No	51.8	
Q2: Personally Used Hospital Compare?		
Yes	17.9	112
No	82.1	
Q3: Professionally Used Hospital Compare?		
Yes	34.8	112
No	65.2	112
Q4: Familiar with Employer's Scores?		
Yes	39.3	112
No	50.0	
Not Sure	10.7	
Q5: Received Training?		
Yes	25.9	112
No	61.6	
Not Sure	12.5	

Vignette Questions

The survey included two sets of vignette questions designed to see how respondents would react to P4P scenarios. The first set of vignettes dealt with flu shot administration; 81% of respondents initially indicated they would offer a flu shot to their patient during flu season. When asked whether the flu shot would be given if the it was not clear whether the patient had received a flu shot, most respondents indicated they would not give the shot.

The second set of vignette questions dealt with giving aspirin on arrival to the emergency department for chest pain patients. Sixty-four percent of respondents indicated they would give aspirin on arrival, as indicated by the chest pain measure. When asked to reconsider giving aspirin because the patient describes tarry (i.e., bloody) stools, the majority of respondents indicated they would not administer the aspirin.

Tables 13 and 14 shows the vignette questions and the response rates.

Table 13

Vignette Questions Frequencies and Percentages, Scenario 1

Vignette Questions Scenario One	**Percent (Respondents)**	**N**
Scenario One		
Q1:Offer Flu Shot?		
Definitely yes	81.3	112
Probably yes	12.5	
Might or might not	0.9	
Probably not	1.8	
Definitely not	3.6	
Q2:Check with MD?		
Definitely yes	44.6	112
Probably yes	19.6	
Might or might not	15.2	
Probably not	16.1	
Definitely not	4.5	
Q3:Encourage Patient?		
Definitely yes	61.3	111
Probably yes	28.8	
Might or might not	9.0	
Probably not	0.9	
Definitely not	0	
Q4:Give Shot?		
Definitely yes	10.0	110
Probably yes	17.3	
Might or might not	24.5	
Probably not	26.4	
Definitely not	21.8	
Q5:Suggest Refusal?		
Definitely yes	3.6	111
Probably yes	3.6	
Might or might not	2.7	
Probably not	22.5	
Definitely not	67.6	

Table 14

Vignette Questions Frequencies and Percentages, Scenario 2

Vignette Questions Scenario Two	Percent (Respondents)	N
Q1:Give Aspirin?		
Definitely yes	64.0	111
Probably yes	23.4	
Might or might not	10.8	
Probably not	0.9	
Definitely not	0.9	
Q2:Give Aspirin with concern?		
Definitely yes	3.6	111
Probably yes	6.3	
Might or might not	17.1	
Probably not	29.7	
Definitely not	43.2	
Q3:Hold Aspirin?		
Definitely yes	55.0	111
Probably yes	25.2	
Might or might not	9.9	
Probably not	5.4	
Definitely not	4.5	

Independent and Mediating Variables

P4P Attitude Variables

Questions used to create scales related to P4P attitudes were created by modifying survey tools used by Casalino et al. (2007), Lindenauer et al. (2014) and Dilliter (2011). Respondents replied using an 8-point Likert-like scale, with a range of "1" indicating strongly disagree" to "7" for strongly agree; a response of "don't know" was recoded from an "8" to the neutral "4" indicating "neither agree nor disagree". Dimension reduction was performed on the

17 items, resulting in three scales which I designated P4P Quality Attitudes; P4P Cynicism; and P4P Reporting Attitudes.

Higher scores on each of the P4P Quality Attitudes Scale and P4P Reporting Attitudes Scale were interpreted as a more positive view of each factor while higher scores on the P4P Cynicism Scale were interpreted as a less positive (more cynical) view. The mean for the P4P Quality Attitudes was 5.17, indicating that the average respondent had a slightly increased view of P4P and quality. The means for both the P4P Cynicism and P4P Reporting Attitudes Survey were close to 4.0, indicating that respondents were neutral on their opinions of the perceived negative aspects of P4P and public reporting. Table 15 shows the mean and standard deviation for each P4P Attitude Scale; the mean and standard deviation for each item in the scales are found in Appendix M.

Autonomy Scale

Autonomy was measured using the autonomy scale of the Work Quality Index (WQI). The autonomy scale consists of five items scored on a 7-point Likert-like scale and was scored "1" for "strongly disagree" to a score of "7" for "strongly agree". Higher scores indicated a higher perceived level of autonomy; the mean of 5.0 for the autonomy scale indicated a slightly higher than neutral perception of autonomy. Table 15 shows the mean and standard deviation for the autonomy scale. Appendix M includes the mean and standard deviation for each item in the autonomy scale.

Role Conflict Scale

Role Conflict was measured using Rizzo's (1970) Role Conflict Scale. The role conflict scale uses eight items, scored on a 7-point Likert-like scale. Scores ranged from "1" as a "strongly disagree" to "7" as "strongly agree"; higher scores indicated a higher level of role

conflict. The mean for role conflict in this survey was slightly under 4, indicating that the respondents had a lower than neutral level of role conflict. Table 15 shows the mean and standard deviation for the role conflict scale and Appendix M shows the mean and standard deviation for each item in the role conflict scale.

Table 15

Means and Standard Deviations for Independent and Mediating Variables

Independent and Mediating Variables	**N**	**Mean**	**Standard Deviation**
Pay for Performance Attitude (Scale 1-7)			
P4P Quality Attitude	112	5.17	1.02
P4P Reporting Attitude	112	4.09	1.25
P4P Cynicism Attitude	112	4.05	1.12
Autonomy (Scale 1-7)	112	5.00	1.43
Role Conflict (Scale 1-7)	112	3.89	1.13

Dependent Variables

Burnout

I measured burnout using the Copenhagen Burnout Inventory (CBI). The CBI measure three dimensions of burnout: personal burnout, work-related burnout, and client-related burnout (Kristensen et al., 2005; Milfont et al., 2007). The 19 statements used in the CBI were scored on a 5- point Likert-like scale, with "1" indicating "always" and "5" as "never." The mean for both the personal and work -related burnout dimensions was less than 3.0, indicating that the respondents experienced a greater than neutral level of burnout for these dimensions. The respondents had a slightly less than average level of patient related burnout, with a mean of 3.73.

Table 16 includes the mean and standard deviation for each scale of the CBI; Appendix m includes the mean and standard deviation for each item in the scales.

Job Satisfaction

I used the six scales from the Spector Job Satisfaction Scale in order to assess job satisfaction. Twenty-three items rated on a 7-point Likert-like scale were included, with a number of items requiring reverse coding. Responses ranged from "1" for "strongly disagree" to "7" with "strongly agree", with higher scores indicating a higher level of job satisfaction for that factor. The factor loadings from my survey scored differently than found by Spector (1997), and overall indicated a lower than neutral level of job satisfaction. Table 16 shows the mean and standard deviation for each scale developed from the JSS results.

Table 16

Means and Standard Deviations for Dependent Variables

Dependent Variables	**N**	**Mean**	**Standard Deviation**
Copenhagen Burnout Index (Scale 1-5)			
Personal Burnout	112	2.54	0.77
Work Related Burnout	112	2.81	0.83
Patient Related Burnout	112	3.73	0.81
Job Satisfaction (Scale 1-7)			
Supervision	112	3.65	1.41
Work Conditions	112	3.65	1.40
Coworkers	112	5.64	0.98
Contingent Rewards	112	4.02	1.57
Communication	112	4.96	1.48

The highest level of job satisfaction pertains to coworker relationships, followed by communication. The lowest level of job satisfaction pertains to supervision and work conditions, where satisfaction with contingent rewards, on average, was slightly dissatisfied.

Regression Analysis

I ran exploratory regression of the independent variables shown in the conceptual model against one of the dependent variables, the CBI Work Related Burnout Scale. I reviewed the variance inflation factors (VIF) for all of the predictor variables in this regression equation. Length of employment correlated highly with age and therefore was not used. None of the remaining variables had a VIF above 2.0, indicating no apparent issues with multicollinearity. Table 17 shows the VIF for control and independent variables to be tested in the model.

Table 17

Variance and Inflation Factor Tolerance for CBI Work Related Burnout

Variable	**VIF**	**1/VIF**
Age	1.59	0.63
Gender	1.05	0.95
Marital Status	1.06	0.95
Race	1.10	0.91
Employment Status	1.18	0.85
Income	1.48	0.68
Education	1.29	0.77
P4P Quality Attitude	1.39	0.72
P4P Reporting Attitude	1.49	0.67
P4P Cynicism Attitude	1.20	0.84

I next conducted a regression analysis to test each component of the model. Each regression was analyzed for heteroscedasticity. There was minimal heteroscedasticity and outliers for each regression. The results of each regression are presented next.

Regression 1: Autonomy

In order to determine the relationship with the control and the P4P attitude variables on autonomy, I regressed the autonomy scale on the control variables in Model 1 and on the control and independent variables in Model 2. As shown in Table 18, none of the control variables or

the overall R^2 of 0.018 for Model 1 were statistically significant. In addition, all the unstandardized and standardized regression coefficients were very small, showing that none of the control variables predicted the perception of autonomy.

Table 18 also shows that in Model 2 the addition of the variables measuring P4P attitudes created an increase in the explained variance (R^2=0.473, $p<0.01$), with the increase being statistically significant. The two significant predictors of perceived autonomy were the scales related to P4P Quality and P4P Cynicism. Respondent's attitudes towards P4P Quality correlated strongly with perceived autonomy ($b^* = 0.556$, $p <0.01$); more positive views towards P4P Quality became more positive correlated with an increase in perceived autonomy. Respondent's attitudes related to P4P Cynicism correlated moderately with perceived autonomy ($b^* = -0.346$, $p<0.01$); more cynical views towards P4P correlated with a decrease in perceived autonomy.

Hypothesis 1, which indicated that "as attitudes towards P4P became more negative, the level of perceived autonomy will decrease" was tested by this regression and was supported through the results of the P4P cynicism and P4P quality results.

Table 18

Summary of Hierarchical Regression Analysis for Variables Predicting Autonomy (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.003	0.013	0.028	0.001	0.010	0.007
Gender	0.086	0.759	0.011	0.233	0.557	0.030
Marital Status	0.306	0.296	0.102	0.165	0.219	0.055
Race	0.077	0.579	0.013	-0.268	0.437	-0.046
Employment	-0.090	0.354	-0.026	0.148	0.263	0.043
Income	0.211	0.350	0.071	0.262	0.256	0.088
Degree	0.194	0.326	0.065	0.077	0.241	0.026
P4P Quality				0.780**	0.117	0.556
P4P Reporting				0.093	0.099	0.081
P4P Cynicism				-0.440**	0.099	-0.346
R^2		0.018			0.491	
F for change in R^2		0.274			9.755**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 2: Role Conflict

In order to determine the effect of the control and the P4P attitude variables on role conflict, I regressed the role conflict scale on the control variables in Model 1 and on the control and P4P attitudinal variables in Model 2. Table 19 illustrates that none of the control variables, nor the overall R^2 for the model, were statistically significant. Additionally, the standardized and unstandardized regression coefficients were small, confirming that none of the control variables were significant predictors of role conflict.

Table 19 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.388$, $p<0.01$). The two significant predictors of perceived role conflict were the scales related to P4P Quality and P4P Cynicism. Respondent's

attitudes toward P4P Quality correlated moderately with perceived role conflict ($b^* = -0.339$, $p < 0.01$); more positive attitudes towards P4P quality correlated with decreased role conflict. Respondent's levels of perceived P4P cynicism were strongly correlated with perceived role conflict ($b^* = 0.519$, $p<0.01$); increases in P4P cynicism correlated with increases in perceived role conflict.

Hypothesis 2, as attitudes towards P4P become more negative, the level of perceived role conflict will increase, was supported by the P4P Quality and the P4P Cynicism Result.

Table 19

Summary of Hierarchical Regression Analysis for Variables Predicting Role Conflict (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	-0.010	0.010	-0.123	-0.002	0.008	-0.026
Gender	-0.680	0.596	-0.112	-0.639	0.470	-0.105
Marital Status	0.145	0.233	0.061	0.197	0.185	0.083
Race	0.098	0.454	0.021	0.452	0.369	0.097
Employment	-0.091	0.278	-0.034	-0.353	0.222	-0.131
Income	-0.174	0.275	-0.074	-0.187	0.216	-0.080
Degree	-0.155	0.256	-0.066	-0.038	0.203	-0.016
P4P Quality				-0.376**	0.099	-0.399
P4P Reporting				-0.062	0.084	-0.068
P4P Cynicism				0.522**	0.083	0.519
R^2		0.034			0.422	
F for change in R^2		0.523			7.367**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 3: Personal Burnout

In order to explore how the control and the P4P attitude variables affect personal burnout, I regressed the CBI Personal Burnout scale on the control variables in Model 1 and on

the control and independent variables in Model 2. Table 20 illustrates that two of the control variables were moderate predictors of personal burnout (age, $b^* = 0.318$, $p<0.01$ and income, $b^* = 0.310$, $p<0.01$) while gender was a weak but statistically significant predictor of personal burnout ($b^* = 0.158$, $p<0.05$). The overall R^2 ($R^2 = 0.171$, $p<0.05$) for the model was also statistically significant.

Table 20 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.133$, $p<0.01$). Age ($b^* = 0.254$, $p<0.01$) and income ($b^* = 0.310$, $p<0.01$) showed a moderate correlation with perceived Personal Burnout, while gender ($b^* = 0.148$, $p< 0.05$) and race ($b^* = -0.202$, $p<0.05$) demonstrated a modest but statistically significant correlation with perceived Personal Burnout. Respondents who are older and with higher incomes were more likely to report higher levels of personal burnout, as were white females. In addition, P4P Cynicism ($b^* = -0.329$, $p<0.01$) correlated moderately with perceived Personal Burnout; increased perceived P4P cynicism correlated with an increase in perceived personal burnout.

Hypothesis 3, as attitudes towards P4P become more negative, the level of perceived burnout will increase, was supported by the P4P Cynicism scale results.

Table 20

Summary of Hierarchical Regression Analysis for Variables Predicting Personal Burnout (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.018**	0.006	0.318	0.015**	0.006	0.254
Gender	0.652*	0.381	0.158	0.613*	0.357	0.148
Marital Status	-0.049	0.149	-0.031	-0.049	0.140	-0.030
Race	-0.448	0.290	-0.141	-0.639*	0.280	-0.202
Employment	-0.003	0.178	-0.002	0.117	0.169	0.064
Income	0.496**	0.176	0.310	0.496**	0.164	0.310
Degree	0.207	0.163	0.129	0.144	0.154	0.089
P4P Quality				0.079	0.075	0.104
P4P Reporting				0.063	0.063	0.103
P4P Cynicism				-0.225**	0.063	-0.329
R^2		0.151			0.284	
F for change in R^2		2.650*			4.010**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 4: Work Related Burnout

In order to determine the impact of the control and the P4P attitude variables on work related burnout, I regressed the CBI Work Related Burnout scale on the control variables in Model 1 and on the control and independent variables in Model 2. Table 21 shows that control variables age (b^*=0.287, p<0.05) and gender (b^*=0.218, p<0.01) demonstrated modest correlations with perceived work- related burnout. Race (b^*=-0.175, p<0.05), degree (b^*=0.192, p<0.05) and income (b^*=0.194, p<0.05) demonstrated weak but statistically significant correlations with perceived work-related burnout. The overall R^2 (R^2 =0.151, p<0.05) for Model 1 was also statistically significant.

Table 21 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.199$, $p<0.01$). In Model 2, control variables age ($b^*=0.241$, $p<0.01$), gender ($b^*=0.219$, $p<0.01$) and race ($b^*=-0.236$, $p<0.01$) showed modest correlations with perceived work- related burnout. Control variables degree ($b^*=0.151$, $p<0.05$) and income ($b^*=0.199$, $p<0.01$) showed weak but statistically correlations with perceived work-related burnout. Respondents who were older, with higher incomes and advanced degrees were more likely to report a higher level of work-related burnout, as were white males. The respondent's perception of P4P Quality ($b^*=0.245$, $p<0.05$) showed a modest correlation with perceived work-related burnout; more positive attitudes towards P4P Quality correlated with decreased perceived work-related burnout. Respondent's level of perceived P4P Cynicism ($b^* = -0.326$, $p<0.01$) correlated moderately with work-related burnout; more cynical attitudes towards P4P correlated with increased perceived work-related burnout.

Table 21

Summary of Hierarchical Regression Analysis for Variables Predicting Work Related Burnout (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.018**	0.007	0.287	0.015**	0.006	0.241
Gender	0.975**	0.407	0.218	0.977**	0.362	0.219
Marital Status	0.020	0.159	0.011	-0.005	0.142	-0.003
Race	-0.598*	0.311	-0.175	-0.809**	0.284	-0.236
Employment	-0.002	0.190	-0.001	0.131	0.171	0.066
Income	0.335*	0.188	0.194	0.345*	0.166	0.199
Degree	0.334*	0.175	0.192	0.263*	0.157	0.151
P4P Quality				0.200*	0.076	0.245
P4P Reporting				0.073	0.064	0.109
P4P Cynicism				-0.242**	0.064	-0.326
R^2		0.171			0.370	
F for change in R^2		3.058*			5.936**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Hypothesis 3, as attitudes towards P4P become more negative, the level of perceived burnout will increase, was also supported by the P4P Quality and Cynicism scale results in this model.

Regression 5: Patient Related Burnout. In order to determine the effect of the control and the P4P attitude variables on patient related burnout, I regressed the CBI Patient Related Burnout scale on the control variables in Model 1 and on the control and independent variables in Model 2. As described in Table 22, none of the control variables nor the overall R^2 ($R^2 = 0.037$) were statistically significant for the model.

Table 22 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.152$, $p<0.05$). In model 2, age ($b^*=0.192$, $p<0.05$) correlated modestly with perceived patient related burnout. Older respondents reported higher levels of patient related burnout, on average, than younger respondents. P4P reporting attitudes ($b^*=0.264$, $p<0.01$) demonstrated a modest correlation with perceived patient related burnout; more positive attitudes towards P4P reporting correlated with a decrease in perceived patient related burnout. P4P Cynicism ($b^*=-0.195$, $p<0.05$) demonstrated a modest but significantly significant correlation with perceived patient related burnout; increased cynicism towards P4P correlated with an increase in patient related burnout.

Hypothesis 3, as attitudes towards P4P become more negative, the level of perceived burnout will increase, was supported by the P4P reporting and cynicism scale results in this model.

Table 22

Summary of Hierarchical Regression Analysis for Variables Predicting Patient Related Burnout (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.012	0.007	0.190	0.012*	0.007	0.192
Gender	-0.028	0.428	-0.006	-0.002	0.401	0.000
Marital Status	-0.078	0.167	-0.046	-0.072	0.158	-0.042
Race	-0.056	0.327	-0.017	-0.316	0.315	-0.094
Employment	-0.159	0.200	-0.082	-0.053	0.189	-0.027
Income	0.251	0.198	0.149	0.259	0.184	0.153
Degree	0.062	0.184	0.037	-0.027	0.173	-0.016
P4P Quality				0.090	0.084	0.113
P4P Reporting				0.172**	0.071	0.264
P4P Cynicism				-0.141*	0.071	-0.195
R^2		0.037			0.189	
F for change in R^2		0.569			2.346*	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 6: JSS Supervision

In order to determine the effect of the control and the P4P attitude variables on the supervision component of job satisfaction, I regressed the JSS Supervision scale on the control variables in Model 1 and on the control and independent variables in Model 2. As described in Table 23, control variable degree (b^*=0.188, p<0.05) demonstrated a weak but statistically significant correlation with perceived satisfaction with job supervision. The overall R^2 (R^2 = 0.090), however, was not statistically significant for the model.

Table 23 reveals how the addition of the P4P attitudinal scales created an increase in the explained variance (change in R^2 = 0.262, p<0.01). In Model 2, variables race (b^*=-0.152,

$p<0.05$), degree ($b^*=0.168$, $p<0.05$) and income ($b^*=0.177$, $p<0.05$) showed a weak but statistically significant correlation with satisfaction towards job supervision. Respondents with higher incomes and an advanced degree were more likely to report higher levels of satisfaction related to job supervision, as were males. P4P Quality ($b^*=0.445$, $p<0.01$) demonstrated a strong correlation with satisfaction with job supervision; increase attitudes towards P4P quality correlated with an increase in satisfaction with job supervision. P4P cynicism ($b^*=-0.295$, $p<0.01$) showed a moderate correlation with satisfaction with job supervision; increased cynicism towards P4P increased correlated with decreased satisfaction with job supervision.

Hypothesis 4, as attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease, was supported by the P4P cynicism and P4P quality scales.

Table 23

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Supervision (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.020	0.012	0.184	0.016	0.011	0.146
Gender	0.402	0.753	0.051	0.485	0.647	0.062
Marital Status	0.223	0.294	0.072	0.094	0.255	0.030
Race	-0.739	0.574	-0.122	-0.919*	0.508	-0.152
Employment	-0.414	0.351	-0.118	-0.233	0.306	-0.066
Income	0.501	0.347	0.164	0.539*	0.298	0.177
Degree	0.576*	0.323	0.188	0.517*	0.280	0.168
P4P Quality				0.643**	0.136	0.445
P4P Reporting				-0.034	0.115	-0.029
P4P Cynicism				-0.386**	0.115	-0.295
R^2		0.090			0.352	
F for change in R^2		1.467			5.490**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 7: JSS Coworker

In order to determine the effect of the control and the P4P attitude variables upon coworker related job satisfaction, I regressed the JSS coworker scale on the control variables in Model 1 and on the control and independent variables in Model 2. As described in Table 24, neither the control variables nor the overall R^2 ($R^2 = 0.090$) were statistically significant for the model.

Table 24 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.157$, $p<0.01$). In Model 2, control variable income ($b^*=0.178$, $p<0.05$) exhibited a weak but statistically significant predictor correlation with job

satisfaction with coworkers. Higher incomes correlated with a higher level of job satisfaction related to coworkers. P4P Quality (b^{*}=0.339, p<0.01) correlated moderately with coworker satisfaction; increased attitudes towards P4P Quality correlated with increased satisfaction with coworkers. P4P Cynicism (b^{*}=-0.282, p<0.01) exhibited a modest correlation with coworker satisfaction; increased cynicism correlated with decreased coworker satisfaction.

Hypothesis 4, as attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease, was supported by the P4P Quality and Cynicism scales.

Table 24

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Coworker (N=112)

Regression 1 Variable	Model 1			Model 2		
	b^{a}	SE b	b^{*b}	b^{a}	SE b	b^{*b}
Age	0.000	0.008	-0.004	-0.003	0.008	-0.043
Gender	0.549	0.510	0.105	0.580	0.464	0.111
Marital Status	-0.129	0.199	-0.063	-0.189	0.183	-0.092
Race	-0.355	0.389	-0.088	-0.505	0.364	-0.126
Employment	0.074	0.238	0.032	0.196	0.219	0.084
Income	0.343	0.236	0.169	0.361*	0.213	0.178
Degree	0.291	0.219	0.142	0.241	0.201	0.118
P4P Quality				0.326**	0.098	0.339
P4P Reporting				0.012	0.083	0.016
P4P Cynicism				-0.246**	0.082	-0.282
R^2		0.090			0.247	
F for change in R^2		1.467			3.313**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 8: JSS Contingent

In order to explore the relationship of the control and the P4P attitude variables with contingent factor job satisfaction, I regressed the JSS contingent factors scale on the control

variables in Model 1 and on the control and independent variables in Model 2. Table 25 shows that age ($b^* = 0.286$, $p < 0.01$) demonstrated a modest correlation with job satisfaction related to contingent factors, although the overall R^2 ($R^2 = 0.110$) was not statistically significant for the model.

Table 25 shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.475$, $p<0.01$). Age ($b^*=0.212$, $p<0.05$) correlated modestly with job satisfaction related to contingent factor; increased age correlated with increased job satisfaction related to contingent job factors. P4P Quality ($b^*=0.316$, $p<0.01$) exhibited a moderate correlation with job satisfaction related to contingent factors; an increase in P4P Quality attitude correlated with an increase in perceived contingent factor related job satisfaction. P4P cynicism ($b^*=-0.419$, $p<0.01$) showed a strong correlation with job satisfaction related to contingent factors; an increase in P4P cynicism correlated with a decrease in perceived contingent factor related job satisfaction.

Hypothesis 4, as attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease, was supported by the P4P Quality and Cynicism scale.

Table 25

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Contingent Factors (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.034**	0.013	0.286	0.025*	0.012	0.212
Gender	0.455	0.793	0.054	0.430	0.672	0.051
Marital Status	0.382	0.310	0.116	0.308	0.264	0.094
Race	-0.380	0.605	-0.059	-0.763	0.527	-0.119
Employment	-0.343	0.370	-0.092	-0.052	0.317	-0.014
Income	0.554	0.366	0.170	0.574	0.309	0.177
Degree	0.440	0.340	0.134	0.313	0.290	0.096
P4P Quality				0.485**	0.141	0.316
P4P Reporting				0.057	0.119	0.046
P4P Cynicism				-0.583**	0.119	-0.419
R^2		0.110			0.385	
F for change in R^2		1.836			6.330**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 9: JSS Communication

In order to explore the relationship of the control and the P4P attitude variables with communication related job satisfaction, I regressed the JSS communication scale on the control variables in Model 1 and on the control and independent variables in Model 2. As shown in Table 26, none of the controls are significant indicators of communication related job satisfaction, and the overall R^2 ($R^2 = 0.070$) is not statistically significant for the model.

Table 26 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.298$, $p<0.01$). Age ($b^*=0.172$, $p<0.05$) correlated modestly with communication related job satisfaction. An increased age correlated with a higher

level of job satisfaction related to communication. P4P Quality (b^*=0.504, p<0.01) exhibited a strong correlation with communication related job satisfaction; increased attitudes towards quality correlated with increased satisfaction with job related communication. P4P Cynicism (b^*=-0.239, p<0.01) showed a modest correlation with job related communication; increased cynicism towards P4P increased satisfaction was associated with a decrease in job related communication satisfaction.

Hypothesis 4, as attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease, was supported by the P4P Quality and P4P Cynicism results in this model.

Table 26

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Communication (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.021	0.013	0.184	0.019*	0.011	0.172
Gender	0.369	0.764	0.047	0.518	0.642	0.065
Marital Status	0.429	0.299	0.138	0.280	0.253	0.090
Race	-0.088	0.583	-0.015	-0.253	0.504	-0.042
Employment	0.204	0.357	0.058	0.358	0.303	0.102
Income	0.094	0.353	0.031	0.143	0.295	0.047
Degree	0.276	0.328	0.089	0.220	0.278	0.071
P4P Quality				0.731**	0.135	0.504
P4P Reporting				-0.012	0.114	-0.101
P4P Cynicism				-0.314**	0.114	-0.239
R^2		0.070			0.368	
F for change in R^2		1.111			5.892**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Regression 10: JSS Operating Conditions

In order to explore the relationship of the control and the P4P attitude variables with operating condition job satisfaction, I regressed the JSS operating conditions scale on the control variables in Model 1 and on the control and independent variables in Model 2. Table 27 demonstrates that none of the control variables were significant indicators operating condition related job satisfaction, and the overall R^2 ($R^2 = 0.062$) was not statistically significant for the model.

Table 27 also shows that the addition of the P4P attitudinal scales created an increase in the explained variance (change in $R^2 = 0.204$, $p<0.01$). Employment status ($b^* = 0.154$, $p<0.05$) showed a weak but statistically significant associate satisfaction with job related operating conditions. Respondents who are employed full-time reported a higher level of job satisfaction with operating conditions than respondents who are employed less than full-time. P4P Quality ($b^*=0.209$, $p<0.05$) exhibited modest correlation with satisfaction with job related operating conditions; increased attitudes towards P4P quality were associated with increased satisfaction with job related operating conditions. P4P Cynicism ($b^* = -0.392$, $p<0.01$) showed a moderate correlation with satisfaction with job related operating conditions; increased cynicism towards P4P correlated with decreased satisfaction with job related operating conditions.

Table 27

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Operating Conditions (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.015	0.012	0.137	0.007	0.011	0.062
Gender	0.573	0.731	0.076	0.516	0.660	0.068
Marital Status	0.413	0.286	0.139	0.380	0.259	0.128
Race	0.153	0.558	0.026	-0.200	0.518	-0.035
Employment	0.269	0.341	0.080	0.519	0.312	0.154
Income	0.421	0.338	0.144	0.428	0.303	0.147
Degree	-0.055	0.314	-0.019	-0.172	0.285	-0.058
P4P Quality				0.290*	0.139	0.209
P4P Reporting				0.077	0.117	0.068
P4P Cynicism				-0.491**	0.117	-0.392
R^2		0.062			0.266	
F for change in R^2		0.990			3.662**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Hypothesis 4, as attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease, was supported by the P4P Quality and P4P Cynicism scales.

Correlation Matrix

Prior to running regression analyses to evaluate mediating factors, I ran a correlation matric for the independent, mediating, and dependent variables. The correlation results are shown in Table 28.

Table 28

Correlation Matrix for Independent, Mediating, and Dependent Variables

	P4PQ	P4PR	P4PC	Aut	RC	PerBO	workBO	PtBO	Sup	Cowork	Cont	Comm	OP
P4PQ	1	.492**	.001	.601**	-.356**	.126	.266**	.266*	.420*	.336*	.329**	.487**	.261**
P4PR	.492**	1	-.145	.388**	-.277**	.136	.211*	.315**	.207*	.201*	.223*	.487**	.251**
P4PC	.001	-.145	1	-.332**	.495**	-.341**	-.362**	-.250**	-.319**	-.234**	-.453**	-.268**	-.347**
Aut	.601**	.388**	-.322**	1	-.588**	.439**	.573**	.418**	.512**	.600**	.604**	.623**	.494**
RC	-.356**	-.277**	.495**	-.588**	1	-.365**	-.539**	-.274**	-.439**	-.511**	-.616**	-.490**	-.547**
PerBO	.126	.136	-.341**	.439**	-.365**	1	.774**	.466**	.392**	.462**	.449**	.332**	.359**
workBO	.266**	.211**	-.362**	.573**	-.539**	.774**	1	.549**	.510**	.635**	.578**	.402**	.509**
PtBO	.266*	.315**	-.250**	.418**	-.274**	.466**	.549**	1	.250**	.462**	.362**	.281**	.449**
Sup	.420*	.207*	.319**	.512**	-.439**	.392**	.510**	.250**	1	.550**	.736**	.578**	.379**
Cowork	.336*	.204**	-.234*	.600**	-.511**	.462**	.635**	.462**	.550**	1	.541**	.448**	.330**
Cont	.487**	.223*	-.453**	.604**	-.616**	.449**	.578**	.362**	.736**	.541**	1	.699**	.527**
Comm	.699**	.242*	-.268**	.623**	-.490**	.332**	.402**	.281**	.578**	.448**	.699*	1	.430**
OP	.261**	.185	-.347**	.494**	-.547**	.359**	.509**	.449**	.379**	.330**	.527**	.430**	1

Note. P4Q= P4P Quality; P4PR = P4P reporting; P4PC = P4P Cynicism; Aut- Autonomy; RC = Role Conflict; PerBO = CBI Personal Burnout; workBO = CBI work-related Burnout; PtBO= CBI patient-related Burnout; Sup= JSS Supervision Satisfaction; Cowork = JSS Coworker Satisfaction; Cont = JSS Contingent Factor Satisfaction; Comm – JSS Communication related Satisfaction; OP = Operating Conditions related satisfaction

Table 28 shows that many of the variables in my conceptual model are highly correlated. This does raise some concern about possible collinearity among the various variables. Nevertheless, the literature supports strong correlations between autonomy, role conflict, job satisfaction, and burnout (Spector, 1997), and therefore the correlations were not unexpected. In addition, careful examination of the various questions making up the different dimensions of autonomy, role conflict, burnout, and job satisfaction confirm that they are distinct and, therefore, do indeed measure different constructs. However, the pattern of correlations reveals the importance of conducting multicollinearity diagnostics, which I reported earlier in this chapter.

Regression 11: Personal Burnout on Autonomy and Role Conflict

In order to determine whether autonomy and role conflict mediate the effects of P4P on burnout and job satisfaction, I compared the regression of the CBI personal burnout scale on the controls and independent (previously shown in Table 20, Model 2) with a regression of the CBI Personal Burnout Scale on the controls and P4P variables plus the autonomy and role conflict scale (Model 3). The results from these two regressions are shown in Table 29. This comparison of models allows me to determine whether mediation exists because P4P variables predicted both autonomy and role conflict. If the P4P variables have weaker effects in Model 3 than in Model 2, and autonomy and/or role conflict are significant predictors in Model 3, this provides evidence of a partial or full mediation (full if the effect becomes insignificant in Model 3).

In Model 2, age (b^* =0.254, $p<0.01$) and income (b^*=0.310, $p<0.01$) exhibited moderate correlation with perceived Personal Burnout, while gender (b^*=0.148, $p< 0.05$) and race (b^*=-0.202, $p<0.05$) showed modest but statistically significant correlation with perceived Personal Burnout. In addition, P4P Cynicism (b^*=-0.329, $p<0.01$) correlated moderately with perceived

Personal Burnout; as respondent's level of an increase in P4P cynicism correlated with an increase in personal burnout.

Table 29 also shows that the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.088$, $p<0.01$). In Model 3, age ($b^* =0.251$, $p<0.01$) and income ($b^*=0.273$, $p<0.01$) showed direct and modest correlation with perceived Personal Burnout, while race ($b^*=-0.182$, $p<0.05$) had a direct and weak but statistically significant correlation with perceived Personal Burnout. Perceived autonomy ($b^* =0.413$, $p<0.01$) exhibited a strong, direct correlation on Personal Burnout; increased perceived autonomy correlated with decreased personal burnout. Perceived autonomy also acted as a partial mediator between P4P Cynicism ($b^* =-0.181$, $p<0.05$) and Personal Burnout, because the effect size for P4P Cynicism was weaker in Model 3 than in Model 2.

Table 29

Summary of Hierarchical Regression Analysis for Variables Predicting Personal Burnout Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.015**	0.006	0.254	0.015**	0.006	0.251
Gender	0.613*	0.357	0.148	0.557	0.340	0.135
Marital Status	-0.049	0.140	-0.030	-0.084	0.134	-0.052
Race	-0.639*	0.280	-0.202	-0.576*	0.267	-0.182
Employment	0.117	0.169	0.064	0.082	0.161	0.045
Income	0.496**	0.164	0.310	0.436**	0.156	0.273
Degree	0.144	0.154	0.089	0.126	0.146	0.079
P4P Quality	0.079	0.075	0.104	-0.097	0.086	-0.129
P4P Reporting	0.063	0.063	0.103	0.042	0.060	0.068
P4P Cynicism	-0.225**	0.063	-0.329	-0.124*	0.072	-0.181
Autonomy Scale				0.223**	0.064	0.413
Role Conflict Scale				-0.006	0.076	-0.009
R^2		0.284				0.372
F for change in R^2		4.010**				4.894**

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 7 illustrates the relationship between age, income, race, cynicism, and personal burnout.

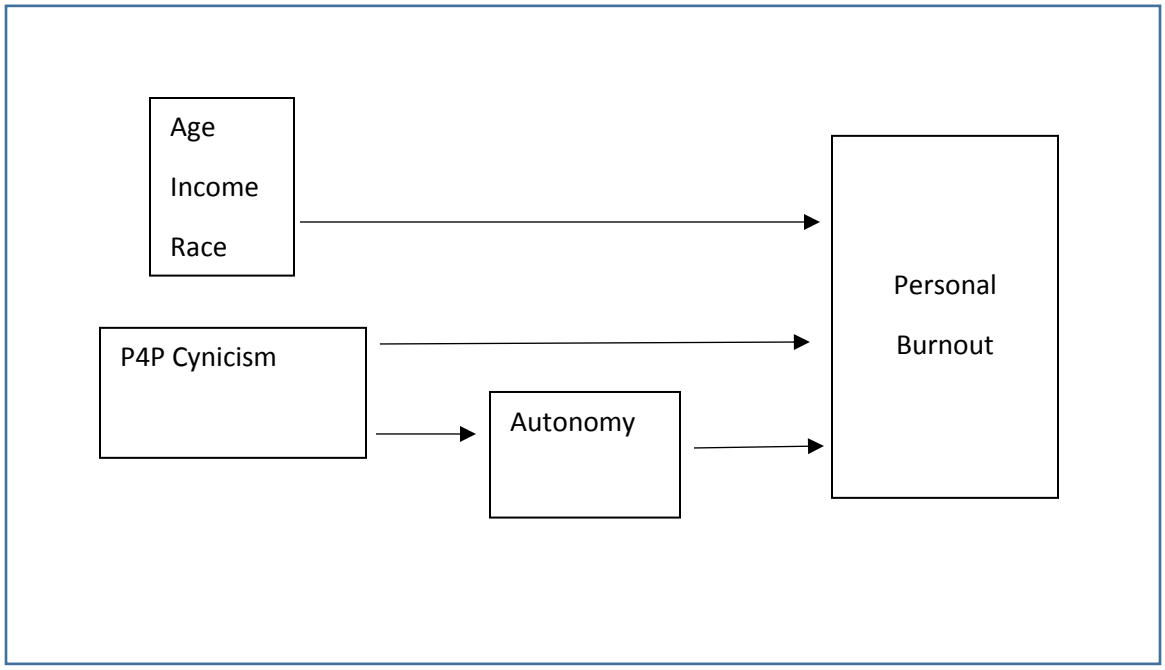

Figure 7. Relationship between age, income, race, P4P cynicism, autonomy and personal burnout.

Regression 12: Work Related Burnout on Autonomy and Role Conflict

In order to determine whether autonomy and role conflict mediate the effects of P4P on work related burnout, I compared the regression of the CBI work related burnout scale on the controls and P4P variables (previously shown in Table 21, Model 2), with a regression of the CBI Work Related Burnout Scale on the controls and P4P variables plus the autonomy and role conflict scale (Model 3). The logic behind this step is the same as explained in regression 11. The results from these two regressions are shown in Table 30.

In Model 2, age (b^*=0.241, $p<0.01$), gender (b^*=0.219, $p<0.01$) and race (b^*=-0.236, $p<0.01$) correlated modestly with perceived work- related burnout. Control variables degree (b^*=0.151, $p<0.05$) and income (b^*=0.199, $p<0.01$) showed weak but statistically significant association with perceived work-related burnout. The respondent's perception of P4P Quality (b^*=0.245, $p<0.05$) showed a modest correlation with perceived work-related burnout; more

positive attitudes towards P4P Quality correlated with decreased perceived work-related burnout. Respondent's level of perceived P4P Cynicism ($b^* = -0.326$, $p<0.01$) had a moderate correlation with work-related burnout; more cynical attitudes towards P4P correlated with increased perceived work-related burnout.

Table 30 also shows that the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.094$, $p<0.01$). In Model 3, age ($b^*=0233.$, $p<0.01$), gender ($b^*=0.184$, $p<0.01$) and race ($b^*=-0.197$, $p<0.01$) showed direct and modest correlations with perceived work- related burnout. The variables degree ($b^*=0.136$, $p<0.05$) and income ($b^*=0.145$, $p<0.01$) exhibited a direct and weak but statistically significant correlation with perceived work-related burnout. Autonomy ($b^*=0.434$, $p<0.01$) showed a strong association with work related burnout; increased perceived autonomy correlated with decreased perceived burnout. Role Conflict ($b^*=-0.199$, $p<0.01$) showed a modest association with work related burnout; increased perceived role conflict correlated with increased perceived burnout. P4P attitudes related to Quality and Cynicism were completely mediated by perceived autonomy and role conflict. I make this conclusion because P4P Quality and P4P Cynicism had significant correlations in Model 2 and insignificant correlations in Model 3, while perceived autonomy and role conflict maintained significant correlations in Model 3.

Table 30

Summary of Hierarchical Regression Analysis for Variables Predicting Work Related Burnout Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.015**	0.006	0.241	0.015**	0.006	0.233
Gender	0.977**	0.362	0.219	0.825**	0.321	0.184
Marital Status	-0.005	0.142	-0.003	-0.017	0.127	-0.010
Race	-0.809**	0.284	-0.236	-0.675**	0.252	-0.197
Employment	0.131	0.171	0.066	0.041	0.152	0.021
Income	0.345 *	0.166	0.199	0.251*	0.147	0.145
Degree	0.263*	0.157	0.151	0.238*	0.138	0.136
P4P Quality	0.200*	0.076	0.245	-0.052	0.081	-0.064
P4P Reporting	0.073	0.064	0.109	0.040	0.057	0.060
P4P Cynicism	-0.242**	0.064	-0.326	-0.054	0.068	-0.072
Autonomy Scale				0.254**	0.061	0.434
Role Conflict Scale				-0.147*	0.072	-0.199
R^2		0.370				0.464
F for change in R^2		5.936**				9.010**

Note: a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 8 demonstrates the relationship between age, income, race, degree, gender, role conflict, autonomy and work-related burnout.

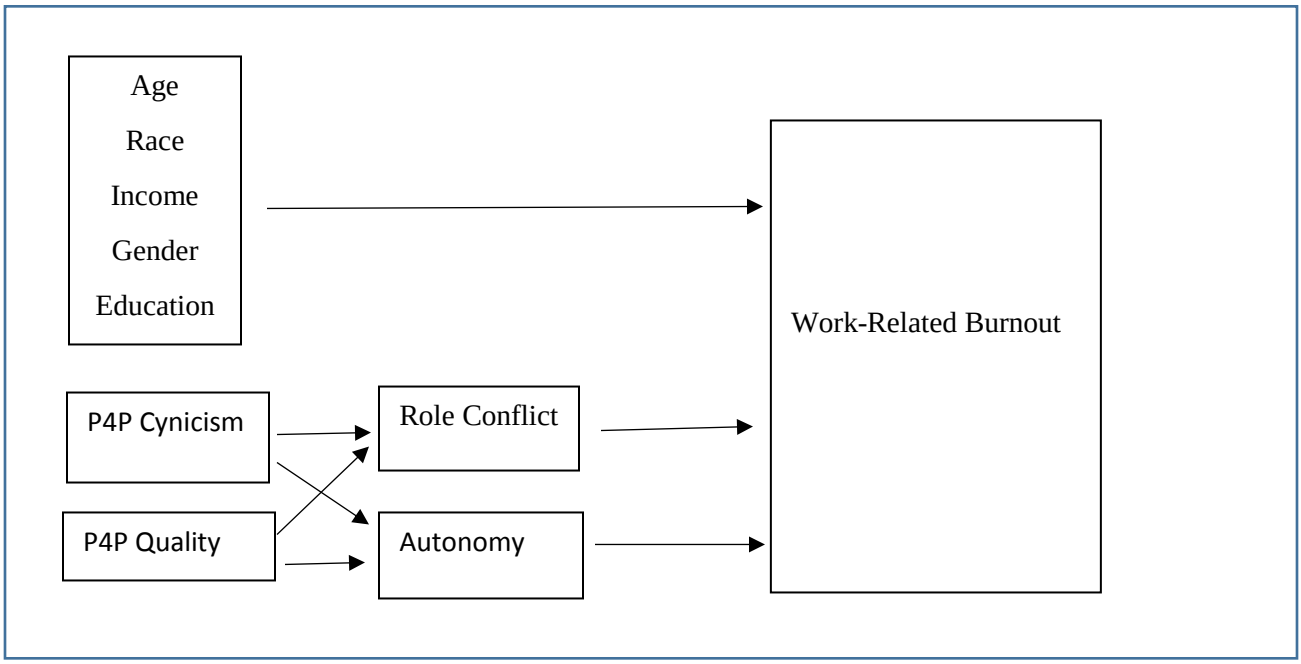

Figure 8. Relationship between age, race, income, gender, education, P4P cynicism, P4P quality, role conflict, autonomy and work- related burnout

Regression 13: Patient Related Burnout on Autonomy and Role Conflict

In order to determine whether autonomy and role conflict mediate the effects of P4P variables on patient related burnout, I compared the regression of the CBI patient related burnout scale on the controls and P4P variables (previously shown in Table 22, Model 2), with a regression of the CBI Patient Related Burnout Scale on the controls and independent variables plus the autonomy and role conflict scale (Model 3). The rationale for this step is the same as that described in regression 11. The results from these two regressions are shown in Table 30.

In Model 2, age (b^*=0.192, $p<0.05$) exhibited a modest but statistically significant correlation with perceived patient related burnout. P4P reporting attitudes (b^*=0.264, $p<0.01$) showed a modest correlation with perceived patient related burnout; more positive attitudes towards P4P reporting correlated with decreased perceived patient related burnout. P4P Cynicism (b^*=-0.195, $p<0.05$) exhibited a modest but significantly significant predictor

correlation with perceived patient related burnout; increased cynicism towards P4P correlated with increased patient related burnout.

Table 31 shows that the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.064$, $p<0.01$). Age ($b^*=0.191$, $p<0.05$) retained a modest but statistically significant predictor correlation with perceived patient related burnout. Autonomy ($b^*=0.369$, $p<0.01$) showed a moderate correlation with perceived patient related burnout; increased perceived autonomy correlated with decreased perceived patient related burnout. P4P reporting attitudes ($b^*=0.237$, $p<0.05$) retained a modest association with perceived patient related burnout, not mediated by perceived autonomy. P4P Cynicism was completely mediated by the addition of autonomy to the model. I make this conclusion because P4P Reporting attitudes remained the same in Model 3 as in Model 2, while P4P Cynicism had an insignificant correlation with patient related burnout in Model 3.

Table 31

Summary of Hierarchical Regression Analysis for Variables Predicting Patient Related Burnout Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.012*	0.007	0.192	0.012*	0.007	0.191
Gender	-0.002	0.401	0.000	-0.030	0.392	-0.007
Marital Status	-0.072	0.158	-0.042	-0.113	0.155	-0.066
Race	-0.316	0.315	-0.094	-0.275	0.307	-0.082
Employment	-0.053	0.189	-0.027	-0.072	0.186	-0.037
Income	0.259	0.184	0.153	0.210	0.180	0.124
Degree	-0.027	0.173	-0.016	-0.042	0.168	-0.025
P4P Quality	0.090	0.084	0.113	-0.062	0.099	-0.077
P4P Reporting	0.172**	0.071	0.264	0.154*	0.069	0.237
P4P Cynicism	-0.141*	0.071	-0.195	-0.066	0.083	-0.091
Autonomy Scale				0.211**	0.074	0.369
Role Conflict Scale				0.033	0.088	0.046
R^2		0.189			0.253	
F for change in R^2		2.346*			2.788**	

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 9 demonstrates the relationship between age, P4P Reporting attitudes, P4P Quality attitudes, autonomy and patient related burnout.

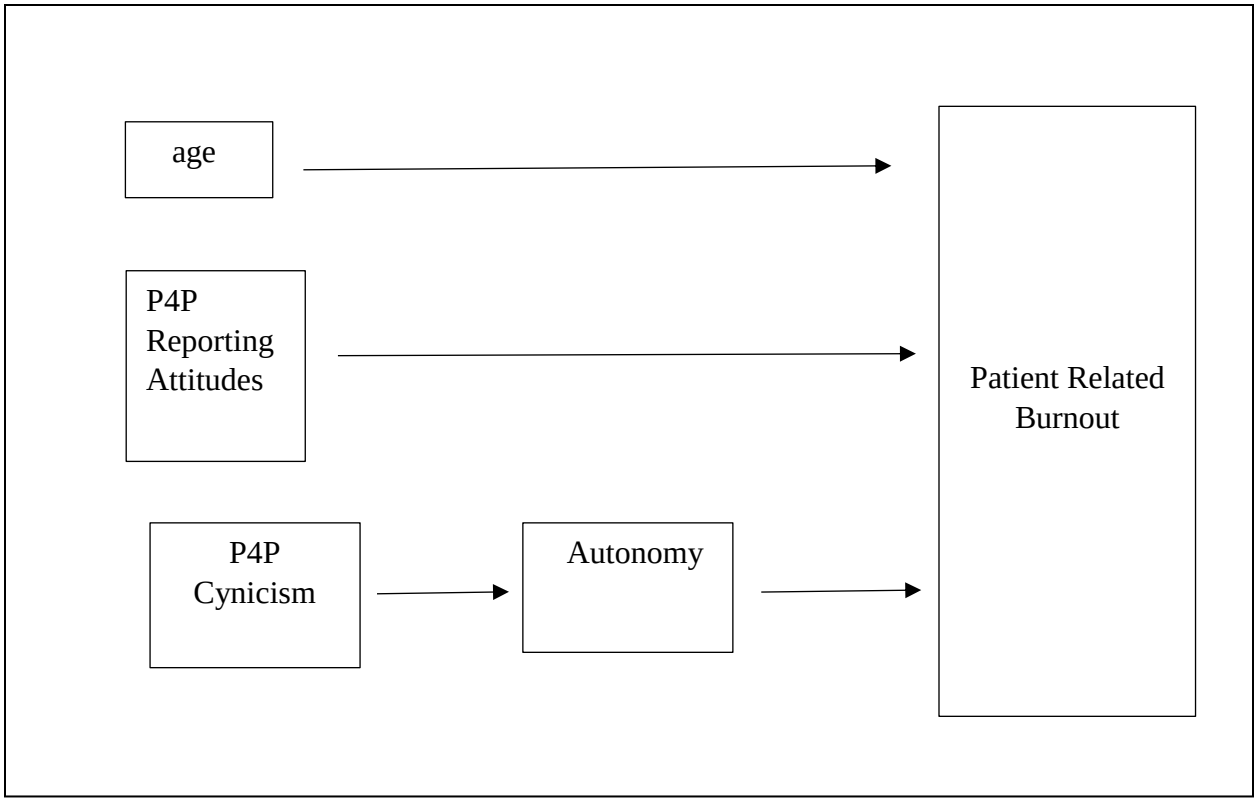

Figure 9. Relationship between age, P4P reporting attitudes, P4P cynicism, autonomy and patient related burnout.

Regression 14: JSS Supervision on Autonomy and Role Conflict

In order to determine whether autonomy and role conflict mediate the effects of P4P variables on satisfaction with job supervision, I compared the regression of the JSS Supervision scale on the controls and P4P variables (previously shown in Table 23, Model 2), with a regression of the JSS Supervision Scale on the controls and P4P variables plus the autonomy and role conflict scale (Model 3). The results are shown in Table 31.

In Model 2, variables race (b^*=-0.152, $p<0.05$), degree (b^*=0.168, $p<0.05$) and income (b^*=0.177, $p<0.05$) showed weak but statistically significant association with satisfaction towards job supervision. P4P Quality (b^*=0.445, $p<0.01$) exhibited a strong correlation with satisfaction with job supervision; increased attitudes towards P4P quality correlated with increased satisfaction with job supervision. P4P cynicism (b^*=-0.295, $p<0.01$) had a moderate

correlation with satisfaction with job supervision; increased cynicism towards P4P correlated with decreased satisfaction with job supervision.

Table 32 demonstrates that the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.045$, $p<0.01$). Degree ($b^*=0.160$, $p<0.05$) retained a weak but statistically significant association with satisfaction with job supervision. Autonomy ($b^*=0.227$, $p<0.05$) showed a modest correlation with satisfaction with job supervision; increased perceived autonomy correlated with increased satisfaction with job supervision. P4P Quality ($b^*=0.279$, $p<0.01$) was partially mediated by perceived autonomy, and P4P cynicism was completely mediated by perceived autonomy. I make this conclusion because while P4P Quality retained a significant correlation with satisfaction with job supervision in both Models 2 but the Beta coefficient decreased in Model 3. In addition, P4P Cynicism showed a significant correlation with satisfaction with job supervision in Model 2 but did not show a significant correlation in Model 3.

Table 32

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Supervision Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.016	0.011	0.146	0.016	0.011	0.141
Gender	0.485	0.647	0.062	0.332	0.637	0.042
Marital Status	0.094	0.255	0.030	0.086	0.251	0.028
Race	-0.919*	0.508	0.508	-0.786	0.499	-0.130
Employment	-0.233	0.306	-0.066	-0.322	0.302	-0.092
Income	0.539*	0.298	0.177	0.449	0.292	0.147
Degree	0.517*	0.280	0.168	0.493**	0.273	0.160
P4P Quality	0.643**	0.136	0.445	0.403**	0.161	0.279
P4P Reporting	-0.034	0.115	-0.029	-0.066	0.113	-0.056
P4P Cynicism	-0.386**	0.115	-0.295	-0.202	0.134	-0.155
Autonomy Scale				0.233*	0.121	0.227
Role Conflict Scale				-0.155	0.143	-0.119
R^2		0.352				0.397
F for change in R^2		5.490**				5.428**

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 10 illustrates the relationship between education, autonomy, P4P quality, P4P cynicism, and satisfaction with job supervision.

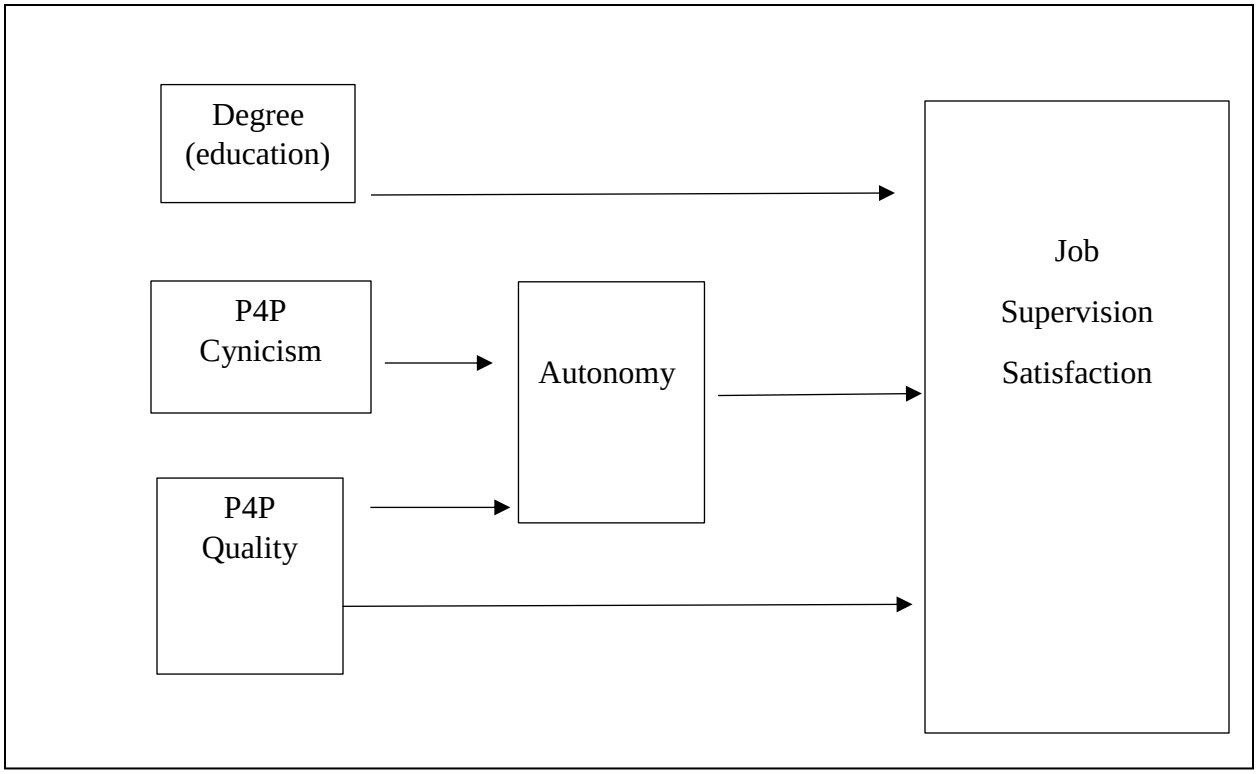

Figure 10. Relationship between education, autonomy, P4P quality, P4P cynicism, and satisfaction with job supervision.

Regression 15: JSS Coworker Scale on Autonomy and Role Conflict.

In order to determine whether autonomy and role conflict mediate the effects of P4P variables on satisfaction with coworkers, I compared the regression of the JSS Coworker scale on the controls and P4P variables (previously shown in Table 24, Model 2), with a regression of the JSS Supervision Scale on the controls and P4P variables plus the autonomy and role conflict scale (Model 3). The reasoning for doing this regression is the same as explained in regression 11. The results are shown in Table 32.

In Model 2, income ($b^*=0.178$, $p<0.05$) had a weak but statistically significant correlation with job satisfaction with coworkers. P4P Quality ($b^*=0.339$, $p<0.01$) showed a moderate correlation with satisfaction with coworkers; increased attitudes towards P4P Quality correlated with increased satisfaction with coworkers. P4P Cynicism ($b^*=-0.282$, $p<0.01$)

showed a modest correlation with satisfaction with coworkers; increased P4P cynicism was associated with decreased satisfaction with coworkers.

Table 33 demonstrates that the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.195$, $p<0.01$). Autonomy ($b^*=0.499$, $p<0.01$) showed a strong correlation with satisfaction with coworkers; increased perceived autonomy was associated with increased satisfaction with coworkers. Role Conflict ($b^*=-0.216$, $p<0.05$) exhibited a modest correlation with satisfaction with coworkers; increased perceived role conflict correlated with decreased satisfaction with coworkers. The effect of attitudes towards P4P Quality and P4P Cynicism were completely mediated by the addition of perceived autonomy and role conflict to the model. I reached this conclusion because P4P Quality and P4P Cynicism had insignificant correlations with satisfaction with coworkers when autonomy and role conflict were considered in the model.

Table 33

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Coworker Including Autonomy and Role conflict (N-112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	-0.003	0.008	-0.043	-0.004	0.007	-0.052
Gender	0.580	0.464	0.111	0.381	0.407	0.073
Marital Status	-0.189	0.183	-0.092	-0.208	0.161	-0.101
Race	-0.505	0.364	-0.126	-0.329	0.319	-0.082
Employment	0.196	0.219	0.084	0.079	0.193	0.034
Income	0.361	0.213	0.178	0.237	0.187	0.116
Degree	0.241	0.201	0.118	0.207	0.175	0.102
P4P Quality	0.326**	0.098	0.339	-0.011	0.103	-0.011
P4P Reporting	0.012	0.083	0.016	-0.031	0.072	-0.040
P4P Cynicism	-0.246**	0.082	-0.282	0.002	0.086	0.002
Autonomy Scale				0.342**	0.077	0.499
Role Conflict Scale				-0.187*	0.091	-0.216
R^2	0.247			0.442		
F for change in R^2	3.313**			6.527**		

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 11 demonstrates the relationship between satisfaction with coworkers and P4P quality attitudes, P4P cynicism, autonomy, and role conflict.

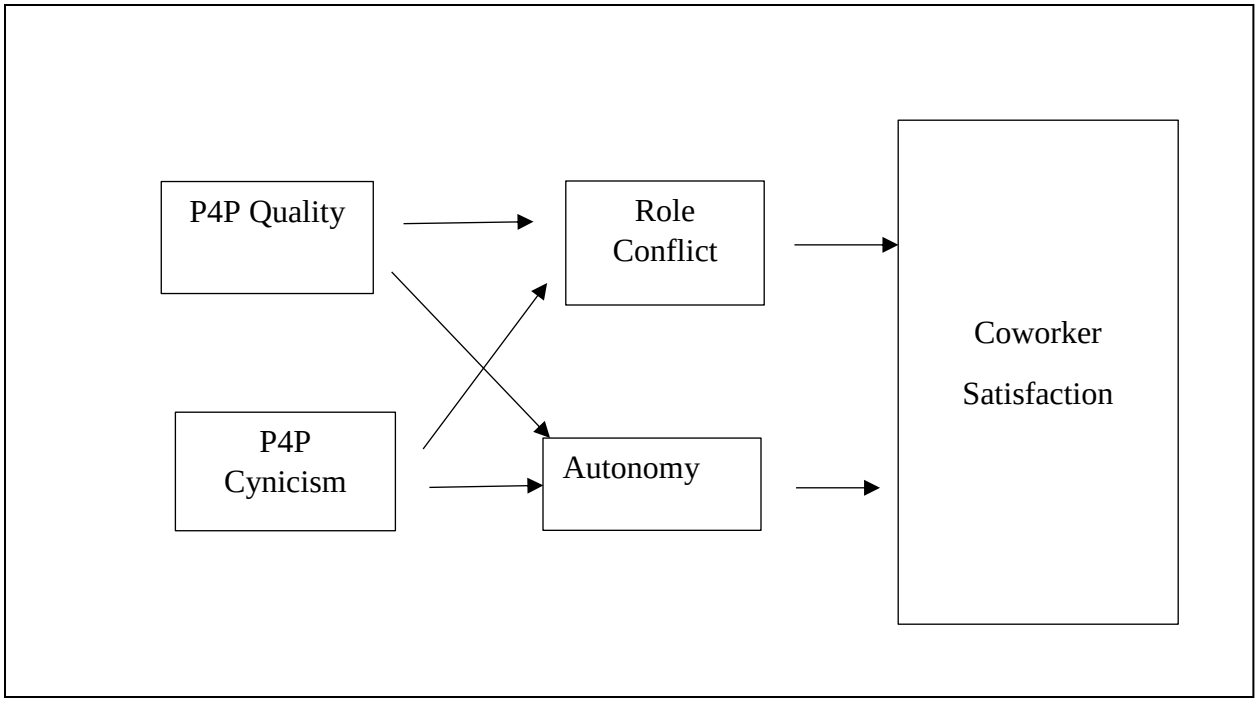

Figure 11. Relationship P4P quality attitudes, P4P cynicism, autonomy, role conflict and coworker satisfaction.

Regression 16: JSS Contingent Factor Scale on Autonomy and Role Conflict

In order to determine whether autonomy and role conflict mediate the effects of P4P variables on satisfaction with contingent job factors, I compared the regression of the JSS Contingent Scale on the controls and independent variables (previously shown in Table 25, Model 2), with a regression of the JSS Contingent Scale on the controls and independent variables plus the autonomy and role conflict scale (Model 3). The reasoning behind this regression is similar to that described in regression 11. The results are shown in Table 34.

In Model 2, age (b^*=0.212, $p<0.05$) exhibited a modest associated with job satisfaction related to contingent factors. P4P Quality (b^*=0.316, $p<0.01$) showed a moderate correlation with job satisfaction related to contingent factors; increases in perceived P4P Quality attitude correlated with increased perceived contingent factor related job satisfaction. P4P Cynicism (b^*=-0.419, $p<0.01$) showed a strong correlation with job satisfaction related to contingent

factors; increased P4P cynicism increased correlated with decreased perceived contingent factor related job satisfaction.

As shown in Table 34, the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.166$, $p<0.01$). Age ($b^*=0.201$, $p<0.05$) retained a modest association with job satisfaction related to contingent factors. Autonomy ($b^*=0.334$, $p<0.01$) showed a moderate correlation with satisfaction with contingent job factors; increased perceived autonomy correlated with increased satisfaction with contingent job factors. Role Conflict ($b^*=-0.331$, $p<0.05$) exhibited a modest correlation with satisfaction with contingent job factors; increased perceived role conflict was correlated with decreased satisfaction with contingent job factors. The effect of P4P Quality and P4P Cynicism on contingent job factors was completely mediated by the addition of perceived autonomy and role conflict to the model. I reached this conclusion because P4P Quality and P4P Cynicism correlated significantly with satisfaction related to contingent job factors in Model 2 but did not correlate with satisfaction related to contingent job factors in Model 3.

Table 34

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Contingent Factors Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 1			Model 2		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.025*	0.012	0.212	0.024*	0.101	0.201
Gender	0.430	0.672	0.051	0.051	0.587	0.006
Marital Status	0.308	0.264	0.094	0.338	0.232	0.103
Race	-0.763	0.527	-0.119	-0.458	0.460	-0.071
Employment	-0.052	0.317	-0.014	-0.268	0.278	-0.072
Income	0.574	0.309	0.177	0.392	0.269	0.121
Degree	0.313	0.290	0.096	0.267	0.252	0.082
P4P Quality	0.485**	0.141	0.316	0.027	0.148	0.018
P4P Reporting	0.057	0.119	0.046	-0.005	0.104	-0.004
P4P Cynicism	-0.583**	0.119	-0.419	-0.183	0.124	-0.131
Autonomy Scale				0.367**	0.111	0.334
Role Conflict Scale				-0.459**	0.132	-0.331
R^2	0.385			0.548		
F for change in R^2	6.330**			9.995**		

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 12 represents the relationship between satisfaction with contingent job factors and age, P4P quality, P4P cynicism, autonomy, and role conflict.

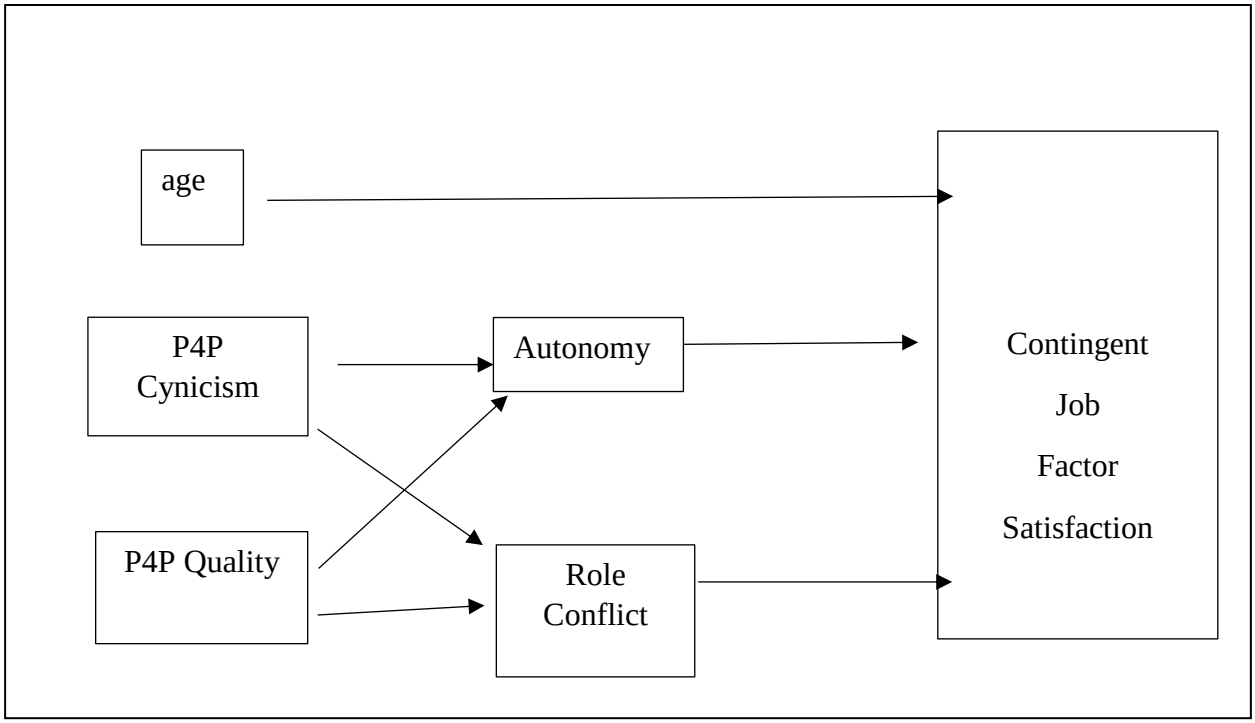

Figure 12. Relationship between age, P4P quality, P4P cynicism, autonomy, role conflict and satisfaction with contingent job factors.

Regression 17: JSS Communication Scale on Autonomy and Role Conflict

In order to determine whether autonomy and role conflict mediate the effects of P4P variables on satisfaction with job communication, I compared the regression of the JSS Communication Scale on the controls and P4P variables (previously shown in Table 26, Model 2), with a regression of the JSS Communication Scale on the controls and P4P variables plus the autonomy and role conflict scale (Model 3). The reasoning behind this analysis is similar to that explained in regression 11. The results are shown in Table 35.

In Model 2, age (b^*=0.172, $p<0.05$) showed a modest association with communication related job satisfaction. P4P Quality (b^*=0.504, $p<0.01$) exhibited a strong predictor of correlation with communication related job satisfaction; increased attitudes towards quality correlated with increased satisfaction with job related communication. P4P Cynicism (b^*=-0.239,

$p<0.01$) showed a modest correlation with job related communication; increased cynicism towards P4P correlated with decreased satisfaction with job related communication.

As illustrated in Table 35, the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.115$, $p<0.01$). Autonomy ($b^*=0.388$, $p<0.01$) demonstrated a moderate predictor correlation with satisfaction with communication; increased perceived autonomy was associated with increased satisfaction with coworkers. Perceived autonomy mediated almost half of the effect of P4P Quality ($b^*=0.235$, $p<0.05$) towards satisfaction with job communication. I reached this conclusion because P4P Quality retained a significant correlation in Model 3, although with a decreased Beta coefficient, and the correlation with P4P Cynicism was insignificant in Model 3.

Table 35

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Communication Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.019*	0.011	0.172	0.018*	0.101	0.165
Gender	0.518	0.642	0.065	0.293	0.592	0.037
Marital Status	0.280	0.253	0.090	0.255	0.234	0.082
Race	-0.253	0.504	-0.042	-0.052	0.464	-0.009
Employment	0.358	0.303	0.102	0.226	0.281	0.064
Income	0.143	0.295	0.047	-0.001	0.272	0.000
Degree	0.220	0.278	0.071	0.181	0.254	0.059
P4P Quality	0.731**	0.135	0.504	0.341*	0.149	0.235
P4P Reporting	-0.012	0.114	-0.101	-0.062	0.105	-0.052
P4P Cynicism	-0.314**	0.114	-0.239	-0.030	0.125	-0.022
Autonomy				0.401**	0.112	0.388
Role Conflict				-0.206	0.133	-0.158
R^2		0.368			0.483	
F for change in R^2		5.892**			7.702**	

a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 13 demonstrates the relationship between race, autonomy, P4P quality attitudes, P4P cynicism, and satisfaction with job related communication.

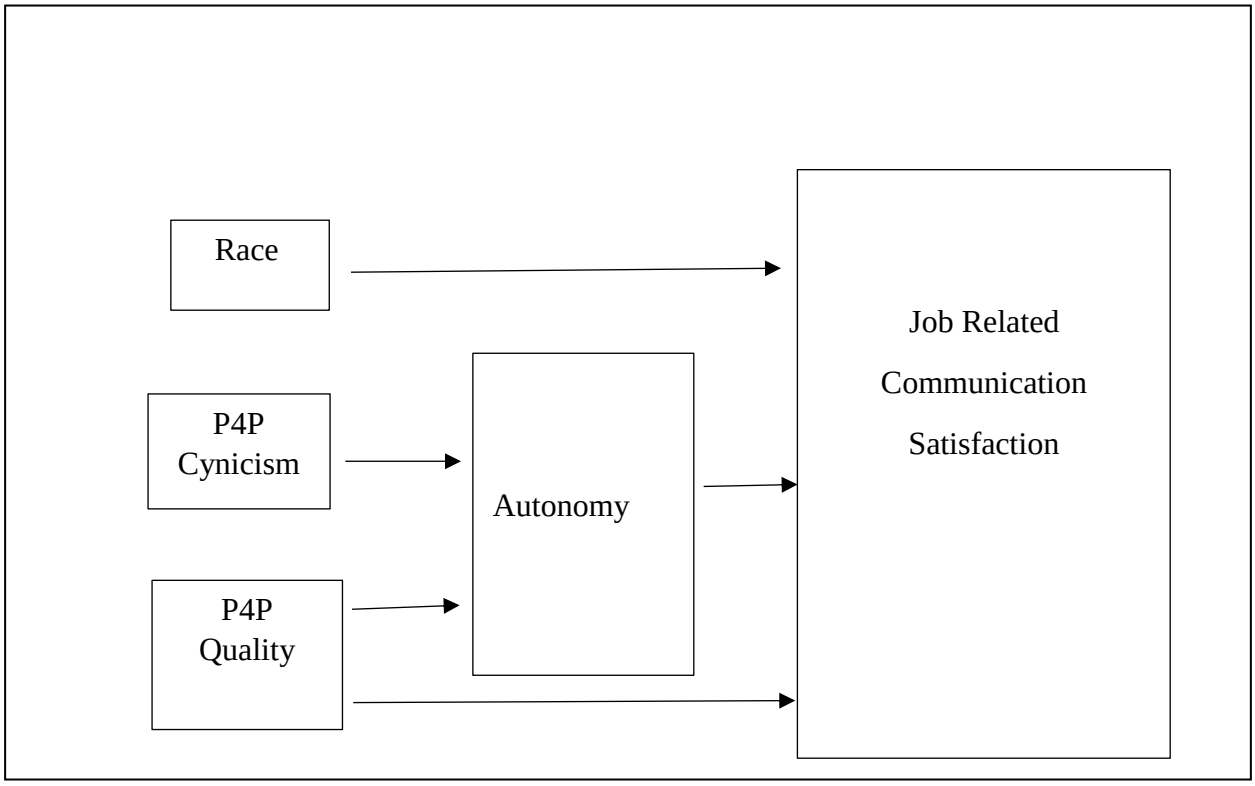

Figure 13. Relationship between race, autonomy, P4P quality, P4P cynicism, and satisfaction with job related communication.

Regression 18: JSS Operating Conditions Scale on Autonomy and Role Cconflict

In order to determine whether autonomy and role conflict mediate the effects of P4P variables on satisfaction with job communication, I compared the regression of the JSS Operating Conditions Scale on the controls and P4P variables (previously shown in Table 27, Model 2), with a regression of the JSS Operating Conditions Scale on the controls and P4P variables plus the autonomy and role conflict scale (Model 3). The reasoning for this regression is similar to that explained in regression 11. The results are shown in Table 36.

Employment status ($b^* = 0.154$, $p<0.05$) showed a weak but statistically significant associated with satisfaction with job related operating conditions. P4P Quality ($b^*=0.209$, $p<0.05$) had a modest correlation with satisfaction with job related operating conditions; increased attitudes towards P4P quality correlated with increased satisfaction with job related

operating conditions. P4P Cynicism (b^*=-0.392, $p<0.01$) showed a moderate association with satisfaction with job related operating conditions; increased cynicism towards P4P correlated with decreased job related operating conditions.

A review of Table 36 shows that the addition of the autonomy and role conflict scales created an increase in the explained variance (change in $R^2 = 0.138$, $p<0.01$). Marital status (b^*=0.145, $p<0.05$) had a weak but statistically significant association with satisfaction with job related operating conditions. Autonomy (b^*=0.247, $p<0.05$) showed a modest correlation with satisfaction with job related operating conditions; increased perceived autonomy correlated with increased satisfaction with job operating conditions. Role Conflict (b^*=-0.356, $p<0.05$) exhibited a modest association with satisfaction with job related operating conditions; increased perceived role conflict correlated with decreased satisfaction with operating conditions. Attitudes towards P4P Quality and P4P Cynicism were completely mediated by perceived autonomy and role conflict. I reached this conclusion because P4P Quality and P4P Cynicism showed significant correlations with satisfaction with job related operating conditions in Model 2 but had insignificant correlations in Model 3.

Table 36

Summary of Hierarchical Regression Analysis for Variables Predicting JSS Operating Conditions Including Autonomy and Role Conflict (N=112)

Regression 1 Variable	Model 2			Model 3		
	b[a]	SE b	b[*b]	b[a]	SE b	b[*b]
Age	0.007	0.011	0.062	0.005	0.010	0.051
Gender	0.516	0.660	0.068	0.176	0.606	0.023
Marital Status	0.380	0.259	0.128	0.428*	0.239	0.145
Race	-0.200	0.518	-0.035	0.066	0.475	0.011
Employment	0.519	0.312	0.154	0.326	0.287	0.097
Income	0.428	0.303	0.147	0.281	0.278	0.096
Degree	-0.172	0.285	-0.058	-0.207	0.260	-0.071
P4P Quality	0.290*	0.139	0.209	-0.067	0.153	-0.049
P4P Reporting	0.077	0.117	0.068	0.027	0.107	0.024
P4P Cynicism	-0.491**	0.117	-0.392	-0.152	0.128	-0.122
Autonomy Scale				0.244*	0.115	0.247
Role Conflict Scale				-0.444**	0.136	-0.356
R^2		0.266				0.404
F for change in R^2		3.662**				5.598**

Note. a-unstandardized regression coefficient; b- standardized regression coefficient
*p<0.05, one-tailed; **p<0.01, one-tailed

Figure 14 shows the relationship between satisfaction with job operating conditions and P4P Quality, P4P Cynicism, role conflict, autonomy, and marital status.

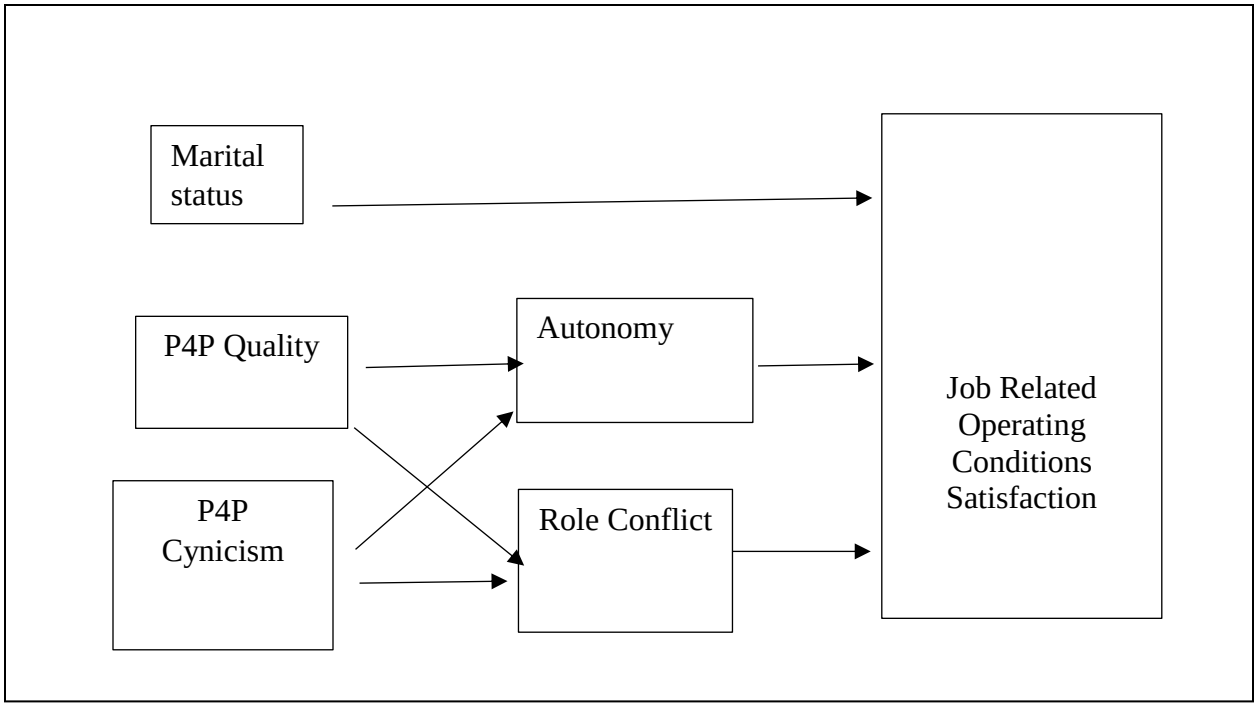

Figure 14. Relationship between P4P quality, P4P cynicism, role conflict, autonomy, and marital status, and satisfaction with job operating conditions.

Chapter Summary

This research project was performed in order to determine how attitudes towards P4P affects perceived autonomy, role conflict, job satisfaction, and burnout. Exploratory data and vignette responses were presented in this chapter. The five hypotheses related to this study were considered by performing a number of regressions and these regression results were also present in this chapter. In Chapter 5 I will discuss the hypotheses in detail, linking the findings to possible policy implications. I will conclude with discussions related to the study limitations as well as suggestions for future research.

CHAPTER 5

DISCUSSION

Chapter Overview

The intent of this study was to explore relationships between attitudes towards Pay for Performance and how these attitudes might correlate with perceived autonomy, role conflict, job satisfaction, and burnout. Existing literature has explored executive level attitudes towards P4P, but I was not able to find any existing literature that explored attitudes of staff nurses towards P4P initiatives. There was also a potential gap in the literature related to exploring how attitudes towards P4P affected issues known to impact nursing retention, such as perceived autonomy, role conflict, satisfaction, and burnout. I used a convenience sample of Pennsylvania nurses in order to obtain responses to an online survey tool. This chapter discusses the results of the study, limitations of the project, and ideas for future research.

Summary of Results

I used quantitative research methods in order to analyze the study data. Results of exploratory and vignette questions were presented in Chapter 4. In addition, I completed a series of regressions in order to determine the effect of the control variables (socioeconomic and job-related characteristics) and independent variables (P4P attitudes) on the variables related to autonomy, role conflict, burnout, and job satisfaction. The results of the analysis were presented in Chapter 4.

Exploratory Information

Respondents were asked a number of questions in order to determine familiarity with the CMS Hospital Compare website. While just under half of the respondents (48.2%) indicated they were aware of the CMS Compare site, most respondents indicated they had not used the site either professionally or personally. Fifty-percent of the respondents were aware of their employer's Hospital Compare Score; the remainder either did not know or were unsure of the score. Approximately one quarter (25.9%) of respondents indicated they had not received any training on the CMS Compare Programs. The results seem to indicate nurses lack familiarity with CMS initiatives. I had hoped to use the responses to the exploratory questions to look for correlations with understanding of CMS initiatives and the dependent variables, but the small response rate did not make this analysis feasible.

Vignette Information

Respondents replied to two different sets of vignette questions. The vignette questions were designed in order to determine how nurses would react in scenarios that are affected by P4P. Two sets of vignettes were presented to nurses; one dealt with flu shots and the other with aspirin on arrival for chest pain patients.

The majority of nurses (93.8%) indicated that they would offer flu shots to their patients. Over half of the nurses (64.2%) indicated they would check with a physician, if needed, before giving the flu shot. The majority of nurses (90.1%) would encourage the patient to receive a flu shot if it was not clear whether they had previously had the shot, but only 27.3% would give the shot if it was unknown whether the patient had already received the vaccine. A small percentage (10.8%) would suggest the patient refuse the shot in order to have the appropriate documentation for the flu shot measure. These results seem to imply that nurses want to comply with the P4P

measure by giving the required flu shot, but they do not want to take steps that may be perceived as unethical in order to complete the measure.

Most nurses (87.4%) responded that they would give aspirin to a patient who presents to the emergency department with chest pain. Most nurses also indicated they would not (72.9%) change documentation of the time of aspirin administration. The majority of nurses (80.2%) also indicated they would hold giving aspirin if they believe it would be medically unsafe for the patient. As in the flu shot scenario, the aspirin vignette responses seem to imply that nurses would not take steps that were unethical or medically unsafe in order to meet P4P requirements.

The responses to the vignette questions were interesting, but unfortunately the response rate was too low for use in any additional analyses.

Relationship with Control Variables

As illustrated in Table 37, a few control variables were significant the models. As the nurses age increased, their level of cynicism towards P4P decreased moderately. A modest relationship also existed between P4P cynicism and income and education level; individuals with an advanced degree and individuals making greater than $60,000 annually reported a lower level of P4P cynicism. A moderate relationship also existed between race and P4P Reporting attitudes; white respondents exhibited a more positive attitude.

Table 37

Relationship of Control Variables with Independent and Mediating Variables

	P4P Quality	P4P Reporting	P4P Cynicism	Autonomy	Role Conflict
Age	-	-	Moderate	-	-
Gender	-	-	-	-	-
Marital Status	-	-	-	-	-
Race	-	Moderate	-	-	-
Employment Status	-	-	-	-	-
Education Level	-	-	Modest	-	-
Income	-	-	Modest	-	-

Table 38 demonstrates the relationships between the control variables and the dependent variables. Weak relationships existed between the following: males indicated less personal burnout than females; those with degrees greater than a BS indicated less work-related burnout and greater satisfaction with job supervision; and older individuals indicated a greater satisfaction with job communication. Modest relationships existed between the following: as individuals got older they had less work-related burnout and contingent job factor related burnout; nonwhite individuals had less work-related burnout; males exhibited less work-related burnout; and unmarried individuals exhibited less burnout related to work conditions. Moderate relationships also existed in that as age and income increased, personal burnout decreased.

Table 38

Relationship of Control Variables with Dependent Variables

	Burnout			Job Satisfaction				
	Personal	Work-Related	Patient Related	Supervision	Operating Conditions	Coworker	Contingent Factors	Communication
Age	Moderate	Modest	Modest	-	-	-	Modest	Weak
Gender	Weak	Modest	-	-	-	-	-	-
Marital	-	-	-	-	Modest	-	-	-
Race	-	Modest	-	-	-	-	-	-
Employment	-	-	-	-	-	-	-	-
Education	-	Weak	-	Weak	-	-	-	-
Income	Moderate	Weak	-	-	-	-	-	-

Relationship with P4P Attitude Variable

Table 39 shows the relationship of the P4P Attitudinal variables on the mediating variables, autonomy and role conflict. A strong relationship existed between attitudes towards P4P quality reporting and autonomy; as views towards P4P as a quality tool became more positive, perceived autonomy increased. A strong relationship also existed between P4P cynicism and role conflict; as views towards P4P became more cynical, perceived role conflict increased. Moderate relationships existed between P4P cynicism and autonomy as well as between P4P quality and role conflict. As attitudes towards P4P became more cynical perceived autonomy decreased, while as attitudes toward P4P as a quality tool became more positive role conflict decreased.

The relationship of the P4P attitudinal variables on autonomy and role conflict is consistent with what might be expected based on similar studies. Multiple researchers have found that P4P has a negative impact on physicians' perceived autonomy; it seems reasonable to assume that other health care providers (such as nurses) would have a similar response to perceived autonomy when asked about P4P. The literature also seems to support the association of P4P with role conflict. For example, both Middleton et al (2005) and Kurtzman et al. (2011) found that nurses were concerned about the additional work created by P4P requirements. Nicks et al. (2009) determined that emergency room physicians experienced conflict when required to give specific antibiotics to patients with pneumonia; it makes sense that nurses would also experience conflict when asked to administer these antibiotics. My data, derived by asking nurses questions related to their opinions of P4P and comparing those responses to perceived autonomy and role conflict, not only match what was hypothesized for this study but also appear to be supported by similar research.

Table 39

Relationship of P4P Attitude Variables with Mediating Variables

	Autonomy	Role Conflict
Quality	Strong	Moderate
Reporting	-	-
Cynicism	Moderate	Strong

Tables 40 and 41 illustrate the relationship of the P4P Attitudinal variables with the Dependent Variables. A weak direct relationship existed between cynicism towards P4P and personal burnout; as cynicism increased, personal burnout also increased. A modest direct relationship was found between attitudes towards P4P quality and job supervision; as attitudes towards P4P quality became more positive, satisfaction with job supervision increased. Moderate direct relationships existed between P4P reporting and patient related burnout; as attitudes toward P4P reporting became more positive, patient related job satisfaction increased. Likewise, a moderate direct relationship existed between P4P quality attitudes and job- related communication; as attitudes towards P4P as a quality initiative increased, communication related job satisfaction also increased.

The mediation effect of autonomy and role conflict on burnout and job satisfaction is consistent with what might be expected. Numerous researchers have described the correlation between autonomy, role conflict and burnout (Atkins, Marshall & Javalgi, 1996; Chan et al., 2013; Gazewood et al., 2000; Shirom, Nirel, & Vinokur, 2010). Other researchers have shown the link between autonomy, role conflict, and job satisfaction (Chan et al., 2013; DeCola & Riggins, 2010). My results, which show mediating effects by autonomy and role conflict on burnout and job satisfaction, both matches what was hypothesized for this study but also appears to be supported by similar research.

In order to research the possibility of causality between P4P attitudes and role conflict/burnout, I reviewed the Pulse of Pennsylvania's Registered Nurses Workforce data to see if there was any type of trend that would show an increase in burnout with the advent of P4P programs. The most recent publication (2012/2013) showed that nurses reported burnout at a rate of 14%; this was the same rate of burnout reported in the 2010/2011 data. Because there was no increase in the reported rate of burnout over the three- year period following the ACA mandated P4P programs, it was not possible to conclude that P4P had created any type of overall increase in the rate of burse burnout.

Table 40

Direct Relationship of P4P Attitude Variables with Dependent Variables

	Burnout			Job Satisfaction				
	Personal	Work-Related	Patient Related	Supervision	Operating Conditions	Coworker	Contingent Factors	Communication
Quality	-	-	-	Modest	-	-	-	Moderate
Reporting	-	-	Moderate	-	-	-	-	-
Cynicism	Weak	-	-	-	-	-	-	-

Table 41

Indirect Relationship of P4P Attitude Variables on Dependent Variables

	Burnout			Job Satisfaction				
	Personal	Work-Related	Patient Related	Supervision	Operating Conditions	Coworker	Contimgent Factors	Communication
Quality	-	Modest	-	Strong	Modest	Moderate	Moderate	Strong
Reporting	-	-	Moderate	-	-	-	-	-
Cynicism	Weak	Moderate	Modest	Moderate	Moderate	Moderate	Mod Strong	Modest

Overall Model for Impact of P4P Attitudes

As shown in Table 42, 4 of the 4 hypotheses related to P4P attitudes are at least indirectly supported by the data. The mediating effects of autonomy and role conflict on burnout and job satisfaction is consistent with what would be expected given the close relationship between these constructs described in existing literature. Hypothesis 5, as levels of perceived autonomy and role conflict decreases, job satisfaction will decrease and burnout will increase, is also supported by the data and models presented in Chapter 4. The results of Hypothesis 5 match what would be expected based on the burnout and job satisfaction literature.

Table 42

Summary of Support for Hypothesis

Hypothesis	**Directly Supported**	**Indirectly Supported**	**Not Supported**
1 As attitudes towards P4P become more negative, the level of perceived autonomy will decrease	X	-	-
2 As attitudes towards P4P become more negative, the level of perceived role conflict will increase	X	-	-
3 As attitudes towards P4P become more negative, the level of perceived burnout will increase	X	X	-
4 As attitudes towards P4P become more negative, the level of perceived job satisfaction will decrease	X	X	-
5 As levels of perceived autonomy and role conflict became more negative, the level of perceived burnout will increase and perceived job satisfaction will decrease	-	X	-

P4P Cynicism had an indirect relationship with all five dimensions of job satisfaction and all three dimensions burnout, maintaining a direct correlation with personal burnout when mediated by autonomy and role conflict. P4P Quality had an indirect relationship with all five dimensions of job satisfaction and one dimension of burnout (work related burnout). P4P Quality maintained a direct relationship with job satisfaction related to supervision and communication. The correlation with P4P Reporting was limited to patient related burnout, and this relationship was not changed by the mediating variables.

The results presented in Chapter 4 demonstrate support for the theoretical model presented in Chapter 2. The initial model has been revised based on the results. Employment did not affect any of the mediating or dependent variables and was therefore removed from the model. The revised model is shown in Figure 15.

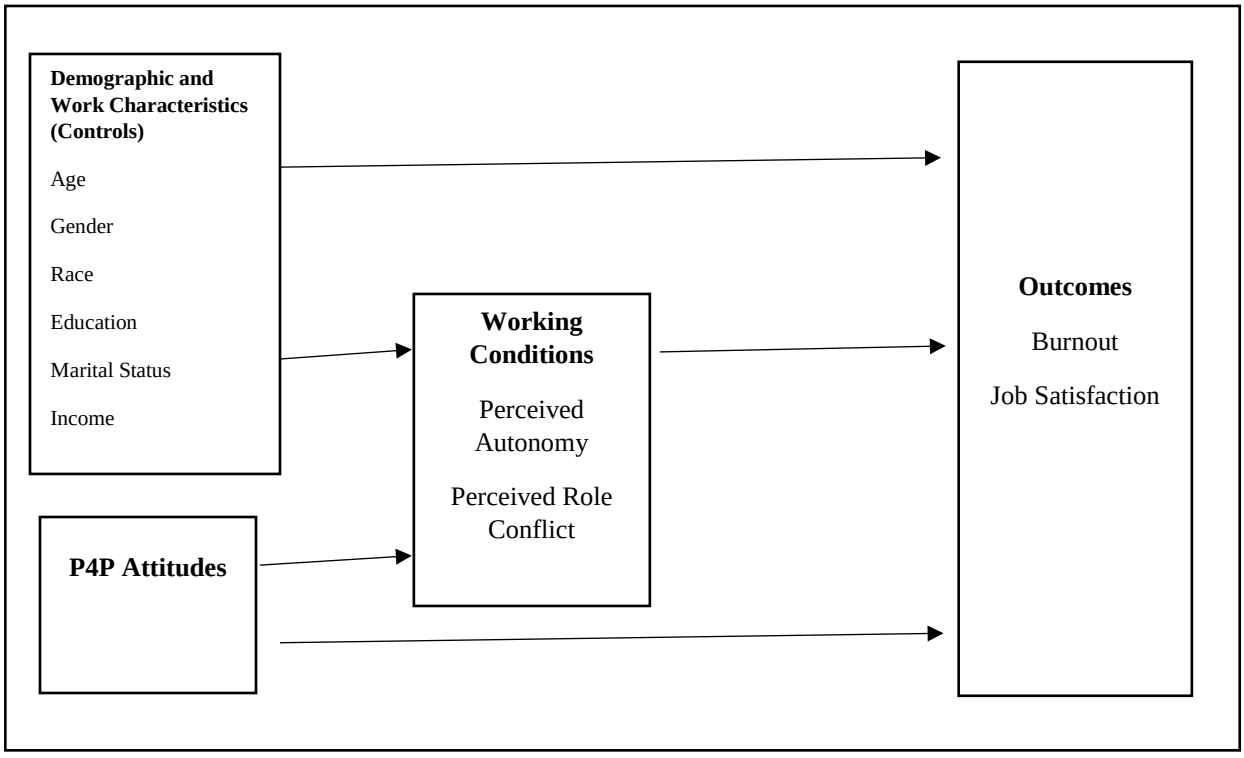

Figure 15. Revised model for P4P attitudes and job satisfaction/burnout.

While the data presented in this study supported the above model, it is important to note that there are other models that may also fit the data. For example, it is possible that elevated levels of burnout lead to negative attitudes towards P4P. Likewise, decreased job satisfaction could be the explanation for negative attitudes towards P4P. It is also reasonable to question whether the overall perception of autonomy and role conflict is the reason for changes in P4P attitudes. However, given that autonomy and role conflict have been shown in the literature as impacting burnout and job satisfaction, and the limited available literature related to P4P and autonomy indicates that P4P attitudes impact levels of autonomy, I chose to maintain the model as presented in Figure 15.

Use of CBI Versus MBI to Measure Burnout

Although the Maslach Burnout Index (MBI) is commonly used to measure nursing burnout, I chose to use the Copenhagen Burnout Index for this study. There were a number of factors that influenced my decision to use the CBI tool. First, the MBI is distributed commercially and requires payment of a fee per survey (Borritz et al., 2006). In addition to the financial limitations associated with using the MBI, there have been some criticism of the tool in the literature related to the MBI definition of burnout as well as cultural concerns related to the exact questions used in the tool (Borritz et al., 2006). The final reason for using CBI to measure burnout related to differences in the burnout dimensions measured by the MBI as opposed to the CBI.

The MBI presents three dimensions of burnout: exhaustion, cynicism, and inefficiency (Maslach et al., 2001). The CBI, on the other hand, measures burnout as personal burnout, work-related burnout, and client (patient) related burnout (Kristensen et al., 2005). Thus, in addition to providing a measure of burnout, the CBI allows the researcher to understand if an individual is

experiencing general burnout versus indicating job burnout or patient burnout; the questions of the CBI specifically refer to "work" or "patient" for those questions being used for those dimensions.

The three burnout dimensions measured by the CBI allow for additional interpretation of the data in this study; I believe the most important is the patient related burnout finding. P4P Quality attitudes showed a moderate, direct relationship with patient related burnout indicating that negative perception of P4P as a quality tool could negatively impact an individual's ability to work with patients. This important finding suggests that healthcare managers need to be very careful to present P4P as a positive initiative in order to avoid impacting nurse's burnout when dealing with their patients; this finding specific to patients would not have been possible had the MBI been used.

Discussion

There were two primary contributions of my study researching P4P attitudes and their effect on nurses. The first contribution was the creation of a scale that could be used to measure nursing attitudes towards P4P. The second contribution was the finding that the use of the new scale showed a correlation between P4P attitudes and autonomy, role conflict, burnout, and job satisfaction. This suggests that efforts to enhance nursing attitudes towards P4P may help reduce nurse burnout and increase nurse job satisfaction.

Implications for Policy and Theory

P4P quality. Attitudes towards P4P quality showed a strong correlation with perceived autonomy and a moderate correlation with role conflict. While autonomy completely mediated the relationship with P4P quality on burnout, there remained a correlation with P4P quality on job satisfaction. Attitude towards P4P quality remained a moderate predictor of supervision and

communication related job satisfaction. This implies that efforts to enhance nursing attitudes towards P4P as a quality measure may increase job satisfaction.

Since P4P is a regulatory policy, implementing P4P initiatives may create organizational change. Implementation of organizational change is more successful if the organization uses strategies such as extensive communication and employee involvement. It may be beneficial to the organization to provide information to nurses explaining how P4P implementation is a quality initiative meant to improve the care of the patient. If the organization presents P4P as a positive way to provide good patient care, the end result may be both better P4P compliance as well as greater job satisfaction.

P4P reporting. Attitudes towards P4P reporting correlated modestly with patient related burnout, which was not mediated by either autonomy or role conflict. This implies that efforts to improve nursing attitudes towards the public reporting of quality measures may decrease patient related burnout. This was an interesting finding since it implies that a more positive perception of the need to publicly report quality data influences patient-related burnout.

It may be possible that nurses feel stressed by knowing that their care of the patient is being publicly graded. Nurses may feel that, since the patient completes the HCAHPS survey, failure to get a good grade is somehow the fault of the nurse. Since organizational change is affected by employee voice, an organization may be able to impact P4P reporting attitudes by allowing nurses the opportunity to help determine how patient care needs can be met in order to best care for the patient and also increase scores on the publicly reported measures.

P4P cynicism. A cynical attitude towards P4P correlated moderately with perceived autonomy and a strongly with perceived role conflict. Autonomy and role conflict completely

mediated the effect of P4P cynicism on job satisfaction. While autonomy partially mediated the effect, P4P cynicism maintained a weak association with personal burnout.

The P4P cynicism scale measured, in a sense, whether an individual felt that there was little they could do in order to improve P4P performance. It seems logical to believe that a negative viewpoint towards mandated quality measures would correlate with personal burnout. The individual may feel that the efforts they are required to take in order to complete P4P requirements creates an environment that prevents the accomplishment of other (in their mind) more important tasks. The perceived inability to accomplish tasks may lead to burnout. As with P4P Quality and P4P Reporting, organizations may want to focus efforts on employee voice in P4P efforts so that the employee sees P4P not as a hindrance in their workload, but instead as a way to best care for their patient.

Limitations

The largest limitation in this study was the small number of participants. While multiple efforts were taken in order to increase survey participation, the final sample size was only 112. The low sample size affected the potential generalizability of the results. As well, the sample size limited the types of analysis I was able to perform.

Another limitation of the study is that it consisted of a convenience sample of Pennsylvania nurses. The ability to survey all nurses in the state of Pennsylvania would have been more desirable, but obtaining a list of all nurses in Pennsylvania was cost prohibitive. Similarly, a random selection of nurses from across the country would have allowed analysis to determine if there were national trends related to P4P attitudes, but a nation-wide pool of survey participants was not feasible for this study.

This study consisted of a survey tool, which contained self-reported data. Survey results may not be a direct measurement of individual feelings (Monette, Sullivan, and DeJong, 2011). If survey participants did not provide an accurate self-assessment, it may have affected the results. Nonetheless, the factor and reliability analyses supported the contention that the instruments I used in this study were reliable and valid.

This study was also limited to statistical associations and did not assure causality. It cannot be determined whether P4P attitudes caused burnout and decreased job satisfaction; the research is only able to show that P4P attitudes are correlated with burnout and decreased job satisfaction. However, the existing literature showing the relationship between P4P and autonomy indicates that nurses believe that P4P impacts autonomy. The literature also shows that autonomy and role conflict are constructs that effect burnout and job satisfaction. Because the known relationships support a model of P4P impacting autonomy/role conflict which then affects burnout and job satisfaction, I believe it is logical to conclude that the P4P attitudes are indeed impacting autonomy and role conflict. Further research in this area would be beneficial to help clarify whether the direction of the model is accurate as proposed.

Conclusions and Recommendations for Future Research

P4P requirements are a current reality in the provision of healthcare. This research presents an instrument that can be used to measure P4P attitudes. This research also suggests that there is a correlation between P4P attitudes and nursing job satisfaction and burnout.

Scant research currently exists to measure nurse perception towards P4P. Additional research using the P4P attitudinal scales created by this survey is warranted in order to assure their validity. Once verified through repeated use, these new P4P scales may be helpful to future

researchers desiring to study P4P attitudes, not only by nurses but also by non-nursing personnel who are also members of the healthcare team.

The primary finding of this project was that attitudes towards P4P correlate with nursing burnout and job satisfaction. Future research in order to validate this finding is warranted. Current literature suggests that burnout and job satisfaction are important components in nursing retention, and therefore understanding of the factors that affect burnout and job satisfaction helps organizations maintain adequate staffing levels. Understanding how nurses perceive P4P may not only help organizations improve P4P scores but may also be used as tools to enhance nursing job satisfaction.

Understanding that P4P attitudes affects nursing burnout and job satisfaction can assist organizations in their P4P implementation practices. Healthcare managers must understand that negative attitudes towards P4P are associated with burnout and job dissatisfaction. For this reason, nurse administrators should present P4P initiatives to staff nurses in a positive manner, emphasizing that these initiatives are based on evidence-based medicine and represent quality patient care. Presenting the rationale behind P4P to nurses in a manner that appeals to their desire to provide quality care to patients is more likely to prevent P4P strategies from negatively impacting nursing burnout and job satisfaction.

In order to assure that nurses understand P4P initiatives and any related strategies for compliance, organizations may want to provide education to nurses related to P4P and its role in patient care. Creating an organizational culture that understands P4P and views these projects as a way to implement quality patient care (as opposed to simply mandated treatment pathways) may help prevent nursing burnout related to P4P compliance. Communication with nurses

regarding P4P programs, including giving the nurses a voice in how compliance is achieved, may also help alleviate concerns related to the effect or P4P attitudes on nursing burnout.

The number of variety of P4P programs makes it confusing and difficult for nurses to comprehend exactly what is expected of them when caring for patients. A single program of P4P would provide clarity, but the nuances of the current health care system in the United States make it unlikely that a single model of P4P for all payors and providers will occur soon. The important thing for health care organizations to understand is that attitudes towards these performance programs do indeed have some effect on nurses, and therefore implementation of P4P projects cannot ignore the need to provide communication and give nurses a voice when programs are presented and strategies for compliance are presented.

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Appendix A

P4P Burnout Survey

Thank you for considering participating in this study. This study is being completed as part of a PhD dissertation project. You are invited to participate in this research study because you are a registered nurse licensed or practicing in the state of Pennsylvania. The following information is provided in order to help you to make an informed decision whether or not to participate. If you have any questions please do not hesitate to ask.

The purpose of this study is to gain a further understanding of factors that affect nursing retention rates. This survey is anonymous; you will not be asked to provide your name. Participation in this study will require approximately 10 minutes of your time.

Your participation in this study is voluntary. You are free to decide not to participate in this study. There are no direct benefits to you as a result of you participation in this study. There are no known risks associated with participating in this study. Your response will be anonymous and considered only in combination with responses from other participants. The information obtained in the study may be published in scientific journals or presented at scientific meetings, but your identity will remain anonymous.

Your completion of the survey indicates your voluntary consent for participation in this study. You have the right to withdraw from the study at any time before submitting your responses. If you do withdraw, your response will not be included. Once your response is submitted it cannot be withdrawn given the anonymity of the data.

If you have questions, you may contact me as the primary investigator or my faculty advisor using the information below. This project has been approved by the Indiana University of

Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724/357-7730).

Annette Godissart, GHYS@IUP.EDU, 814-494-1923

Dr. Alex Heckert, Alex.Heckert@IUP.EDU, 724-357-2731

First, just a little about you. Remember, your responses are anonymous and will only be used in combination with responses from other participants.

Are you an RN currently working in a hospital?

- ○ Yes
- ○ No

In what year were you born?

What is your sex?

- ○ Male
- ○ Female
- ○ identify differently

Please indicate your marital status

- ○ never married
- ○ married/cohabitating
- ○ divorced/separated
- ○ widowed
- ○ other

How would you describe your race?

- ○ American Indian or Alaskan Native
- ○ Asian
- ○ Black

- ○ Native Hawaiian or Pacific Islander
- ○ White
- ○ Other, indicate below

How would you describe your ethnicity?

- ○ Hispanic or Latino
- ○ Non-Hispanic
- ○ other

What is the highest level of education you have completed?

- ○ RN, certificate
- ○ Associate Degree
- ○ Bachelor Degree
- ○ Master's Degree
- ○ DNP
- ○ PhD

How many years have you been working as a nurse?

How many years have you been working with your current employer?

What is your current employment status?

- ○ full time
- ○ part time seeking full time
- ○ part time choosing to be part time
- ○ casual/per diem seeking more hours
- ○ casual/ per diem by choice
- ○ other, describe

What is your primary nursing job function?

- ○ Direct Patient Care
- ○ Administration
- ○ other, describe

In what type of unit do you work (what is the primary patient population on your unit)?

- ○ ICU
- ○ pediatric
- ○ medical
- ○ surgical
- ○ obstetric
- ○ hospice
- ○ rehabilitation
- ○ cardiac care
- ○ other, describe
- ○ not applicable

Are you familiar with the Hospital Compare Website, found at CMS.gov?

- ○ Yes
- ○ No

Have you used the Hospital Compare Website as a consumer?

- ○ Yes
- ○ No

Have you used the Hospital Compare Website as a health care employee?

- ○ Yes
- ○ No

Are you familiar with your employer's Hospital Compare scores?

- ○ Yes
- ○ No
- ○ Not sure

Have you received training on the CMS Hospital Compare measures?

- ○ Yes
- ○ No
- ○ Not Sure

Does your facility use standing order sets to enhance compliance with the CMS Hospital Compare measures?

- ○ Yes
- ○ No
- ○ Not sure

Does your facility provide reference materials to use in order to enhance compliance with CMS Hospital Compare measures?

- ○ Yes
- ○ No
- ○ Not sure

Please enter your level of agreement with the statements below

Service is the primary quality driver of my organization

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree

- ○ Strongly agree
- ○ Don't Know

The CMS (Center for Medicare and Medicaid Services) HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Symptoms) survey questions are a proper tool to measure service quality levels.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

The CMS quality measures are a generally accurate measure of care quality.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

Efforts meant to improve quality measure scores may result in the neglect of more important matters.

- ○ Strongly disagree
- ○ Disagree

- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

Public reporting stimulates quality improvement activities in my organization.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

Publicly shared HCAHPS data is positive.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

HCAHPS survey results are a good way to justify CMS reimbursement.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

Public reporting influences my organization's reputation.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

My organization is able to influence performance on publicly reported measures.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree

- ○ Strongly agree
- ○ Don't Know

Performance on publicly reported measures is useful for making inferences about the general quality of care at my hospital.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

Hospitals may try to maximize performance on quality measures by altering documentation and coding practices.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

When calculating performance scores, risk adjustment appropriately accounts for difference n patient mix.

- ○ Strongly disagree

- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

My organization's performance on quality measures is affected by chance.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree
- ○ Don't Know

In my organization, performance measures are considered a genuine tool for improving quality of care.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, following CMS guidelines is more important than meeting individual patient care needs.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My hospital dutifully complies with P4P (pay for performance) requirements.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My hospital meaningfully embraces P4P as a way to improve care quality.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment allows me to make autonomous nursing care decisions

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment allows me to be fully accountable for nursing care decisions.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment encourages me to make adjustments in my nursing practice to suit patient needs.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment provides a stimulating intellectual environment

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment provides me with time to engage in research if I want

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment promotes a high level of clinical competence on my unit

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My current nursing practice environment allows me the opportunity to receive adequate respect from nurses on other units

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, I am required to complete tasks differently than the way I believe they should be completed

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, I work with policies and procedures that are sometimes incompatible with each other.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree

- ○ Strongly agree

In my organization, I am sometimes required to oppose a rule or policy in order to carry out an assignment

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, I receive assignments without the assistance I need to complete them

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, I receive contradictory requests from two or more people

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree

- ○ Agree
- ○ Strongly agree

In my organization, I have to work under vague directions or orders

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, I receive assignments without adequate resources or materials to execute them

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

In my organization, I work on many unnecessary things

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree

- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

Please respond to the scenarios below by choosing the action you would take if the situation occurred at your current nursing position.

It is flu season. You ask your patient if she has received her flu shot. Your patient has not. Do you offer a flu shot?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely not

It is flu season. You ask your patient if he has received his flu shot. Your patient cannot remember if he has received a flu shot. Do you check with the patient's physician to see if the patient received a flu shot in the office?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely not

It is flu season. You ask your patient if she has received her flu shot. Your patient cannot remember if they have received a flu shot. You check with the patient's physician and the office

does not have a record of the patient receiving a flu shot. Do you encourage your patient to get a flu shot?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

It is flu season. You ask your patient if he has received his flu shot. Your patient cannot remember if he has received a flu shot. You are unable to contact the patient's physician to see whether the office has a record of the patient receiving a flu shot. Do you give the flu shot because you know it is required?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

It is flu season. You ask your patient if she has received her flu shot. Your patient cannot remember if they have received a flu shot. You are unable to contact the patient's physician to see whether the office has a record of the patient receiving a flu shot. Do you suggest the patient tell you that they refuse the flu shot because you are aware that patient refusal is a valid reason to not give a flu shot during an admission ?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Your patient presents to the emergency department complaining of chest pain. Your facility has a protocol that allows nurses to give aspirin on arrival for patients with chest pain. Do you give the patient an aspirin?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely not

Your patient presents to the emergency department complaining of chest pain. Your facility has a protocol that allows nurses to give aspirin on arrival for patients with chest pain. Your patient also indicates that they have pain in their abdomen and have had dark tarry stools. Do you give the patient an aspirin to meet the goal in time?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely not

Your patient presents to the emergency department complaining of chest pain. Your facility has a protocol that allows nurses to give aspirin on arrival for patients with chest pain. Your patient also indicates that they have pain in their abdomen and have had dark tarry stools. Do you hold giving aspirin until you can verify the patient does not have a GI bleed?

- ○ Definitely yes
- ○ Probably yes
- ○ Might or might not
- ○ Probably not
- ○ Definitely not

Almost done! But first, a little more about you.For the next section, please indicate the frequency with which you agree with the statements.

How often do you feel tired?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

How often are you physically exhausted?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

How often are you emotionally exhausted?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

How often do you think "I can't take it anymore"?

- ○ Always
- ○ Often
- ○ Sometimes

- ○ Seldom
- ○ Never

How often do you feel worn out?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Do you feel worn out at the end of the working day?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Are you exhausted in the morning at the thought of another day at work?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Do you feel that every working hour is tiring for you?

- ○ Always
- ○ Often

- ○ Sometimes
- ○ Seldom
- ○ Never

Do you have enough energy for family and friends during leisure time?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Is your work emotionally exhausting?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Does your work frustrate you?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Do you feel burned out because of your work?

- ○ Always
- ○ Often

- ○ Sometimes
- ○ Seldom
- ○ Never

Do you find it hard it work with patients?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Does it drain your energy to work with patients?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Do you find it frustrating to work with patients?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Do you sometimes wonder how long you will be able to work with patients?

- ○ Always

- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Do you feel that you give more than you get back when you work with patients?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

Are you tired of working with patients?

- ○ Always
- ○ Often
- ○ Sometimes
- ○ Seldom
- ○ Never

For the next section, please indicate your level of agreement with the statements as they relate to your current nursing position

My supervisor is quite competent in doing his/her job.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree

- ○ Strongly agree

When I do a good job, I receive the recognition for it that I feel I should receive.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

Many of our rules and procedures make doing a good job difficult.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

I like the people I work with.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree

- ○ Strongly agree

I sometimes feel my job is meaningless.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

Communications seem good within my organization.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

My supervisor is unfair to me.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree

- ○ Strongly agree

I do not feel that the work I do is appreciated.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly disagree

My efforts to do a good job are seldom blocked by red tape.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

I find I have to work harder at my job because of the incompetence of people I work with.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree

- ○ Strongly agree

The goals of my organization are not clear to me.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

My supervisor shows too little interest in the feelings of subordinates.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ strongly agree

There are few rewards for those who work here.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree

- ○ Strongly agree

I have too much to do at work.

- ○ strongly disagree
- ○ disagree
- ○ somewhat disagree
- ○ neither disagree nor agree
- ○ somewhat agree
- ○ agree
- ○ Strongly agree

I enjoy my coworkers.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

I often feel that I do not know what is going on with the organization.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree

- ○ Strongly agree

I feel a sense of pride in doing my job.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

I like my supervisor.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

I have too much paperwork.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree

- ○ Strongly agree

I don't feel my efforts are rewarded the way they should be.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

There is too much bickering and fighting at work.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

My job is enjoyable.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree

- ○ Agree
- ○ Strongly agree

Work assignments are not fully explained.

- ○ Strongly disagree
- ○ Disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Agree
- ○ Strongly agree

Last few questions; just a little information about your workplace. Remember, these responses are anonymous!

What is your individual annual income?

- ○ < $20,000 annually
- ○ $20,000 - 39,999 annually
- ○ $40,000 - 59,999 annually
- ○ $60,000 - 79,999 annually
- ○ $80,000 - 99,999 annually
- ○ >$100,000 annually

In what Pennsylvania county is your primary employer located?

What is the size of the hospital that you work for (in number of beds)

Is your hospital a Magnet hospital?

- ○ Yes
- ○ No

- ○ Don't Know

Is your hospital associated with any academic research facility?

- ○ Yes
- ○ No
- ○ Don't Know

What is the name of the hospital where you work as an RN?

And finally, How do you view your hospital's pay for performance practices as affecting patient care?

Appendix B

Research Topic Approval Form

Indiana University of Pennsylvania

www.iup.edu
Office of Assistant Dean for Research
School of Graduate Studies and Research
Stright Hall, Room 113
210 South Tenth Street
Indiana, Pennsylvania 15705-1048

P 724-357-7730
F 724-357-2715
mnv.iup.edu/research

March 22, 2016

Annette Godissart
282 Ridgewood Lane
New Paris, PA 15554

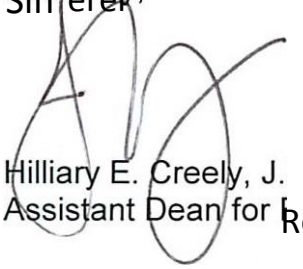
Dear Ms. Godissart,

I recently received your Research Topic Approval Form requesting approval for your topic entitled, Pay-for-Performance Attitudes and Their Effect on Burnout and Job Satisfaction in Nurses.

After a careful review of your project summary, I feel that your research may require human subjects review. Please complete the Human Subjects Review Protocol and return it to my office as soon as possible. The form is available on our website at http://www.iup.edu/research. Select Resources for Researchers and Institutional Review Board for the Protection of Human Subjects, and then select IRB Forms and Application Instructions.

Please follow the instructions carefully. If you have any further questions, please call my office at (724) 357-7730.

Sincerely,



Hilliary E. Creely, J.D., Ph.D.
Assistant Dean for Research

xc: Dr. Alex Heckert, Dissertation Committee Chairperson

HEC/bb

Appendix C

IRB Approval Letters

Indiana University of Pennsylvania

www.iup.edu
Institutional Review Board for the
Protection of Human Subjects
School of Graduate Studies and Research
Stright Hall, Room 113
210 south Tenth Street
Indiana, Pennsylvania 15705-1048

P 724-357-7730
F 724-357-2715
irb-research@iup.edu
www.iup.edu/irb

December 5, 2016

Annette Godissart
282 Ridgewood Drive New Paris,
PA 15554

Dear Ms. Godissart:

Your proposed research project, "Pay-for Performance Attitudes and Their Effect on Burnout and Job Satisfaction in Nurses," (Log No. 16-215) has been reviewed by the IRB and is approved. This approval is for UPMC Altoona, UPMC Bedford, and Monongahela Valley Hospital research sites. In accordance with
45CFR46.101 and IUP Policy, your project is exempt from continuing review. This approval does not supersede or obviate compliance with any other University requirements, including, but not limited to, enrollment, degree completion deadlines, topic approval, and conduct of university-affiliated activities.

You should read all of this letter, as it contains important information about conducting your study.

Now that your project has been approved by the IRB, there are elements of the Federal Regulations to which you must attend. Il-JP adheres to these regulations strictly:

1 . You must conduct your study exactly as it was approved by the IRB.

2. Any additions or changes in procedures must be approved by the IRB before they are implemented.

3. You must notify the IRB promptly of any events that affect the safety or well-being of subjects.

4. You must notify the IRB promptly of any modifications of your study or other responses that are necessitated by any events reported in items 2 or 3.

The IRB may review or audit your project at random or for cause. In accordance with Il-JP Policy and Federal Regulation (45CFR46.113), the Board may suspend or terminate your project if your project has not been conducted as approved or if other difficulties are detected

Although your human subjects review process is complete, the School of

Graduate Studies and Research requires submission and approval of a Research

Topic Approval Form (RTAF) before you can begin your research. If you have not yet submitted your RTAF, the form can be found at http://www.iup.edu/page.aspx?id=91683 .

While not under the purview of the IRB, researchers are responsible for adhering to US copyright law when using existing scales, survey items, or other works in the conduct of research. Information regarding copyright law and compliance at IUP, including links to sample permission request letters, can be found at http://www.iup.edu/page.aspx?id=165526.

I wish you success as you pursue this important endeavor.

Sincerely,

Jennifer Roberts, Ph.D.

Chairperson, Institutional Review Board for the Protection of Human Subjects Professor of Criminology

JLR:jeb

cc: Dr. Alex Heckert, Dissertation Chair

Dr. Beth Mabry, Dissertation Committee Member

Dr. Brandon Vick, Dissertation Committee Member

Dr. John Anderson, Graduate Coordinator

Ms. Brenda Boal, Secretary

Indiana University of Pennsylvania

www.iup.edu

Institutional Review Board for the
Protection of Human Subjects
School of Graduate Studies and Research
Stright Hall, Room 113
210 south Tenth street
Indiana, Pennsylvania 15705-1048

P 724-357-7730
F 724-357-2715
irb-research@iup.edu
www.iup.edu/irb

January 27, 2017

Annette Godissart
282 Ridgewood Drive
New Paris, PA 15554

Dear Ms. Godissart:

Your proposed modifications to your previously approved research project, "Payfor-Performance Attitudes and Their Effect on Burnout and Job Satisfaction in Nurses," (Log No. 16-215) have been reviewed by the IRB and are approved. In accordance with 45CFR46.101 and IUP Policy, your project is exempt from continuing review in addition to the approval of your request for changes. This approval does not supersede or obviate compliance with any other University requirements, including, but not limited to, enrollment, degree completion deadlines, topic approval, and conduct of university-affiliated activities.

You should read all of this letter. as it contains important information about conducting your study.

Now that your project has been approved by the IRB, there are elements of the Federal Regulations to which you must attend. Il-JP adheres to these regulations strictly:

1. You must conduct your study exactly as it was approved by the IRB.
2. Any additions or changes in procedures must be approved by the IRB before they are implemented.
3. You must notify the IRB promptly of any events that affect the safety or well-being of subjects.
4. You must notify the IRB promptly of any modifications of your study or other responses that are necessitated by any events reported in items 2 or 3.

The IRB may review or audit your project at random or for cause. In accordance with Il-JP Policy and Federal Regulation (45CFR46.113), the Board may suspend or terminate your project if your project has not been conducted as approved or if other difficulties are detected.

While not under the purview of the IRB, researchers are responsible for adhering to US copyright law when using existing scales, survey items, or other works in the conduct of research. Information regarding copyright law and compliance at IUP, including links to sample permission request letters, can be found at http://www.iup.edu/page.aspx?id=165526.

I wish you success as you pursue this important endeavor.

Sincerely,

Jennifer Roberts, Ph.D.
Chairperson, Institutional Review Board for the Protection of Human Subjects Professor of Criminology

JLR:jeb cc: Dr. Alex Heckert, Dissertation Chair

Indiana University of Pennsylvania

www.iup.edu

Institutional Review Board for the
Protection of Human Subjects
School of Graduate Studies and Research
Stright Hall, Room 113
210 south Tenth street
Indiana, Pennsylvania 15705-1048

P 724-357-7730
F 724-357-2715
irb-research@iup.edu
www.iup.edu/irb

May 01, 2017

Dear Ms. Annette Godissart

Your proposed modifications to your previously approved research project, "Pay-for Performance Attitudes and Their Effect on Burnout and Job Satisfaction in Nurses," (Log No. 16-215) been reviewed by the IRB and are approved. In accordance with 45CFR46.101 and IUP Policy, your project is exempt from continuing review in addition to the approval of your request for changes. This approval does not supersede or obviate compliance with any other University requirements, including, but not limited to, enrollment, degree completion deadlines, topic approval, and conduct of university-affiliated activities.

You should read all of this letter, as it contains important information about conducting your study.

Now that your project has been approved by the IRB, there are elements of the Federal Regulations to which you must attend. IUP adheres to these regulations strictly:

1. You must conduct your study exactly as it was approved by the IRB.
2. Any additions or changes in procedures must be approved by the IRB before they are implemented.
3. You must notify the IRB promptly of any events that affect the safety or well-being of subjects.
4. You must notify the IRB promptly of any modifications of your study or other responses that are necessitated by any events reported in items 2 or 3.

The IRB may review or audit your project at random *or* for cause. In accordance with IUP Policy and Federal Regulation (45CFR46.113), the Board may suspend or terminate your project if your project has not been conducted as approved or if other difficulties are detected.

While not under the purview of the IRB, researchers are responsible for adhering to US copyright law when using existing scales, survey items, or other works in the conduct of research. Information regarding copyright law and compliance at

IUP, including links to sample permission request letters, can be found at http://www.iup.edu/page.aspx?id=165526.

I wish you success as you pursue this important endeavor.

Sincerely,

Jennifer Roberts, Ph.D.
Chairperson, Institutional Review Board for the Protection of Human Subjects
Professor of Criminology

JLR:jeb

Cc: Dr. Daniel Heckert, Faculty Advisor

Appendix D

Survey Questions for General Internists P4P Attitudes

1. If the measures are accurate, physicians should be given financial incentives for quality
2. Financial incentives for quality are unprofessional
3. If accurate, measures of quality of individual physicians' performance should be made public
4. If accurate, measures of quality of individual medical groups should be made public
5. At present, measures of quality are generally accurate
6. At present, measures of quality are not adequately adjusted for patients' medical conditions
7. At present, measures of quality are not adequately adjusted for patients' socioeconomic status
8. Measuring quality will divert physicians' attention from important types of care for which quality is not measured
9. Measuring quality may lead physicians to avoid high risk patients
10. Health plans will try hard to make quality measures as accurate as possible
11. The government will try hard to make quality measures as accurate as possible

Source: Casalino et al., 2007

Appendix E

Survey Questions for Executive P4P Attitudes

1. Public reporting stimulates quality improvement activities at my institution
2. Our hospital is able to influence performance
3. Our hospital's reputation is influenced by public reporting
4. The measures accurately reflect quality of care at my hospital for the conditions being measured
5. Performance can be used for inferences about general quality of care at my hospital
6. Measured differences are large enough to meaningfully differentiate among hospitals
7. Efforts on these measures may result in neglect of more important matters
8. Hospitals may try to maximize performance primarily via coding and documentation
9. Risk adjustment appropriately accounts for differences in patient mix
10. Random variation is likely to affect my hospital's performance

Source: Lindenauer et al., 2014

Appendix F

Survey Questions for P4P Attitudes

1. Do you believe that service quality is the primary driver of your organization?
2. Do you believe HCAHPS is the proper tool to measure service quality measures?
3. DO you believe that having HCAHPS data publicly shared is positive?
4. Do you believe HCAHPS should be used to justify CMS reimbursement?

Source: Dilliter, 2011

Appendix G

Autonomy Subscale of the Work Quality Index

The nursing practice environment:

Allows you to make autonomous nursing care decisions

Allows you to be fully accountable for those decisions

Encourages you to make adjustments in your nursing practice to suit the needs of the patient

Provides a stimulating intellectual environment

Promotes a high level of clinical competence on your unit

Responses are graded on a score of 1 to 7, with 1 being least satisfied and 7 being most satisfied

Source: Whitley & Putzier, 1994

Appendix H

Role Conflict Scale

1. I must do things that I think must be done differently
2. I work under incompatible policies and guidelines
3. I have to oppose a rule or policy in order to carry out an assignment
4. I receive assignments without the manpower to complete them
5. I receive incompatible requests from two or more people
6. I have to work under vague directions or orders
7. I receive assignments without adequate resources or materials to execute them
8. I work on many unnecessary things

Source: Rizzo, House, & Lirtzman, 1970; Valentine, Godkin & Varca, 2012

Appendix I

CBI

Personal burnout:
How often do you feel tired?
How often are you physically exhausted?
How often are you emotionally exhausted?
How often do you think “I can’t take it anymore”?
How often do you feel worn out?
How often do you feel weak and susceptible to illness?
Work-related burnout:
Do you feel worn out at the end of the working day?
Are you exhausted in the morning at the thought of another day at work?
Do you feel that every working hour is tiring for you?
Do you have enough energy for family and friends during leisure time? (inverse coding)
Is your work emotionally exhausting?
Does your work frustrate you?
Do you feel burnt out because of your work?
Client-related burnout:
Do you find it hard to work with clients?
Does it drain your energy to work with clients?
Do you find it frustrating to work with clients?
Do you feel that you give more than you get back when you work with clients?
Are you tired of working with clients?
Do you sometimes wonder how long you will be able to continue working with clients?
Source: Borritz et al., 2006

Appendix J

Spector's Job Satisfaction Survey

1. I feel I am being paid a fair amount for the work I do.
2. There is really too little chance for promotion on my job.
3. My supervisor is quite competent in doing his/her job.
4. I am not satisfied with the benefits I receive.
5. When I do a good job, I receive the recognition for it that I feel I should receive.
6. Many of our rules and procedures make doing a good job difficult.
7. I like the people I work with.
8. I sometimes feel my job is meaningless.
9. Communications seem good within this organization.
10. Raises are too few and far between.
11. Those who do well on the job do a fair chance of being promoted.
12. My supervisor is unfair to me.
13. The benefits we receive are as good as most other organizations offer.
14. I do not feel that the work I do is appreciated.
15. My efforts to do a good job are seldom blocked by red tape.
16. I find I have to work harder at my job because of the incompetence of people I work with.
17. I like doing things I do at work.
18. The goals of this organization are not clear to me.
19. I feel appreciated by the organization when I think about what they pay me.
20. People get ahead as fast here as they do in other places.
21. My supervisor shows too little interest in the feelings of subordinates.
22. The benefit package we have here is equitable.
23. There are few rewards for those who work here.
24. I have too much to do at work.
25. I enjoy my coworkers.
26. I often feel that I do not know what is going on with the organization.
27. I feel a sense of pride in doing my job.
28. I feel satisfied with my chances for salary increases.
29. There are benefits we do not have that we should have.
30. I like my supervisor
31. I have too much paperwork.
32. I don't feel my efforts are rewarded the way they should be.
33. I am satisfied with my chances for promotion.
34. There is too much bickering and fighting at work.
35. My job is enjoyable.
36. Work assignments are not fully explained.

Source: Spector, 1997

Appendix K

General Understanding of P4P Questions

Q1: Are you familiar with the Hospital Compare Website, found at CMS.gov?

Q2: Have you used the Hospital Compare Website as a consumer?

Q3: Have you used the Hospital Compare Website as a health care employee?

Q4: Are you familiar with your employer's Hospital Compare Scores?

Q5: Have you received training on the CMS Hospital Compare Measures?

Q6: Does your facility use standing order sets in order to enhance compliance with the CMS Hospital Compare measures?

Q7: Does your facility provide reference materials to use in order to enhance compliance with CMS Hospital Compare Measures?

Appendix L

Vignette Questions

Flu Shot vignette

Q1*:* It is flu season. You ask your patient is she has received her flu shot. Your patient has not. Do you offer a flu shot?

Q2: It is flu season. You ask your patient is he has received his flu shot. Your patient cannot remember if he has received a flu shot. Do you check with the patient's physician to see if the patient received a flu shot in the office?

Q3: It is flu season. You ask your patient is she has received her flu shot. Your patient cannot remember if they have received a flu shot. You check with the patient's physician and the office does not have a record of the patient receiving a flu shot. Do you encourage your patient to get a flu shot?

Q4: It is flu season. You ask your patient if he has received his flu shot. Your patient cannot remember if he has received a flu shot. You are unable to contact the patient's physician to see whether the office has a record of the patient receiving a flu shot. Do you give the flu shot because you know it is required?

Q6: It is flu season. You ask your patient if she has received her flu shot. Your patient cannot remember if she has received a flu shot. You are unable to contact the physician's office to see whether they have a record of the patient receiving a flu shot. Do you suggest the patient tell you that they refuse the flu shot because you are aware that patient refusal is a valid reason to not give the flu shot during an admission?

Chest pain vignette

Q1:Your patient presents to the emergency department complaining of chest pain. Your facility has a protocol that allows nurses to give aspirin on arrival for patients with chest pain. Do you give the patient an aspirin?

Q2:Your patient presents to the emergency department complaining of chest pain. Your facility has a protocol that allows nurses to give aspirin on arrival for patients with chest pain. Your patient also indicates that they have pain in their abdomen and have had dark tarry stools. Do you give the patient an aspirin in order to meet the goal in time?

Q3: Your patient presents to the emergency department complaining of chest pain. Your facility has a protocol that allows nurses to give aspirin on arrival for patients with chest pain. Your patient also indicates that they have pain in their abdomen and have had dark tarry stools. Do you hold giving aspirin until you can verify the patient does not have a GI bleed?

Appendix M

Mean and Standard Deviation Information for Scales

P4P Attitude Questions (Scale 1-7)	N	Mean	Standard Deviation
Quality Scale			
Service is the primary quality driver of my organization (1)	112	5.52	1.76
Public reporting stimulates quality improvement activities in my organization (5)	112	5.23	1.43
Public reporting influences my organization's reputation (8)	112	5,67	1.35
My organization is able to influence performance on publicly reported measures (9)	112	4.89	1.33
In my organization, performance measures are considered a genuine tool for improving quality of care (14)	112	5.25	1.37
My hospital dutifully complies with P4P requirements (16)	112	4.92	1.36
My hospital meaningfully embraces P4P as a way to improve care quality (17)	112	4.72	1.42
Quality Mean	112	5.17	1.02
Reporting Scale			
The CMS HCAHPS survey questions are a proper tool to measure service quality levels (2)	112	4.05	1.67
The CMS quality measures are a generally accurate measure of care quality (3)	112	4.12	1.51
Publicly shared HCAHPS data is positive (6)	112	4.49	1.49
HCAHPS survey results are a good way to justify CMS reimbursement (7)	112	3.25	1.62
Performance on publicly reported measures is useful for making inferences about the general quality of care at my hospital (10)	112	4.54	1.54
Reporting Mean	112	4.09	1.25
Cynicism Scale			
Efforts meant to improve quality measure scores may result in the neglect of more important matters (4)	112	5.01	1.68
Hospitals may try to maximize performance on quality measures by altering documentation and coding practices (11)	112	3.91	1.70
My organization's performance on quality measures is affected by chance (13)	112	3.44	1.58
In my organization, following CMS guidelines is more important than meeting individual patient care needs (15)	112	3.86	1.68
Cynicism Mean	112	4.05	1.12

WQI, (Whitley & Putzier, 1994) (Scale 1-7)	N	Mean	Standard Deviation
Autonomy Scale			
My current nursing practice environment allows me to make autonomous nursing care decisions (1)	112	5.16	1.65
My current nursing practice environment allows me to be fully accountable for nursing care decisions (2)	112	5.29	1.55
My current nursing practice environment encourages me to make adjustments in my nursing practice to suit patient needs (3)	112	5.13	1.57
My current nursing practice environment provides a stimulating intellectual environment (4)	112	5.19	1.67
My current nursing practice environment promotes a high level of clinical competence on my unit (5)	112	5.36	1.50
Autonomy Mean	112	5.00	1.43

Role Conflict, (Rizzo, House, & Lirts=zman, 1970) (Scale 1-7)			
Role Conflict Scale			
In my organization, I am required to complete tasks differently than the way I believe they should be completed (1)	112	3.52	1.781
In my organization, I work with policies and procedures that are sometimes incompatible with each other (2)	112	3.88	1.781
In my organization, I am sometimes required to oppose a rule or policy in order to carry out an assignment (3)	112	3.51	1.801
In my organization, I receive assignments without the assistance I need to complete them (4)	112	3.90	1.830
In my organization, I receive contradictory requests from two or more people (5)	112	3.76	1.736
In my organization, I have to work under vague directions or orders (6)	112	3.59	1.758
In my organization, I receive assignments without adequate resources or materials to execute them (7)	112	3.82	1.937
In my organization, I work on many unnecessary things (8)	112	3.83	1.687
Role Conflict Mean	112	3.89	1.13

CBI, (Borritz et al., 2006) (Scale 1-5)	N	Mean	Standard Deviation
Personal Burnout Scale			
How often do you feel tired (1)	112	2.29	.801
How often are you physically exhausted (2)	112	2.67	.953
How often are you emotionally exhausted (3)	112	2.56	.857
How often do you feel work worn out (5)	112	2.61	.894
Personal Burnout Mean	112	2.54	0.77
Work Related Burnout Scale			
Do you feel worn out at the end of the working day (6)	112	2.25	0.954
Are you exhausted in the morning at the thought of another day at work (7)	112	2.98	1.107
Do you feel that every working hour is tiring for you (8)	112	3.37	1.022
Is your work emotionally exhausting (9)	112	2.54	0.929
Does your work frustrate you (10)	112	2.71	0.856
Do you feel burned out because of your work (11)	112	3.04	1.082
Work Related Burnout Mean	112	2.81	0.833
Patient Related Burnout Scale			
Do you find it hard to work with patients (12)	112	3.83	0.804
Does it drain your energy to work with patients (13)	112	3.68	0.951
Do you find it frustrating to work with patients (14)	112	3.69	0.891
Do you sometimes wonder how long you will be able to work with patients (15)	112	3.50	1.131
Are you tired of working with patients (17)	112	3.96	1.034
Patient Related Burnout Mean	112	3.73	0.81

JSS, (Spector, 1997) (Scale 1-5)	N	Mean	Standard Deviation
Supervision Scale			
My supervisor is quite competent in doing his/her job (1)	112	4.83	1.820
When I do a good job, I receive the recognition for it that I believe I should receive (2)	112	4.42	1.980
My supervisor is unfair to me *r* (7)	112	5.72	1.484
I do not feel that the work I do is appreciated (8)	112	4.62	1.842
My supervisor shows too little interest in the feeling of subordinates *r* (12)	112	4.84	1.929
I like my supervisor (18)	112	5.41	1.455
Supervision Mean	112	4.98	1.47
Work Conditions Scale			
Many of our rules and procedures make doing a good job difficult *r* (3)	112	3.98	1.786
I have too much to do at work *r* (14)	112	3.75	1.674
I have too much paperwork *r* (19)	112	3.23	1.729
Work Conditions Mean	112	3.65	1.41
Coworkers Scale			
I like the people I work with (4)	112	5.78	1.145
I enjoy my coworkers (15)	112	5.67	1.269
I feel a sense of pride in doing my job (17)	112	5.86	1.039
My job is enjoyable (22)	112	5.26	1.729
Coworkers Mean	112	5.64	0.98
Contingent Rewards Scale			
Communications seem good within my organization (6)	112	4.04	1.828
There are few rewards for those who work here *r* (13)	112	4.07	1.939
I don't feel my efforts are rewarded the way they should be *r* (20)	112	3.94	1.736
Contingent Rewards Mean	112	4.02	1.57

Communication Scale			
The goals of my organization are not clear to me *r* (11)	112	5.56	1.444
I often feel that I do not know what is going on with the organization *r* (16)	112	4.37	1.760
Communication Mean	112	4.96	1.48

Appendix N: Terms and Abbreviations

ACA:	Affordable Care Act
ACO:	Accountable Care Organization
AHA:	American Hospital Association
AHRQ:	Agency for Healthcare Quality and Research
CAP:	Community Acquired Pneumonia
CBI:	Copenhagen Burnout Index
CEO:	Chief Executive Officer
CFO:	Chief Financial Officer
CLABSI:	Central line-associated blood stream infection
CMS:	Centers for Medicare and Medicaid Services
CNO:	Chief Nursing Officer; see also DON
COO:	Chief Operating Officer
COPD:	Chronic Obstructive Pulmonary Disease
CPC:	Clinical Process of Care
DON:	Director of Nursing; see also CNO
DRG:	Diagnosis Related Group
EHR:	Electronic Health Record
FFS:	Fee For Service
HAP:	The Hospital and Healthsystem Association of Pennsylvania
HC:	Hospital Compare, Medicare
HCAHPS:	Hospital Consumer Assessment of Healthcare Providers and Systems
HCFA:	Healthcare Financing Agency (now CMS)
HRRP:	Hospital Readmissions Reduction Program
HVBP:	Hospital Value Based Purchasing
JSS:	Spector's Job Satisfaction Survey
MBI:	Maslach Burnout Index
NCLB:	No Child Left Behind
NQF:	National Quality Forum

OLS:	Ordinary Least Squares Regression
IPPS:	Inpatient Prospective Payment System
P4P:	Pay for Performance
PPV:	Pneumococcal Polysaccharide Vaccine
PSNA:	Pennsylvania State Nurses Association
PUMA:	Project on Burnout, Motivation, & Job Satisfaction
QR:	Quantile Regression
RN:	Registered Nurse
RWJF:	Robert Woods Johnson Foundation
SOP:	Standard Operating Procedure
TJC:	The Joint Commission
TPS:	Total Performance Scores
VBP:	Value Based Purchasing
WQI:	Work Quality Index