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William Ingram

*University of Central Florida*



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THE MODERATING EFFECT SHIFT WORK HAS ON SUPPORT, ENGAGEMENT,  
SATISFACTION, TURNOVER, AND SERVICE DELIVERY: AN EMPIRICAL ANALYSIS  
OF US HOTEL FRONT DESK PERSONNEL

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Rosen College of Hospitality Management  
at the University of Central Florida  
Orlando, Florida

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Major Professor: Kevin Murphy

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## **ABSTRACT**

Several industries require operations and services to be provided at all hours of the day. Many organizations have implemented a shift work system for scheduling purposes to meet the demand of their industry. While some research has been conducted on the effects of shift work on employees, overall, there is still much to be learned, especially in the hotel industry. Most hotel front desks in the United States operate 24 hours a day and therefore, have to staff employees for the morning, afternoon, and overnight shifts. Previous literature states that each shift starts and ends at different times of the day as well as the tasks for each shift may be different. These differences may cause a hotel front desk agent to perceive their role differently based on the shift they work. The primary objective of this study is to investigate if there are moderating effects caused by working different shifts at a hotel front desk on three prevalent relationships often examined utilizing hotel frontline employee samples.

Social support, employee engagement, job satisfaction, intention to quit, and quality service delivery willingness will all be examined in this research. A survey instrument was developed based on existing scales and distributed to hotels in the southeastern United States via paper and electronic methods. A total of 554 surveys were returned. Moderated multiple regression was conducted utilizing the Process tool in SPSS. Results indicated that the employees who worked the swing shift (both morning and afternoon shifts) were significantly different than front desk agents who worked the overnight shift. Most of the relationships tested were much weaker for the swing shift employees almost to the point that the relationship became non-existent. Implications, limitations, and future research will also be discussed.

To my wife, Erin, and my family who continued to support me through all of the ups and downs of this insane journey. I would have never realized my goals without your help.

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I would also like to thank my other dissertation committee members: Dr. Amy Gregory, Dr. Edwin Torres, and Dr. Lisa Young-Thomas. Dr. Gregory always took the time to really look at my work and provide me with detailed feedback. I felt after each of our conversations and interactions I learned more about research and the process. I would like to thank Dr. Torres for not only being a committee member but also allowing me to be his teaching assistant. Our conversations and work together were very beneficial to me and I hope they will continue as both our careers advance. I am extremely thankful to Dr. Young-Thomas for being my external committee member. I was blown away by the amount of effort she put into my development and I would highly recommend her as a mentor to all of my peers and future Ph.D. students.

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## **CHAPTER ONE: INTRODUCTION**

This chapter begins by providing a definition and background of shift work in hotel front offices and the unique job characteristics of various front desk shifts. Next, is an overview of popular concepts currently being studied utilizing samples of hotel front line employees. This chapter ends with support for investigation in to shift work since it is unclear whether the relationships between current concepts is moderated by the shift a front desk agent works. The problem statement, purpose of the study, and the significant contribution this study will add to the hospitality literature body of knowledge is also specified.

### **1.1 Background**

The vast majority of American lodging establishments remain open year round and are expected to provide their customers with services at all hours of the day. In order to meet the demands of providing uninterrupted services, hotels usually apply a “shift work” form of scheduling for the front office employees. While front office employees normally consist of all positions in a hotel front office such as front desk agents, night auditors, room controllers, bellmen, concierges, and valets, this study only focuses on front desk agents. The reason for focusing on just front desk agents is because differences in property characteristics can determine which positions will participate in the shift work system style of scheduling. An industry norm for hotel front office operations is to have at least one person scheduled at all times in this department and that person is a front desk agent. Larger and more upscale properties may schedule additional front office personnel such as bellman or concierge for the entire 24

hour period, but the bare minimum is one front desk agent (Kasavana & Brooks, 2009).

Therefore, only front desk agents are being examined in this study because some smaller and limited service properties do not staff concierge, bellmen, valet, and room controllers twenty-four hours a day.

Researchers often define shift work as “employment in which two or more groups of employees work at different times of a 17-hour or 24-hour time span, including a so-called day shift” (Finn, 1981, pg. 31). Shift work scheduling has been utilized in several industries such as police, fire, manufacturing, medical, and service industries due to the demands for goods and services (Hedges & Sekscenski, 1979).

United States hotel front desks operate a full day (24-hour time frame) and therefore utilize three groups of employees: a morning shift (7am-3pm), an afternoon shift (3pm-11pm), and the overnight shift (11pm-7am). The overnight shift can also be referred to as the third shift, graveyard shift, or night audit. According to interviews conducted with local hotel managers, the employees that work the overnight shift typically only work the overnight shift, whereas those employees scheduled for day or afternoon shifts may rotate back and forth through between those day and afternoon shifts, but rarely work the overnight shift (V. Johnson, personal communication, November 4, 2015; R. Mehta, personal communication, November 4, 2015; K. Karson, personal communication, November 18, 2015). The typical overnight shift time starts at approximately 11pm and ends at approximately 7am. The overnight shift staff can range from several employees to just one person depending on various characteristics of the hotel property (Vallen & Vallen, 2009). Smaller properties and limited services properties may only schedule one person for the entire hotel to work the overnight shift. Whether an individual is working

alone or with others on the overnight shift they are still working hours that are considered non-normal working hours which may have an effect on the individual's mind and health (Jamal, 2004).

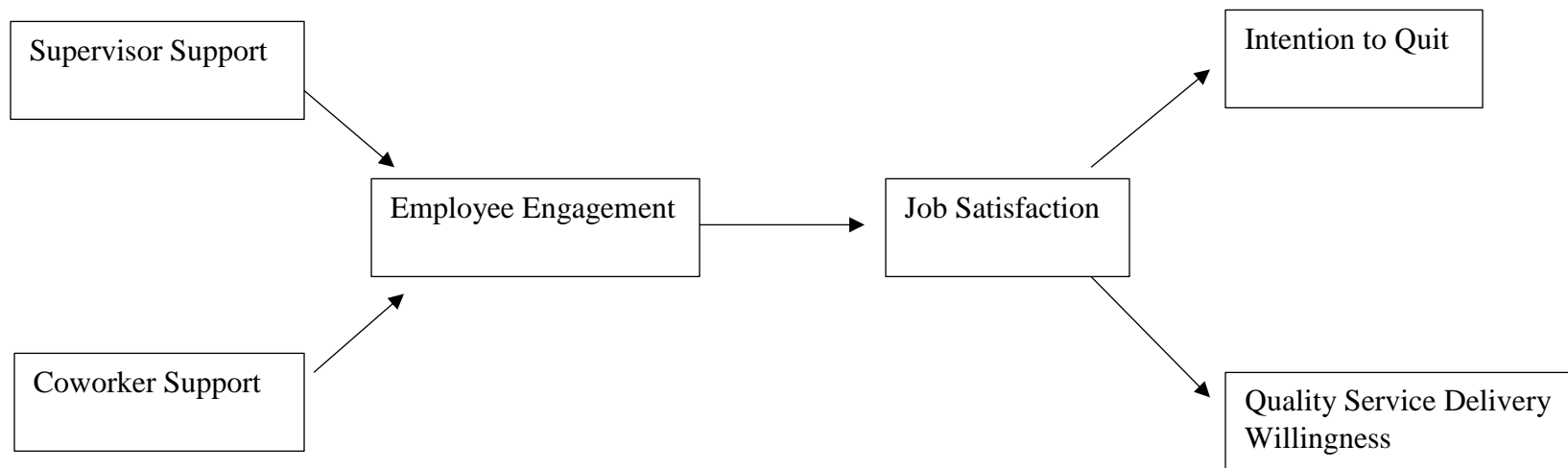
The human body's natural rhythm is to be awake during the day and to be asleep at night, so the question becomes who works the overnight shift and why do they do so. Research has indicated that employees of the overnight shift work that particular shift for both voluntary and involuntary reasons (Zimmerer, 1976). Those that chose to work the third shift voluntarily gave reasons such as they preferred to be off from work during the daylight hours, freedom and lack of pressure found on third shift due to absence of upper management, and could work full-time overnight and part-time during the day. Involuntary reasons given by individuals were it was part of the shift rotation between all staff, only employment the individual could find, the nature of the work only allowed for the job to be performed overnight, were taking classes only available during the day to further their education, and felt they needed to work a compatible shift with their spouse to obtain adequate income and/or for child care purposes. For whatever the reason an individual has chosen to work the overnight shift, there are effects to the individual and the organization. The mental and physical repercussions of working third shift have been shown to increase the employee's burnout level (Jamal, 2004) and lower job satisfaction (Finn, 1981). The job characteristic of working the overnight shift has also been shown to effect the employee's social life, work team, and health (Presser, 2003; Presser, 1995; Presser, 1989; Mott, Mann, McLoughlin, & Warwick, 1965; Staines & Pleck, 1983). To this point there has been very little research in hospitality that examines the impact of the shift an employee works on the relationships between these outcomes. It is important to determine if there are any differences

among shift workers in the hospitality industry because the results could further explain individual behaviors that may alter organizational outcomes.

### 1.2 Conceptual Model for Current Research

Shift work has yet to be studied as a possible moderating variable in several key relationships examined in hospitality research. Figure 1 depicts the overall conceptual model for this research with the main objective to examine key relationships for the presence of a shift work moderator. However, due to the amount of relationships being examined it is necessary for the overall conceptual model to be deconstructed into three separate investigations. Each separate investigation will test shift worked as a possible moderating variable. The first study focuses on the relationship between social support (social support and coworker support) and employee engagement. The second study focuses on employee engagement's relationship with job satisfaction. The final study focuses on the relationship between job satisfaction and intention to quit and quality service delivery willingness. An overview of each of the main concepts in this dissertation is provided first, followed by the problem statement and purpose of the study.





*Figure 1 Conceptual Model for All Concepts in Study*

### 1.3 Overview of Main Concepts in Study

#### 1.3.1 Social Support

Social support for an employee in the hospitality industry mostly comes from their supervisor and their coworkers. Both types have been studied and shown to have positive outcomes on the employee and the organization (Eisenberger et al., 2002; Susskind, Kacmar, & Borchgrevink, 2003; Karatepe, Keshavarz, & Nejati, 2010). There has also been evidence of a relationship between coworker support and employee engagement indicating that engaged employees have better relationships with their coworkers which in turn creates a better climate to serve the customers (Lee, 2012). However, it is not clear if the sample consisted of shift workers or standard day workers.

Supervisor support and coworker support are important concepts to study when investigating the influence of different shifts worked because the shift times can determine the amount of supervision and coworkers an employee will have on their shift. Vallen and Vallen (2009) stated the amount of employees scheduled to work the overnight shift will vary from property to property based on the property's characteristics. Third shift personnel may have different views of perceived co-worker support and supervisor support if they are scheduled to work the night shift by themselves or with a team.

Night auditors are another piece of the overnight shift workers which are responsible for closing out the end of day in the property management system as well as having additional accounting tasks to complete (Hayes, Ninemeier, & Miller, 2012). Closing out the end of day in the property management system means that the night auditor is telling the system that the day is over. In hotels, the end of the day may not necessarily mean midnight and really could be closer

to 3 or 4 am. This is because the closing of the day is the night auditor closing all revenue streams for the hotel which may include departments such as room service or a hotel bar (often open past midnight). When the system is closed for the day then the new day begins and this is often when the property management system will post room and tax to each guest folio. The night audit task is crucial for a hotel because the process makes sure to charge the guests properly for their stay.

Night auditors may be scheduled by themselves or with additional front desk agents (Kasavana & Brooks, 2009; Worcester, 1999). If the night auditor is scheduled by themselves, then they are to also act as the overnight front desk agent. It is also possible for a night auditor scheduled by themselves to act as the overnight manager on duty as well. Each of these different scheduling possibilities may influence the overnight employee's perception of co-worker support and supervisor support. These fluctuating support levels of front desk shifts combined with the time of the day some of these shift are have the ability to significantly influence an employee's level of engagement.

### 1.3.2 Employee Engagement

Employee engagement has been described as the antithesis of employee burnout and is composed of energy, involvement, and sense of efficacy (Maslach & Leiter, 1997; Kim, Shin, & Swanger, 2009). Job burnout's three sub-constructs, opposites of engagement's constructs, have been identified as emotional exhaustion, depersonalization, and diminished personal accomplishment (Maslach, 1998). Since 1990, employee engagement is a concept that has generated much discussion in organizational behavior, psychology, and business. Kahn (1990) defines engagement as "the harnessing of organization members' selves to their work roles; in

engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (pg. 694). Essentially, engagement refers to how involved an employee is in the job they are doing and the amount of effort they are exerting to complete their job tasks. Hotel employee’s performance and knowledge has been shown to increase customer satisfaction which in turn increases positive customer behaviors such as repeat purchase and positive word-of-mouth (Ali, 2015). Therefore, engagement is a critical concept to study in hotel front-line positions because these positions interact most often with guests who supply the revenue to the hotel organization. Another concept that can influence an organization’s level of customer service is their employee’s job satisfaction (Dipietro, Kline, & Nierop, 2014).

### 1.3.3 Job Satisfaction

Job satisfaction is one of the more prominent concepts studied in human resource literature (Yeh, 2013), and has been utilized in studies as both a predictor and outcome variable. Job satisfaction is defined as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating one’s job values” (Locke, 1969, p.317). There have been several empirical studies that have shown employee engagement has a significant and positive relationship with job satisfaction. Many of these studies have been conducted with frontline hotel employees.

Rigg, Day, and Adler (2013) sampled Jamaican hotel employees while studying the relationship between engagement and job satisfaction. Their results showed that work engagement did have a significantly positive relationship with job satisfaction. Similar results were found in a study of frontline Turkish hotel employees (Burke, Koyuncu, Fiksenbaum, and Tekin, 2013), frontline Romanian hotel employees (Karatepe and Karadas, 2015), and frontline

Taiwanese hotel employees (Yeh, 2013). Job satisfaction, utilized as a predictor variable, has also been shown to be negatively related to turnover intention which is an outcome variable (Uludag, Khan, & Guden, 2011). Previous research has shown that relationships between these concepts exist in hotel frontline employees but the extent to which a shift an employee works influences these relationships has not. Two theories will be included in this study to help predict why there will be a difference of influence on these relationships based on shift worked by the employee. The first theory is concerned with how the employee identifies with other coworkers and the hotel company.

#### 1.3.4 Social Identity Theory

Social Identity Theory (SIT) was developed by Tajfel (1959, 1969, 1982) with the idea that social groups had “in-groups” and “out-groups.” An individual of a social group would identify themselves as being part of the in-group or the out-group (Abrams & Hogg, 1990). When SIT was first developed by Tajfel the categorizations people used were based on social aspects such as racism, prejudice, and discrimination (Tajfel, 1963). However, SIT in today’s literature has expanded identifiable categories to almost any similarity or difference an individual can determine with another individual in the same group such as nationality, political affiliation, religious affiliation, gender, age, sports team, etc. (Hogg et al., 1995).

The current study will utilize social identity theory to predict the different levels of influence the shift worked has on the relationship between the social support concepts and employee engagement. SIT is relevant to this study because the way an individual identifies with the group members determines whether or not the individual will personally feel the successes and failures of the group (Ashforth & Mael, 1989). If the individual feels they are part of the

group then they perceive the fate of the group as their own fate. Due to the possibility of lack of social interactions a non-standard work shift employee would have with the other front office personnel would make it difficult for the shift working employee to identify with other front office employees, their supervisor, and their organization. Other sectors of the hospitality industry that utilize shift work systems, such as the gaming industry, have shown that shift work can lead the employee to social isolation due to the time of the shift they are working (Tiyce, Hing, Cairncross, & Breen, 2013). This lack of identity could influence the shift working employee's perception of the support they are receiving from their co-workers and supervisors. The different shift characteristics can alter an employee's level of social identification, but those characteristics may also distort an individual's perception of shift equivalence. The second theory utilized in this study is based on how an individual perceives equivalence in ratios compared to their coworkers.

### 1.3.5 Equity Theory

Equity Theory was first introduced by Adams (1963) and stems from the theory of cognitive dissonance. Equity theory is based on an individual and their perception of a ratio that consists of inputs and outputs. An individual will ask themselves two questions: "What do I receive for what I put in? and what do others receive for what they put in?" The individual will then assess the ratios and determine if they are equal or unequal. Adams introduced this theory in a business environment but has also been tested in many other areas such as economics, social psychology, and organizational behavior (Gilmore, 2001).

Adams (1965) later defined what would qualify for the ratios inputs and outputs. An input could be skill, effort, education, age, gender, etc. An output is what is received for the input

such as pay, respect, feedback, promotion, etc. The ratio is then compared to “other” which can be a co-worker, relative, neighbor, group, etc. Adams then performed four experiments and concluded six observations. The main points of his six observations were that an individual can be dissatisfied if they perceive an inequity, dissatisfaction can lead to the individual leaving their employment by quitting their job, transferring or increasing absenteeism, and an individual experiencing inequity may influence another individual to increase or decrease their input.

Equity theory is relevant in the context of this study because employees compare themselves to other employees and examine the ratio of inputs/outputs. The perceived results of this ratio examination may lead the employee to rectify the inequity of the ratio. Therefore, if a non-standard shift working employee perceives a negative inequity it is likely that they will have lower job satisfaction, higher intention to quit, and lower quality service delivery willingness.

While there is an abundance of academic literature on hotel front office employees, employee engagement, job satisfaction, and turnover intention, there are still many gaps yet to be filled regarding these specific shift work employees and concepts

#### 1.4 Problem Statement

The idea of shift work and overnight shifts can be found back as early as the 13<sup>th</sup> century when craftsmen complained that night work reduced their quality of work (Hedges & Sekscenski, 1979). Research examining the effects of shift work and the overnight shift have been around for decades but not widely studied. The studies that do exist are primarily focused on the manufacturing industry or the medical field such as nurses working in hospitals. When studies do mention the service sector, a large employer of shift workers, the research does not

separate out the hospitality employees from other industries and utilizes both afternoon and overnight employees in the studies. A recent search in a university library database (EBSCO) for hospitality shift workers resulted with only six relevant articles. One study examined workplace relationships, attitudes, and organizational justice in shift workers working in registered clubs but resulted in inconsistent findings in the relationship between types of justice and satisfaction and intention to quit (Chan & Jepsen, 2011). Another study found that chefs who had the highest stress levels in their study worked the night swing shifts and a combination of other various job characteristics (Chuang & Lei, 2011). Overall, there is a dearth of research regarding hospitality shift work employees and the effects of working different shifts may have on the employee's behaviors.

While many researchers have studied frontline employees, there is a scarcity in research investigating the influence working different shifts may have on frontline employee's behaviors. When researchers state that they have sampled frontline employees, it is unclear how many employees in that sample are from each shift, or whether workers from various shifts have been included at all. Different types of properties schedule different amounts of employees per shift with the overnight shift typically being the least amount of employees scheduled. Therefore, it is likely that samples of frontline employees under represent the third shift employees. Combining the dearth of research on the impact of working certain shifts and the possible lack of representation of third shift employees in most frontline employee samples, one may conclude that there is very likely a gap in knowledge about employees scheduled in shift work systems.

Another gap addressed in this study focuses on social identity theory and lack of identity a third shift employee may have with their team and organization. Due to the characteristics of



third shift work, social identity theory may be more applicable than it has been applied thus far in shift work research. Zimmerer (1976) states that a primary organizational problem is third shift employees generally have a feeling of not belonging to an organization because there are fewer employees working third shift and there is a lack of support from management. Significant accomplishments made by third shift employees are not recognized the same way that a day time employee accomplishments would be. Management seldom schedules company recreation programs or individual improvement training at a time that third shift employees may also take advantage of them. Zimmerer (1976) concludes that this lack of involvement may lead third shift employees to feel their work being performed is not really important and no reason to worry if the quality of work exceeds the standards. Good performance cannot be expected if the third shift employee feels like a member of the out-group or feels their work is not significantly contributing to the betterment of the organization.

One more gap in the literature surrounding front desk shift employees is the inclusion of equity theory and the perceptions of ratios between inputs and outputs. Working the afternoon and overnight shifts are not considered working normal hours and have adverse effects on a person's health and life. Working the overnight shift has been shown to lead to sleep deprivation, lower physical and mental well-being, and increase in work family conflict (Barnes-Farrell, Davies-Schriels, McGonagle, Walsh, Di Milia, Fischer, Hobbs, Kalitena, & Tepas, 2008). A unique aspect of these negative effects caused by working non-standard shifts is that organizations try to compensate employees working the overnight shift by offering them a pay differential (King & Williams, 1985; Kostiuk, 1990). This research will utilize equity theory to predict the moderating effects of different working shifts on the relationship between job

satisfaction and intention to quit. The purpose of this research was determined by identifying the gaps in literature surrounding shift work.

### 1.5 Purpose of Research

The primary objective of this study is to investigate if there are moderating effects caused by working different shifts at a hotel front desk on three prevalent relationships often examined utilizing hotel frontline employee samples. These three relationships were also chosen because the differing job characteristics for each shift may also increase or decrease the perception of these concepts. Based on extensive, existing literature, the first relationship examined is between the two social support variables and employee engagement. The second relationship tested is between employee engagement and job satisfaction. The last relationship being tested is between job satisfaction and intention to quit and quality service delivery willingness. The objective of this research has led to the development of the following research questions:

### 1.6 Research Questions

R1: Does the shift a front desk employee works moderate the relationship between social support and employee engagement?

R2: Does the shift a front desk employee works moderate the relationship between employee engagement and job satisfaction?

R3: Does the shift a front desk employee works moderate the relationship between job satisfaction and intention to quit and quality service delivery willingness?

### 1.7 Significance of Research

It is expected that the results of this study will offer significant findings that will help to explain certain gaps in the shift work, engagement, support, social identity theory, and equity theory literature. The differences shift work may cause in relationships between varying employee behavior and attitude concepts may offer significant implications for hospitality organizations. Specifically, the third shift personnel are important to study because they make up one third of the teams assigned to cover the front desk operation throughout the day. Finding someone to voluntarily work the overnight shift can be difficult and trying to retain overnight employees can be even more difficult (Vallen & Vallen, 2009). The consistency of the abnormal shift time and the inconsistency of the overnight shift job responsibilities and characteristics from property to property may also influence the turnover rate in the overnight shift (Woods, Ninemeier, Hayes, & Austin, 2007). The results of this study will help industry professionals better retain their overnight employees and ensure their continued satisfaction with their role and organization. The results should also offer insight to the differences between day and afternoon shift employees.

Given the uncertainty of the distribution of third shift employees in existing research, as well as specific researched focused on this segment of employees, this research may act as a foundation from which further research on hospitality shift work employees can occur.

## **CHAPTER TWO: LITERATURE REVIEW**

This chapter begins by providing an in depth background of shift work followed by the literature for each relationship being examined. The study itself can be seen as three smaller investigations that are related through common concepts. Each smaller study will first review the concepts being examined, applicable theory, literature regarding how shift work influences the concepts, and finally the general business and hotel specific literature on the relationship between the concepts. Since shift work is the moderating variable being tested in each relationship, the literature review will start with this topic.

### **2.1 Shift Work**

The shift work system is a common scheduling practice in many organizations and industries that require individuals to work outside of normal work hours. Normal working hours are defined as a start time of 7am to 9am with an ending shift time of 4pm to 6pm (Root & Wooten, 2008). Organizations and industries that typically utilize the shift work system are those that consist of operating hours outside of the normal working hours such as the manufacturing industry, healthcare industry, and the hospitality industry to name a few (Selvi, Karakas, & Boysan, 2015).

The shift work system does not always mean there are shifts covering the full 24 hours in a day. Shift work can also be considered as only have two shifts such as a morning and afternoon shift. There can also be only two shifts which do cover the 24 hour period and is often seen in hospitals with nurses being scheduled 12 hour shifts (Carney, 2012). The present research is focused on the hospitality industry, specifically the front desk operations, and in this context shift

work does contain three shifts. Those three shifts are the morning (7am-3pm), afternoon (3pm-11pm), and the overnight shift (11pm-7am). Front desk agents are often scheduled for an eight hour shift.

Differences between shift workers has been well documented in academic research outside of the hospitality industry. Some of the differences between shift workers that have been discovered are attention deficits (Selvi et al., 2015), sleep patterns (Parkes, 2015; Oexman, Knotts, & Cook, 2002; Khaleque, 1989), health habits (Kivimaki, Kuisma, Virtanen, & Elovainio, 2001), quality of life (Ferreira, 1988; Khaleque, 1989), family and social life conflicts (Khaleque, 1989), anxiety and depression levels (Thun, Bjorvatn, Torsheim, Moen, Mageroy, & Pallesen, 2014), and absentee rates (Dionne & Dostie, 2007). Other differences between shift workers have been found in their perception of social support, levels of employee engagement, job satisfaction, turnover intention, and productivity and performance. These are the concepts being investigated in the current study and those findings will be discussed in more detail throughout the literature review.

Differences in shift workers may be attributed to the different characteristics of each shift. In the hotel front desk setting there are many differences between the morning, afternoon, and overnight shifts such as amount of coworkers, level of supervision, and time of the shifts (Kasavana & Brooks, 2009). The combination of previous literature and shift characteristic differences led the researcher to posit that the shift worked by an employee at a hotel front desk could influence the strength of the relationship between certain concepts starting with social support and employee engagement.

*(Study 1)*

## 2.2 Social Support

Social support can be viewed as when an individual perceives they experience supportive social relationships at work with others (Wiesenfeld, Raghuram, & Garud, 2001). “Others” at work can be defined as dyadic partners or groups the individual interacts with. “Social support also captures the perceived level of help or backing available for work-related difficulty, and its source can be from coworkers or supervisors” (Owens, Baker, Sumpter, & Cameron, 2016, pg. 38). The variations in staffing levels in hotel front offices means that a front desk agent’s interactions with coworkers and supervisors will vary based on the shift the individual works. The present research will examine two types of social support that may fluctuate based on shift worked by the employee.

### 2.2.1 Supervisor Support

Supervisor support and co-worker support will be the two types of support examined in this study. Eisenberger et al. (2002) state that “employees develop global beliefs concerning the extent to which the organization values their contributions and cares about their well-being” (pg. 565). This belief is called perceived organizational support. The authors further explain that employees not only develop these views about their organization but also about their supervisors. This is called perceived supervisor support and is defined as “general views concerning the degree to which supervisors value their contributions and care about their well-being” (pg. 565).

Many studies have examined the perceived organizational support with perceived supervisor support and have found a significant and positive relationship (Rhoades, Eisenberger,

& Armeli, 2001; Yoon, Han, & Seo, 1996; Yoon & Lim, 1999; Yoon & Thye, 2000). However, Eisenberger et al. (2002) decided to examine perceived supervisor support as the independent criterion instead of perceived organizational support. In three separate studies, the authors found that perceived supervisor support was actually a contributor to perceived organizational support and employee retention. Therefore, this study focuses on perceived supervisor support and not perceived organizational support. Third shift front desk agents role and management interaction vary more than day working agents which is another reason to focus on perceived supervisor support. Third shift scheduling does not just change management interactions but may also change the interaction time with coworkers if even given any at all. Eisenberger et al. (2002) study utilized retail workers which in some cases may work in a shift work system, however, the authors did not address this in their study so the present research investigates shift work's influence on perceived supervisor support relationship with employee engagement.

#### 2.2.2. Coworker support

Coworker support is the second type of support that will be examined in this study. Coworker support is defined as “the extent to which employees believe their coworkers provide them with work-related assistance to aid them in carrying out their service-related duties” (Susskind, Kacmar, & Borchgrevink, 2003, pg. 181). While it is important to define coworker support, it is equally important to define what constitutes a coworker in this research. Coworkers in this study are defined as the employee's peers who are members of the same department, in this case the front office. A coworker may be scheduled at the same time as the employee or another shift but still in a role that requires the employee to perform front desk agent tasks. The coworker must also be on the same level in the properties organizational hierarchy.

Previous research on support in service-based organizations determined that support did come from two main sources: supervisors and coworkers (Susskind et al., 2003; Susskind, Borchgrevink, & Kacmar, 2000). Coworkers of line-level employees and their supervisors play distinctly separate support roles, but both are essential to the employee (Susskind, Kacmar, & Borchgrevink, 2007). This study will follow this previous research stream and measure separately supervisor support and coworker support. The perception of support level may vary between shifts and cause the employee to feel more included or excluded within the department and organization. The feeling of being included and part of the team is the premise for social identity theory and why this is also included in the research.

### 2.3 Social Identity Theory

Tajfel (1978) stated “the problems of an individual’s self-definition in social context can be restated in terms of the notion of a social identity. We need to postulate that, at least in our kinds of societies, an individual strives to achieve a satisfactory concept or image of himself” (pg. 61). Social identity is defined as “the part of an individual’s self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership” (Tajfel, 1978, pg. 63). The main premise of social identity theory is that individuals have a clear desire for and are driven by the need to achieve and maintain a positive self-image (Ashforth & Mael, 1989). The theory also asserts that individuals develop their perception of their identity mainly through comparisons of others in their social groups. While the theory does recognize and encompass both individual and collective identities, its particular focus is on the individual’s identity developed by group



memberships (Wilkins, 2007). An individual's self-definition and self-image can be positively or negatively influenced based on memberships in various social groups (Ashforth & Mael, 1989).

Groups that individuals may feel they are a part of are not limited to any size specifications. In the context of this study, a group an employee identifies with may be the department the employee works in or the entire hotel. Organizational identification is another form of identity under the umbrella of social identity theory. Organizational identification is defined as "the degree to which an individual incorporates the attributes, characteristics, and motives of the organization into his/her self-concept" (Griepentrog et al., 2012, pg. 729). When individuals feel more connected to an organization through organizational identification, they will want to be with the organization for the long-term and therefore less likely to voluntarily quit their job (Griepentrog et al., 2012).

Tajfel and Turner (1986) state that social identity theory maintains the individual first must define groups for themselves by identifying common characteristics they associate with the group. When an individual starts to identify with a group then they mimic or reinforce these common group characteristics as their own (Ashforth & Mael, 1989). The individual's perception of group membership may be an influential force in how an individual determines their self-concept, perceives their group and organization, and make decisions (Terry & Hogg, 2001). This study postulates that an employee's social identification with the department and organization will vary based on the shift the front desk agent works because of the differences in amount of employees the participant works with and also the scheduled shift time impact on the participants ability to participate in organizational activities. The number of coworkers and shift time should vary enough that the shift worked causes a moderating effect between the social

support variables' relationship with the employee's level of engagement. Therefore, employee engagement is an integral component of the study.

## 2.4 Employee Engagement

Academic researchers have identified three main conceptualizations of employee engagement (Lee, 2012; Kang, 2014). The first conceptualization began with Kahn's (1990) work which provided the foundation of personal engagement and disengagement. Again, Kahn (1990) defined personal engagement as "the harnessing of organization members' selves to their roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance" (pg. 694). Disengagement was defined as "the uncoupling of selves from work roles" (Kahn, 1990, pg. 694). One of the key aspects about Kahn's (1990) work that is important to this study is that disengaged employees are thought to become emotionally detached from co-workers and managers and inattentive to the job which could have impacts on perception of support and quality service delivery willingness.

Still in the realm of the first conceptualization of engagement, Rothbard (2001) expanded upon Kahn's (1990) work and developed engagement further. Rothbard's (2001) main contribution to the engagement discussion was adding two new components: attention and absorption. Attention was defined as "the cognitive availability and the amount of time one spends thinking about a role" and absorption was defined as "being engrossed in a role and refers to the intensity of one's focus on a role" (pg. 656). Employee engagement is seen as a psychological presence in a role with additional components of attention and absorption (Bakker & Schaufeli, 2008; Saks, 2006; Lee, 2012; Kang, 2014).

The second conceptualization came from the researchers studying burnout who identified the engagement dimensions as the positive antipodes of the three burnout dimensions: exhaustion, cynicism, and sense of inefficacy (Maslach & Leiter, 1997; Maslach, Schaufeli, & Leiter, 2001; Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006; Shuck & Wollard, 2010; Lee, 2012; Kang, 2014). Engagement dimensions were then defined as energy, involvement, and self-efficacy (Maslach & Leiter, 1997). Leiter & Bakker (2010) defined this conceptualization of engagement as “a positive, fulfilling, affective-motivational state of work-related well-being that can be seen as the antipode of job burnout” (pg.1). Utilizing the Maslach Burnout Index, a popular scale to measure burnout, it was presumed that low scores on this index would correspond to high levels of engagement within the employee (Maslach et al., 2001). However, there has been recent discussion as to whether one scale can really measure two opposite constructs (Schaufeli & Bakker, 2004; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Therefore, a third conceptualization of employee engagement emerged.

The third conceptualization defined engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, et al., 2002, pg. 74). In a way, Schaufeli et al. (2002) combined pieces of the first and second conceptualizations to form this new conceptualization. Vigor, defined as “high levels of energy and mental resilience while working, the willingness to invest effort in one’s work, and persistence even in the face of difficulties,” can be viewed as the opposite of the burnout component exhaustion (Schaufeli et al., 2002, pg. 74). Dedication, the second component in the third conceptualization, is defined as “a sense of significance, enthusiasm, inspiration, pride, and challenge” (pg. 74). Dedication is the opposite of the burnout component cynicism. This new

conceptualization of engagement is different with the third component being absorption and not the opposite of the third burnout component, sense of inefficacy. Rothbard (2001) introduced absorption to the engagement literature by expanding upon Kahn's (1990) work. Schaufeli et al. (2002) defined absorption as "being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work" (pg. 75). Therefore, engagement as a whole was looked at as more than a brief thought or state of mind, but rather an active cognitive state that is focused on the entire work role. Engaged employees are energetic, and identify with and become more involved with their work (Schaufeli & Bakker, 2010, Kang, 2014). One important distinction made by the researchers who developed and defined the third conceptualization is that they acknowledge that engagement is the positive opposite of burnout but operates as an independent state of mind and cannot be measured properly utilizing the Maslach Burnout Index. This is an important distinction for this study and led to the adoption of this conceptualization of engagement.

This dissertation utilizes the third conceptualization and definition of engagement, "a positive, fulfilling, work related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli et al., 2002, pg. 74). The main reason for utilizing this conceptualization is because this definition recognizes the relationship between burnout and engagement but asserts that these are two independent states of mind. As this study is not examining burnout at all and only focusing on engagement it follows that the study should adopt this definition. Kahn's (1990) conceptualization was not chosen for this research because Kahn never operationalized engagement into an index even though his work did lead to further studies on engagement. Another reason for utilizing this definition is that the measurement scale (Utrecht

Work Engagement Scale) being used was developed by Schaufeli et al. (2001) who operationalized the scale from their definition. Their scale is cited and used more frequently in modern engagement research (Bakker & Schaufeli, 2008; Koyuncu, Burke, & Fiksenbaum, 2006). The last reason for utilization is because their conceptualization clearly states that this is a continuous cognitive state that employees are to feel energized and involved in their work which may be more difficult for one of the groups within this study's sample of employees who primarily work the overnight shift. Previous research on the relationship between social support and employee engagement will now be reviewed to determine the gaps in existing literature and aid in hypotheses development.

## 2.5 Relationship between Social Support and Engagement

### 2.5.1 Shift work differences in support

There have been only a small number of articles that have examined how differences in perceptions of supervisor support and coworker support may be impacted by the shift worked by the employee. Carney (2015) recently conducted a study on nurses working the night shift in hospitals in the Midwest part of the United States. Some of their conclusions mimicked previous study findings such as the night shift nurses had poor sleep patterns and had to attend meetings during their normal sleep time. More importantly for the purposes of this study, their results found that two-thirds of the participants answered that their supervisor never worked the same shift as they did. Twenty-five percent of the participants stated that it had been at least one year since they last saw their supervisor. Other interesting findings in this study are direct quotes from the participants indicating that they did not feel like they were part of the organization or even

cared about. Some of the quotes were “I’ve always felt like a second-class citizen,” “Celebrations are scheduled for day shift and we get the leftovers, we go home feeling less valued,” and “All awards are given during department meetings during the day, and all awards are given to day-shift people.” These quotes clearly show that the lack of support from their supervisors leads the employee to feel less like part of the organization.

Bohle and Tilley (1998) also examined nurses in shift work systems and found that the longer an employee worked in a shift work system the higher their dissatisfaction with the job grew. Social support from coworkers was found to be a significant predictor of the employee’s level of dissatisfaction. The night shift employee indicated that they frequently felt lonelier than the day shift employees while at work, but they also stated the night shift was friendlier. The results seem almost contradictory and need to be examined further in the current study, especially because the property type can dictate how many individuals are scheduled for each shift.

Another study investigated shift workers in an auto parts plant which only utilized two shifts but not an overnight shift. Root and Wooten (2008) utilized a qualitative research design by interviewing and observing auto plant workers. Their findings indicated that the afternoon employees relied on their supervisors and coworkers to cover for them so they could attend social and family activities. These activities were important to the afternoon shift workers and would not have been able to attend them with the support of their supervisors and coworkers. One employee even stated that when a supervisor would not help them out they would have to figure out another way to get out of work such as lying about a situation outside of work so they would not have to go back to work. This study showed that the afternoon shift workers really

rely on the support of their supervisor and coworkers and without it may cause the employee to make choices that affect the organization. Research has also shown that there is a difference in shift workers based on their engagement.

### 2.5.2 Shift work differences in employee engagement

Burnout and engagement lie at the opposite ends of each other on a continuum. Even though they are measured differently in some studies, the two concepts can be viewed as the antithesis of the other (Maslach & Leiter, 1997). Results of studies examining burnout may aid researchers studying engagement. Therefore, studies that have found differences in shift workers based on burnout components should be reviewed and included in the literature review. One such study examined shift work effects on burnout utilizing a sample of casino workers in Macau (Chan, Wan, & Kuok, 2015). Their results were inconsistent with another study's results that indicated shift work was significantly different on the three components of burnout (Ozyurt et al., 2006). However, Chan et al.'s (2015) data did show significant differences on the burnout component of depersonalization. While there was not a statistically significant difference on the burnout component exhaustion, the shift workers mean was still higher than those of non-shift workers.

Similar results of Chan et al. (2015) study were found in a study of Greek sport center employees (Koustelios, 2001). In studying all three components of burnout, the results indicated that there was only a significant difference in shift workers based on the component depersonalization. Depersonalization is defined as the impersonal feeling or reaction toward the service receivers (Maslach & Jackson, 1986). This is an important finding for the current study

because the sample consists of those working directly with the customers and it is imperative that they look engaged during customer interactions in order to provide proper customer service.

Wittmer and James (2010) examined the effect of shift on emotional exhaustion, a component of burnout, utilizing a sample of postal employees. The results showed that there was a significant difference in level of exhaustion based on shift worked. The night shift was significantly different than the day and afternoon shifts. This result was seen in other studies as well where three shifts are examined and only the overnight shift is significantly different from the other two shifts. One of the reasons that this may happen is because the third shift varies much more than the other two shifts in terms of job characteristics.

#### 2.5.3 Hotel shift job characteristics that may affect support and engagement

There are three main characteristics that are different for those working the overnight shift than those on a day or afternoon shift at a hotel front desk. The first is the amount of employees that are scheduled to work the overnight shift (Vallen & Vallen, 2009). Depending on the size of the property or property service type, there may only be one employee scheduled or several for the front desk. Smaller properties and limited service properties will likely have less employees scheduled. If an employee were to be scheduled by themselves then this may cause them to have a unique perception of coworker support as they would interact very little with their defined coworkers.

The second difference is the amount of supervision the overnight shift has during their shift (Kasavana and Brooks, 2009). Larger properties and full service properties will typically have an overnight manager scheduled or at least additional front desk agents reporting to a night auditor. The night auditor may also act as the manager on duty for the overnight shift. If a front



desk agent is scheduled by themselves then they may be the front desk agent, the night auditor, and the manager on duty. Therefore, the perception of supervisor support will be influenced by the shift the employee works because a day time front desk agent would not be acting as the manager on duty at the same time they are working as a front desk agent.

The last main difference in shifts is the time the shift occurs. Previous research has shown that working the overnight shift is contradictory to a person's natural circadian rhythm (Finn, 1981). Sleep deprivation is another common effect seen by those that work the overnight shift. Sleep deprivation can lead a person to feeling tired and therefore affect the employee's level of engagement. The articles reviewed have shown that shift work can significantly affect the levels of support and engagement and each shift has its own specific characteristics. However, exactly which characteristics cause the most influence on the relationship is beyond the scope of this study. Therefore, only shift worked is examined as a moderator in the model. There will now be a review of general and hotel literature on the relationship between support and employee engagement.

#### 2.5.4 Business research on relationship between support and engagement

There has been an abundance of research investigating the relationship between support and employee engagement in both general business and hospitality academic literature. Some articles have determined that perceived supervisor support is significantly and positively related to employee engagement. The samples utilized in these studies were healthcare and telecom workers (Jose & Mampilly, 2015), soft-ware programmers (Pati & Kumar, 2010), grocery store employees (Cantor, Morrow, & Blackhurst, 2015), and general business employees who attend meetings regularly (Yoerger, Crowe, & Allen, 2015) to just name a few. However, there have

been conflicting results in other studies which will be discussed in the hospitality literature section regarding this relationship.

Coworker support relationship with employee engagement is also be examined in this model. Coworker support is often operationalized as a form of social support, like supervisor support, and is considered a job resource. Llorens, Bakker, Schaufeli, & Salanova (2006) stated that job resources are an important component of employee engagement. Much like the inconsistent findings of supervisor support's relationship with employee engagement, the same is found in the relationship between coworker support and employee engagement. Schaufeli and Bakker (2004) and Schaufeli, Taris, and Van Rhenen (2008) found a significant relationship between coworker support and employee engagement sampling Dutch employees. However, in Schaufeli et al. (2008) study, coworker support only had a significant relationship with two of three components of engagement and not the component absorption. In a study utilizing flight attendants, who often work long shifts and sometimes overnight, Xanthopoulou et al. (2008) also found that coworker support was significantly related to employee engagement. Contradicting these findings is a study conducted on Norwegian police officers, also shift workers, and found coworker support had no significant relationship to employee engagement (Richardsen, Burke, Martinussen, 2007). Inconsistent findings indicate a need for more research regarding shift work employees and the relationship between support and engagement.

#### 2.5.5 Hotel research on relationship between support and engagement

One study utilizing a sample of frontline hotel workers did not find support for the relationship between supervisor support and employee engagement (Karatepe & Olugbade, 2009). In the study conducted by Karatepe and Olugbade (2009), the authors acknowledged that

there had been conflicting results regarding the relationship between supervisor support and employee engagement. However, they also noted that “the weight of the evidence suggests that supervisor support is an important job resource influencing work engagement” (pg. 506). Therefore, their study hypothesized that supervisor support would have a significantly positive relationship with engagement, however, their results failed to yield significance. This is important because their study utilized a sample of frontline hotel employees and the present study also utilizes frontline hotel employees. There is enough research to indicate that the researcher should still hypothesize a significantly positive relationship between supervisor support and employee engagement. With inconsistent results it is plausible that there may be moderating factors that have been overlooked in the previous studies. This study utilizes the shift an employee worked as a possible moderating variable in this relationship.

Karatepe, Keshavarz, and Nejati (2010) state that in a work environment where frontline hotel employees receive high levels of coworker support the employee may feel energetic, dedicated, and immersed in their work, which is engagement. For the same reasons in the hypothesis development for supervisor support and employee engagement, this study predicts that coworker support has a significantly positive relationship with employee engagement. Based on the previous literature regarding these concepts, the following hypotheses are proposed:

#### 2.5.6 Hypotheses 1 and 2, Model 1

H1a: The shift worked by the employee moderates the relationship between supervisor support and employee engagement vigor concept in hotel front desk agents.

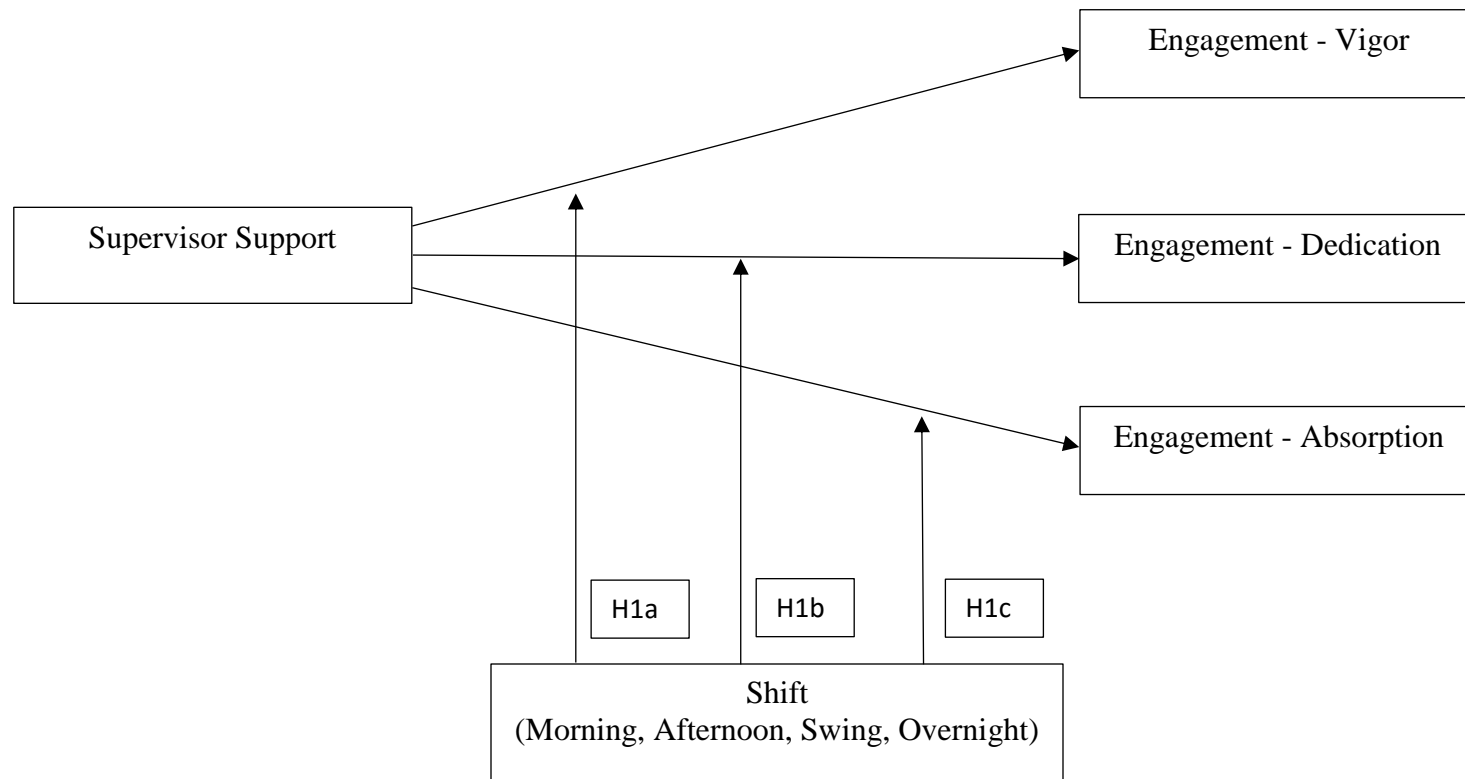
H1b: The shift worked by the employee moderates the relationship between supervisor support and employee engagement dedication concept in hotel front desk agents.

H1c: The shift worked by the employee moderates the relationship between supervisor support and employee engagement absorption concept in hotel front desk agents.

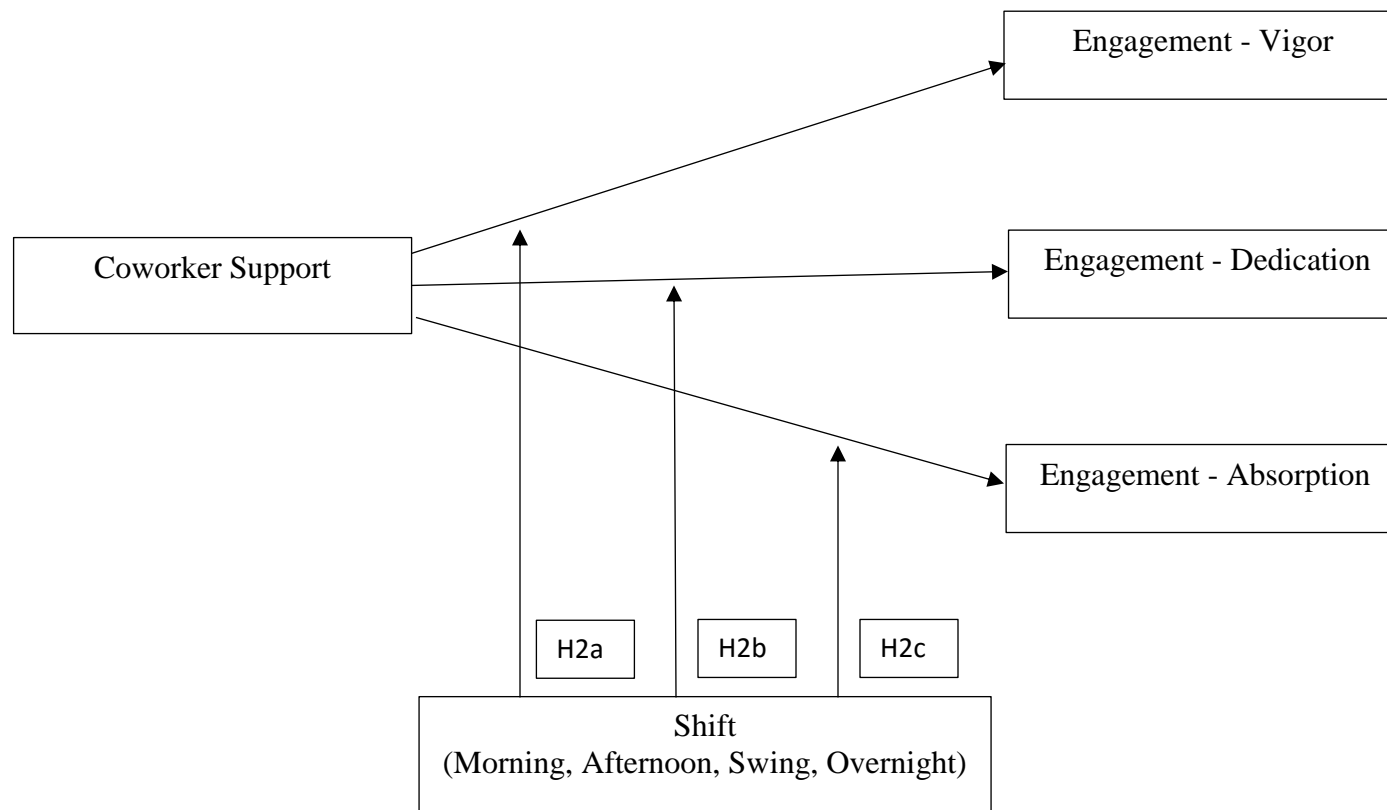
H2a: The shift worked by the employee moderates the relationship between coworker support and employee engagement vigor concept in hotel front desk agents.

H2b: The shift worked by the employee moderates the relationship between coworker support and employee engagement dedication concept in hotel front desk agents.

H2c: The shift worked by the employee moderates the relationship between coworker support and employee engagement absorption concept in hotel front desk agents.



*Figure 2 Model of Supervisor Support Relationship with Employee Engagement Moderated by Shift Work*



*Figure 3 Model of Coworker Support Relationship with Employee Engagement Moderated by Shift Work*

(Study 2)

## 2.6 Employee Engagement

Employee engagement was discussed extensively in the previous section and therefore only a brief summary will be provided here followed by a literature review for job satisfaction. Engagement is defined as “the harnessing of organization members’ selves to their roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performance” (Kahn, 1990, pg. 694). The antecedents and consequences of employee engagement have been widely studied in academic literature (Rich, Lepine, & Crawford, 2010; Shuck, Reio, & Rocco, 2011; Menguc, Auh, Fisher, & Haddad, 2013; Rasheed, Khan, & Ramzan, 2013; Burke et al., 2013; Wollard & Shuck, 2011; Wang, Hinrichs, Prieto, & Howell, 2013; Saks, 2006). This dissertation intends on examining the moderating effect of shift work on the relationships between employee engagement and its antecedents and consequences.

The previous model investigated the relationship between employee engagement and two antecedents: supervisor support and coworker support. This next section examines the relationship between employee engagement and a known consequence of engagement, job satisfaction. This relationship is specifically tested for a moderating effect by the shift work variable. Understanding job satisfaction and the influential concepts connected to it are important for all organizations to understand because of its powerful ability to alter employee and organizational outcomes.

## 2.7 Job Satisfaction

Organizations and researchers who study them have developed a deep interest in the topic of job satisfaction (Lu, While, & Barriball, 2005). Job satisfaction is often studied in organizational behavior research and utilized as a central variable in research ranging from job design to supervision (Spector, 1997). Locke (1969) defined job satisfaction as “the pleasurable emotional state resulting from the appraisal of one’s job as achieving or facilitating one’s job values” (pg. 317). While there have been many seminal researchers studying job satisfaction, Locke’s (1969) definition of job satisfaction is most appropriate for this study. Other researchers, such as Schneider (1976), state that job satisfaction results entirely from organizational conditions and not pre-existing expectations an individual may have about their job. Locke (1976) argues against this notion and insists that job satisfaction is the result of an interaction between the employee and the job situation. In this study, the employee’s perceptions are being examined as well as the unique traits of working varying shifts which is part of the job situation. Therefore, Locke’s view (1969, 1976) of job satisfaction is adopted for this study. Job satisfaction has been widely studied in various industries and shown to have significant relationships with other meaningful variables that can impact hospitality organizations.

When hospitality employees experience low levels of job satisfaction, their desire to improve their personal and business performance is reduced which may result in providing poor quality customer service (McPhail et al., 2015). Service employees with lower job satisfaction may result in negative outcomes such as lower competitiveness and poor performance due to higher turnover rate in dissatisfied employees (Bernhart, Donthu, & Kennett, 2000; Meng & Han, 2014; Roushdy, 2012; Wangenheim, Evanschitzky, Wunderlich, 2007). Job satisfaction’s



significant influence on key organizational variables make it a critical concept to fully understand as both a predictor and an outcome variable. This section of the dissertation focuses on job satisfaction as an outcome variable of employee engagement. Previous research on shift work's influence on the relationship between employee engagement and job satisfaction will now be reviewed to identify gaps in the literature and develop hypotheses for examination.

## 2.8 Relationship between Employee Engagement and Job Satisfaction

### 2.8.1 Shift work differences in engagement

Similar to the most recent section on employee engagement, much of the literature consisting of an employee's shift influence on their engagement levels has already been discussed so a brief summary will be provided followed by a discussion on employee's shift influence in their job satisfaction levels. The research on an employee's shift influence on the employee's level of engagement was primarily conducted on engagement's antithesis, burnout. Chan et al. (2015) and Koustelios (2001) found that shift work did have a significant difference based on the burnout component depersonalization. Wittmer and James (2010) study found that shift work did cause significant differences in the burnout component, emotional exhaustion, and that the overnight shift rated exhaustion much higher than the day shift counterparts. These are important findings for this section of the dissertation because engagement is now being investigated as a predictor of job satisfaction. Shift work literature has also shown that shifts can cause a difference in levels of job satisfaction.

### 2.8.2 Shift work difference in job satisfaction

Zimmerer (1976) stated that there are both voluntary and involuntary reasons an individual chooses to work the overnight shift. This premise can really be applied for any individual working in any type of a shift work system. Individuals who are working the shift and position they want are likely going to be more satisfied with their current role than someone who is working a shift they do not want to work. Barton and Folkard (1991) surveyed nurses working both day and night shifts in a psychiatric hospital. Their results indicated that there were statistically significant differences between the two shifts surveyed. However, the differences were not as expected such as day time nurses reported having more domestic problems than night shift nurses. Female nurses on the day shift also reported more dissatisfaction with their free time than the night nurses. Night employees were more stressed than day time nurses and there was a significant interaction effect with age indicating that younger nurses were more stressed. Other interesting results from this study were there was no significant difference between shift satisfaction and only the temporary workers from the sample reported sleep pattern problems. Overall, it appears that if the nurses were working a consistent schedule and it was the schedule they wanted to work then there were no issues with their job satisfaction.

Guimaraes, Pessa, and Biguelini (2012) concluded similar results as the previous study. Their study showed that employees who were working the shifts that matched up with their chronotype were more satisfied than those who were not. A person's chronotype in its simplest form is whether or not the individual is a morning person or a night person. Essentially, if a morning person is working an evening shift or a night person is working a morning shift then they are going to be less satisfied with their role. This has a strong implication for making sure

the supervisor is recruiting the right individual and scheduling them according to their preference. Zedeck, Jackson, and Summers (1983) also found similar results indicating that individuals working the shift time they wanted to work were more satisfied than those that were not. The results of these studies indicate that there are differences in satisfaction levels based on the shift a person works and is strongly influenced on why that individual is working that particular shift. The characteristics of the job may be reasons why an employee wants to work a specific shift because they know they fit better with those certain characteristics which will increase their job satisfaction.

### 2.8.3 Business research on relationship between employee engagement and job satisfaction

This dissertation examines the impact employee engagement has on the outcome variable, job satisfaction. Previous studies in the general business segment have conducted many studies on this relationship. Karanika-Murray, Duncan, Pontes, & Griffiths (2015) examined engagement as a mediator variable between organizational identification and job satisfaction. Their results indicated that engagement did mediate the relationship which meant that engagement was positively and significantly related to job satisfaction. Garg (2015) found the same results, employee engagement is significantly and positively related to job satisfaction, utilizing a sample of multiple industries such as banking, insurance, textile, and sugar. In a hospitality industry study, Cheema, Akram, and Javed (2015) investigated this relationship with restaurant employees. Their results were the same as the previous studies with employee engagement being positively and significantly related to job satisfaction. Within the hospitality industry, there have been several studies that investigated this relationship with a hotel sample.

#### 2.8.4 Hotel research on relationship between employee engagement and job satisfaction

Many studies conducted in the hotel sector have shown that employee engagement is a significant predictor of job satisfaction (Lee et al., 2014; Yeh, 2013, Rigg et al., 2013; Burke et al., 2013; Karatepe & Karadas, 2015). The studies all had similar results but the samples varied a little or were surveyed in various parts of the world. It is also important to note that employee engagements relationship with job satisfaction might have not been the main focus of their study. Many studies in the table found employee engagement or job satisfaction as a mediating variable in a larger model. Table 1 provides an exhaustive list of employee engagement and job satisfaction relationship literature in hospitality.

*Table 1: Studies in Hospitality with Engagement Positively Related to Satisfaction*

Authors	Country	Sample
Yeh (2013)	Taiwan	Frontline hotel employees
Rigg et al. (2013)	Jamaica	Mid-Upper scale non-supervisory hotel employees in 8 departments
Burke et al. (2013)	Turkey	Frontline employees in top quality hotels
Karatepe & Karadas (2015)	Romania	Frontline employees in 4 and 5 star chain hotels
Burke et al. (2009)	China	Hotel managers
Lee et al. (2014)	South Korea	Frontline employees in 4 and 5 star hotels
Jung et al. (2015)	South Korea	Deluxe hotel employees
Lee et al. (2016)	United States	Hotel operations employees and managers
Paek et al. (2015)	South Korea	Frontline hotel employees in 5 star hotels

In some of these studies the demographics of the samples were provided. The authors either stated which departments (most included all frontline hotel employees) or what role the participants had within the hotel. However, none of these studies provided which shifts the

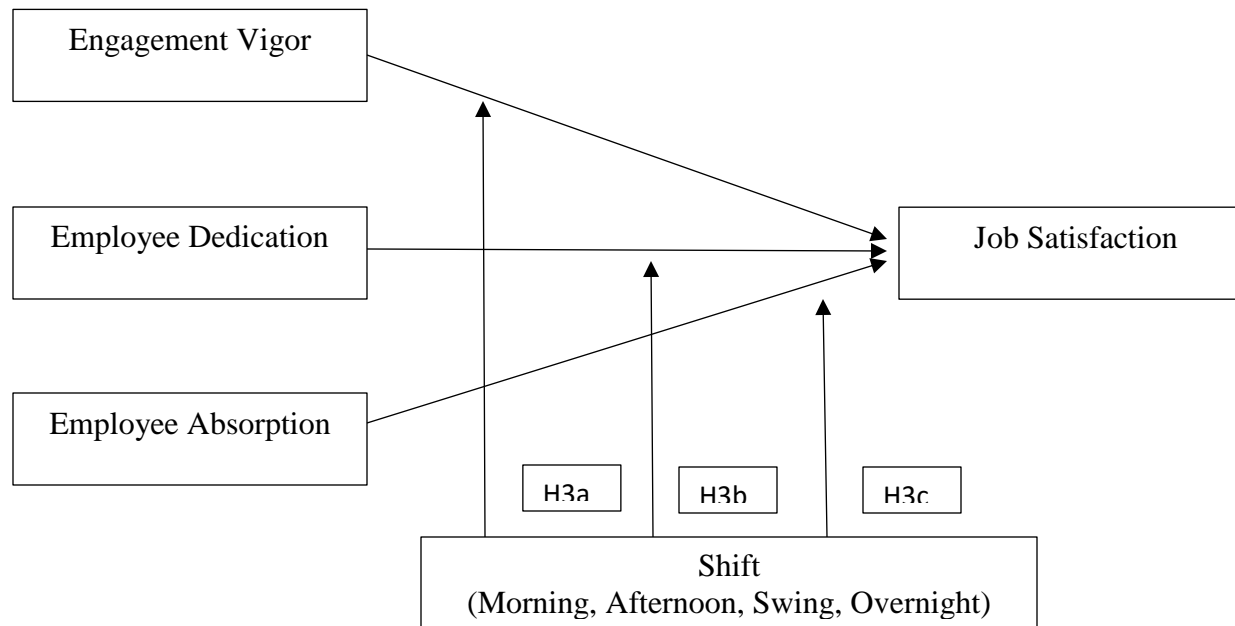
employees worked and therefore it is unknown as to how many of these employees worked third shift in the front office. This is an important aspect to investigate because there may be significant differences about the perception of this relationship depending on the shift the employee worked. Therefore the following hypothesis and model have been developed:

#### 2.8.5 Hypothesis 3, Model 2

H3a: The shift worked by the employee moderates the relationship between employee engagement vigor concept and job satisfaction in hotel front desk agents.

H3b: The shift worked by the employee moderates the relationship between employee engagement dedication concept and job satisfaction in hotel front desk agents.

H3c: The shift worked by the employee moderates the relationship between employee engagement absorption concept and job satisfaction in hotel front desk agents.



*Figure 4 Model of Employee Engagement and Job Satisfaction Moderated by Shift Work*

(Study 3)

## 2.9 Job Satisfaction

A review of job satisfaction literature was described in the previous section that examined employee engagements relationship with job satisfaction. Therefore, only a brief summary of the literature will be provided in this section followed by a review of literature on equity theory, intention to quit, and quality service delivery willingness. Utilizing Locke's (1969) definition, job satisfaction is defined as "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating one's job values" (pg. 317). The relationship between job satisfaction and job performance is a popular research topic for all organizations, and has even been referred to as the "Holy Grail" for industrial psychologists (Landy, 1989). Job satisfaction is important to study as a predictor variable because of its influential power on many employee and organizational outcomes. Employees experiencing low levels of satisfaction are more likely going to have a reduced desire to improve their personal performance (McPhail et al., 2015). Equity theory aids in the prediction and explanation of the significant relationship between job satisfaction and the outcome variables in this study.

## 2.10 Equity Theory

Equity theory first developed by Adams (1963) has been studied in a number of industries and utilized to understand an employee's behaviors based on the perception of equity or inequity in ratios. While equity theory did stem from Festinger's (1957) work on theory of cognitive dissonance, it has now found a place in organizational justice. Equity theory, also referred to as distributive justice, is one third of organizational justice (Greenberg, 1990).

Organizational justice is also comprised of procedural justice and interpersonal justice. This study will focus only on equity theory (distributive justice) because of its roots in theory of cognitive dissonance.

Equity theory at its core consists of person, other, input, and outputs (Adams, 1965). A “person” is the individual who is evaluating the input/output ratio to another individual. The other individual is called “other” and may be a coworker, neighbor, or anyone the “person” wants to compare their ratio to. In this study, “person” will be the overnight hotel front desk employees who are being surveyed and “others” will be other front desk agents who work all day shifts at the same hotel as “person” or work all overnight shifts at different hotels from “person”. Inputs are anything the “person” is putting in to receive something in return, the output. For instance, in this study, inputs could be skills, effort, sacrificing normal shift times for the overnight shift, missing organizational planned events, etc. The outputs in this study could be more compensation, more time off, better days off, etc. Equity theory is based on individuals comparing these ratios to another individual.

When an individual compares these ratios to other individuals, there are certain results that have been shown overtime. There are really only three outcomes from these ratio comparisons: the individual will perceive an inequity in the ratios that is viewed negatively, the individual will perceive the ratios to be equal, or the individual will perceive an inequity that is viewed positively. The ratios being viewed as equal is just as simple as it sounds. However, the ratios that were perceived to not be equal can be a little more challenging to define. In the inequity ratio that is viewed negatively, the individual feels they are contributing more inputs and receiving equal or less outputs or the individual feels they are contributing an equal amount



of input but receiving less in outputs. The inequity ratio that is viewed positively is when the individual feels they are contributing less inputs and receiving equal or larger amounts of outputs than others or when the individual feels they are putting in equal amounts of inputs and receiving more in outputs than others. These inequities can influence an employee's behaviors and actions.

Adams (1965) conducted four experiments examining the possible ratio comparisons and concluded six observations:

*Table 2. Adams Six Equity Theory Observations*

1	Increasing inputs will reduce felt inequity if a person's ratio is greater than another's ratio.
2	Increasing outcomes will reduce inequity if a person's ratio is less than another's ratio and vice versa.
3	Individuals may distort their inputs and outcomes cognitively.
4	A dissatisfied individual may leave the field by quitting his job, obtaining a transfer, and absenteeism.
5	A person experiencing inequity may induce another to increase or reduce his input.
6	When faced with inequity, Person may change his referent.

These six observations have been studied widely in various industries utilizing different concepts or actions as the inputs and outputs. The hospitality industry has utilized equity theory as a way to predict and explain service recovery satisfaction (Kwon & Jang, 2012), tourism stakeholders perception of volunteer tourism (Burrai, Font, & Cochrane, 2015), and customer's perceptions of priority lines at theme parks, clubs, and airports (Alexander, MacLaren, O'Gorman, & White, 2012). The present research utilizes the observations developed by Adams to establish the remaining hypotheses for the study. Perception of inequities may have negative or positive influences on an employee's perception of job satisfaction, intention to quit, and quality service delivery willingness depending on which way the inequity is perceived by the

employee. Outcome variables, intention to quit and quality service delivery willingness, will now be discussed.

### 2.11 Intention to Quit

For organizations to maintain long-term success, the organization needs to retain trained, experienced, satisfied, and committed employees (Uludag et al., 2011). Retaining employees is key to organizational performance because high levels of employee turnover can cause a magnitude of organizational problems such as: costs of recruiting and training new employees, inadequate staffing levels, loss in productivity, and overall organizational ineffectiveness. Determining why employees want to stay with an organization or why they want to leave has been a topic that has received much attention in various industries including hospitality, which is known for having notoriously high turnover rates (Rigg et al., 2013; Karatepe, 2013; Karatepe & Ngeche, 2012; Burke et al., 2013; Saks, 2006; Park & Gursoy, 2012; Dermody et al., 2004). The concept of employee turnover has been widely studied, but has been referred to in research as many different labels.

Intention to quit, turnover intention, intention to stay, and employee loyalty are all similar concepts whose goal is to understand why an employee wants to stay or leave an organization. Much like the argument that job satisfaction factors would have the same influence on job dissatisfaction, is the argument that intention to quit factors would have same influence on intention to stay. However, Herzberg (1966) found that there are two different sets of factors in terms of job satisfaction and job dissatisfaction indicating that they are opposite of each other but measured differently. The same was found in turnover intention in a study conducted by Cho,

Johanson, & Guchait (2009). Their findings indicated that there were differences in the factors that predicted turnover intention and intent to stay. These two concepts are opposites of each other but also measured differently. Turnover intention and intention to quit are the same and on the negative side of the continuum. Intent to stay and commitment would be the same and are on the positive side of the continuum. For the purposes of this study, the negative side of the concept, intention to quit, will be utilized. Intention to quit is defined simply as the employee's voluntary intention to leave their present company. The negative side of the concept was chosen for two reasons with the first being the other concepts being examined in this study are on the positive side of their respective continuums, engagement and job satisfaction. The researcher felt that the contrast in the survey items would provide better results. The second reason is in the study conducted by Cho et al. (2009), their findings indicated that more factors were related to intention to quit as opposed to intent to stay. Previous research has indicated that intention to quit is a stronger predictor of actual turnover than other outcomes such as job satisfaction (Tett & Meyer, 1993; Steel & Ovalle, 1984). Another outcome variable of job satisfaction that is important to investigate is quality service delivery willingness.

### 2.12 Quality Service Delivery Willingness

In order to fully understand quality service delivery willingness, quality service must first be defined. Parasuraman, Zeithaml, and Berry (1985, 1988) seminal work on service quality laid much of the foundation in service quality studies over the last few decades. They separate quality service from quality products because of three unique aspects to service: intangibility, heterogeneity, and inseparability of production and consumption (Parasuraman et al., 1985). The

work of Parasuraman et al. (1985) is well-known in hospitality literature for its contribution to service quality research, however, these authors were not the only ones to examine service quality. Torres (2014) details and deconstructs the variations in defining service quality in academic research. He concludes that quality service could be examined from both the consumer's perspective and an expert-centric perspective. The expert driven examination of service quality could be from a hotel setting and following service standards or monitoring ratings. This is an important viewpoint on service quality for this study because this means that employees can determine service quality as well as consumers. The current research does not ask for the consumer's perspective of service being delivered, but rather the hotel employee's willingness to deliver quality service. The employee is able to define service quality for themselves from their company's standards and determine if they are willing to provide those standards of quality service constantly.

Results of subsequent studies on service quality link service quality to organizational performance. The level of service quality has been shown in research to be a key predictor in customer satisfaction, which then leads to the organization's success and survival (Desatnick & Detzel, 1993). This is important and relevant to the present study because service is delivered by employees, and hotel customers may need service at all hours of the day.

Service delivery requires high levels of human involvement because the employee must deliver the service and the customer must receive it (Boshoff & Allen, 2000). The customers have a predetermined expectation of the level of service delivered by the employee (Gronroos, 1984). Good quality service, or high levels of quality service, are achieved when the employee delivers service that are above the customer's expectations. Poor service delivery results when

the service delivered is below the expectations of the customer. Organizations will always try to make sure that good quality service is what is being delivered to their customers, but unfortunately that might not always be what is actually delivered. Due to the amount of interactions between employee and customer in service delivery it is almost inevitable that an occasional service failure will occur. Therefore, to avoid as many service failures as possible the employee must be willing to provide proper levels of quality service throughout their shifts. This study's objective is about examining the employees and not the customers, so therefore SERVQUAL (Parasuraman et al., 1988) or other quality service scales are not utilized. Rather, the study will focus on the employee's quality service delivery willingness.

When service employees are unwilling or unable to deliver proper levels of service then the service quality suffers (Zeithaml et al., 1990). Singh (2000) stated that because there is a need for empathy and emotions during service encounters then services are really an emotional labor. There is a level of expectations set by organizations for employees to display certain emotions that would be consistent with the company image and service they are providing (Dormann & Zapf, 2004). Therefore, if the shift the employee works can increase or decrease their job satisfaction, it is plausible that their level of satisfaction may influence the employee's emotional labor affecting the service encounter.

## 2.13 Relationship between job satisfaction and intention to quit and QSDW

### 2.13.1 Shift work differences in satisfaction

Similar to the most recent section on job satisfaction, much of the literature consisting of an employee's shift influence on their satisfaction levels has already been discussed so a brief

summary will be provided followed by a discussion on employee's shift influence in their intention to quit and quality service delivery willingness. Previous studies concluded that if an employee was working the shift they preferred as well as a shift that matched their chronotype then there was no significant difference in satisfaction based on shift worked (Barton & Folkard, 1991; Guimaraes, Pessa, & Biguelini, 2012; Zedeck, Jackson, and Summers, 1983). Even though there was not significant results, there is a strong possibility of attaining significant results if the employees are not satisfied with their job. Other research has shown significant differences in shift work based on intention to quit and quality service delivery willingness.

#### 2.13.2 Shift work differences in intention to quit

Absentee rates have been shown to be a strong predictor of intention to quit (Keller, 1984; Stumpf & Dawley, 1981; Mobley, 1982; Steers & Mowday, 1981), therefore, studies showing shift work differences in absenteeism have also been included in this discussion. Increased absentee rates have been shown in changes in shifts, such as working the night shift, and shift work scheduling (Pocock, Sergeant, & Taylor, 1972; Dionne & Dostie, 2007; Smulders, 1983). Several authors have also found differences in levels of intention to quit, or its opposite, intention to stay based on shift work (Jamal, 1981; Frost & Jamal, 1979; Martin, Sinclair, Lelchook, Wittmer, & Charles, 2012; Stavrou & Kilaniotis, 2010; Wittmer, Shepard, & Martin, 2015). Frost and Jamal (1981) and Martin et al. (2012) results showed that those working the non-day shifts were more likely to have higher intention to quit. Carney (2015) stated that the lack of interaction between supervisor and employee can also lead to increased turnover and the literature has shown that there is a difference in level of supervision based on shift. Previous research has also indicated that shifts can change an individual's performance.

### 2.13.3 Shift work difference in QSDW, productivity, performance

There have not been many studies conducted on shift work differences influence on the specific variable quality service delivery willingness. However, quality service can be viewed as a form of product and/or performance, therefore, studies showing differences in productivity and performance were included in this section. Productivity is shown to be decreased for individuals participating in shift work systems and more specifically working the night shift (Lieber, Kvieska, & Delamaro, 2012; Hanna, Chang, Sullivan, & Lackney, 2008; Malaviya & Ganesh, 1976). Malaviya and Ganesh (1976) did find results that supported a decrease in productivity in shift workers, but found some evening shift workers individually had higher productivity rates than some individuals working the day shift. In Carney's (2015) study of nurses, one nurse stated that the night shift did not have the same resources as the day shift and that impacted the amount of care the nurses could give. In a hotel front desk, the amount of resources on the night shift would also be limited due to the time of the shift. Therefore, this may be another characteristic that causes a difference in level of quality service delivery willingness based on shift work. There are many shift job characteristics that might affect satisfaction, intention to quit, and quality service delivery willingness.

### 2.13.4 Hotel shift job characteristics that affect satisfaction, turnover, QSDW

One reason an individual may not be satisfied with their scheduled shift is because they perceive an inequity between the shifts. Even with compensation often being given to employees working overnight shifts (King & Williams, 1985), there still may a perception of inequity. One of Adams (1965) observations is that a perception of inequity will cause the individual to become dissatisfied with the situation and possibly reduce the inequity by completely removing

it in the form of quitting. Therefore, it is important to understand if the front desk hotel employee's perception of the shift they work influences their level of satisfaction, intention to quit, and QSDW.

The different times of the shift may also lead to increased levels of intention to quit if the individual is working a shift that they do not prefer or because they are working it for involuntary reasons. If an individual has an opportunity to move to a shift that is more to their preference or the need to work an undesired shift changes then the individual may choose to leave a particular shift or positions in shift work systems completely.

Fatigue and sleep deprivation were mentioned as effects of working the overnight shift. It is plausible that fatigue and lack of sleep could lead an individual to not perform as well as those individuals who are well rested. The decrease in productivity and performance levels could decrease the employee's quality service delivery willingness. Previous studies have examined the relationship between satisfaction and outcome variables producing results that are relevant to the current study.

#### 2.13.5 Business research on relationship between satisfaction, turnover, QSDW

There have been a number of studies that have studied the relationship between job satisfaction and the two outcome variables in this study. Each study showed that job satisfaction is negatively related to intention to quit meaning the more satisfied an individual was with their job the less likely they were to quit. Table 3 provides a sample list of business research that examined the relationship between job satisfaction and intention to quit. Due to the amount of research regarding this relationship only a small amount of articles is included in the table.



*Table 3 Sample List of General Business Articles Examining Relationship between Job Satisfaction and Intention to Quit*

Authors	Year	Sample	Results
Sharma & Nambudin	2015	Indian IT professionals	Satisfaction negatively related to intention to quit
Johnson & Yanson	2015	Technology employees	Satisfaction negatively related to intention to quit
Helm	2013	Various business employees	Satisfaction negatively related to intention to quit
Hofaldhllaoul & Chhinzer	2014	French Engineers	Satisfaction negatively related to intention to quit
Yanchus et al.	2015	VHA employees	Satisfaction negatively related to intention to quit
Kessler	2014	Israeli IT employees	Satisfaction negatively related to intention to quit
Andrews et al.	2014	General business employees	Satisfaction negatively related to intention to quit
Mousavi et al.	2013	Iranian employees	Satisfaction negatively related to intention to quit

#### 2.13.6 Hotel research on relationship between satisfaction, turnover, QSDW

The following review of previous research all utilized samples of hotel employees in their examination of job satisfaction with the two outcome variables. Each studies' results indicate that job satisfaction is negatively related to intention to quit. Table 4 is a sample list of research that utilized a sample of hotel employees to examine job satisfaction's relationship with intention to quit.

*Table 4 Sample List of Lodging Specific Articles Examining the Relationship between Job Satisfaction and Intention to Quit*

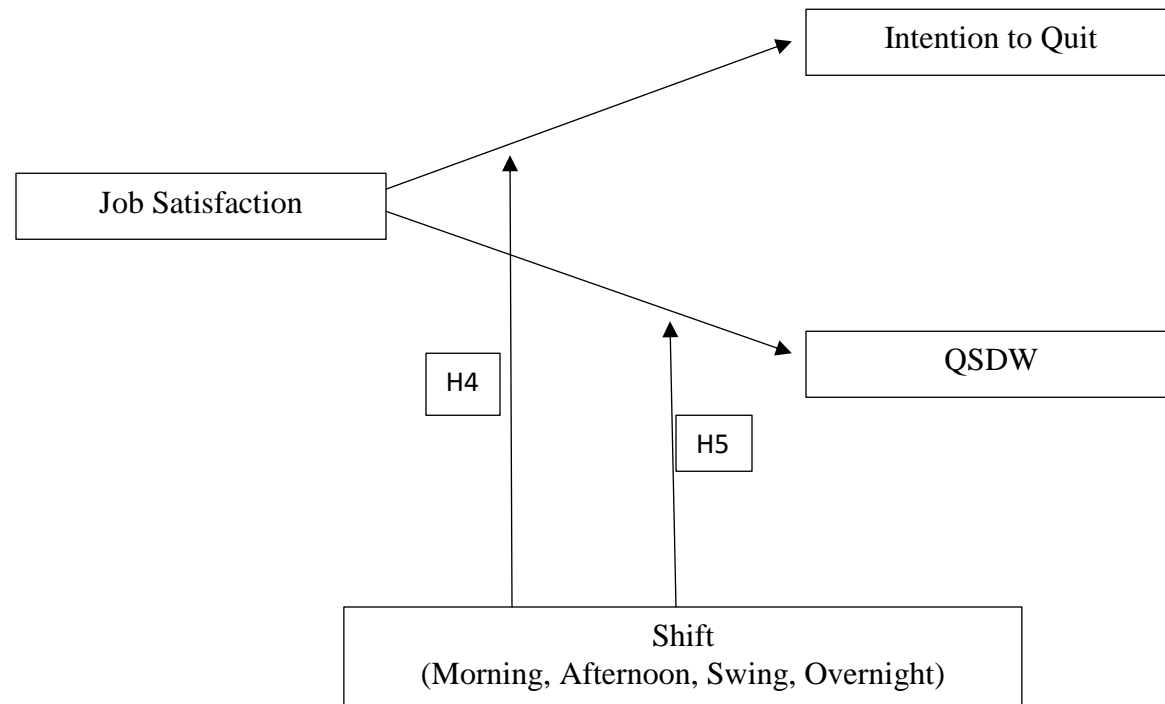
Authors	Year	Sample	Results
Uludag et al.	2013	Turkish hotel employees	Job satisfaction negatively related to intention to quit
Zopiatis et al.	2014	Turkish hotel employees	Extrinsic Job Satisfaction negatively related to intention to quit
Chan et al.	2015	Macau casino employees	Job satisfaction negatively related to intention to quit, Burnout positively related to intention to quit
Jang et al.	2012	US hotel employees	Job satisfaction negatively related to intention to quit
Yang	2008	Taiwan hotel employees	Job satisfaction negatively related to intention to quit
Nadiri et al.	2010	Turkish hotel employees	Distributive Justice more impactful on job satisfaction and intention to quit than Procedural Justice
Rigg et al.	2013	Jamaican hotel employees	Job satisfaction negatively related to intention to quit

Based on the shift job characteristic differences, equity theory premises, and previous research conducted on the relationship between job satisfaction and these outcome variables, the following hypotheses and model have been developed:

#### 2.13.7 Hypotheses 4 and 5, Model 3

H4: The shift worked by the employee moderates the relationship between job satisfaction and intention to quit in hotel front desk agents.

H5: The shift worked by the employee moderates the relationship between job satisfaction and quality service delivery willingness in hotel front desk agents.



*Figure 5 Model of Job Satisfaction, Intention to Quit and Quality Service Delivery Willingness Moderated by Shift Work*

## **CHAPTER THREE: METHODOLOGY**

This chapter begins by discussing the target population of the study as well as the sample. Next, the survey instrument development will be discussed with an explanation for the use of each measurement scale. The pre-test, pilot test, and data collection process will follow with the last section explaining the data analysis.

### 3.1 Population and Sample

The target population for this study is front desk hotel employees working in shifts in the southeastern United States because this study intends to determine if shift work has an effect on front desk agents' perceptions of support, engagement, satisfaction, and intention to quit. This study utilizes judgmental sampling because the participants must meet certain qualifications such as they must work in a shift work system. A random sample of the population would result in an imbalance of responses for each category of shifts and likely not provide the minimum amount of responses needed per shift category for data analysis purposes. The overnight shift is typically scheduled with less employees because hotel operations and service needs tend to be reduced during those hours. Judgmental sampling, a type of non-probability sampling techniques, is utilized to specify the sample of an empirical study. Several hospitality industry studies have utilized this sampling technique with great success (Magnini et al., 2011; Wang, 2013; Karatepe & Karadas, 2015). These researchers justified a utilization of judgmental sampling in their research due to targeting specific types of employees and overall difficulty of random sampling an organization. The present research utilization of judgmental sampling is because the population of the study is specific meaning that the respondents must meet certain requirements.

Those requirements are the participants must be front desk employees, in hotels that utilize a shift work system, and operate the front desk 24 hours a day.

The sample size needed for this study was calculated utilizing the GPower 3.1.9.2 tool (Faul, Erdfelder, Lang, & Buchner, 2007). Since the analysis will utilize a moderated multiple regression approach the test family selected was the F test. The specific statistical test selected from that family was linear multiple regression, fixed model,  $R^2$  increase. The power, alpha level, effect size, and number of predictors were inputted into the tool to calculate sample size.

The power was set at .8 and the alpha level was set to .05 (Trochim & Donnelly, 2007).

According to Aguinis et al. (2005), the power being set to .8 is the minimum the power should be set at for categorical moderation analysis. Normally, the effect size is set at .15 but there is research suggesting an effect size of .025 may be more appropriate for moderator analysis (Aguinis et al., 2005). Therefore, .025 was set for the effect size. The number of predictors was set to 2 because there is an independent variable and moderator for each analysis. The calculated sample size was 389. For this study, the target sample size will be rounded up to an even 400 observations with 100 observations for each shift (morning, afternoon, swing, and overnight).

The southeastern United States was selected because the abundance of tourism attractions have created a need for a plethora of hotels of various types. The large concentration of hotels offers various sizes, service types, and management types within the population of hotels. Various sizes and characteristics in hotels dictate the staffing and supervisory levels in front desks (Kasavana & Brooks, 2009). However, this does cause a need to control for property differences such as property size, service type, and management structure. This is an important step in the analysis process because the variables being examined in this study may be influenced

by the differences in properties (Mount & Frye, 2006). The control variables and analysis will be discussed more in the data analysis section of this chapter. The data collection section of this chapter will explain more on why judgmental sampling method was chosen instead of random sampling with mail surveys. Next, the survey instrument development process is explained.

### 3.2 Survey Instrument and Development

A cover letter (Appendix B) and questionnaire (Appendix C) were developed to be distributed to the participants for data collection. The purpose of the cover letter was to brief the participants about the study and encourage them to complete the survey about their roles working front desk shifts. The cover letter also informed the participants that participation was voluntary and their identity would remain anonymous. To comply with the university's institutional review board, contact information for the researcher was also included in case the participants had questions.

The questionnaire created for this study consisted of two sections and was limited to one sheet of paper, front and back, to reduce the participant's survey fatigue. Survey fatigue is defined as when a participant in a study is completing a questionnaire and loses interest in completing the survey. The participant will either not complete the survey or fill out the remaining portion of the survey without carefully reading the questions. Common causes of survey fatigue are from the length of the survey or the order in which the questions are asked on the survey. For the development of the questionnaire used in this study, Dillman et al.'s (2009) survey design method was utilized. Following this method, it is important to keep the questionnaire as short as possible, only asking questions regarding the concepts in this study, and

organized in a way that the participants do not get confused or frustrated. Therefore, the limit was set to one page, front and back, and contained only two sections.

The first section of the survey was concerned with asking the participants about the major concepts being investigated in this study such as supervisor support, coworker support, employee engagement, job satisfaction, intention to quit, and quality service delivery willingness.

Supervisor support's four measurement items (survey questions 1-4) were taken from Beehr et al.'s (1990) study in the health care industry. Karatepe and Olugbade (2009) utilized the same scale in a study examining Nigerian frontline hotel employees' relationship between supervisor support and engagement with a reliability score of .80. Reliability was assessed using Cronbach's alpha. Examples of these items are "I can depend on my supervisor for help when things get tough at work" and "My supervisor is willing to change my work schedule when I need it." This scale was chosen over other supervisor support scales because other scales (Humborstad et al., 2008) tended to ask questions more about whether the employee liked their supervisor and found them friendly as opposed to this scale which asks more specifically about the supervisor helping the employee out during their shift. The purpose of this study is to examine perception of support from the supervisor not if the individual generally likes their supervisor as a person. Therefore, Beehr et al.'s scale on supervisor support is more appropriate for this purposes of this study.

The other social support variable measured in the first section of the questionnaire was coworker support. There are five measurement items (survey questions 5-9) measuring coworker support and they are being taken from Hammer et al. (2004). Their study utilized the scale with a sample of food and beverage employees and found the scale to have reliability of .83. Karatepe



et al. (2010) also utilized this scale on frontline hotel employees' relationship between coworker support and employee engagement. This relationship is also being examined in the present study but adding the shift worked variable as a possible moderator of the relationship. Examples of coworker support items are "I receive help and support from my coworkers" and "My coworkers back me up when I need it."

The next part of this section asks the participant about employee engagement. Earlier in this dissertation, three conceptualizations of employee engagement were outlined. For this study, the third conceptualization was utilized which came from Schaufeli et al. (2002). In their seminal work they created a scale which is referred to as the 17-item Utrecht Work Engagement Scale. In the original scale vigor was measured with six items, dedication with five items, and absorption with six items. In 2006, the authors revised the scale to only have nine measurement items with three measurement items for each engagement component. Table 5 below outlines the changes between the two scales.

*Table 5 Comparison of Both Engagement Scales*

Concepts of Engagement	2002 Scale – 17 Items	2006 Scale – 9 Items
Vigor	<p>At my work, I feel bursting with energy.</p> <p>At my job I feel strong and vigorous.</p> <p>When I get up in the morning I feel like going to work.</p> <p>I can continue working for long periods of time.</p> <p>At my job, I am very resilient, mentally.</p> <p>At my work I always persevere, even when things do not go well.</p>	<p>At my work, I feel bursting with energy.</p> <p>At my job I feel strong and vigorous.</p> <p>When I get up in the morning I feel like going to work.</p>
Dedication	<p>I feel the work that I do full of meaning and purpose.</p> <p>I am enthusiastic about my job.</p> <p>My job inspires me.</p> <p>I am proud of the work I do.</p> <p>To me, my job is challenging.</p>	<p>I am enthusiastic about my job.</p> <p>My job inspires me.</p> <p>I am proud of the work I do.</p>
Absorption	<p>Time flies when I am working.</p> <p>When I am working, I forget everything else around me.</p> <p>I feel happy when I am working intensely.</p> <p>I am immersed in my work.</p> <p>I get carried away when I am working.</p> <p>It is difficult to detach myself from my job.</p>	<p>I feel happy when I am working intensely.</p> <p>I am immersed in my work.</p> <p>I get carried away when I am working.</p>

Many researchers have utilized the shortened version and found the new scale to have sufficient reliability scores (Karatepe, 2011; Karatepe & Ngeche, 2012; Richardsen et al., 2007; Suela et al., 2012). This study utilizes the shortened version of the Utrecht scale because utilizing less questions on the survey may help reduce survey fatigue in the participants. Examples of the items utilized for vigor (survey questions 10-12) are “At my work, I feel bursting with energy” and “At my job I feel strong and vigorous.” The last item measuring vigor was slightly modified from its original conception. The original item stated “When I get up in the morning I feel like going to work.” This was changed to “When I wake up I feel like going to work.” The change was made because this study’s sample is consisted partially of third shift workers who do not sleep normal hours, therefore, the change was made to be more general to accommodate their sleep habits. Example of dedication items (survey questions 13-15) were “I am enthusiastic about my job” and “My job inspires me.” Examples of absorption measurement items (survey questions 16-18) were “I feel happy when I am working intensely” and “I am immersed in my work.”

Job satisfaction, intention to quit, and quality service delivery willingness finished out the first section of the survey. With job satisfaction being such a popular concept to study across many different industries, there have been many scales developed to measure job satisfaction. This study utilizes only one measure item for job satisfaction (survey question 19) and that is “Overall, I am satisfied with my job.” Rigg et al., (2013) utilized a single measure item in their study which sampled hotel employees. They justified the single measurement item because many researchers use a single item for satisfaction because the overall satisfaction is most important (Scarpello & Campbell, 1983). Wanous, Reichers, and Hudy (1997) conducted a meta-analysis

on the differences between using a single-item for job satisfaction versus using a multi-item scale. Their results indicated that utilizing a single measurement item for job satisfaction was acceptable. Warr and Inceoglu (2012) examined the relationship between job engagement and job satisfaction which is also being examined in the present study. The authors chose to utilize a single measurement item for job satisfaction in order to increase measurement separation from job engagement. Another reason the authors chose to utilize a single item construct for job satisfaction was to reduce survey fatigue and sustain the participant's attention.

Intention to quit was measured using three items (survey questions 20-22) from Colarelli (1984). Rigg et al. (2013) and Saks (2006) also utilized the same scale in their study. Both studies examined employee engagement and intention to quit which is the same investigation in the present study. Examples of these items are "I frequently think about quitting my job" and "I am planning to search for a new job in the next 12 months."

The last item in this section was quality service delivery willingness and was measured by one item (survey question 23) taken from Humborstad et al. (2008). The item is "I am willing to invest extra effort to deliver quality service to customers. Service quality has been a popular concept in hospitality research and has well known and reliable scales. However, this research is examining the employee's willingness to deliver quality service as opposed to the perception of service received from the customer's perspective. Quality service delivery willingness is not a common concept studied in hospitality, and there are not many developed scales. The one item scale utilized in this study was chosen for the same reasons as the one item scale for job satisfaction with that reason being to reduce survey fatigue (Warr and Inceoglu, 2012).

All items measured in the first section were measured on a five point Likert type agreement scale ranging from strongly disagree, as 1, to strongly agree, as 5. According to Dawes' (2007) study, there was no significant difference in results when utilizing a five or seven point Likert scale, therefore, the five point Likert scale is being utilized to limit the number of options the participants will have to think about it when completing the survey. The average of the items will be taken and the higher the score then the stronger the participant felt about that concept. For example, if a participant's average score of supervisor support was 5 then the individual felt they had a lot of supervisor support. To increase reliability and accuracy of the responses, one measurement item from each of the concepts will be reverse coded. Reverse coding an item ensures that the participant clearly read each question. Table 6 has a complete list of the measurement items utilized in the first two sections of the questionnaire showing the reverse coded item as well. The last section of the questionnaire did not utilize the five point Likert scale because those survey questions were asked in categorical or open-ended format.

The purpose of the second section of the survey was to inquiry job characteristic and demographic attributes of the participants. The most important question in this section asked the participants to mark which shift they worked most often and they were given four choices. Those choices were labeled morning shift, afternoon shift, and overnight shift because these are the three main shift times in front office operations (Kasavana & Brooks, 2009). A fourth option was added to this question because some front desk agents may actually working both morning and afternoon shifts. Therefore, "swing" shift was the fourth option added meaning the employee works equal amounts of morning and afternoon shifts. As mentioned previously in the introduction, individuals who work the overnight shift rarely work another shift so one swing

shift option is acceptable for this item. This categorical variable will be utilized as the moderating variable in the data analysis. Other variables that were asked so the researcher could provide a description of the sample were employment status, gender, age, education, pay per hour, and responsibility level. Property size, hotel service type, and owner/management structure are utilized as control variables. Property size, hotel service type, and owner/management structure response options were based upon Kasavana and Brooks (2009) book about hotel front office operations. Owner/Management structure was the only item to be slightly modified because of the location of survey distribution. A Timeshare/Condo response option was added because central Florida represents the largest percentage of timeshare inventory in the USA (ARDA, 2014; Rivera, Gregory, & Cobos, 2015), therefore the owner/management structure of timeshares needed to be represented in the survey. The list of all items in this study is seen in the following table.

Table 6 Complete List of Measurement Items

Concept	Measures	Source
Coworker Support (5 items)	I receive help and support from my coworkers. I do not feel accepted in my work group. (R) My coworkers are understanding if I have a bad day. My coworkers back me up when I need it. I feel comfortable with my coworkers.	Hammer et al., 2004
Supervisor Support (4 items)	My supervisor is willing to listen to my personal problems. My supervisor is not easy to talk to. (R) I can depend on my supervisor for help when things get tough at work. My supervisor is willing to change my work schedule when I need it.	Beehr et al., 1990
Employee Engagement (9 items)	<i>Vigor</i> (3) At my work, I feel bursting with energy. At my job I feel strong and vigorous. When I get up in the morning I feel like going to work. <i>Dedication</i> (3) I am enthusiastic about my job. My job inspires me. I am not proud of the work I do. (R) <i>Absorption</i> (3) I feel happy when I am working intensely. I am immersed in my work. Time flies when I am working	Schaufeli et al., 2006
Job Satisfaction (1 item)	Overall I am satisfied with my job.	Rigg et al. 2013

Concept	Measures	Source
Intention to Quit (3 items)	I frequently think about quitting my job. I am planning to search for a new job in the next 12 months. If I have my own way, I will be working for this organization one year from now. (R)	Colarelli, 1984
Quality Service Delivery Willingness (1 item)	I am willing to invest extra effort to deliver quality service to customers.	Humborstad et al. 2008
Employment Status (3 levels)	Full-time Part-time Seasonal	
Shift (4 levels)	Morning Shift Afternoon Shift Swing Shift (Morning and Afternoon Shifts) Evening Shift	Kasavana et al. 2009
Gender (2 levels)	Male Female	
Education (4 levels)	High School Associates Degree Undergraduate Degree Masters Degree or Higher	
Manager on Duty? (2 levels)	Yes No	
Job Tenure (1 item)	How long have you worked in this job?	
Industry Tenure (1 item)	How long have you worked in the hospitality industry?	
Property Size (4 levels)	Under 150 rooms 150 to 299 rooms 300 to 600 rooms More than 600 rooms	Kasavana et al. 2009
Service Type (3 levels)	Economy/Limited Service Mid-Range Service	Kasavana et al. 2009



Concept	Measures	Source
	Upscale Service	
Owner/Management Structure (4 levels)	Management Company Chain Hotel Independent Hotel Timeshare/Condo	Kasavana et al. 2009 Rivera et al. 2014

### 3.3 Pre-test and Pilot Test

A pre-test and pilot test were conducted before the questionnaire was distributed to the study's sample. These two tests aided the researcher in fine tuning the instrument for understanding of the questions, survey design, and instructions to complete the survey. The pre-test was distributed to twenty-five hospitality students, five hospitality management professors, and five hospitality managers currently managing hotel operations. The consensus of the pretest group was to change the wording of only two items. The first item was a measurement item for the engagement component vigor. The original item was changed from "At my work, I feel bursting with energy" to "At my work, I feel like I am bursting with energy." The second item was also from employee engagement but from the component absorption. The item originally read "I get carried away when I am working" but due to the feedback from the pre-test the item was changed to "Time flies when I am working." The industry managers did also note that the some questions were asked in the positive format and others in the negative format. However, these changes were from the reverse coded items so they remained the same for data collection to increase reliability.

The pilot test consisted of 40 front desk employees currently working the various shifts. They were asked to complete the survey and their responses were checked for reliability of the measures. Forty participants is a sufficient amount of participants to examine Cronbach's alpha for reliability (Lee, 2012). There were no changes to the survey, so these pilot study surveys were included in the sample in the data analysis section of the study (Gliner, Morgan, & Leech,

2009). The individuals asked to participate in the pilot study were selected from hotels in the southeastern United States in order to better assess the reliability of the questionnaire.

### 3.4 Data Collection

The modified, final questionnaire was distributed directly to front desk agents by the researcher or from industry managers who agreed to have their properties participate. Each participant received a cover letter explaining the survey and their rights as participants, the survey itself, and a pre-paid addressed envelope to return the survey to the researcher.

Judgmental sampling was utilized in the study because it is important for data analysis that the participants meet the criteria for participation and minimum requirements for each shift category are met.

In this study, judgmental sampling occurs because the researcher did not distribute the surveys to random individuals, but instead to every front desk agent who works in hotels that utilize shift work system scheduling and operate the front desk 24 hours a day. Almost 500 hotels in the southeastern United States were visited by the researcher and asked to participate in this study. The reason for this method instead of mailing the surveys is because mail surveys typically only have a 10 to 15% response rate. Data collection began in April 2016 and concluded two months from the start date. Participants were made aware of the response time frame in the cover letter. Once the data collection was collected, the data cleaning and analysis began.

### 3.5 Data Analysis

Data from the surveys were inputted into SPSS for data analysis. The researcher manually imported the survey information into the software and had an additional researcher not related to the study analyze the entries for accuracy. An expectation of the returned surveys was a disproportion of shifts represented and this expectation did hold true. In order to correct this, the researcher separated each shift out and randomly select 111 observations for each shift. This created equal group sizes in the moderator variable while allowing each front desk agent an equal chance to participate in the study. The random sample pulled for each group was added back together in a new data set. This new data set of 444 cases was the data analyzed for this study. Multiple regression was utilized to test the hypotheses because the independent variables and dependent variable for each analysis are measured continuously. When conducting a moderation analysis it is best to use either multiple regression or structural equation modeling. The present study utilized multiple regression because some of the scales in the study consisted of only one measurement item and structural equation modeling requires at least four measurement items per variable to work properly (Hair et al., 2006). The researcher utilized the Process tool created by Hayes (2013) for testing moderation utilizing multiple regression analysis. First, the researcher will clarify the differences between moderation and mediation.

“A moderator is an independent variable that affects the strength and/or direction of the association between another independent variable and an outcome variable (Ro, 2012, pg. 953). A mediator is a variable that specifies how the association occurs between an independent variable and outcome variable (Ro, 2012, pg. 953).” Researchers will utilize a moderator variable when looking for the ‘when’ the relationship occurs, and will use a mediator when they

are trying to determine the ‘how’ or ‘why’ (Baron & Kenny, 1986). The current study investigated when the relationship becomes stronger or weaker, therefore the analysis examined the data for the presence of a moderator.

Ro (2012, pg. 955) stated the following about how to conduct a moderator analysis in multiple regression when the independent variable is continuous and the moderator is categorical:

“When the independent variable is continuous and the moderator is a categorical variable, the first step is to represent the categorical variable with code variables (k-1 coding for variables for a moderator with k levels). A product term needs to be created for each level of the coded variable. Then, the coded variables and their product terms with an independent variable are entered into the model, and then tested or the product terms to examine moderating effects. Several different regression slopes represent the association, rather than just one, and the association of the independent variable with the dependent variable depends on the value of the moderator variable.”

Hayes (2013) Process tool can be downloaded and utilized in SPSS. Utilizing this Process add-on eliminates the need to create product terms to represent interactions because the tool will do this during the analysis. Model 1 in the Process tool is the model for a basic moderation model which is what this study requires. The M variable was shift worked and the dummy variables were created by the Process tool as well. Property size, service type, and management structure were controlled for so they will be added into the covariates box. The researcher also asked the Process tool to mean center for products, heteroscedasticity-consistent SEs, and

OLS/ML confidence intervals. Since the moderator has four groups, the researcher labeled the moderator as multi-categorical in the Process tool and select code method indicator.

In order to detect if shift work as a moderator, the researcher reviewed key outcomes. First, the independent variable must have a statistically significant relationship with the dependent variable. Next, the researcher checked to see if the interaction effect is statistically significant at the .05 level. Then, the  $r^2$  change due to interaction was inspected and should also be statistically significant at the .05 level. Both of these must be statistically significant in order to show that shift work moderates the proposed relationship. If both of these are statistically significant then the next step is to inspect the conditional effect table. In this table, the group level needed to be statistically significant and the beta coefficients reviewed to determine which shift is a stronger moderator of the relationship.

## **CHAPTER FOUR: RESULTS and DISCUSSION**

The purpose of this chapter is to present the results of the analysis from the data collected from April 1, 2016 to June 10, 2016 in southeastern United States. First, the characteristics of the study sample will be provided with descriptive statistics. Next, the results of the hypotheses testing will be discussed. Further data analysis will be reviewed followed by an overview of all analysis and possible explanations for results.

### 4.1 Response Rate

A total of 2,386 surveys were distributed to hotel front desk agents working in shift work systems in the southeastern United States. Two thousand two hundred eighty six were paper surveys that were handed out by the researcher with pre-paid return envelopes. One hundred of the surveys were distributed electronically through email as opposed to paper at the request of a few of the hotel managers. There was a total of 539 paper surveys returned and 39 electronic surveys returned. The total surveys returned was 578 making that a completion rate of 24.2%.

Twenty-four surveys in total were removed from the analysis for varying reasons. Four surveys were eliminated from the analysis because the participants did not complete enough of the survey to consider them usable. Seven were removed because it was clear the participant did not read the questions clearly because they marked all the same score even though some questions were reverse coded. Thirteen more surveys were eliminated from the analysis because the participants selected multiple shifts when asked which shift they primarily worked. These thirteen needed to be removed because the shift they worked was utilized as a moderator in the analysis and these results would have been problematic. Therefore, the final usable survey

number was 554 making that a 23.2% usable completion rate. The characteristics of the sample were taken from these 554 participants.

#### 4.2 Demographic Results of Entire Sample

The demographic characteristics of the participants are shown in table 7. The sample was 85.2% full-time employment status and 69.1% female. The ages of the participants ranged from 18 to 73 with 78% of them being below the age of 35. Their education level was 25% high school, 46.6% associates degree/some college, 25.5% undergraduate degree, and only 2.7% had a graduate degree or higher.

Almost 80% of the respondents stated they worked in a lodging operation that had less than 300 rooms and only 8.7% working in properties with more than 600 rooms. About half of the participants worked in mid-range service level properties (51.6%) with the other half almost evenly splitting between economy/limited service (28%) and upscale service (18%). Participants were also asked to identify which shift they primarily worked as a front desk agent. Almost 80% of the participants work either the morning, afternoon, or swing shift with only 20% working the overnight shift. Only 53.6% of the participants stated they were working the shift they wanted to be scheduled. Last, both company tenure and hospitality industry tenure was provided by participants. Company tenure ranged from 1 month to 360 months (30 years) with 82.4% of the sample being 4 years or less. Hospitality industry tenure ranged from 1 month to 801 months (66 years) with 81.6% of the sample being 10 years or less.



*Table 7 Demographic Results of the Participants*

Demographic	Characteristic	N	Percent (%)
Employment Status	Full-Time	467	85.2
	Part-Time	76	13.9
	Seasonal	5	.9
Shift Scheduled	Morning	130	23.5
	Afternoon	114	20.6
	Swing	199	35.9
	Overnight	111	20.0
Shift Preferred	Morning	292	53.0
	Afternoon	95	17.2
	Swing	97	17.6
	Overnight	60	10.9
Working Preferred Shift	Yes	297	53.6
	No	257	46.4
Gender	Male	170	30.9
	Female	380	69.1
Education	High School	138	25.1
	Some College	256	46.6
	Undergraduate	140	25.5
	Masters	15	2.7
Property Size	Less than 150 Rooms	300	54.2
	150-299 Rooms	136	24.5
	300-600 Rooms	66	11.9
	More than 600 Rooms	48	8.7

Demographic	Characteristic	N	Percent (%)
Act as MOD	Yes	309	55.8
	No	225	42.1
Service Type	Economy/Limited	156	28.2
	Mid-Range	286	51.6
	Upscale	101	18.2
Management Structure	Management Company	217	39.2
	Chain Hotel	218	39.4
	Independent Hotel	92	16.6
	Timeshare/Condo	12	2.2

#### 4.3 Creating an Equal Group Size Data Set

The returned survey responses yielded an uneven distribution amongst the shifts the participants worked. As shift worked is the moderator in this study it is important to have equal group sizes for the data analysis (Aguinis, 1995). The overnight shift had the least amount of usable survey responses with 111. The data was reduced so that each shift had 111 observations, however, the overnight shift did not need any observations removed because this shift had the least observations to begin with. There were 114 participants who indicated that they worked primarily the afternoon shift so 3 cases were deleted by selecting every 30<sup>th</sup> case. The morning shift was reduced to 111 observations by deleting every 10<sup>th</sup> observation with a total of 19 being deleted. The largest group represented were the participants who worked swing shift with a 199 total responses. Eighty-eight cases were deleted from the swing shift group by removing every 3<sup>rd</sup> observation. This random deletion in cases allowed for the groups to become equal in size

while giving every participant an equal chance of representation in the sample. However, to be assured that the deletion of cases did not affect the outcomes in the study, analysis was conducted with both data sets and demographic characteristics are reported for both.

#### 4.4 Demographic for Equal Group Size Data Set

The new data set was reduced to a sample size of 444 with 111 observations for each shift. Table 8 represents the demographic characteristics of the data set utilized in the analysis.

*Table 8 Demographic Results for Equal Group Size Sample*

<b>Demographic</b>	<b>Characteristic</b>	<b>N</b>	<b>Percent (%)</b>
Employment Status	Full-Time	378	86.1
	Part-Time	57	13.0
	Seasonal	4	.9
Shift Scheduled	Morning	111	.25
	Afternoon	111	.25
	Swing	111	.25
	Overnight	111	.25
Shift Preferred	Morning	209	47.4
	Afternoon	88	20.0
	Swing	79	17.9
	Overnight	59	13.3
Working Preferred Shift	Yes	261	58.8
	No	183	41.2
Gender	Male	139	31.4
	Female	304	68.6
Education	High School	113	25.7
	Some College	213	48.4
	Undergraduate	100	22.7
	Masters	14	3.2
Property Size	Less than 150 Rooms	246	55.4
	150-299 Rooms	108	24.3
	300-600 Rooms	52	11.7
	More than 600 Rooms	35	7.9
Act as MOD	Yes	256	59.7
	No	173	40.3
Service Type	Economy/Limited	125	28.2
	Mid-Range	227	51.1
	Upscale	83	18.7
Management Structure	Management Company	167	37.6
	Chain Hotel	180	40.5
	Independent Hotel	76	17.1
	Timeshare/Condo	10	2.3

#### 4.5 Reliability and Comparison of Data Sets

Reliability is important to assess in a study because this indicates the measurements internal consistency. Reliability should be a minimum of .70 or higher (Nunnally, 1978). Both data sets (entire sample and equal group sample) reliability was checked and all scales were in the adequate range for acceptable reliability scores. Table 9 shows the reliability values for each measurement. Means for each scale are also provided in Table 9 because when reducing a sample to create equal groups it is important to show that there is not a significant change in the means for each variable.

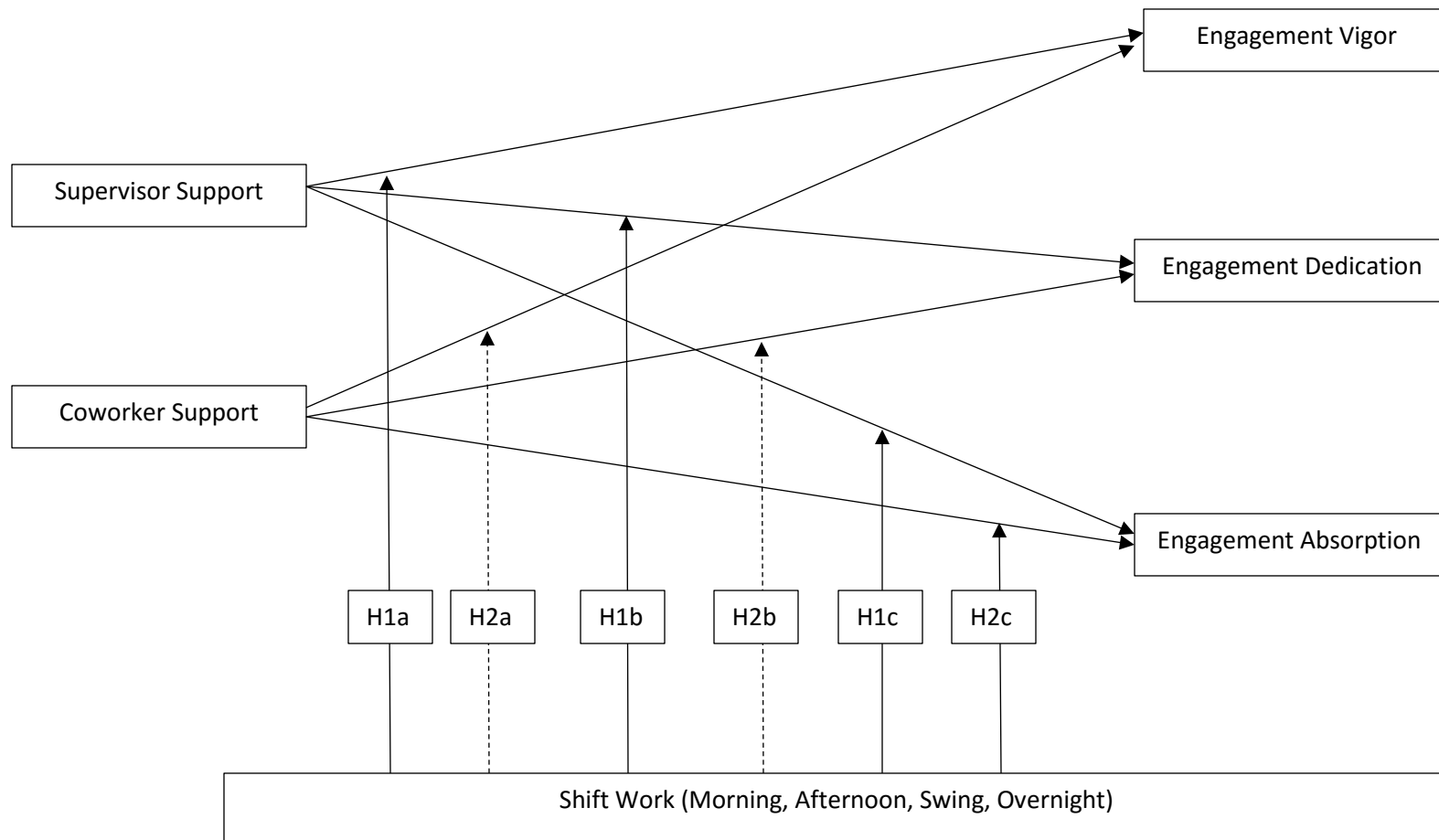
*Table 9 Reliability and Mean Comparison of Concepts*

<b>Scales</b>	<b>Entire Sample</b>		<b>Equal Groups Sample</b>	
	<i>Reliability</i>	<i>Mean</i>	<i>Reliability</i>	<i>Mean</i>
<b>Supervisor Support</b>	.86	3.99	.87	4.04
<b>Coworker Support</b>	.89	4.08	.895	4.11
<b>Engagement Vigor</b>	.86	3.41	.87	3.50
<b>Engagement Dedication</b>	.80	3.71	.80	3.82
<b>Engagement Absorption</b>	.82	3.67	.84	3.74
<b>Job Satisfaction</b>	NA	3.83	NA	3.93
<b>QSDW</b>	NA	4.42	NA	4.49
<b>Intention to Quit</b>	.81	2.57	.82	2.45

#### 4.6 Hypotheses Testing with Equal Group Size Sample

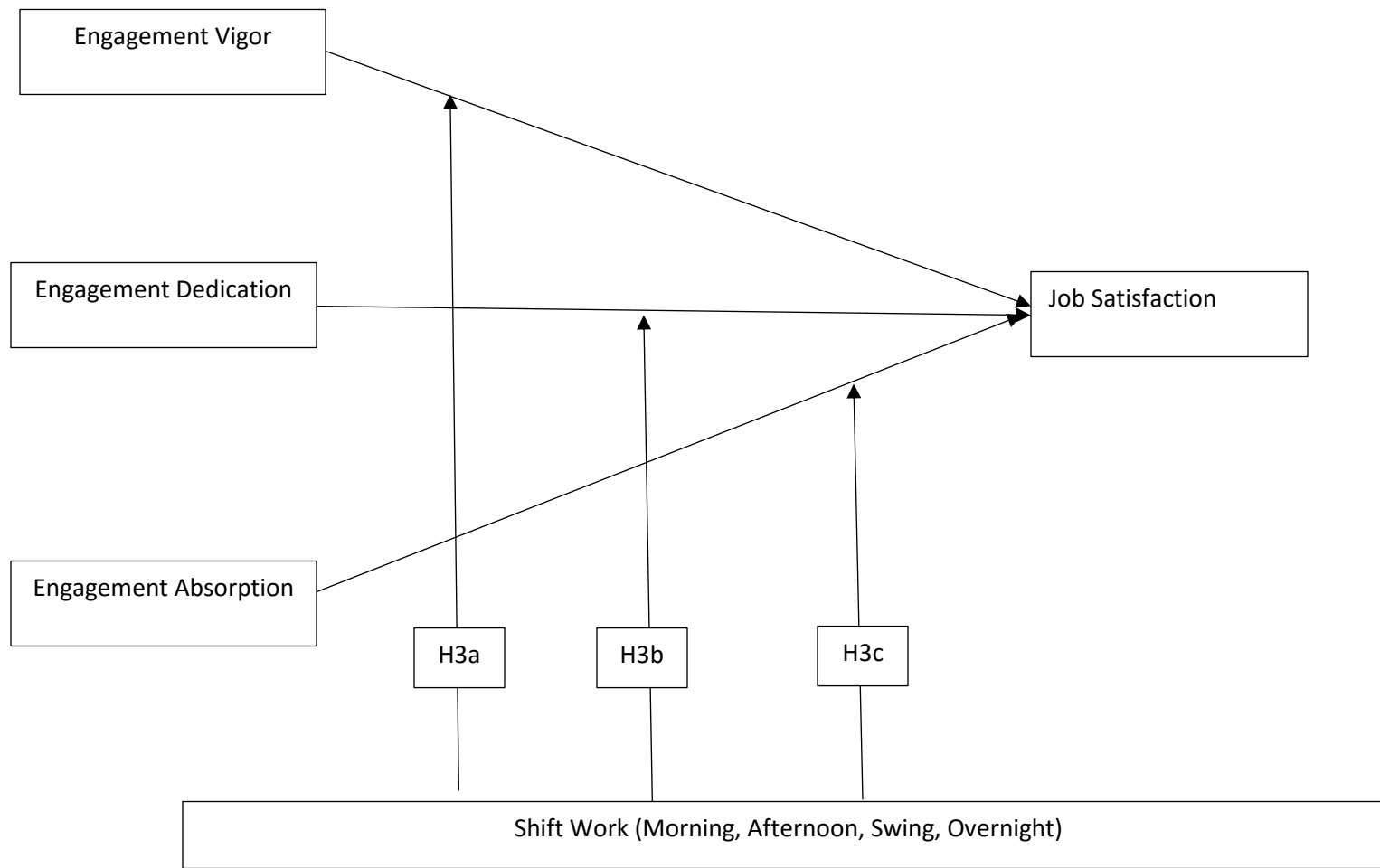
All hypotheses testing were conducted utilizing the Process tool in SPSS created by Andrew Hayes (2013). The Process tool is an excellent application to test many models and

specifically the moderation model being tested in this study. Model 1 in the Process tool was utilized for all hypotheses tests. Shift worked was utilized as the moderator in all analysis and was automatically dummy coded by the Process tool. There are four levels in the shift worked variable so three dummy variables were created in the analysis process. In moderation analysis, it is important for the independent variable (x) to have a statistically significant relationship with the dependent variable (y). When reviewing the output from the analysis, the researcher is looking for a significant interaction effect between the independent variable and moderator variable. The  $r^2$  change is also inspected and should be statistically significant. Each reported analysis will include both of these outcomes. Property size, service type, and management structure will be controlled in the analysis. Figures 6, 7, and 8 represent all the results of hypotheses testing.



Note: Dotted lines means not supported. Solid line means supported.

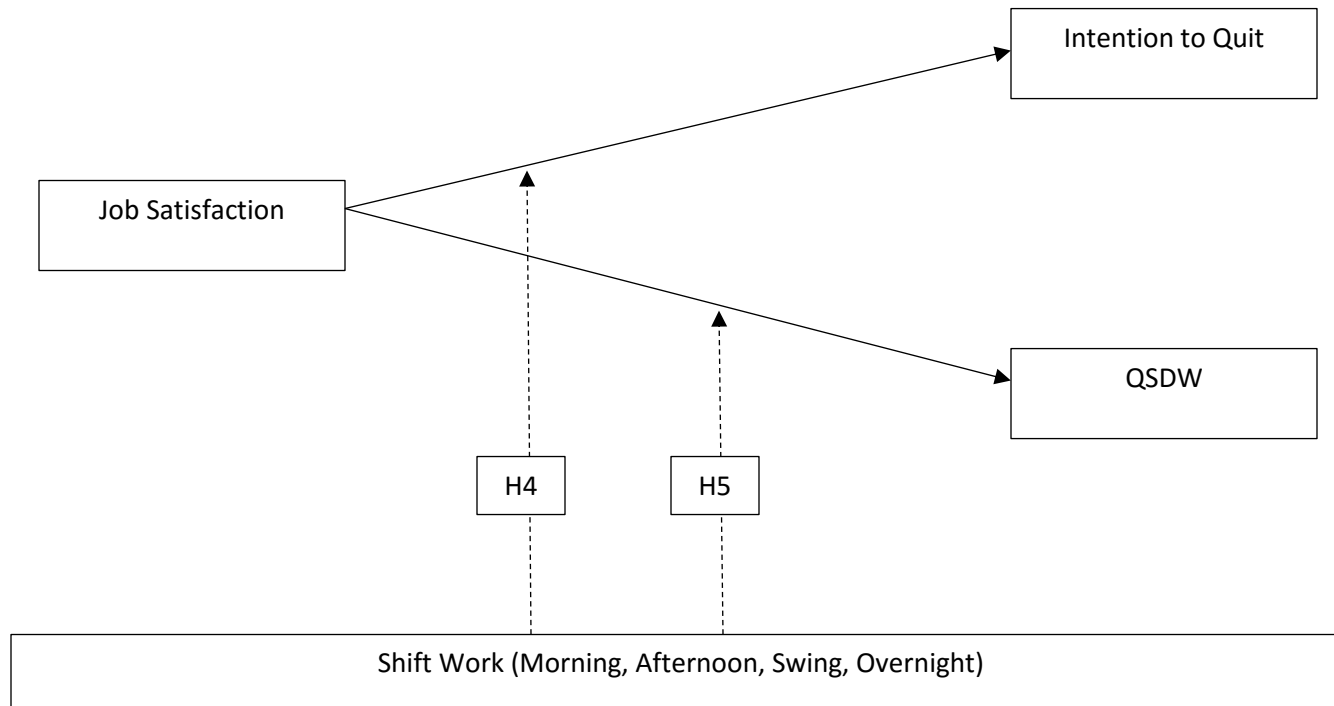
Figure 6 Results for Hypotheses 1abc and 2abc



Note: Dotted lines means not supported. Solid line means supported.

*Figure 7 Results of Hypotheses 3abc*





Note: Dotted lines means not supported. Solid line means supported.

*Figure 8 Results of Hypotheses 4 and 5*

In each of the following analyses, dummy variables had to be created as well as the interaction term. The Process macro tool will actually do both of these steps for the researcher as long as the information is inputted correctly. When creating dummy variables for a categorical variable, there is one less variable created than there are levels ( $k-1$ , where  $k$  is the number of levels). Therefore, for this study, three dummy variables are created leaving one variable to be the comparison. The overnight shift was not created as a dummy variable and will be utilized as the comparison variable for the other dummy variables in analysis. The interaction variable is created by multiplying the dummy variable by the independent variable. The Process macro tool does this automatically. For the analysis, interaction variable 1 is the interaction between the afternoon shift and the independent variable. Interaction variable 2 is the interaction between the swing shift and the independent variable. Interaction variable 3 is the interaction between the morning shift and the independent variable. These labels are consistent throughout the data analysis section.

The first set of hypotheses tested were concerned with the relationship between supervisor support and the employee engagement concepts. Supervisor support acted as the independent variable and shift worked acted as the moderator variable for the first three hypotheses tests. The dependent variables for hypotheses 1a, 1b, and 1c were engagement vigor, engagement dedication, and engagement absorption, respectively. Table 10 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 1a. The independent variable supervisor support does have a statistically significant relationship with engagement vigor ( $p < .05$ ) which is needed in order to continue the analysis. One of the interaction effects, Int\_2 (IV and Swing Shift), was statistically significant ( $t = -2.6409$ ,  $p < .05$ )

and the  $r^2$  change due to interaction was also statistically significant ( $F=2.6303$ ,  $p<.05$ ).

Therefore, hypothesis 1a, presence of shift work as a moderator between supervisor support and engagement vigor, is supported.

Further examination of Table 10 indicates that the slope of regression line for the afternoon and morning shifts are not statistically significantly different when compared to the overnight shift. The slope of the swing shift is significantly different when compared to the overnight shift. Table 11 identifies the conditional effect of each shift group. By examining the  $p$  value of each shift, it is clear that the swing shift, while statistically significant, is not as strong as the other three shifts. This is further understood when the  $r^2$  for each shift group regression is analyzed. The morning, afternoon, and overnight shift all have adjusted  $r^2$  values above .30, while the swing shift's adjusted  $r^2$  value is below .07 indicating a very weak relationship (Hair et al., 2006) between supervisor support and engagement vigor. Figure 9 is a scatter plot of the relationship between supervisor support and engagement vigor. The figure clearly demonstrates the difference in strength of relationship based on the shift.

*Table 10 Model Summary for Hypothesis 1a*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.1246	.1431	21.8320	.0000
<b>PropSize</b>	.0141	.0368	.3839	.7013
<b>ServType</b>	.0841	.0492	1.7089	.0882
<b>Mgmt</b>	.0020	.0409	.0501	.9601
<b>SupTot</b>	.6779	.0615	11.0152	.0000
<b>D1</b>	.1385	.1256	1.1027	.2708
<b>D2</b>	.3591	.1239	2.8979	.0039
<b>D3</b>	.3630	.1213	2.9922	.0029
<b>Int_1</b>	-.0034	.1199	-.0284	.9774
<b>Int_2</b>	-.3725	.1411	-2.6409	.0086
<b>Int_3</b>	.0251	.1053	.2384	.8117

Table 11 Conditional Effects of Shift Groups 1a

ShiftSch	Coeff	se	t	p	LLCI	ULCI
Morning	.7030	.0865	8.1241	.0000	.5330	.8731
Afternoon	.6745	.1031	6.5448	.0000	.4720	.8771
Swing	.3054	.1275	2.3956	.0170	.0548	.5559
Overnight	.6779	.0615	11.0152	.0000	.5570	.7989

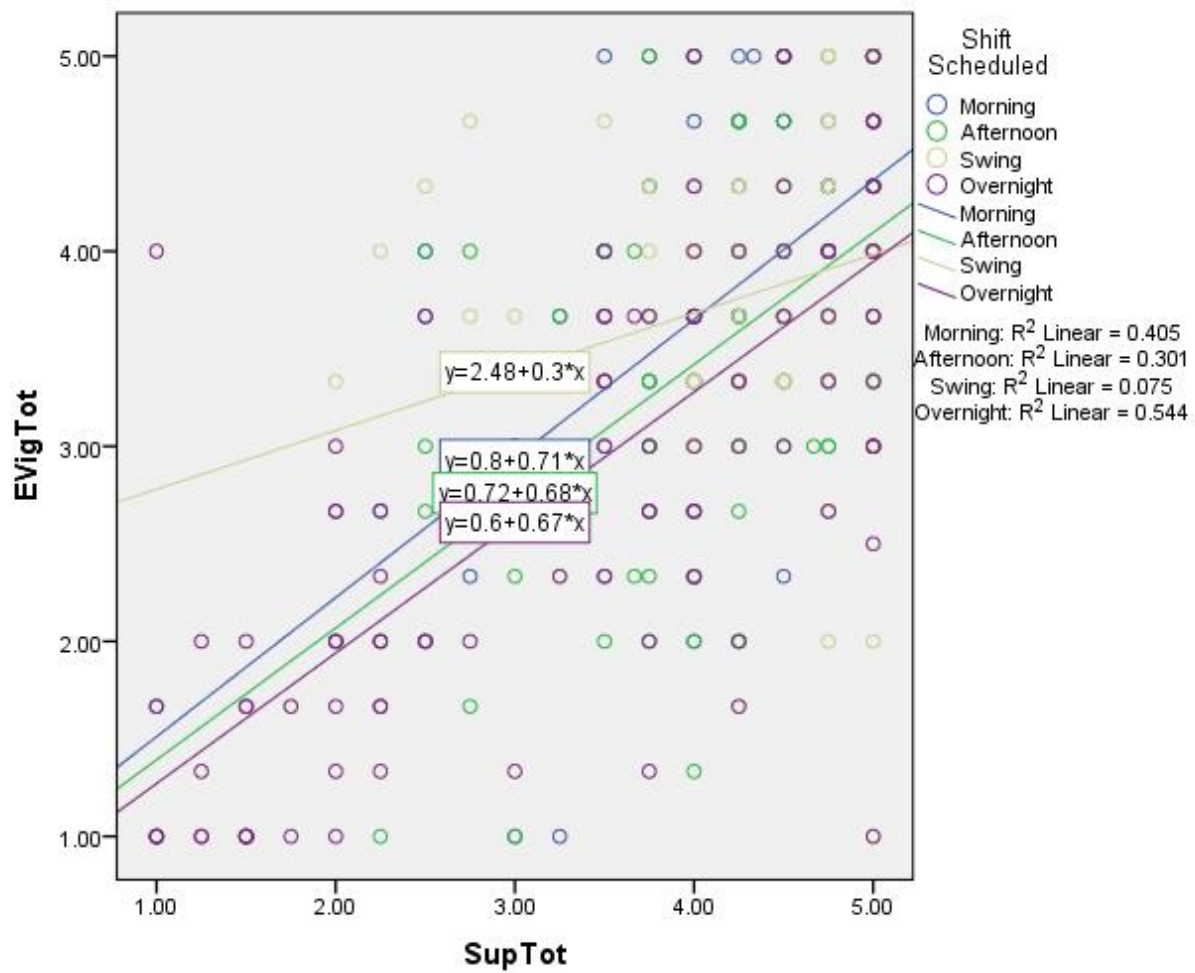


Figure 9 Scatter Plot for H1a

Table 12 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 1b. The independent variable supervisor support does have a statistically

significant relationship with engagement dedication ( $p < .05$ ). One of the interaction effects, Int\_2 (IV and Swing Shift), was statistically significant ( $t = -3.0252$ ,  $p < .05$ ) and the  $r^2$  change due to interaction was also statistically significant ( $F = 3.5886$ ,  $p < .05$ ). Therefore, hypothesis 1b, presence of a shift work as a moderator between supervisor support and engagement dedication, is supported.

Further examination of Table 12 indicates that the slope of regression line for the afternoon and morning shifts are not statistically significantly different when compared to the overnight shift. The slope of the swing shift is significantly different when compared to the overnight shift. Table 13 identifies the conditional effect of each shift group. By examining the  $p$  value of each shift, it is clear that the swing shift, while statistically significant, is not as strong as the other three shifts. This is further supported when the  $r^2$  for each shift group regression is analyzed. The morning, afternoon, and overnight shift all have adjusted  $r^2$  values above .30, while the swing shift's adjusted  $r^2$  value is below .10 indicating a very weak relationship between supervisor support and engagement dedication. Figure 10 is a scatter plot of the relationship between supervisor support and engagement dedication. The figure clearly demonstrates the difference in strength of relationship based on the shift.

*Table 12 Model Summary for Hypothesis 1b*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.3898	.1412	24.0027	.0000
<b>PropSize</b>	.0431	.0341	1.2658	.2063
<b>ServType</b>	.0608	.0458	1.3285	.1847
<b>Mgmt</b>	.0272	.0400	.6805	.4965
<b>SupTot</b>	.6898	.0509	13.4536	.0000
<b>D1</b>	.1115	.1206	.9247	.3557
<b>D2</b>	.3933	.1130	3.4803	.0006
<b>D3</b>	.3821	.1157	3.3031	.0010
<b>Int_1</b>	.0761	.1193	.6378	.5239
<b>Int_2</b>	-.3517	.1163	-3.0252	.0026
<b>Int_3</b>	-.0829	.1056	-.7848	.4330

*Table 13 Conditional Effects of Shift Groups 1b*

<b>ShiftSch</b>	<b>Coeff</b>	<b>Se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Morning</b>	.6069	.0938	6.4683	.0000	.4225	.7913
<b>Afternoon</b>	.7659	.10749	7.0969	.0000	.5538	.9780
<b>Swing</b>	.3381	.1059	3.1919	.0015	.1299	.5462
<b>Overnight</b>	.6898	.0509	13.5436	.0000	.5897	.7899

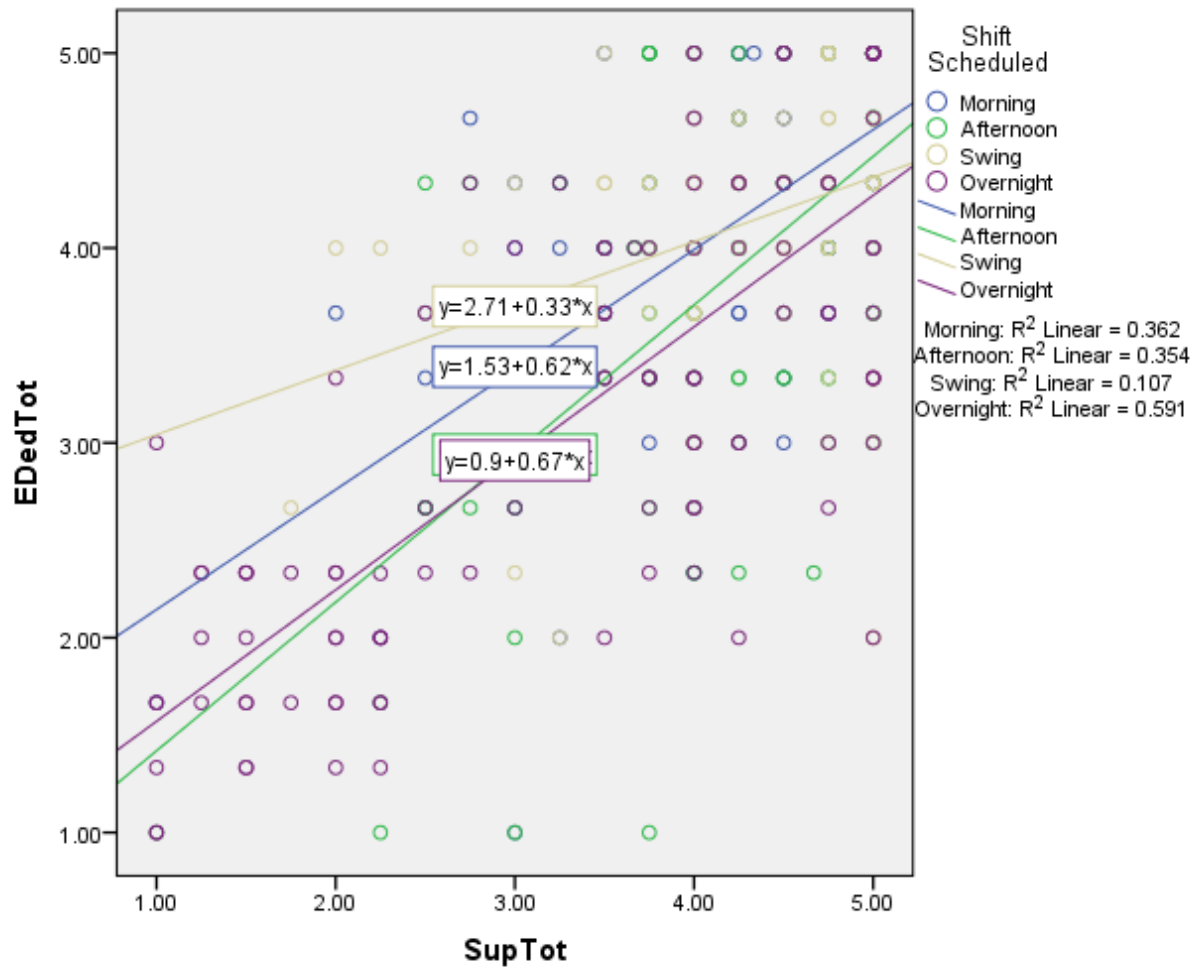


Figure 10 Scatter Plot for H1b

Table 14 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 1c. The independent variable supervisor support does have a statistically significant relationship with engagement absorption ( $p < .05$ ). One of the interaction effects, Int\_2 (IV and Swing Shift), was statistically significant ( $t = -2.9311$ ,  $p < .05$ ) and the  $r^2$  change due to interaction was also statistically significant ( $F = 3.0593$ ,  $p < .05$ ). Therefore, hypothesis 1c,

presence of shift work as a moderator between supervisor support and engagement absorption, is supported.

Further examination of table 14 indicates that that the slope of regression line for the afternoon and morning shifts are not statistically significantly different when compared to the overnight shift. The slope of the swing shift is significantly different when compared to the overnight shift. Table 15 identifies the conditional effect of each shift group. By examining the p value of each shift, it is clear that the swing shift is not as strong as the other three shifts because it is not statistically significant ( $p > .05$ ). This is further supported when the  $r^2$  for each shift group regression is analyzed. The morning, afternoon, and overnight shift all have adjusted  $r^2$  values above .17, while the swing shift's adjusted  $r^2$  value is below .04 indicating a very weak relationship between supervisor support and engagement absorption. Figure 11 is a scatter plot of the relationship between supervisor support and engagement absorption. The figure clearly demonstrates the difference in strength of relationship based on the shift.

*Table 14 Model Summary for Hypothesis 1c*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.4263	.1437	23.8393	.0000
<b>PropSize</b>	.0556	.0373	1.4923	.1364
<b>ServType</b>	.0224	.0466	.4810	.6308
<b>Mgmt</b>	.0115	.0396	.2904	.7717
<b>SupTot</b>	.6469	.0835	7.7445	.0000
<b>D1</b>	.1697	.1173	1.4462	.1489
<b>D2</b>	.2982	.1208	2.4690	.0139
<b>D3</b>	.3780	.1264	2.9908	.0029
<b>Int_1</b>	-.1781	.1391	-1.2804	.2011
<b>Int_2</b>	-.4359	.1487	-2.9311	.0036
<b>Int_3</b>	-.2373	.1437	-1.6521	.0992



Table 15 Conditional Effects of Shift Groups 1c

ShiftSch	Coeff	se	t	p	LLCI	ULCI
<b>Morning</b>	.4096	.1173	3.4925	.0005	.1791	.6400
<b>Afternoon</b>	.4688	.1111	4.2208	.0000	.2505	.6872
<b>Swing</b>	.2110	.1241	1.6999	.0899	-.0330	.4550
<b>Overnight</b>	.6469	.0835	7.7445	.0000	.4827	.8111

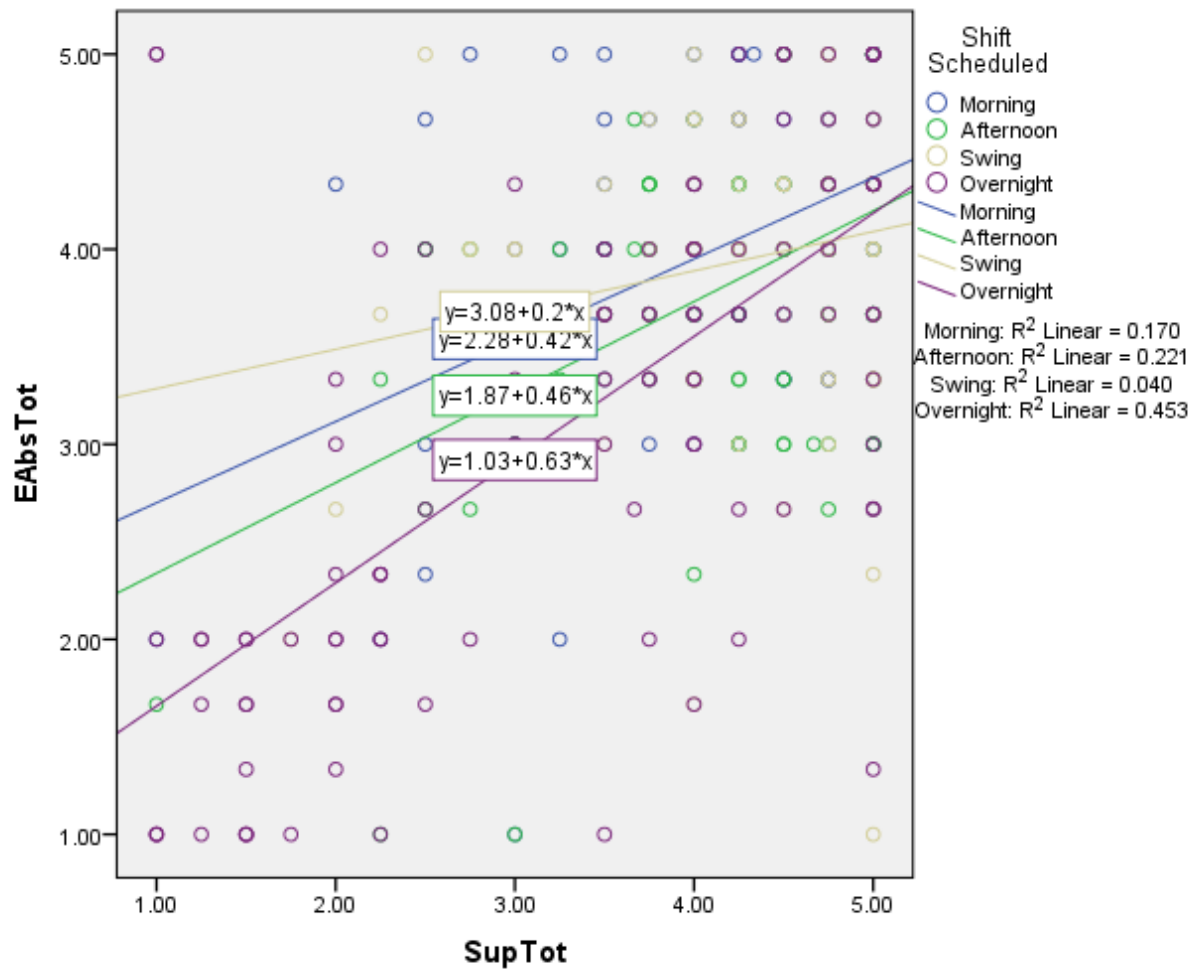


Figure 11 Scatter Plot for H1c

The next set of hypotheses examined the relationship between coworker support and the components of engagement: vigor, dedication, and absorption. Table 16 displays the regression

coefficients, standard errors, t-values, and p-values of variables in hypothesis 2a. The independent variable coworker support does have a statistically significant relationship with engagement vigor ( $p < .05$ ), however, there is no statistical significance in the interaction effect. The  $r^2$  change due to interaction was not statistically significant ( $F = 1.8503$ ,  $p > .05$ ). Therefore, hypothesis 2a is not supported.

*Table 16 Model Summary for Hypothesis 2a*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.0613	.1473	20.7837	.0000
<b>PropSize</b>	-.0233	.0415	-.5613	.5749
<b>ServType</b>	.1206	.0497	2.4278	.0156
<b>Mgmt</b>	.0054	.0431	.1259	.8999
<b>CoSupTot</b>	.8136	.0626	12.9881	.0000
<b>D1</b>	.1854	.1229	1.5089	.1321
<b>D2</b>	.3768	.1197	3.1490	.0018
<b>D3</b>	.5014	.1269	3.9516	.0001
<b>Int_1</b>	-.1668	.1073	-1.5539	.1209
<b>Int_2</b>	-.2672	.1556	-1.7168	.0867
<b>Int_3</b>	-.2343	.1483	-1.5797	.1149

Table 17 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 2b. The independent variable coworker support does have a statistically significant relationship with engagement dedication ( $p < .05$ ). There is statistical significance in one of the interaction effect, however, the  $r^2$  change was not statistically significant ( $p > .05$ ). Both values must be statistically significant in order to show the presence of a moderator. Therefore, hypothesis 2b is not supported.

*Table 17 Model Summary for Hypothesis 2b*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.3128	.1493	22.1915	.0000
<b>PropSize</b>	-.0012	.0379	-.0305	.9757
<b>ServType</b>	.0943	.0482	1.9549	.0512
<b>Mgmt</b>	.0347	.0427	.8132	.4165
<b>CoSupTot</b>	.7827	.0640	12.2327	.0000
<b>D1</b>	.1784	.1238	1.4404	.1505
<b>D2</b>	.4522	.1122	4.0305	.0001
<b>D3</b>	.5216	.1203	4.3357	.0000
<b>Int_1</b>	-.0340	.1349	-.2523	.8009
<b>Int_2</b>	-.2646	.1216	-2.1760	.0301
<b>Int_3</b>	-.1875	.1493	-1.2559	.2098

Table 18 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 2c. The independent variable coworker support does have a statistically significant relationship with engagement absorption ( $p < .05$ ). There is also a significant interaction effect between the independent variable and moderator as seen in Int\_2 ( $t = -2.3582$ ,  $p < .05$ ). The  $r^2$  change was also significant ( $F = 3.1181$ ,  $p < .05$ ). Therefore, hypothesis 2c, presence of a shift work as a moderator between coworker support and engagement dedication, is supported.

Further examination of Table 18 indicates that that the slope of regression line for the afternoon and morning shifts are not statistically significantly different when compared to the overnight shift. The slope of the swing shift is significantly different when compared to the overnight shift. Table 19 identifies the conditional effect of each shift group. By examining the p value of each shift, it is clear that the swing shift is not as strong as the other three shifts because it is not statistically significant ( $p > .05$ ). This is further supported when the  $r^2$  for each shift group

regression is analyzed. The morning, afternoon, and overnight shift all have adjusted  $r^2$  values above .14, while the swing shift's adjusted  $r^2$  value is below .05 indicating a very weak relationship between coworker support and engagement absorption. Figure 12 is a scatter plot of the relationship between supervisor support and engagement absorption. The figure clearly demonstrates the difference in strength of relationship based on the shift.

*Table 18 Model Summary for Hypothesis 2c*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.3763	.1509	22.3782	.0000
<b>PropSize</b>	.0240	.0380	.6302	.5289
<b>ServType</b>	.0472	.0457	1.0349	.3013
<b>Mgmt</b>	.0131	.0406	.3240	.7461
<b>CoSupTot</b>	.7678	.0756	10.1620	.0000
<b>D1</b>	.2176	.1234	1.7633	.0786
<b>D2</b>	.3429	.1240	2.7645	.0059
<b>D3</b>	.4690	.1278	3.6700	.0003
<b>Int_1</b>	-.3043	.1569	-1.9396	.0531
<b>Int_2</b>	-.4505	.1910	-2.3582	.0188
<b>Int_3</b>	-.3146	.1650	-1.9063	.0573

*Table 19 Conditional Effects of Shift Groups 2c*

<b>ShiftSch</b>	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Morning</b>	.4532	.1477	3.0684	.0023	.1629	.7435
<b>Afternoon</b>	.4634	.1359	3.4097	.0007	.1963	.7306
<b>Swing</b>	.3173	.1752	1.8105	.0709	-.0271	.6617
<b>Overnight</b>	.7678	.0756	10.1620	.0000	.6193	.9163

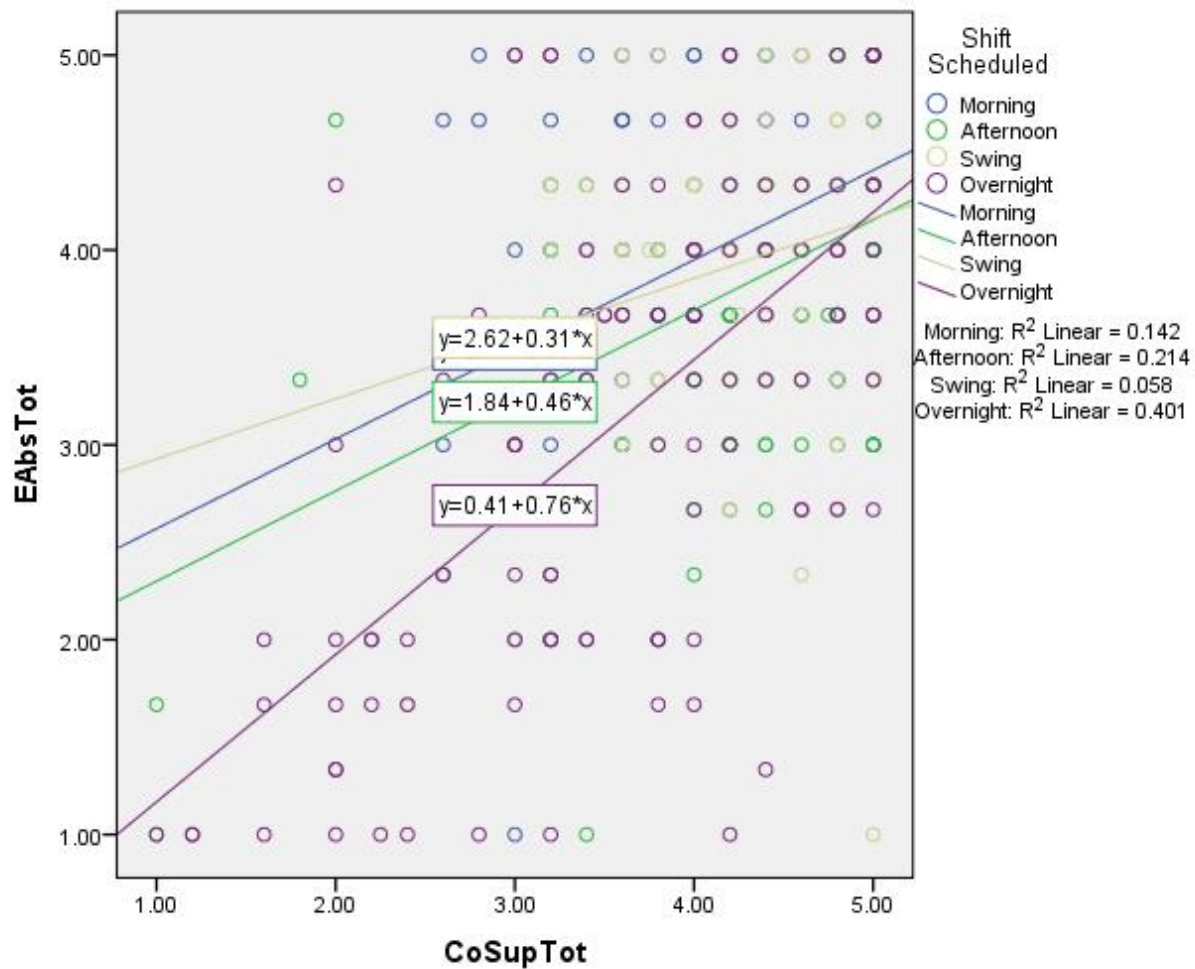


Figure 12 Scatter Plot for H2c

The next set of hypotheses investigated the relationship between the three engagement components and job satisfaction. The engagement components acted as the independent variables, job satisfaction as the dependent variable, and shift worked as the moderator. Table 20 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 3a. The independent variable engagement vigor does have a statistically significant relationship with job satisfaction ( $p < .05$ ). Two of the interaction effects were statistically

significant (Int\_1:  $t=-2.2484$ ,  $p<.05$ ; Int\_2:  $t=-4.2085$ ,  $p<.05$ ) and the  $r^2$  change due to interaction was also statistically significant ( $F=6.3980$ ,  $p<.05$ ). Therefore, hypothesis 3a, presence of shift work as a moderator between engagement vigor and job satisfaction, is supported.

Further examination of table 20 indicates that slope of the regression lines for afternoon and swing shifts are statistically significantly different when compared to the overnight shift. Table 21 identifies the conditional effect of each shift group. Due to the p values all being significant at the  $p<.0001$  level, the t values can be inspected instead. The table indicates that the overnight shift has the largest t value indicating that the relationship between engagement vigor and job satisfaction is stronger for the overnight shift. This can be further examined by inspecting the  $r^2$  values for each shift's regression analysis. The  $r^2$  values for the morning, afternoon, swing, and overnight shifts are .46, .41, .22, and .64, respectively. Figure 13 shows that the slope of the regression line for the overnight shift is significantly steeper than those of the afternoon and swing shift.

*Table 20 Model Summary for Hypothesis 3a*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.8038	.1210	31.4375	.0000
<b>PropSize</b>	-.0655	.0335	-1.9524	.0515
<b>ServType</b>	-.0102	.0506	-.2027	.8395
<b>Mgmt</b>	.0560	.0378	1.4815	.1392
<b>EVigTot</b>	.8999	.0535	16.8335	.0000
<b>D1</b>	.2055	.1059	1.9401	.0530
<b>D2</b>	.3906	.1118	3.4941	.0005
<b>D3</b>	.2286	.1115	2.0493	.0410
<b>Int_1</b>	-.2529	.1125	-2.2484	.0251
<b>Int_2</b>	-.4291	.1020	-4.2085	.0000
<b>Int_3</b>	-.1597	.1116	-1.4316	.1530

Table 21 Conditional Effects of Shift Groups 3a

ShiftSch	Coeff	se	t	p	LLCI	ULCI
<b>Morning</b>	.7402	.0975	7.5901	.0000	.5485	.9319
<b>Afternoon</b>	.6470	.0978	6.6141	.0000	.4547	.8393
<b>Swing</b>	.4708	.0871	5.4053	.0000	.2996	.6421
<b>Overnight</b>	.8999	.0535	16.8335	.0000	.7949	1.0050

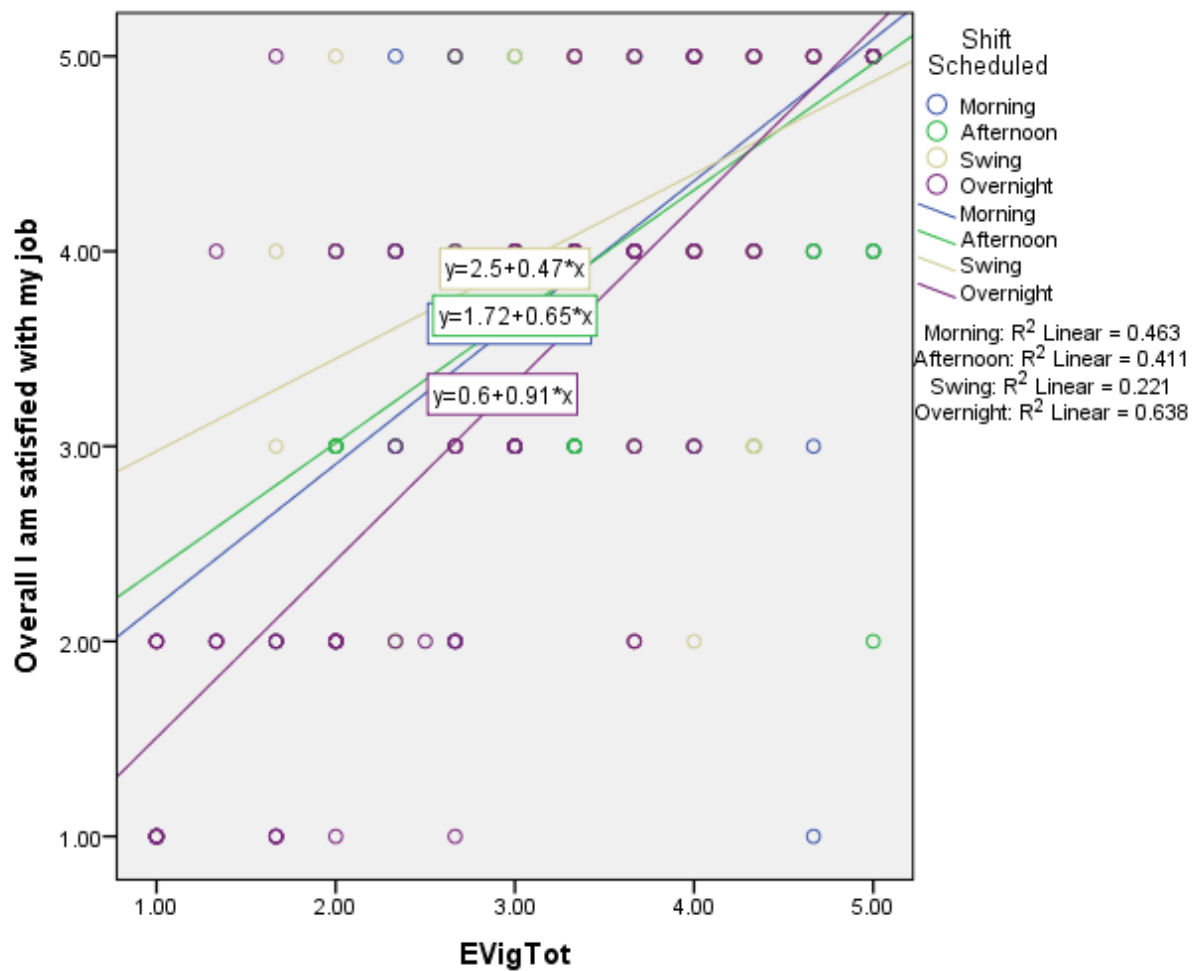


Figure 13 Scatter Plot for H3a

Table 22 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 3b. The independent variable engagement dedication does have a

statistically significant relationship with job satisfaction ( $p < .05$ ). Two of the interaction effects were statistically significant (Int\_1:  $t = -2.8172$ ,  $p < .05$ ; Int\_2:  $t = -2.9348$ ,  $p < .05$ ) and the  $r^2$  change due to interaction was also statistically significant ( $F = 4.7274$ ,  $p < .05$ ). Therefore, hypothesis 3b, presence of shift work as a moderator between coworker support and engagement dedication, is supported.

Further examination of Table 22 indicates that that slope of the regression lines for afternoon and swing shifts are statistically significantly different when compared to the overnight shift. Table 23 identifies the conditional effect of each shift group. Due to the  $p$  values all being significant at the  $p < .0001$  level, the  $t$  values can be inspected instead. The table indicates that the overnight shift has the largest  $t$  value indicating that the relationship between engagement dedication and job satisfaction is stronger for the overnight shift. This can be further examined by inspecting the  $r^2$  values for each shift's regression analysis. The  $r^2$  values for the morning, afternoon, swing, and overnight shifts are .62, .60, .35, and .73, respectively. Figure 14 shows that the slope of the regression line for the overnight shift is significantly steeper than those of the afternoon and swing shift



*Table 22 Model Summary for Hypothesis 3b*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.9367	.1112	35.3862	.0000
<b>PropSize</b>	-.0837	.0336	-2.4907	.0131
<b>ServType</b>	-.0088	.0449	-.1964	.8444
<b>Mgmt</b>	.0389	.0315	1.2342	.2178
<b>EDedTot</b>	.9926	.0426	23.2772	.0000
<b>D1</b>	.1435	.0906	1.5847	.1138
<b>D2</b>	.2488	.1113	2.2348	.0259
<b>D3</b>	.0990	.0984	1.0063	.3148
<b>Int_1</b>	-.2378	.0844	-2.8172	.0051
<b>Int_2</b>	-.3529	.1203	-2.9348	.0035
<b>Int_3</b>	-.0558	.0923	-.6049	.5456

*Table 23 Conditional Effects for Shift Groups 3b*

<b>ShiftSch</b>	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Morning</b>	.9368	.0814	11.5056	.0000	.7767	1.0968
<b>Afternoon</b>	.7548	.0723	10.4353	.0000	.6126	.8969
<b>Swing</b>	.6397	.1126	5.6805	.0000	.4183	.8610
<b>Overnight</b>	.9926	.0426	23.2772	.0000	.9088	1.0764

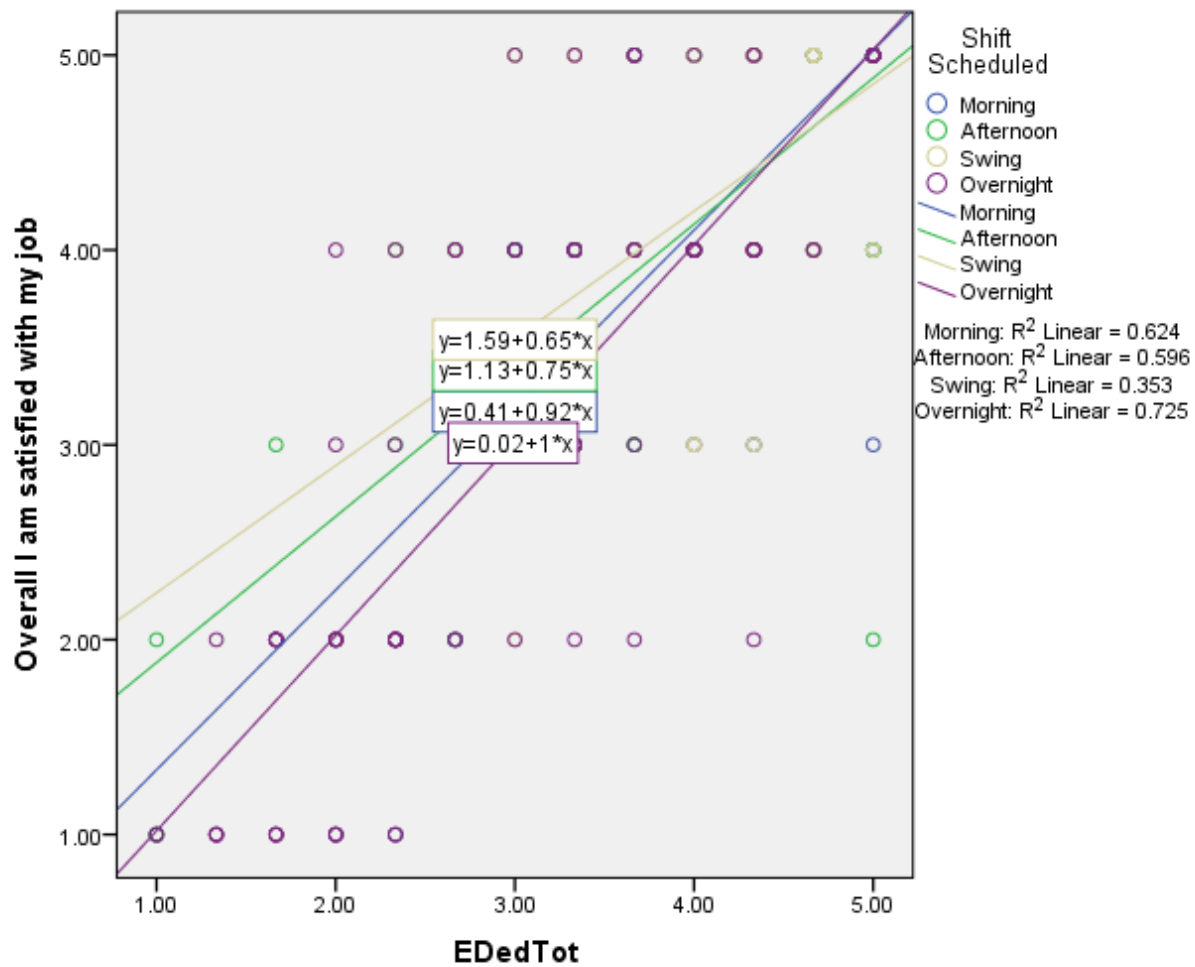


Figure 14 Scatter Plot for H3b

Table 24 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 3c. The independent variable engagement absorption does have a statistically significant relationship with job satisfaction ( $p < .05$ ). One of the interaction effects, Int\_2, was statistically significant ( $t = -2.6664$ ,  $p < .05$ ) and the  $r^2$  change due to interaction was also statistically significant ( $F = 2.8233$ ,  $p < .05$ ). Therefore, hypothesis 3c, presence of shift work as a moderator between engagement absorption and job satisfaction, is supported.

Further examination of table 24 indicates that that the slope of regression line for the afternoon and morning shifts are not statistically significantly different when compared to the overnight shift. The slope of the swing shift is significantly different when compared to the overnight shift. Table 25 identifies the conditional effect of each shift group. By examining the p value of each shift, it is clear that the swing shift is not as strong as the other three shifts because it is not statistically significant ( $p > .05$ ). This is further supported when the  $r^2$  for each shift group regression is analyzed. The morning, afternoon, and overnight shift all have adjusted  $r^2$  values above .30, while the swing shift's adjusted  $r^2$  value is below .09 indicating a very weak relationship between engagement absorption and job satisfaction. Figure 15 is a scatter plot of the relationship between engagement absorption and job satisfaction. The figure clearly demonstrates the difference in strength of relationship based on the shift.

*Table 24 Model Summary for Hypothesis 3c*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	3.6976	.1560	23.6960	.0000
<b>PropSize</b>	-.1055	.0394	-2.6739	.0078
<b>ServType</b>	.0354	.0569	.6224	.5340
<b>Mgmt</b>	.0421	.0434	.9703	.3324
<b>EAbsTot</b>	.7884	.0721	10.9361	.0000
<b>D1</b>	.2842	.1315	2.1603	.0313
<b>D2</b>	.5580	.1414	3.9463	.0001
<b>D3</b>	.3712	.1503	2.4701	.0139
<b>Int_1</b>	.0424	.1187	.3573	.7211
<b>Int_2</b>	-.4475	.1678	-2.6664	.0080
<b>Int_3</b>	-.0954	.1440	-.6623	.5082

Table 25 Condition Effects for Shift Groups 3c

ShiftSch	Coeff	se	t	p	LLCI	ULCI
Morning	.6930	.1254	5.5251	.0000	.4465	.9395
Afternoon	.8308	.0944	8.7961	.0000	.6451	1.0164
Swing	.3409	.1512	2.2543	.0247	.0437	.6380
Overnight	.7884	.0721	10.9361	.0000	.6467	.9301

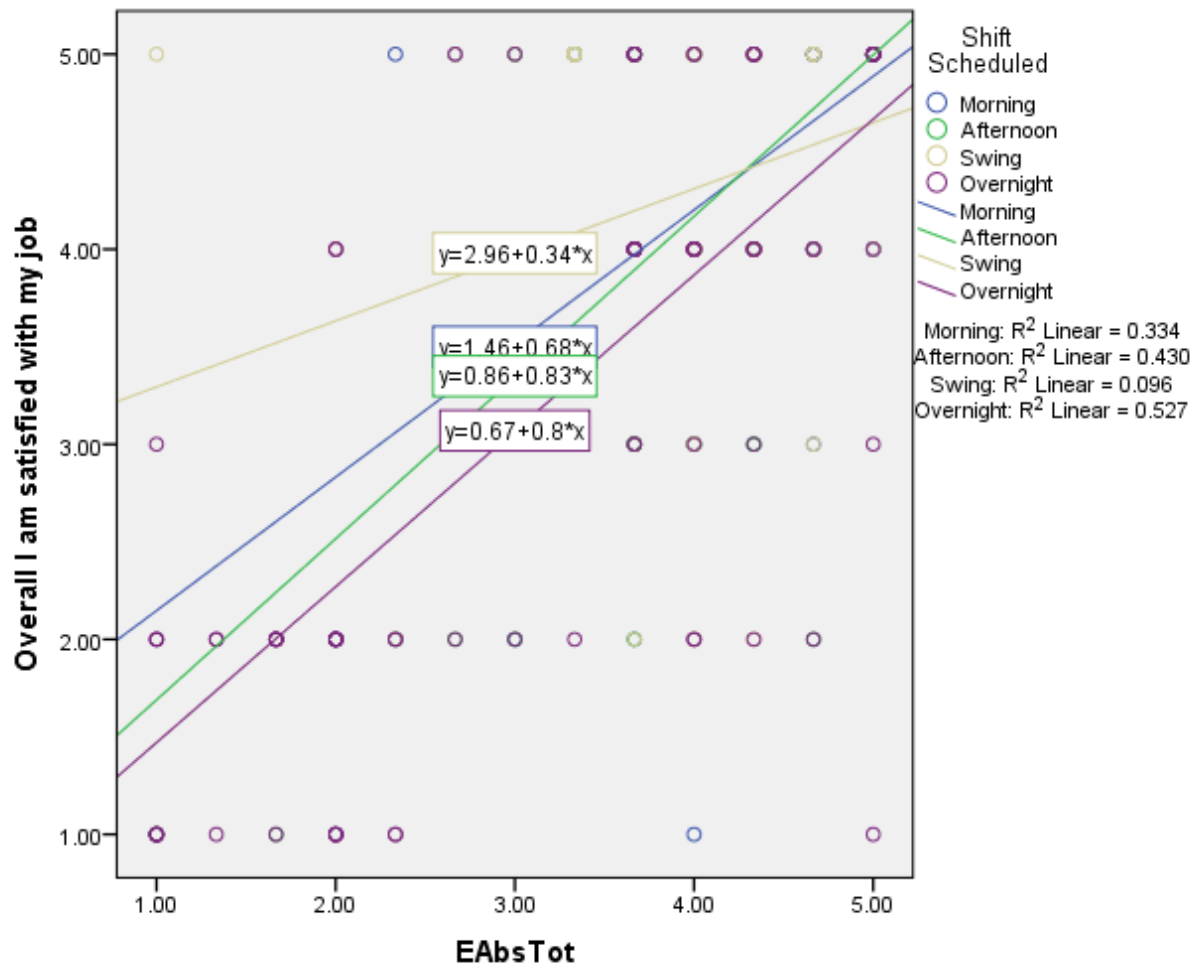


Figure 15 Scatter Plot for H3c

The last set of hypotheses examined the relationship between job satisfaction and two outcome variables. Hypothesis 4 utilized job satisfaction as the independent variable, intention to

quit as the dependent variable and shift worked as the moderator. Table 26 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 4. The independent variable job satisfaction does have a statistically significant relationship with intention to quit ( $p < .05$ ), however, there is no statistical significance in the interaction effects ( $p > .05$ ). The  $r^2$  change due to interaction was also not statistically significant ( $F = .2562$ ,  $p > .05$ ). Therefore, hypothesis 4 is not supported.

*Table 26 Model Summary for Hypothesis 4*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	2.5103	.1516	16.5605	.0000
<b>PropSize</b>	-.0741	.0450	-1.6466	.1004
<b>ServType</b>	.0154	.0489	.3157	.7524
<b>Mgmt</b>	.0080	.0490	.1627	.8708
<b>JobSatis</b>	-.6780	.0555	-12.2072	.0000
<b>D1</b>	.0375	.1153	.3249	.7454
<b>D2</b>	.0820	.1439	.5698	.5691
<b>D3</b>	-.0145	.1364	-.1065	.9153
<b>Int_1</b>	-.0779	.0904	-.8612	.3896
<b>Int_2</b>	-.0154	.1459	-.1059	.9157
<b>Int_3</b>	-.0457	.1274	-.3586	.7201

Table 27 displays the regression coefficients, standard errors, t-values, and p-values of variables in hypothesis 5. The independent variable job satisfaction does have a statistically significant relationship with quality service delivery willingness ( $p < .05$ ). There is statistical significance in the interaction effects, however, the  $r^2$  change due to interaction was not statistically significant ( $F = .2.2566$ ,  $p > .05$ ). Therefore, hypothesis 5 is not supported.

*Table 27 Model Summary for Hypothesis 5*

	<b>Coeff</b>	<b>se</b>	<b>t</b>	<b>p</b>
<b>Constant</b>	4.3678	.1118	39.0520	.0000
<b>PropSize</b>	.0602	.0292	2.0640	.0396
<b>ServType</b>	.0075	.0408	.1849	.8534
<b>Mgmt</b>	-.0244	.0466	-.5245	.6002
<b>JobSatis</b>	.3225	.0603	5.3479	.0000
<b>D1</b>	.0204	.1102	.1855	.8530
<b>D2</b>	.1404	.0916	1.5331	.1260
<b>D3</b>	.1865	.0959	1.9444	.0525
<b>Int_1</b>	-.0637	.1346	-.4732	.6363
<b>Int_2</b>	-.2198	.0949	-2.3162	.0210
<b>Int_3</b>	-.1792	.0897	-1.9880	.0463

#### 4.7 Further Analysis – ANOVAs

Many of the hypotheses examined in this study were supported by showing statistical significance. These hypotheses examined shift work as a moderator on the relationship between two variables. To further examine the data, the researcher has opted to examine the difference in shift group means for each individual variable by conducting a series of one-way anovas. These mean differences were not hypothesized but may offer a deeper understanding in the data set.

##### 4.7.1 One-Way Anova of Supervisor Support

*Table 28 One-Way Anova of Supervisor Support*

<b>Source</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>	<b>Eta Squared</b>
<b>ShiftSch</b>	3	23.229	26.569	0.000	.153
<b>Error</b>	440	.874			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their perception of supervisor support. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in supervisor support scores for the four groups:  $F(3,440) = 23.229$ ,  $p < .01$ . Furthermore, the model fit well with shift worked explaining 15.3% of the perception of supervisor support's variation. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the overnight group ( $M = 3.362$ ,  $SD = 1.33$ ) was significantly different from the other three shifts. The morning, afternoon, and swing shifts were not statistically different from each other.

#### 4.7.2 One-Way Anova of Coworker Support

*Table 29 One-Way Anova of Coworker Support*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	12.459	20.667	0.000	.124
Error	440	.603			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their perception of coworker support. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in coworker support scores for the four groups:  $F(3,440) = 20.667$ ,  $p < .01$ . Furthermore, the model fit well with shift worked explaining 12.4% of the perception of coworker support's variation. Post-hoc comparisons using the Tukey HSD test indicated that the

mean score for the overnight group ( $M=3.62$ ,  $SD= 1.04$ ) was significantly different from the other three shifts. The morning, afternoon, and swing shifts were not statistically different from each other.

#### 4.7.3 One-Way Anova of Engagement Vigor

*Table 30 One-Way Anova of Engagement Vigor*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	22.964	24.435	0.000	.143
Error	440	.940			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their engagement vigor. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p<.05$  level in engagement vigor scores for the four groups:  $F(3,440)= 22.964$ ,  $p<.01$ . Furthermore, the model fit well with shift worked explaining 14.3% of engagement vigor's variation. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the overnight group ( $M=2.85$ ,  $SD= 1.21$ ) was significantly different from the other three shifts. The morning, afternoon, and swing shifts were not statistically different from each other.

#### 4.7.4 One-Way Anova of Engagement Dedication

*Table 31 One-Way Anova of Engagement Dedication*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	24.024	27.334	0.000	.157
Error	440	.879			



A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their engagement dedication. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in engagement dedication scores for the four groups:  $F(3,440) = 27.334$ ,  $p < .01$ . Furthermore, the model fit well with shift worked explaining 15.7% of engagement dedication's variation. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the overnight group ( $M = 3.17$ ,  $SD = 1.16$ ) was significantly different from the other three shifts. The morning, afternoon, and swing shifts were not statistically different from each other.

#### 4.7.5 One-Way Anova of Engagement Absorption

*Table 32 One-Way Anova of Engagement Absorption*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	18.677	22.667	0.000	.134
Error	440	.824			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their engagement absorption. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in engagement absorption scores for the four groups:  $F(3,440) = 22.667$ ,  $p < .01$ . Furthermore, the model fit well with shift worked explaining 13.4% of engagement absorption's variation. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the

overnight group ( $M = 3.15$ ,  $SD = 1.25$ ) was significantly different from the other three shifts. The morning, afternoon, and swing shifts were not statistically different from each other.

#### 4.7.6 One-Way Anova of Job Satisfaction

*Table 33 One-Way Anova of Job Satisfaction*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	29.207	26.964	0.000	.155
Error	440	1.083			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their job satisfaction. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in job satisfaction scores for the four groups:  $F(3,440) = 26.964$ ,  $p < .01$ . Furthermore, the model fit well with shift worked explaining 15.5% of job satisfaction's variation. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the overnight group ( $M = 3.19$ ,  $SD = 1.37$ ) was significantly different from the other three shifts. The morning, afternoon, and swing shifts were not statistically different from each other.

#### 4.7.7 One-Way Anova of Intention to Quit

*Table 34 One-Way Anova of Intention to Quit*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	12.546	10.327	.000	.066
Error	440	1.215			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their intention to quit. Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in intention to quit scores for the four groups:  $F(3,440) = 10.327$ ,  $p < .05$ . Overall, the model fits poorly as an examination of the effect size ( $\eta^2 = .066$ ) reveals that the statistical difference among shift group means is trivial. This result suggests that the shift worked only explains 6.6% of the variation in intention to quit scores. The results are not impressive enough to make a contribution to theory or practice. The attainment of statistical significance is most likely attributable to a negligible impact resulting more from the statistical precision that a large sample size affords. Consequently, the post hoc test results will not be reported.

#### 4.7.8 One-Way Anova of Quality Service Delivery Willingness (QSDW)

*Table 35 One-Way Anova of QSDW*

Source	df	Mean Square	F	Sig.	Eta Squared
ShiftSch	3	5.072	9.284	0.000	.060
Error	438	.546			

A one-way anova between-groups analysis of variance was conducted to explore the impact of the shift an employee works on their quality service delivery willingness (QSDW). Participants were divided into four groups according to the shift they worked (Group 1: Morning, Group 2: Afternoon, Group 3: Swing, Group 4: Overnight). There was a statistically significant difference at the  $p < .05$  level in QSDW's scores for the four groups:  $F(3,438) = 9.284$ ,  $p < .05$ . Overall, the model fits poorly as an examination of the effect size ( $\eta^2 = .060$ ) reveals that the

statistical difference among shift group means is trivial. This result suggests that the shift worked only explains 6.0% of the variation in QSDW's scores. The results are not impressive enough to make a contribution to theory or practice. The attainment of statistical significance is most likely attributable to a negligible impact resulting more from the statistical precision that a large sample size affords. Consequently, the post hoc test results will not be reported.

#### 4.8 Discussion

Two data analysis groupings were conducted in this study. The first was the original proposed data analysis conducting a moderated multiple regression utilizing the data set with equal group sizes. The second analysis were one-way anovas conducted to further understand this data set. Each hypothesis will be reviewed followed by a discussion on the problems of detecting moderation effects in academic research. This section will end with a brief discussion on the anova findings.

##### 4.8.1 Overview of Results from Moderated Multiple Regression

The aforementioned findings indicated that many of the proposed hypotheses were supported indicating that shift work does moderate the relationship between certain variables often studied in hotel front desk employees. Seven of the eleven proposed hypotheses were supported starting with the relationship between supervisor support and elements of engagement.

Shift work was shown to moderate the relationship between supervisor support and employee engagement. The results indicated that the swing shift was statistically different in terms of regression slope when compared to the overnight shift. In fact, the results showed that only a small amount of the variance in engagement vigor could be accounted for by the swing

shift employee's perception of supervisor support. The regression line for the swing shift employees was almost a straight line across, whereas the other shifts regression line had a positive slope. This means that for the morning, afternoon, and overnight shifts that supervisor support had a significantly positive relationship with engagement vigor. For these three shifts, when the perception of supervisor support increased then their level of engagement vigor also positively increased. For the swing shift employees, when supervisor support increased it had little effect on their engagement vigor. A possible explanation for this could be as simple as looking at what the swing shift really entails. While the other three shifts indicate the front desk agents work at different times of the day, they at least work at consistent times for the week. The swing shift individuals indicated that in a given week they work both the morning and afternoon shifts. The other shifts may be able to get on a schedule that helps them maintain their energy for work, their engagement vigor, where the swing shift individual may not be able to get into a rhythm and their internal body clock may be thrown off. Due to the fact their shift always changes, the amount of supervisor support may not have any positive effect on their engagement vigor which is what the results indicate.

The swing shift results were similar for the relationship between supervisor support and the other two engagement concepts. An explanation as to why supervisor support did not have as strong of a relationship with engagement dedication with the swing shift as compared to the other shifts could be also attributed to the lack of consistency in work schedule and management supervision. Engagement dedication was measured by items such as "I am enthusiastic about my job" and "I am proud of the work I do." It may be difficult for an employee to be dedicated to their job when they are scheduled based on operational needs and not the individual's wants. It

also may be difficult to dedicate yourself to the role if you are the only one working the swing shift. If everyone else, including your managers, work a consistent shift then the individual on the rotating shift schedule will work with many managers. An employee may not be able to develop a significant relationship with a supervisor if the supervisor is a different individual for each shift.

Coworker support's relationship with engagement concepts were the next set of hypotheses tested. However, two of the three hypotheses in this section were not supported. The relationship between coworker support and engagement vigor and engagement dedication were not moderated by shift work. For each of these relationships coworker support did have a significantly positive relationship with the engagement concept, however, the shift worked by the front desk agent did not alter this relationship. Essentially this means that no matter the shift the front desk agent works, they feel equally about the influence of coworker support on engagement vigor and engagement dedication.

Similar to the first set of hypotheses, coworker support's relationship with engagement absorption was moderated by shift work. By examining the scatter plot, it is clear that the slope of the regression line for swing shift front desk agents was significantly different than the slope of the regression line for overnight shift. Again, the reason may be caused by the swing shift individual not working a consistent shift and therefore working with different individuals on a regular basis. It may be harder for swing shift individuals to build strong enough relationships with their coworkers that then in turn would significantly influence their engagement absorption. More will be discussed on these outcomes in the future research section in chapter five.

The next group of hypotheses examined the possibility of shift work moderating the engagement concepts relationship with job satisfaction. All three hypotheses were supported indicating shift work is a moderator of these relationships. For both hypothesis 3a and 3b, afternoon and swing shifts had significantly weaker relationships than the overnight shift. These outcomes were expected because the nature of working the overnight shift and the effect that may have on an individual's mental and physical state. Therefore, an individual working these odd hours may put more weight on the relationship between their level of engagement's ability to influence their job satisfaction.

Hypothesis 3c, shift moderates the relationship between engagement absorption and job satisfaction, was also supported. However, only the swing shift slope was significantly different from the overnight shift's regression line slope. The adjusted  $r^2$  for swing shift was below .09 indicating a very weak relationship. Swing shift has consistently been the significant difference in most of the supported hypotheses which really indicates that these particular individuals should be looked at more in depth. It is possible that these individuals may view their support and engagement as something different than individuals who work consistent shifts. It is also possible that individuals who work the swing shift do so because they do not have enough seniority yet to be given a set schedule. Their lack of experience may be the cause for the significant differences in these analyses.

Hypotheses 4 and 5 were not supported and shift work was not shown to moderate these relationships between job satisfaction and intention to quit and quality service delivery willingness. These hypotheses were proposed because it was expected that the overnight shift employees would not liking working that particular shift and would not provide the above and

beyond service that has come to be expected in the front office. When reviewed in the scatter plot, the four shift regression lines are almost lined up on top of each other indicating that the relationship between job satisfaction and intention to quit is viewed the same for each shift. Those with lower job satisfaction will have higher intentions to quit and just because the individual works the overnight shift does not change the nature of that relationship. Individuals who work the overnight shift may be doing so voluntarily and enjoy doing so. There will be more discussion about this in the limitations section in chapter five.

Hypothesis 5 was also not supported and upon further examination, the results showed that the relationship between job satisfaction and quality service delivery willingness was a weak relationship for all shifts. This could be attributed to individuals taking employment in the service industry because they enjoy helping others. Their job satisfaction does not significantly influence their desire to provide quality service. Individuals may also feel that providing quality service is part of the job requirements and their satisfaction does not influence that want or need to complete their job requirements. There also may be other explanations as to why shift work was not shown as a moderator of some of these relationships. It may be caused by statistical analytic reasons and not from the participants and their responses.

#### 4.8.2 Difficulty in Detecting Moderation

Ro (2012) summarized that there may be five different reasons for not detecting a moderating effect. Those five reasons are power, measurement errors, coarse outcome measure, removing insignificant variables, and artificial grouping.

The issue of power can be different when the moderator is measured continuously or categorically. This study not only utilized a categorical moderator but a multi-categorical



moderator as opposed to a dichotomous variable such as gender. Aguinis (1995) stated that unequal group sizes in the moderator may decrease power. This is the reason that the data set was reduced from 554 participants to 444 participants. Oddly, when the original data set with unequal group sizes was analyzed there was an additional hypothesis supported as opposed to just the single hypothesis in the equal group size data set. Even if group sizes are equal there is a chance that the error variances across groups may be unequal which could also lower power (Overton, 2001).

Measurement error is another reason that moderation may not be detected (Ro, 2012). Measurement errors in individual variables may be compounded when the interaction term is created and may reduce the reliability of that term (Aguinis et al., 2001). This may result in the underestimation of the moderator effect (Holmbeck, 1997). Jaccard and Wan (1996) argue that regression analysis tend to underestimate the interaction effect which is how a moderation effect is present. This study needed to utilize regression instead of structural equation modeling because of measurement scales, measurement types, and sample size.

Coarse outcome measure is the third reason for not detecting a moderating effect. Ro (2012) states that the outcome measure must have as many response options as the independent and moderator variables have multiplied together. In other words, if both the independent and moderator are measured with a 5 point Likert scale (the same used in this study) then the outcome variables needs to have 25 response options. True interaction effects are lost when using a coarse scale (Russell & Bobko, 1992). The outcome variables in this study were only utilizing a 5 point Likert scale. This could not be changed because practically it did not make

sense to have a 25 point Likert scale and the variables in this study were utilized as both independent and dependent variables depending on the relationship being examined.

The last two reasons for not detecting moderating effects are removing insignificant variables and artificial groupings (Ro, 2012). These two do not affect the outcomes in this study because no insignificant variables were removed in analysis and there was not artificial groups created for the variables.

The truth about moderated multiple regression is that moderation may be difficult to detect because there are many elements in the analysis that must be perfect. Unfortunately, in field research it is almost impossible to create the optimal conditions in the data for analysis. This research design did attempt to eliminate as many negative influences as possible but still resulted in non-significant findings for some of the hypotheses. However, when the data was further examined with one-way anova analyses, there were significant findings that will also contribute to the body of knowledge on shift work systems in hotel front office departments.

#### 4.8.3 One-Way Anova Results

Several one-way anovas were conducted as part of the analysis. The reason for doing so was to provide a more in depth look at the impact shift work has on each of these variables. The hypotheses examined how shift work moderated the relationship between the two variables but it did not examine how shift work impacted each individual variable.

The social support variables, engagement concept variables, and job satisfaction were all examined first. Results indicated that the shift group means for each of these variables were statistically significantly different from each other. Each of these analyses also indicated that the effect size was more than trivial meaning that the difference in shift group means was not just do

to having a large sample size but rather the shift an individual works may affect their perception of each of these variables. This is an important discovery for research because the overall results show that shift work not only moderates the relationship between these variables but it can also impact the mean of each variable by itself.

The last two variables that anovas were conducted for were intention to quit and quality service delivery willingness. While statistical significance was found, the effect size was found to be trivial. These results show that no matter the shift an individual works, it will not significantly change the perception about these variables. These two variables are especially important in hotel front desks because finding someone to wants to work the third shift and provide quality service can be difficult. Further research needs to be conducted on front desk agents to determine specifically why shift work does not alter their perception of intention to quit and their quality service delivery willingness.

Overall, the results of the analyses were beneficial to both research and industry. By taking the analysis a step further and conducting one-way anovas, the data was able to provide more useful information about shift work systems. Researchers utilizing samples of hotel front desk agents should include the shift worked as part of the descriptive statistics as well as consider controlling for shift work in their particular study. The conclusion will summarize the findings as well as provide future researchers suggestions for continuing the investigation into shift work systems in the hospitality industry.

## CHAPTER FIVE: CONCLUSION and LIMITATIONS

This chapter begins with a conclusion of the study in its entirety and a review of the study's outcomes. Theoretical and practical implications will be reviewed. A discussion on the limitations of the study will lead into suggestions for future research.

### 5.1 Conclusion

The purpose of this research was to determine if the shift worked by a hotel front desk agent moderated specified relationships between two concepts that effect the individual's job role and perception. Eleven hypothesis were proposed and seven were supported by statistical significance. These results are summarized in Table 36 and indicate that shift work needs to be further examined in the hospitality industry.

*Table 36 Summary of Hypotheses and Results*

Hypothesis	Independent Variable	Dependent Variable	Result
1a	Supervisor Support	Engagement Vigor	Supported
1b	Supervisor Support	Engagement Dedication	Supported
1c	Supervisor Support	Engagement Absorption	Supported
2a	Coworker Support	Engagement Vigor	Not Supported
2b	Coworker Support	Engagement Dedication	Not Supported
2c	Coworker Support	Engagement Absorption	Supported
3a	Engagement Vigor	Job Satisfaction	Supported
3b	Engagement Dedication	Job Satisfaction	Supported
3c	Engagement Absorption	Job Satisfaction	Supported
4	Job Satisfaction	Intention to Quit	Not Supported
5	Job Satisfaction	QSDW	Not Supported

The first set of hypotheses were all supported indicating that shift work moderated the relationship between supervisor support and the three engagement concepts. However, an interesting revelation from the analysis was the weak relationship between the concepts for the

swing shift participants. The hypotheses were proposed because the expectation was that the overnight individuals, working non-normal hours, would be the participants who perceived the relationships differently. In actuality, the results showed individuals who do not work a consistent shift during the week are the employees who perceive the relationships differently.

The same results can be said about hypothesis 2c, the relationship between coworker support and engagement absorption was almost non-existent for the swing shift participants. Again, the fact that individuals are not working consistent shifts may also cause the individual to not work consistently with the same coworkers or even the same amount of coworkers. Unfortunately, the survey did not inquire as to how many coworkers an individual worked with and who they defined as coworkers. This is an issue that could be addressed in a future study.

Job satisfaction was examined a dependent variable to the engagement concepts and as an independent variable to intention to quit and quality service delivery willingness. Interestingly in the first two hypotheses of this section, it was found that not only was swing shift significantly different than the overnight shift but the afternoon shift was as well. Again, shift work was expected to moderate these relationships but the expectation was that the morning shift was going to be the significantly different shift when compared to the overnight shift. The reason behind that expectation was the morning shift was viewed as a standard shift and considered to fall in the normal working hours. The overall results of the first three sets of hypotheses are really showing that the inconsistency of shift schedule times has more of an influence on these variables than a consistent non-standard schedule. These findings open up more questions that should be further investigated in future research.

The reasons why an individual wants to stay working for a hotel and why they want to provide quality service are essential to a hotel's success. Many research studies have been conducted trying to understand these variables better. Unfortunately, this study's results did not provide information that would be beneficial to the hotel industry. Shift work was not found to moderate these relationships, and was also not found to cause significantly different means in the different shifts. Further studies need to continue to examine shift work employees to determine why they want to stay with their company and why they want to provide quality service regardless of shift worked.

## 5.2 Theoretical Implications

Several theoretical implications arose from the findings of this study. First, is the need to continue studying shift work systems in the hospitality industry. The results indicated that shift work is an influential factor for hospitality employees on several key relationships. Almost no hospitality research to date includes their samples breakdown by shift worked. This study provided support that employees working the swing shift may not view relationships the same as employees were consistent shifts. Due to the changes by shift, it is important for researchers to reexamine the scales used in hospitality research to ensure that they are consistent for all employees working various shifts.

Another implication is the possibility of more complex models. Especially, models that include multiple moderators or moderators and mediators in the same model. Hospitality researchers have examined the variables in this study as mediators or moderators, but now researchers need to include shift as an additional moderator in those models.

The Process tool (Hayes, 2013) utilized in this study should be further utilized in future studies as well. The Process tool's ability to examine multi-categorical moderators is new since the beginning of 2016. This is one of the first studies to utilize this feature and report the findings. Analyzing complex models in SPSS can be accomplished now with greater ease and this needs to be utilized more in research.

This study utilized social identity theory and equity theory to develop the proposed hypotheses. Social identity theory states that an individual will define comparison groups and then identify with those groups or individuals based on common characteristics. This theory led to the proposed hypotheses that social support variables relationship with engagement concepts would be moderated by shift work. It was presumed that the overnight shift would have a weaker relationship than the other shifts, but the results showed that swing shift actually had the weaker relationship. This can also be explained because swing shift working individuals may not have consistent coworkers or supervisors making it difficult for the individual to identify with a certain group. Therefore, this study shows the presence of social identity theory in a hotel front desk setting.

Equity theory was also utilized in this study to aid in the development of the hypotheses examining job satisfactions relationship with intention to quit and quality service deliver willingness. Unfortunately, these hypotheses were not supported. However, this does not necessarily indicate that equity theory does not exist in hotel front desk shift work systems. One of the primary components of equity theory is that an individual is compensated in some form by the organization when they perceive an inequity. This study proposed that the overnight shift would perceive an inequity but was not found. However, the survey given to the participants did

not ask about their pay and it is possible that the overnight shift was already being given a pay differential because they are working a less desirable shift. Therefore, an inequity may not have been perceived. Pay was left out of the survey because many individuals do not like to provide their wage. Also, each company pays their employees differently and pay can change based on experience so collecting that information would not have been as conclusive as hoped. Going forward, this would something future researchers could look into. This study provided certain theoretical implications but also provided solid practical implications for hotel managers and companies.

### 5.3 Practical Implications

This research examined hotel front desk agents and the results provided many practical implications that hotel managers should consider. The first implication was shown in the supported hypotheses that the swing shift employees did not view the relationships between these concepts the way other shifts did. In fact, many of the relationships were almost disappeared completely for the swing shift employees. Hotel managers should revisit their scheduling practices to try and remove the amount of individuals working swing shifts. If a manager could schedule employees consistent shifts throughout the week then these relationships become stronger.

Another implication for hotel managers would be to help swing shift employees become better connected with their work groups. The hotel manager should assist their swing shift employees in getting to know members of the team better. Increasing orientation and training for



new employees who will be working swing shifts may aid the employee in identifying with their coworkers and supervisors better.

The last implication is for managers to converse with each individual employee and determine what would make them want to stay employed with a company and what makes them want to provide quality service. These results indicated that the shift worked did not alter the relationship of intention to quit or quality service delivery willingness. Therefore, managers should try to understand what each individual is looking for from their job and company. It is also important to note that the overnight shift also viewed the relationship between job satisfaction and intention to quit the same as the other shifts. While this shift is difficult to hire for, once a manager does, then they need to make sure that employee is satisfied with their job. This study provided beneficial information for theoretical and practical implications. However, there were some limitations to the study.

#### 5.4 Limitations

All studies are not without their limitations and this study is no exception. One of the first limitations comes from the aforementioned discussion on the few hypotheses not supported. It is doubtful that the hypotheses based on intention to quit and quality service delivery willingness will ever be moderated by shift work. However, the hypotheses examining coworker support as the independent variable may show moderation with an increased sample size. This study's sample size was calculated utilizing a large effect size. If the effect size was changed to a moderate effect size then the sample size would need to be increased. A moderate effect size would still provide useful information for future researchers.

The Anna Karenina bias essentially states that if you only ask highly satisfied people about their satisfaction then you are obviously going to get results that favor satisfaction. This principle can be seen as a limitation in this study because the sample consisted of individuals who are currently working as hotel front desk agents. The sample may have limited the results because it did not include responses from individuals who no longer work as front desk agents. Individuals who have chosen to leave their position as a front desk agent may have provided more significant changes in the data that could have been detected in the moderation analysis.

The sample also lacked diversity in terms of location because only southeastern United States front desk agents were utilized. While this study did survey participants who worked in high tourist areas as well as those that were not, it did only look at southeastern United States. Individuals working in hotels in other parts of the United States may view these relationships differently. This goes to say that individuals working in hotels outside of the United States may also feel differently about these relationships based on the shift worked. Future studies will need to address this issue to examine if this is a true limitation.

The last limitation of this study is the small response rate. While the response rate is consistent with other paper survey studies, it does cause concern that the entire population may not be accurately represented. While most hotels in the area were given the opportunity to participate in the study, it is unclear how many front desk agents were actually given the survey. Often in the process the researcher left the surveys with the hotel manager to distribute and there is no way to verify whether all the front desk agents were given the opportunity or not. It is also plausible to assume the social desirability bias may have factored in to the participant's responses. Since the hotel managers were distributing the survey, the individual may have felt

the need to indicate that they are more satisfied with their job or their supervisor support. The researcher attempted to minimize this effect by issuing a cover letter regarding the study and the participant's anonymity but there is no guarantee that it fully removed the bias. Future studies will need to address all of these limitations if possible.

### 5.5 Future Research

A few insignificant results from this study and possible limitations give a good foundation to build future research upon. The first suggestion for future research is to add a qualitative component to the study. Moderation is difficult to detect in general and it is difficult to determine what aspect of the shift differences are causing the significant results in the anovas. A qualitative component consisting of interviews with front desk agents may shed more light on to what is causing the significance as well as the theories ability to predict the outcomes.

There are certain issues that may cause moderation to be difficult to be detected. A larger sample size of the population may provide better results. It must be cautioned that if a sample size is too large then significance will be detected anyway. A recommendation would be to include an equal size sample set from another area with in the United States. Specifically, an area that may be known to be different from the southeastern United States.

The sample for this study consisted only of hotel front desk agents in southeastern United States properties. A more diverse sample may be needed in future research. There are no casino hotels sampled in this study and the agents working in these types of hotels may have a different perspective as their properties typically stay busy 24 hours a day. Casino hotels also have casinos which staffs individuals for 24 hours a day as well. Including more shift working employees in

the hospitality industry may also provide a stronger result. Other shift working individuals could come from the restaurant industry because there are many locations that are open 24 hours a day such as IHOP and Denny's. International hotel front desk agents could also be included to determine if their perception of shift work also impacts certain variables and relationships.

This study controlled for property size instead of inspecting it as a possible variable. The results were inconsistent but occasionally property size did show significance. Future studies should inspect property size as a possible moderator on these relationships. The reason property size may be influential on the relationships is because the property size can dictate the organizational chart as well as number of employees scheduled. Smaller properties will typically have less management and smaller amounts of staff scheduled. It is possible for smaller property front desk agents to be scheduled in their department by themselves regardless of the shift they work.

The last recommendation for future studies is to examine the possibility of multiple moderators. This was beyond the scope of the current research but should be inspected in future studies. Individuals in this study were asked to indicate which shift they primarily worked as well as which shift they wanted to work. A dichotomous variable was created for each participant that indicated whether the individual was working their preferred shift or not. A t-test was conducted (not reported in findings) on all the variables just as the anovas were and significant differences were found. Those who were working their desired shift had significantly higher means than those who did not. Future studies may want to include this variable in with shift worked to determine if there is an interaction between these two moderators.

## **APPENDIX A: IRB APPROVAL LETTER**



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **William Ingram**

Date: **April 05, 2016**

Dear Researcher:

On 04/05/2016, the IRB approved the following minor modifications to human participant research that is exempt from regulation:

Type of Review: Exempt Determination  
Modification Type: A revised survey was uploaded.  
Project Title: The Moderating Effect Shift Work has on Social Support,  
Employee Engagement, Job Satisfaction, Intention to Quit, and  
Quality Service Delivery Willingness: An Empirical Analysis of  
Shift Working Hotel Front Desk Personnel in the US  
Investigator: William Ingram  
IRB Number: SBE-16-12168  
Funding Agency:  
Grant Title:  
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Kanille Chay" followed by a horizontal line.

IRB Coordinator

## **APPENDIX B: COVER LETTER FOR SURVEY**



April 7, 2016

Dear Front Desk Agent,

I am writing to ask for your help in understanding the effect a shift time can have on a front desk agent's perception of social support, engagement, job satisfaction, intention to quit, quality service delivery willingness, and work-leisure conflict. The best way we have of learning about these concepts is by asking all types of different front desk agents in the hotel industry.

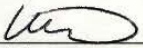
Your responses are **voluntary** and will be kept **confidential**. You must be at least 18 years old to participate. This study is completely independent from your company and should be completed on your own time. The results of the study will be utilized to complete my dissertation thereby fulfilling the needed requirements for me to graduate from the University of Central Florida.

The questions should only take about 5 to 10 minutes to complete. Your names are not on our mailing list and your answers will never be associated with you or your mailing address. If you have any questions about this survey of shift work effects on front desk agent's perceptions, please call William Ingram by phone at 806-441-9662 or by email at William.ingram@knights.ucf.edu. You may also contact the faculty supervisor of this study, Dr. Kevin Murphy, at 407-903-8117, or by email at kevin.murphy@ucf.edu. This study has been reviewed and approved by the University of Central Florida Institutional Review Board, and if you have any questions about your rights as a participant in this study, you may contact them by telephone at 407-823-2901.

By taking a few minutes to share your thoughts and opinions on front desk agent's perception of support, engagement, and satisfaction you will be helping us out a great deal. If you choose to participate, please complete the survey and return it in the pre-paid envelope provided.

I hope you enjoy completing the questionnaire and I look forward to receiving your responses.

Many thanks,

  
William Ingram  
Doctoral Student  
University of Central Florida  
Rosen College of Hospitality Management

Rosen College of Hospitality Management  
9907 Universal Boulevard • Orlando, FL 32819-8701 • 407-903-8000 • Fax: 407-903-8105  
An Equal Opportunity and Affirmative Action Institution



## **APPENDIX C: SURVEY**

**Social Support, Engagement, Satisfaction, Intention to Quit, and Quality Service Delivery Willingness of Front Desk Agents**

William Ingram

Survey Code:

Please mark an "X" in the box that most accurately reflects your level of agreement for each of the items. You should have only one "X" per item.

**Start Here**



		Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
		1	2	3	4	5
1.	My supervisor is willing to listen to my personal problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	My supervisor is difficult to talk to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I can depend on my supervisor for help when things get tough at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	My supervisor is willing to change my work schedule when I need it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I receive help and support from my front desk coworkers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	I do not feel I am accepted in my work group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	My front desk coworkers are understanding if I have a bad day.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	My front desk coworkers back me up when I need it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I feel comfortable with my front desk coworkers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	At my work, I feel like I am bursting with energy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	At my job I feel strong and vigorous.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	When I wake up I feel like going to work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	I am enthusiastic about my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	My job inspires me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	I am not proud of the work I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	I feel happy when I am working intensely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	I am immersed in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	Time flies when I am working.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	Overall I am satisfied with my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Please continue to the back side of this page.....*



		1	2	3	4	5
20.	I frequently think about quitting my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	I am planning to search for a new job in the next 12 months.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	If I have my own way, I will be working for this organization one year from now.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	I am willing to invest extra effort to deliver quality service to customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	I do not have enough time for leisure activities because of my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	I do not have enough energy to participate in leisure activities because of my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	I am not able to participate in leisure activities because of my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	I have never been in a suitable frame of mind to participate in leisure activities because of my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	I know who my front desk coworkers are.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. What is your employment status? ☐ Full Time ☐ Part Time ☐ Seasonal

30. Which shift do you primarily work at front desk (Please select only one):

☐ Morning ☐ Afternoon ☐ Swing (Morning and Afternoon Shifts) ☐ Overnight

31. Which shift would you prefer to be scheduled? (Please select only one):

☐ Morning ☐ Afternoon ☐ Swing (Morning and Afternoon Shifts) ☐ Overnight

32. Gender: ☐ Male ☐ Female

33. Age: \_\_\_\_\_

34. Highest Level of Education Completed:

☐ High School ☐ Associates Degree/Some College ☐ Undergraduate Degree ☐ Masters Degree or Higher

35. Size of Property:

☐ Under 150 rooms ☐ 150 to 299 rooms ☐ 300 to 600 rooms ☐ More than 600 rooms

36. Do you act as the Manager on Duty during your shift? ☐ Yes ☐ No

37. How long have you been working with this company? \_\_\_\_\_year(s) \_\_\_\_\_months

38. How long have you worked in the hospitality industry? \_\_\_\_\_year(s) \_\_\_\_\_months

39. What type of service level is your hotel?

☐ Economy/Limited Service ☐ Mid-Range Service ☐ Upscale Service

40. What is the owner/management structure of your property? (Please mark best answer only)

☐ Management Company ☐ Chain Hotel ☐ Independent Hotel ☐ TimeShare/Condo

41. Please write one word that best describes the atmosphere of the shift you work as a front desk agent.

*This is the end of the survey. We appreciate the time you have taken to help us in our research.*

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