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The social structural and gender attitude effects on job satisfaction for U.S. physical therapists

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THE SOCIAL STRUCTURAL AND GENDER ATTITUDE EFFECTS ON JOB SATISFACTION FOR U.S. PHYSICAL THERAPISTS

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This project is a case study on the vertical and horizontal occupational structures of physical therapy and how gender attitudes on opportunities can influence one's workplace satisfaction. The theoretical perspective is based upon a gendered organizational theory and organizational justice operating in a latent manner through gendered opportunities on workplace satisfaction. Horizontal segregation (location and specialty) has been linked to gender essentialism, while vertical hierarchy (work continuity, earnings, and supervisory duties) has also been linked to male primacy. Workers' perceived attitudes about opportunities for women (promotions and jobs) can potentially influence the outcome of job satisfaction.

The 2004 Physical Therapy Labor Force Survey was examined for potential bias using a sample of physical therapists (PTs) from the 2000 US Census PUMS 5 percent sample. Using the 2004 survey data for salaried PTs, two dependent variables were generated via factor analysis (intrinsic rewards and well-being) from a 10-item workplace attitudes scale. Regression analyses on these models by gender revealed specific

associations among the explanatory variables and the workplace attitude factors. Women who selected the response "promotion opportunities worse for women" on average had lower intrinsic reward and well-being factor scores (compared to those selecting no difference). Yet, men who chose "job opportunities better for women" on average had lower well-being scores (compared to men reporting no difference); this was not shown to be the case for intrinsic rewards for men.

In general, the results of this research suggest that female respondents with the perception that women have less chance for promotion than men tended to lower their job satisfaction. However, male respondents who perceived that women have a greater chance of jobs than men tended to have reduced job satisfaction scores. The results for women were in both domains of satisfaction (intrinsic rewards and well-being), whereas those for men were only for well-being. Job satisfaction is affected by the social structure (vertical and horizontal), gender, and attitudes about opportunities in physical therapy associations among the explanatory variables and the workplace attitude factors.

DEDICATION

This research is dedicated to the memory of my mother, Marjorie Eleanor Logee James, and in honor of my father, Frank Charles James.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Heat, cold, water, light, sound, electricity…every physical therapist recognizes immediately the value of these physical elements when applied along with exercise and massage. The occupation, now known as physical therapy, began with the realization by turn-of-the-20th-century physicians that healing and well-being could be greatly improved by a program of physical exercise during the recuperative process after an injury or surgery. By logical extension, women who were being trained in colleges across the country for employment in Physical Education (PE) programs could (with a little extra coursework) learn how to administer these earlier techniques and ideas for rehabilitation of muscles, ligaments, tendons, and joints. Therefore, historically, women have played a significant role in physical therapy and its programs since their inceptions, but where were the men? There were a few men who began to train in physiotherapy immediately after World War I (WWI). However, this situation and the profession have changed dramatically since then. This research project is a case study focusing on the vertical and horizontal occupational structures of physical therapy and how gender attitudes on opportunities can influence one's workplace satisfaction.

Viewing gender as a social structure (Risman 2004; Connell 2002) or as a social institution (Martin 2004; Lorber 1994; Acker 1992) allows researchers examining gendered organizations to consider the multi-faceted nature of this complex concept.

Gender is described as a social process and a social practice complete with its own ideologies and distributions of power. To complicate matters, it is also fluid and changing (Acker 1992, Connell 2002, Martin 2004 and Risman 2004). Yet, when the social construction of gender can be made visible as Lorber (1994) claimed, then a potential step may be taken toward dismantling the institutional structure.

Background

Physical therapy is still a predominantly female occupation where gender-biased expectations can and do occur. Additionally, the influence of social structure within the occupation leads to differential opportunities and power within this specialized medical field. How the history (political, social and economic) of physical therapy within the US has affected the development of primary care settings (e.g., outpatient, acute care), the available primary foci or specialties (e.g., orthopedics, sports, pediatrics), and the choices between full-time, part-time, salaried or self-employed work will be considered.

The multi-faceted aspects of gender discussed above matter since being born a male or a female places each of us in a convergence of on-going social structures and institutions. In the process, gender is assigned, and the current set of gendered practices, ideologies, and distributions of power surround and also become internalized. Gender ideology that is legitimated by those who benefit from these every-day practices provides power (privilege and advantage) to the few and leads to inequities (less opportunities and more disadvantages) for those with less access to resources, social control, and status.

The main predictors of current workplace satisfaction (for both genders) are assumed to be the vertical (hierarchical power) and horizontal (segregation) social

structural opportunities. A gendered approach to the organization of work also assumes the shared occupational attachment of attitudes about opportunities (job and promotional) and the choices and opportunities realized within the occupational social structure. However, even though gender is present in and at work, every social interaction, practice, or expectation is not necessarily gendered. Additionally, in this study career is not bounded by the organization as a firm but by the structure of the occupation. Although an occupation is also performed within some organizational structure, the focus remains on occupational structure and the respondent's gendered attitudes.

Cultural values construct gender as a social status. As its own social structure or institution, gender becomes yet another influence within other institutions and organizations of everyday life and work (Lorber 2009). This "gendered" organizational structure approach is adapted to specifically examine work and how one's gender attitudes affect the interplay of structural factors and career success with those opportunity attitudes in determining current workplace satisfaction for physical therapists. Autonomy, promotional and job opportunities, experience, setting, specialty, and attitudes about opportunity have been demonstrated in the literature to be related to job satisfaction and will be outlined in the current case study of physical therapy.

This study of the physical therapy workforce emphasizes both the organizational structure at the occupational level and the structural social relations of gender superimposed upon and within this occupational structure. The theoretical model for the current research is based upon the socialization process of gendering in everyday life and its effects in a gendered work occupation. Gender is a social structure with social patterns and processes (Connell 2002; Lorber 2009). The overall theoretical model in

this study is based upon the social construction of gender that links gender, career success (Melamed 1995 and 1996), location (setting and focus), and organizational justice attitudes (opportunities) to job satisfaction (Mueller and Wallace 1996; Cohen-Charash and Spector 2001; Colquitt, Conlon, Wesson, Porter and Ng 2001; Younts and Mueller 2001; McDuff 2001; Clay-Warner, Reynolds, and Roman 2005). More specifically, this study centers upon the vertical dimension of career success (hierarchy) as well as the horizontal dimensions of setting and specialty (internal segregation or demarcation). In the present theoretical model of gender and workplace satisfaction, gender is considered a multi-dimensional system with gender processes occurring at the individual and interactional levels as well as the result of cultural beliefs and the unequal distributions of resources within institutions similar to approaches by Correll (2001) and Risman (2004). Vertical hierarchy, or objective career success, is emphasized with attention to work continuity, earnings, and supervisory duties in physical therapy. Male primacy has been linked to vertical hierarchical structure or power (Charles & Grusky 2004). Likewise, the horizontal social structure of the respondent's current position (primary setting and focus) has been linked to gender essentialism, potentially reflected in the respondent's attitudes on gender issues about opportunity. Location shapes our views of the world. And, together, structural opportunities and location within the occupational organization contribute to workers' job satisfaction, usually defined as the sense of fulfillment in work; yet, gendered attitudes about male primacy (men's work is more highly valued than women's) and gender essentialism (certain traits are regarded as either distinctly feminine or masculine) contribute toward the worker's sense of gender justice that also affects job satisfaction.

Problem Statement

Vertical and horizontal opportunities are both predictors of workplace satisfaction. Additionally, workers' gendered attitudes about opportunities (such as in promotions and jobs) influence the outcome of workplace attitudes. Yet, it is unclear how these two structural predictors are linked via gender attitudes to the outcome.

Even though physical therapy is traditionally a female occupation, women do not make comparable economic and career status gains as men in the occupation. In 1993 women in physical therapy earned about 78% of what men did when comparing unadjusted median gross earnings; this proportion increased to 81% in 1999 and 87% in 2005 (APTA 2007). However, part of these gains may be due to women remaining in the workforce for longer hours (full-time versus part-time) and for more years of service. Additionally, since the 1970s, overall men have lost consistent ground in their real wages (Kimmel 2000; Hattery 2001; Padavic and Reskin 2002). Some evidence (Bieker 1999; Rozier, Thompson, Shill and Vollmar 2001; MacLean and Rozier 2007) also suggests that men and women in physical therapy are becoming more dominant within certain specialties or subspecialties as a form of internal gender segregation. Men also tend to gravitate more often to self-employment or administrative positions in the physical therapy field (Rozier, Hersh-Cochran, and Whitright 1993; Murphy 1995; Rosier, Hamilton, and Hersh-Cochran 1998), which is also not uncommon for self-employment in the general economy, where 7% of women compared to 12% of men in the labor force own their own businesses (Fairlie 2004).

A principal question that arises from a consideration of the empirical data and the comparisons above concerns whether gender attitudes about opportunities (promotional

and jobs) affect the interplay of social structural factors of work at the individual's occupational level in either the vertical (career success) or horizontal (location or specialty) dimensions for physical therapists in determining their current workplace attitudes. The goal of this research is to delineate how these concepts come together in the field of physical therapy in the US.

Workplace attitudes, whether job satisfaction, organizational commitment, or turnover intentions, contain two elements: a sense of fulfillment from the job and a sense of justice from fair treatment in the workplace. Gender justice can be measured indirectly through attitudes that tap into gender stereotypes and fairness in getting or receiving opportunities in the workplace. The key is to link these gender attitudes from the organizational structure of the occupation to workplace attitudes. A few organizational justice studies have demonstrated that attitudes about justice or perceived fairness by workers based upon gender are linked to job satisfaction (Phelan 1994; Mueller and Wallace 1996; McDuff 2001).

There are three primary research objectives in this case study: (1) to build a theory that addresses a gendered organizational perspective at the occupational level and to test this theory for one occupation at the national level; (2) to examine the relationships and links between vertical (e.g., authority, earnings, career continuity) or horizontal (e.g., primary setting and specialty) structures and workplace attitudes (job satisfaction); and (3) to determine if attitudes about vertical opportunities (promotions and jobs) either moderate or mediate effects between the vertical and/or horizontal structures and worker satisfaction.

Occupational segregation by gender is considered a major social problem for working women. It perpetuates the effects of gender stereotypes (male primacy and gender essentialism), and it can prevent both men and women from pursuing just and fulfilling work. Yet, at present in the context of an inequitable society, men's work is valued over women's (cultural valuation), there is gender discrimination and inequity (glass ceiling, glass escalator), and psychological incentives (power and domination), and material incentives for men still reign. There are costs and consequences of these inequities, first to women, but also to men and to the common good. The equity principle states that people who make greater contributions should receive higher outcomes (Lipponen, Olkkonen and Myyry 2004). By demonstrating that the potential links between the organizational structures of an occupation and workplace attitudes are affected by gendered attitudes and the resulting power differences, we can better address this social problem.

The data for the present study are from the *2004 PT Labor Force Survey*, which targeted members of the 2004 American Physical Therapy Association (APTA). These data were examined for potential bias using a sample of all PTs from the *2000 US Census Five-Percent Sample* dataset. Multivariate regression analyses were performed based upon a statistical model derived from the overall theoretical model to test the relevant hypotheses.

CHAPTER II

THEORETICAL PERSPECTIVE AND LITERATURE REVIEW

Gendered processes and practices need to be connected to the gendered social structures of society. This is one of the principal contributions of the theory of social construction of gender (Lorber 2009). Gender is built into all the major social organizations—family, work, law, government, education, religion, medicine, and the military. From social experiences, people begin to form stereotypes regarding masculinity and femininity that continue to be transformed over time. Therefore, it is crucial to a more complete understanding of the concept of gender to consider gender ideology (e.g., stereotypes), practices and processes (doing gender), and possible stratification systems of power, such as the vertical and horizontal (Mennino and Brayfield 2002).

Gender constitutes a substructure that pervades all other institutions and organizations. However, gender roles and attitudes do not arise spontaneously within these organizations or occupations. Henslin (2007) asserted that an essential part of socialization is learning the culturally defined gender roles in "countless subtle and not so subtle ways" (2007:76). Family, peers, school, work, and mass communications all affect this socializing process of gender. Therefore, gender roles and attitudes remain subject to change by our environments throughout the course of living.

The gendered aspects of the occupation, physical therapy in this instance, must be situated within the historical context of political, social, and economic forces of these times. Given these considerations, the overall research question is: Do gender attitudes about opportunities (promotional, jobs) affect the interplay of social structural factors of work at the individual's occupational level in either the vertical hierarchy or horizontal segregation dimensions for physical therapists in determining current workplace satisfaction?

A Gendered Occupation and Workers' Attitudes

Gender Stereotypes and Organizational Structures across Occupations

Mennino and Brayfield (2002) considered three dimensions critical to the understanding of gender in the workplace: a person's gender, gender ideology, *and* the gender composition of the individual's occupation (or proportions). As discussed earlier, gender is considered a social structural concept. Rather than gender ideology being described as an identity (Kroska 2000), here the phrase takes the meaning of the worker's gender attitudes as measured by attitude scales (Sanchez and Thomson 1997).

There are social practices and processes of gender that occur every day. Where do these practices or processes originate? In the socialization of children, the division of labor in the family and in the workplace, the portrayal of bodies and sexual beings by the media, and many other cultural and religious values. These processes affect the social construction of gender and inevitably lead to gender stereotypes.

Gender stereotypes are considered "group" stereotypes, and they can be either descriptive or prescriptive stereotypes under gender ideology, defined as a set of beliefs

that helps to form our behavioral expectations (Hattery 2001). These are the rules by which individuals assume they will be judged (whether they agree with them or not). Descriptive stereotypes consist of a set of widely shared assumptions about the nature of the sexes and the relations between them. Prescriptive (also referred to as gender-role) stereotypes are particularly directed toward what these shared assumptions "ought" to be (Padavic and Reskin 2002; Ridgeway 2006; Heilman and Parks-Stamm 2007). These socially-shared beliefs link certain traits, attributes, or skills with one sex or the other and are part of the social construction of gender roles, e.g. masculine traits – more instrumental and protective, rational, aggressive, assertive, competitive and stronger, and feminine traits – more emotional, passive, caregiving and nurturing (Reskin and Hartmann 1986; MacLean and Rozier 2007). Restated, men are more often described as exhibiting agency, while women are more frequently described as exhibiting more communal characteristics. In the workplace, these traditional versus egalitarian attitudes of how either gender "should" or "should not" be performed may affect career progress and status. Further complicating matters, these gender stereotypes can operate together with ethnicity/race and class stereotypes and appear to be routine and automatic or just the natural part of doing gender/race/class/age. And the effects of gender-status beliefs are usually stronger in gender-typed work settings, such as engineering for men and nursing for women (Ridgeway 2006).

Gender stereotypes can be examined using gender essentialism, where certain traits are regarded as distinctly feminine or masculine, and male primacy, which is the devaluation of women's work (or men's work is more highly valued). Men's work is either viewed as more status worthy or, from the opposite perspective and referred to as

cultural feminism, roles associated with women are devalued (Charles and Grusky 2004; Baunach 2002). Individuals tend to remember evidence consistent with pre-existing stereotypes and gender-role beliefs and ignore, discount, or forget evidence that undermines these stereotypes and beliefs (Padavic and Reskin 2002; Correll 2001; Ridgeway 2006). In other words, individuals tend to perceive and interpret people and events in terms that confirm their prior expectations and concerns.

According to Charles and Grusky (2004), there is a link between gender essentialism and horizontal segregation, and there is another link between male primacy and vertical hierarchy. Occupational segregation, or the horizontal dimension, has also been described as "the different types of work that men and women perform," while positional inequality, or the vertical dimension, considers the "hierarchical disparities in their (men and women's) work" (Baunach 2002:79). According to Ridgeway (2006), the gender gap in horizontal segregation has been decreasing somewhat, whereas the value of men's work compared to women's has not. However, Charles and Grusky (2004) claim the reverse: gender essentialism has *not* abated, while male primacy shows signs of weakening. In the current study, the focus is on the relationship between opportunity attitudes and the horizontal and vertical dimensions of the occupational structure and their effect on one another as well as the subjective outcome of workplace satisfaction.

Even though men are still the minority in nursing, library work, teaching (K-12), and social work, they are not disadvantaged by this minority status; in fact they tend to progress faster in these occupational vertical hierarchies (Cassidy and Warren 1991). Williams (1995) has described men as having to work to stay in their same position in female-dominated jobs as a type of "glass escalator," as opposed to the "glass ceiling"

that women face in obtaining executive positions. The glass escalator is a social structural feature of such professions that helps men independent of their own efforts or preferences. Men may have social, psychological, or economic incentives for separating their gender-role stereotypes from women involved in "women's work."

Within physical therapy, the internal vertical hierarchy appears to promote a "glass escalator" for men as evidenced by male PTs who are over-represented in managerial positions as well as in their own start-up businesses in the field at about twice of rate as female PTs. There may also be a re-segregation with men moving into those areas with higher pay and status, a type of internal horizontal segregation. Yet, most men in PT educational programs expressed dismay when they first learned that PT is predominantly a "women's profession" (MacLean and Rozier 2007; Rozier, et al. 2001).

Besides the vertical and horizontal dimensions, there are also the levels of aggregation in the occupational structures that influence gender. Gender can be viewed as a multi-dimensional system with roles and identities at the individual and interactional levels, as well as including the cultural beliefs and unequal distributions of resources within these institutions (Correll 2001 and Risman 2004). Individuals shape the gendered social structure, and the gendered social structure acts back on individuals in a recursive relationship (Giddens 1984). At the next level, cultural beliefs about gender are part of gender stereotypes that reflect certain expectations about an individual's competence (agency) or being personable (communality). Gender beliefs are generally viewed as one set of cultural schemes for trying to make sense of the social world. Cultural beliefs about both masculinity and femininity are built into the very structures of the workaday world (Williams 1995). And beliefs about gender can sometimes limit women's

opportunities resulting in power differences, while conversely leading to more occupational success for men.

Therefore, gender and their structural differences are manifested in a multitude of ways within society. However, this case study focuses upon gender and the social structure imposed by one occupation—physical therapy. What do men and women really tend to value in their occupations and their jobs? Others have found that both groups tend to value good pay, autonomy, and prestige (Padavic and Reskin 2002). People tend to "have similar interests if they have similar preferences, and face similar social conditions" (Jackson 1998:264). Yet, Kanter (1977) argued that men give greater importance to promotion than women because they are more likely to be located in organizational positions that encourage workers to hope for a promotion; they are simply in different opportunity structures at work. When employers make traditionally male jobs open to women, women are usually very interested in applying (Padavic and Reskin 2002). On the other hand, employment in heavily female occupations has been positively associated with men's promotional aspirations (Cassirer and Reskin 2000).

There has also been an organizational perspective that women are "not as committed to" ("less interested in" or "less motivated for") their careers as men. A positive cultural valuation, such as male primacy, tends to portray men as more career-determined, ambitious, and a better fit for management (Bradley 1993). During interviews, some male PTs have cited a lack of commitment to the profession by female PTs, either by working part-time or taking time off to have children (MacLean and Rozier 2007). Typically, differences in job commitment by women have been demonstrated to be the result of a lack of organizational support, the perception of job

discrimination, receiving less challenging job assignments, and the motherhood penalty (Lips and Lawson 2009). Among 20 male PT students in a qualitative study, 19 had some plan to practice in orthopedics or sports, own their own practice, go into management, or seek further education (Rozier, et al. 2001).

Men have operated typically as the gatekeepers for most businesses and governmental organizations and can just withhold their support for others to lose access to high-status positions. Historically, when the interests of organizations shifted, the interests of the men who got their power from these organizations also had to change (Jackson 1998). Status inequality (unequal rank) by gender no longer provides a good fit with positional inequality within organizations (one's unequal political and economic location within the structure of the organization, such as vertical hierarchical relations). Therefore, a person's rank in terms of the gender status system will tend to give him or her differing levels of access to locations within this positional inequality. From an organizational perspective, women and men offer similar opportunities for either manipulation or support in similar tasks. However, powerful people will seek competitive advantages for their organizations or themselves (Jackson 1998). Therefore, which particular story line unfolds within an organization (or occupation in this instance) depends on the way interests change, the existing distributions of power, and the *historical* conditions that apply. These interests link macro-level structural circumstances with the more micro level of people making decisions and choosing actions (Jackson 2006). In Jackson's way of thinking, interests are represented by the relationships between the social environment and people's values—not just self-interest. As Jackson noted, "Normally, people will not, without good reason, knowingly and repeatedly make

choices that will worsen their lives" (1998:264). However, both Christine Williams (1995) and Cecilia Ridgeway (2006) have argued that the division of labor by gender specifically favors men because organizations value men and those qualities associated with masculinity more highly than they value women (the primacy of gender).

Gendered Occupational Structures

There are two types of social structures at work in the overall research question for this project: gender and the occupation's opportunity structure. Gender is a structure of social relations where the arrangements are always changing (Connell 2002). These social relations are superimposed upon and within the organizational structure of the work world. Kanter's (1977) major contribution in this area was to put gender awareness into her organizational research. Acker (1990) built upon Kanter's approach by adding a crucial qualification. It is not "structure *or* gender;" rather, gender permeates throughout the organization's structure. Kanter's theory has been criticized implicitly (Acker 1990) and explicitly (Britton and Logan 2008) as being too gender neutral for complex organizations, and by Lorber (2009) as being contradictory since men in low numbers are often "pushed" into administrative jobs or gravitate to specialties that seem more masculine. The strong division of labor (where men are concentrated in military, infrastructure, and economics, and women are in social welfare, health, and education) should *not* be ignored according to these theorists. Workers' locations within their organization's opportunity structures shape their work attitudes, *and* gender differences in work attitudes and behavior also affect that social structure, or vice versa (Cassirer and

Reskin 2000). The association of gender with certain gender-differing attitudes appears to operate through the worker's location within the organizational opportunity structure.

When examining any complex work organization, there are two forms of relations that need to be considered: horizontal and vertical. Vertical or hierarchical relationships, such as staff and management, often establish the power and status differences among various jobs and their occupants. By comparison, the horizontal segregation relationships, although non-hierarchical, can also contribute toward an artificial boundary based upon either a job specialty or location. And both of these relationships have a potential to separate workers by age, social class, ethnicity/race, and/or gender. And, particularly relevant to this study, both can also represent an internal form of gender demarcation

Opportunity, social power, and the numbers or proportions of certain groups (by gender, age, ethnicity, or age) are three main conceptual foci in Kanter's *Men and Women of the Corporation* (1977). Career success and career growth are part of the structure of opportunity, which can affect a person's overall level of work involvement (Melamed 1995 and 1996), and ultimately his/her sense of workplace satisfaction (Miller, Goddard and Laschinger 2001) in a gendered fashion, as well as one's career commitment, the overall attachment to the occupation that is shaped principally by opportunity (Kanter 1977).

Social power, the second concept, is "the ability to get things done" (Kanter 1977:166), including the ability to control resources and people (Jackson 1998). In terms of power, what sometimes looks like gender differences *may* be power differences; however, the reverse or both may also apply. For example, female-dominated

professions (e.g., nursing, social work, and teaching) typically have fairly close supervisory hierarchies and are usually concerned with detail. Professionalization can be achieved through political power by instituting "a monopoly on a set of specialized, essential, and unique skills" (Williams 1995:45). As will be demonstrated in the next section, physical therapy has been fairly successful on this front.

The significance of relative proportions, the third concept, demonstrates that groups may be uniform, skewed (with tokens); tilted (like in the profession of physical therapy), or balanced based on social type (i.e., gender, ethnicity) (Kanter 1977). However, when men are tokens (described as less 15% of an organization or occupation), they may get preferential treatment in the hiring process, be channeled into "certain male-identified specialties," and be pressured into doing jobs that are viewed as more masculine. In other words, they may be elevated by their token status (Williams 1995).

These concepts of opportunity, power, and proportions have been combined to represent a gendered social structural approach to studying the problems of men and women in organizations. Since competence can oftentimes be difficult to evaluate, social facts or statuses (such as gender, ethnicity/race, age, or class) may become even more pertinent and prominent in determining the outcome in any interactional process. In a complex social world, stereotypes can offer one energy-saving device in the formation of impressions (Heilman and Parks-Stamm 2007).

Gender, Career Discontinuity, and Vertical Hierarchy

Wage increases and promotions are, of course, also related to career continuity; and early and mid-career decisions are more critical to this process. Workers at these

stages are making career decisions and would anticipate their greatest increases in earnings and promotions during this time. What about gender? Fuller (2008) in a 12-year career study used the 1979 National Longitudinal Survey of Youth (NLSY 79) to examine the data on young men and women and the effect of labor force attachment on wage outcomes by gender. Average career continuity has declined for men in their 20s and 30s while rising for young women due to women's increased job market attachment. Periods of unemployment (career discontinuity) or even part-time employment can result in decreased wages and promotions. This occurs more frequently for women compared to men, and to an even greater degree for women with a high school education or less. The results of a lack of stability among professionals by gender are less clear.

Women are much more likely than men to drop out of the labor force. In the 1980s about half of all working women in the US had at least one six-month period of discontinuity in their work history; which compared to less than 15% of the men (Rix 1988). In a 1990 study, more than three-fifths of the women who left the work force for an extended period listed housekeeping (included child or relative care) as the reason compared to about 3 percent of the men who dropped out and gave the same cause (US Department of Labor, BLS 1991). Most of the professions tend to reward (i.e., more responsibility, pay, status) early training, continuous employment, certain technical skills, and less personal responsibilities that might compete with the career. Such traits have been characterized as portraying a higher level of commitment to the profession. And commitment has been linked to job satisfaction.

Even in the female-dominated occupations like physical therapy, it is this male model of laboring that tends to get compensated. Women can chase after a more "male"

career pattern, but men still receive more opportunities and encouragement than their women colleagues, even in female-dominated occupations (MacKinnon 1979; Williams 1995). Further complicating this situation, physical therapy has also been referred to as a "front-loaded" occupation where wages or salaries at the entry level are high (especially during times of shortages) and increases in pay over the tenure of this worker may not keep pace with new workers who come on board (Gwyer 1995).

In a 1993 study on PT executives (managerial and private practice), women on average took longer leaves over a career (for maternity, dependent care, travel/vacation, and relocation) than men (Rozier, Hersh-Cochran and Whitright 1993), which can result in a negative effect on wages and promotional opportunities (Noonan 2001). Rozier, Hamilton and Hersh-Cochran (1998) stated in their study that female PTs represented 71% of all salaried managers, and both male and female salaried managers typically worked in a hospital setting. Yet, about 33% of the women and 57% of the men were self-employed and tended to specialize in orthopedics (Rozier, et al. 1998). More recent studies are needed to demonstrate the links between wages and promotions, gender, and job continuity in physical therapy as well as other occupations.

How Is the Occupational Structure of Physical Therapy Gendered?

According to Jacobs (1993) an occupation can be considered *female-dominated* if at least 70 percent of its workers are female. The 2000 US Census Bureau data for physical therapists specified a female to male split of 72:28 per 100 physical therapists. However, a second relevant concept is the *nontraditional* occupation. Since nontraditional occupations are defined as those where 25 percent or less of those

individuals employed are of the opposite sex (US Dept. of Labor, BLS 2007), then physical therapy can *no longer* be considered a nontraditional occupation for men since about 1980—only female dominated.

Yet, within occupations, a type of internal segregation can exist influencing the horizontal internal structure that works in tandem with the promotional or vertical hierarchy in contributing to the separation of workers by class, ethnicity or gender. Here, physical therapy serves as a case study of one gendered occupation where the vertical and horizontal work structures can be examined for their links to workplace satisfaction and how PTs' gender-related attitudes about opportunities in their field operate to influences these relationships.

An occupation is a group or "category of people who share some distinctive skill" (Dingwall, Rafferty and Webster1988:77). Just as significant to this definition is that these boundaries are politically and socially (rather than individually) determined. As with other occupations, physical therapy has a formal system of credentials and registration that mark these boundaries between insiders and outsiders.

Economic, Political, and Social Forces Influencing Physical Therapy

Since physical therapy is an occupation that went from almost 100% female immediately after WWI to 72% female in 2000, attention needs to be focused on the broader movement of males into traditionally female jobs in this general time frame. Harriet Bradley (1993) argued that structural forces (i.e., accumulation of capital and male hierarchical dominance) came together with social beliefs and attitudes about gender to produce an environment in which certain jobs or occupations became suitable

for either one sex or the other in the workplace beginning in the 19th century. According to Dingwall, Rafferty, and Webster (1988), male nurses have demonstrated demarcation—the process of internal segregation where a subordinate group is concentrated in certain subspecialties within an occupation—historically by becoming medical attendants in hospitals or in asylum nursing. But these horizontal boundaries can shift over time. By the 1920s these same nursing "attendants" began to be referred to as mental nurses regardless of their gender. More recently, male nurses have also (besides psychiatric and orthopedic nursing) been choosing the subspecialties of Emergency Room (ER) nursing, Certified Registered Nurse Anesthetists (CRNAs), Intensive or Critical Care Nursing(ICN or CCN), Family Nurse Practitioners (FNPs) or Medical-Surgical Nurses (MSNs), and/or moving up into management (Stromberg 1988; Williams 1995; Dubeck and Borman 1996). Using the 2000 US National Sample Survey of Registered Nurses (94.5% female), Snyder and Green (2008:286) concluded that gendered horizontal or "lateral sorting" via specialization has a greater impact on the location of nurses than the vertical component in a "bottom heavy" (i.e., more lateral clusters, less top-end differences by gender) occupation. Examples of other occupations with internal horizontal segregation include physicians (with more female pediatricians and more male surgeons) and attorneys (likewise, with more female family attorneys and more male trial lawyers) (Blau, Brinton and Grusky 2006).

Men in more nontraditional occupations may also use strategies to separate themselves from their female cohorts (Williams 1995). This may be by seeking out male-identified subspecialties within an occupation as discussed above, playing up the masculine parts of the job, moving up into administrative positions, starting up their own

business within the occupation, or just living for their leisure time by separating themselves from the job. All but the last reason can contribute to an "internal stratification" or demarcation (horizontal and vertical) as a result of organizational, occupational, cultural, or individual motives or pressures. Therefore, the continued demarcation of jobs by gender in certain specialties within an occupation is a crucial factor in reaffirming cultural stereotypes about gender differences and men's higher status (Reskin and Roos 1990).

Gritzer and Arluke (1985) conceptualized the formal division of labor of an occupation as the result of its *history of development* and the *creation of social closures* in order to stabilize its social structure. Unable to meet a demand for certain medical care services during times of war, male physicians played a critical role in the development of allied rehabilitation occupations when they provided active assistance in forming and promoting allied health care occupations. Physical therapy was one such neophyte during the early days of WWI.

Murphy's (1995) history of the occupation of physical therapy indicates that in the decade after World War II (WWII), there were important structural and gendered shifts within this rehabilitation field. The officers of the American Physiotherapy Association (APA) were all females for more than 20 years. In 1942, a male therapist was elected to a national office for the first time (Murphy 1995). Representation by males in physical therapy was slowed considerably by the fact that most PT schools did *not* accept men well into the 1940s in civilian schools or the 1950s within the US military training programs (Anderson 1968; Murphy 1995). During WWII, female PTs became commissioned officers within the US Army (Anderson 1968; Gritzer and Arluke 1985).

Yet, these commissions continued to be offered only to women until the mid-50s when qualified male PTs were finally admitted into the Army at the same rank as qualified females (Murphy 1995). After the war, men (with help from the GI Bill, also known as the Servicemen's Readjustment Act of 1944) began entering physical therapy civilian schools in much larger numbers, and the APA became know as the American Physical Therapy Association (APTA). Those licensed in this workforce became known as physical therapists. APTA membership was 20 percent male by 1953 (from almost 100 percent female in 1921), and by the end of that decade male representation on the national board and in the state chapters had increased dramatically (Murphy 1995).

Another critical development after WWII was the increased professionalization of physical therapy. The number of approved PT schools across the US grew quickly—from 21 in 1946 to 31 in 1950 (with two-thirds offering a bachelor's degree in physical therapy and 1 in 4 providing post-baccalaureate certification), to 42 accredited schools in 1962 (Murphy 1995). By 1955 all states had chapters of the APTA, and, coincidentally, the section on the Self-Employed (later renamed Private Practice) was also added at the national level that same year. A day-long board examination was also developed and established during the 1950s for use by the APTA and made available to all state licensure boards to standardize knowledge requirements in the basic and clinical sciences, theory, and procedures as APTA pushed for the legal licensing or registration of PTs. Thirty-one states had such licensing state laws by the end of the 1950s (Gritzer and Arluke 1985). As an occupation's professional or status rank increases, generally an influx of more males occurs, and wages rise simultaneously.

Increasing the education requirements also contributes to a rise in income. In 1960 APTA formally set the Bachelor's degree for physical therapy as the minimum education qualification. About 20 years later, the decision was made to raise the entry-level educational requirement into the profession to a post-baccalaureate (Master's) degree by 1990. That deadline in turn became the date for establishing a new directive requiring a Doctorate in Physical Therapy by 2020 (Gritzer and Arluke 1985; Murphy 1995; Plack and Wong 2002).

With the passing of legislation creating Medicare and Medicaid in 1965 and the Allied Health Act of 1966, service markets were expanding significantly, which also contributed to the drive for more autonomy in physical therapy. Autonomy within this profession has been described as "independent, self-determined professional judgment and action" (*PT Bulletin Online* 2001:3). Initially, in the late 1960s, many physical therapy supporters welcomed the Allied Health Act with its aid to professional educational programs. However, being classified with other allied health programs, such as health information management, medical technology, occupational therapy, and physician assistant training programs, was viewed as interfering with the autonomy of the field's professional education and the profession as a whole. During the 1970s with additional sources of federal compensation, PTs began leaving acute care hospitals in greater numbers to enter the private practice market. By the late 1980s about half of all PTs in practice were in settings *outside* of the hospital (Pinkston 1989). This was also a time of active movement by male PTs into administrative positions within the APTA. The first man to be elected as President of APTA served for six years (1967-1973), and men continued to hold this office until 1985 (Murphy 1995). The male administrative

influence did not stop there. The Executive Director (ED) of APTA from 1969 to 1985 was also a male PT who was immediately followed by another man who was *not* trained as a PT (Murphy 1995). In the early 1990s another male non-PT also assumed the reigns of ED, now designated as Chief Executive Officer (CEO) and the position is still currently filled by a man with a bachelor's degree in economics (APTA 2010).

Another technique to increase the status and pay of any group of workers is to develop a more complex horizontal structure. From 1965 to 1978, more special interest sections were added to APTA (e.g., sports, pediatrics, orthopedics, geriatrics), and by the mid-1990s, there were 19 sections available to members. The specialist certification program was also formed in 1978 with the four original areas: cardiopulmonary, neurology, orthopedics, and pediatrics. Very specific rules were implemented for certification in a specialty area and were administered by a special commission or board. Several more specialist certification programs were added during the 1980s and 1990s, such as clinical electrophysiology and sports; and these latter two programs are currently more heavily populated by men in the field of physical therapy.

With regular surveys of active members, by the 1980s it became obvious that women PTs lagged behind men in their professional status and economic compensation. A much lower percentage of women owned their own private practice, administered or managed physical therapy care within institutions, held advanced professional degrees and certification in a specialty, or conducted research (Murphy 1995). The APTA Board of Directors concluded that there were two main causes of this inequity: caregiver responsibilities and discrimination based upon sex (Murphy 1995). A new Office of Women's Issues (now called the Department of Women's Initiatives) was created by

APTA in the mid-1990s in an attempt to address these barriers to advancement. In a study by APTA in fall 2000, female PTs were also proportionately *less* likely to join APTA compared to males; the members were 68 percent women compared to 77 percent for the profession at the turn of the 21st century (APTA 2007; Mueller 2002). Baker and McMahon (1989) conducted a study on PTs in Maryland who were also members of APTA. Only 45 percent of the women respondents were in a managerial position compared to 64 percent of males. When only full-time practitioners were included, 48 percent of the women and 63 percent of the men were classified as managers. Additionally, full-time male department managers differed significantly in annual pay from their female counterparts; however, this was not true for either self-employed managers or staff on the basis of gender.

In the 1960s female-dominated occupations, including the allied health fields, were considered "semi-professions" (Etzioni 1969). However, as demonstrated above, with the further development of a theoretical base of knowledge, a continued emphasis in service, the increase of autonomy over its members and authority over its clients, and a demonstrated occupational culture, physical therapy has become increasingly recognized as a profession. Presently, this profession appears to be in the state between invasion (large numbers of men are moving or have moved into the occupation taking positions at the top of the hierarchy or the higher-status specialties) and infiltration (the occupation is still defined mainly as a female one, but men are still in a position to exploit their masculine traits to maximize their career choices and chances within that occupation) (Kanter 1977). Infiltration has been linked to an individual's motivation and to poor economic conditions limiting openings in traditional male jobs. Yet, invasion can also

involve a process of redefining tasks in a particular work area. Similar to the field of nursing (Snyder and Green 2008), both technological changes and the perception of increased economic opportunities have probably operated to encourage men to cross over to the occupation of physical therapy in larger numbers since the 1960s. Currently, physical therapy is ranked seventh in the top 10 occupations with the highest median weekly income among full-time employed *women* (US Department of Labor, Women's Bureau 2007). However, women in physical therapy typically take home less money than their male counterparts (APTA 2006, Chevan and Chevan 1998). And this gendered occupation has potential structural and attitudinal links to workplace satisfaction.

Conceptualizing Job Satisfaction

When compared to career or work commitment, workplace attitudes (such as job satisfaction) usually refer to the *current* level of satisfaction in one's employment. Whereas, career commitment measures how likely the respondent would remain working in the field if economic necessity were not a factor in the decision, essentially stressing the level of centrality of this work in the person's life (Mueller 2002). On the other hand, job satisfaction has been described as the level of fulfillment for a particular job but has also been linked to one's cultural values, like fairness in the workplace or social justice (Mueller and Wallace 1996; Cohen-Charash and Spector 2001; Colquitt, Conlon, Wesson, Porter and Ng 2001; Younts and Mueller 2001; McDuff 2001; Chu, Hsu, Price, and Lee 2003; and Clay-Warner, Reynolds and Roman 2005). When organizational members feel less valued due to certain attributes (e.g. gender, race/ethnicity, age, class, appearance), they will tend to be less satisfied and committed to the organization

(McIntyre, Bartle, Landis, and Dansby 2002). Overall, workers who receive less support and encouragement, discrimination in job/promotion opportunities, and lower pay and status may suffer from the penalties of the power dynamics of gender. Such inequitable treatment alienates workers. Results from several studies on gender or minority attitudes about equal opportunity fairness indicated a correlation with job satisfaction (See Grant, Garrison, and McCormick 1990; Witt 1990; and Rosenfeld, Thomas, Edwards, Thomas, and Thomas 1991). Also known under its broader concept of organizational justice, workers' perceptions about fairness are based upon their cultural and personal values influencing outcomes, such as job satisfaction (McDuff 2001 and Lipponen, Olkkonen, and Myyry 2004). When examining physical therapists' values, several studies specific to this occupation have demonstrated that in addition to caring, empathy, and respect, the value of "justice" has been named repeatedly by the respondents (Thomasma 1996; Triezenberg and Davis 2000; Nosse and Sagiv 2005).

Why do we, or should we, care about fairness across or within occupations? For organizational justice in terms of pay and benefits, there are the positive economic consequences. Fairness is valued because it is related to favorable outcomes. And even more important in the long-term, fair treatment and procedures communicate a sense of a positive and respected position for the worker in the group, organization, or occupation. Power leads to differences in privileges, resources, and opportunities; and when these are linked to gender, the result is gender inequity.

Available quantitative studies on workplace attitudes *and* gender in the field of physical therapy usually do not provide detailed analyses on relationships or interactions for gender. In fact, there is only one study in the occupation of physical therapy where

part of the main focus was gender and its relation to job satisfaction. In these results, there were no statistically significant main effects or interactions for overall job satisfaction "as a function of gender and area of practice" (Bieker 1999:19). Yet, individual analyses did reveal one significant difference based upon gender: female PTs specializing in sports were more satisfied with their level of autonomy than males in the same setting. Job satisfaction was measured by using 10 statements specifically designed for relevance to the field of physical therapy, with half stated negatively (Speakman, Pleasant, and Sutton 1996). In the Speakman, et al. study (1996), PT respondents were asked to evaluate each statement, first, for its importance and, second, for their level of agreement on two separate seven-point scales. Results from PTs licensed in Texas indicated content validity for this population on the scale of importance (i.e., all statements measured important dimensions of job satisfaction in this field). On the agreement scale, satisfying aspects of physical therapy were that it: provided challenging and interesting work that required use of their abilities, allowed independence in their decision-making and autonomy, and encouraged on-going learning and improvement. The most dissatisfaction was associated with the high level of paperwork. Also, some participants felt overworked and thought their jobs were at times too physically demanding and mentally stressful.

Even though the following studies do not have a gender component, they do contribute to a deeper understanding of the vertical, horizontal, and cultural dimensions that affect job satisfaction for physical therapists. In addition, there have been other approaches to measuring job satisfaction in the field of physical therapy. Broski and Cook (1978) used the *Job Descriptive Index* (JDI), which includes measures for work,

supervision, co-workers, current pay, and promotional opportunities to study allied professionals (dietitians, medical technologists, occupational therapists, and physical therapists). Within this sample, occupational and physical therapists reported higher degrees of job satisfaction on all five scales when compared to med techs and dietitians. Nevertheless, opportunities for promotions were lacking for all four groups of allied health professionals when compared to national norms established from about 20 national businesses. Another study examined similar factors associated with job satisfaction for about 200 PTs and PTAs (PT assistants) in Utah (Okerlund, Jackson and Parsons 1994). There were three leading reasons for the respondents' satisfaction: level of freedom or autonomy on the job, opportunities to develop skills, and wages and benefits, all of which link workplace satisfaction to the vertical structure. Most of the participants indicated they started practicing in a hospital setting (from internships), but due to an emphasis by hospital administration on the quantity of patients treated in a day, many later switched to other outpatient settings (e.g., clinics, home health)—a change in the horizontal structure.

In an early study on PTs by Barnes and Crutchfield (1977), there were four common influences on organizational managers and those in private practice: achievement and responsibility (intrinsic factors) and salary and organizational policies (extrinsic factors). Dissatisfaction with policies for organizational PTs was due to disagreement on the goals between the hospital administrator and the manager (or chief PT), whereas those self-employed PTs cited difficulty interpreting government policies and regulations. However, the two groups diverged on dissatisfaction for two separate extrinsic factors: peer relationships for organizational PTs (e.g., heads of *other*

departments) compared to working conditions for the private practice group (e.g., long hours; little to no vacation time). Even though overall work satisfaction itself was not significant for either group, both mentioned the amount of paperwork contributing to feelings of the job being routine and boring, similar to results by Speakman, et al. (1996). In a second two-factor study, job satisfaction measures for intrinsic and extrinsic areas were included for occupational and physical therapists, and an additional occupation, speech-language pathologists, across two surveys (1995 and 2000)[1] (Randolph, Doisy and Doisy 2005). The results of the two-factor (extrinsic vs. intrinsic) job satisfaction measures along with the individual's judgment about her/his own capabilities (self-efficacy) were separated for PT respondents. Intrinsic factors, such as having opportunities for professional growth, an environment in line with professional values, and clients who become well (health wise), were all statistically significant for PTs. Therefore, according to these authors, cognitive dissonance between a PT's personal or cultural values and those of the organization or occupation can all lower job satisfaction and effectiveness.

There is another group of workplace attitude studies that emphasizes three of the factors also stressed by Kanter's (1977) gendered organizational theory: control of one's work, challenge, and commitment. Control captures the respondent's perception of freedom to make decisions (autonomy), challenge highlights the perceived challenge of the job in a positive sense (opportunity for promotion), and commitment can be demonstrated by total years of experience in the field. In the field of nursing and later applied to physical therapy, empowerment (access to information, support, and resources)

[1]A serious limitation of this study was that the second sample for 2000 was not controlled by age or level of experience.

has been shown to be linked to one's organizational commitment, work satisfaction, level in the hierarchy, and autonomy (Miller, Goddard, and Laschinger 2001). A convenience sample of PTs in a large, urban teaching hospital located in Canada included scales to measure formal and informal sources of power that were related to the PTs total empowerment scores (Miller, Goddard, and Laschinger 2001), but since the sample was low in numbers and limited to only one hospital, this research should be expanded to other PTs, especially since there has been a noticeable shift from the traditional hospital setting to greater employment within the community in physical therapy (Akroyd, Wilson, Painter and Figuers 1994; Chevan and Chevan 1998). As already demonstrated, workplace attitudes are influenced by organizational setting; therefore, it is reasonable to anticipate shifts in job satisfaction related to changes within the occupational settings of physical therapists (organizational vs. self-employed and even managerial/supervisor vs. staff/solo practice as vertical markers).

In addition to the shift in organizational settings, there is also intra-professional gender segregation in physical therapy, or horizontal markers. More women were planning to specialize in pediatrics and private practice compared to men over one limited six-year study (Mueller 2002), while men were more likely to plan to specialize in orthopedics and management. Overall, their high career satisfaction (90 percent) was tempered by a majority (66 percent) finding the practice of PT frustrating regardless of gender or cohort membership. Top five frustrations for this subgroup were: inability to help patients enough; insufficient time to achieve goals; lack of respect from other health professionals; too many patients; and lack of teamwork.[2] Respondents who would *not*

[2] There were no significant differences with respect to gender or cohort.

choose PT again if given the chance were significantly more likely to consider PT a frustrating profession when compared to those who would choose PT again. Conversely, those respondents who were pursuing graduate education were significantly more likely to remain in the profession. While these studies emphasized autonomy, opportunities for promotion, and years of experience in the field, these features can also serve as important determinants of job satisfaction.

All of the job satisfaction studies discussed above had some measure of age or level of experience included in the model except for Randolph, Doisy and Doisy (2005). This is crucial since values by age, cohort, or amount of time in the field may affect one's sense of job satisfaction or workplace attitudes. Research in the 1990s demonstrated that there may be substantial cohort effects on changing gender role attitudes over time (Brooks and Bolzendahl 2004).

Interaction (Moderating) Effects: Linking Gendered Attitudes to Vertical or Horizontal Structures & Job Satisfaction

Concern with equity and social justice in which more complicated interactions between gender, ethnicity, or poverty has been explored as well (Tinklin, Croxford, Ducklin and Frame 2005). Melamed (1995 and 1996) argued that a *gender-specific* model should be offered to help explain upward career mobility or success. According to her research, the relationship between career success and three predictors (career choices, the opportunity structure, and human capital factors) is moderated by gender (Melamed 1995 and 1996). Barriers to women's progress in career success were considered to be: 1) "traditional" feminine traits, attitudes, or behaviors that oppose those needed for managers; 2) the "traditional" protector and provider role in the married/co-habiting

household where the man is often considered the financial head of household increasing the likelihood of a man's career success yet hindering a woman's; 3) the social culture; and 4) career paths with breaks and outside organizational commitments that disadvantage women due to organizational sanctions and structures. Melamed (1996) further generalized that women tend to be more successful in close, noncompetitive organizations—those with a narrow product or market service that prioritize retention, continuity, and reliability. This is a close description for salaried PTs. On the other hand, men tend to be more successful in open and competitive organizations—those who thrive on product innovation or the creation of new markets and emphasize recruitment of independent creative experts (Melamed 1996). This would further the argument for the separation of salaried work from self-employed work in the current physical therapy model.

Taking the above research one step further, a study by Miller, et al. (2001) on Canadian PTs employed by a large urban hospital demonstrated that access to opportunity and power structures can increase job satisfaction. However, these researchers did not test for any influence by gender or gender-role attitudes upon the predictors or outcome.

Career patterns in vertical hierarchy and horizontal segregation are certainly influenced by individual choice, but other social factors—such as gender, ethnicity, socioeconomic factors, level of education, the recruitment and retention policies of the organization and the social context—are also critical (Melamed 1996; Rozier, Raymond, Goldstein and Hamilton 1998). Gender can either enable or restrict workers depending on one's "horizons for action" (Beck, Fuller and Unwin 2006:672).

Many researchers claim that gender pressures begin with the male-female socialization process (Collins 2000; Tracey and Nicholl 2007; Lorber 2009). Additionally, men and women may have had different experiences during the socialization process depending on their race or age/generation (e.g., matrix of domination by Collins 2000 and three waves of feminism by Lorber 2009). However, research conducted on data up through the 1990s has also demonstrated that socialization factors can contrast sharply with work on gender relations. Gender attitudes are not fixed by childhood socialization but are also affected by adult relations (in the labor force, personal experience, and education) encountered by individuals throughout their life course (West and Zimmerman 1987; Ferree, Lorber, and Hess 1999; Risman 1998 and 2004; Brooks and Bolzendahl 2004).

Other studies shed more light on how one's sense of organizational justice can influence a person's outlook at the workplace (job or pay satisfaction, organizational commitment, or turnover intentions). While not focused on physical therapy or gender, these projects demonstrate connections relevant to the current study. A study on members of the military in regards to equal opportunity fairness and its relationship to job satisfaction was undertaken since more minorities and women began entering the US military in the 1970s (McIntyre, Bartle, Landis, and Dansby 2002). Equal opportunity (EO) is official policy by the military, and negative attitudes by respondents about this policy can lead to dissatisfaction in the service and vice versa. Even though EO may not be official policy for APTA, there was a demonstrated link between EO fairness and job satisfaction in the McIntyre, et al. (2002) study. Another group of researchers concluded from a survey of employees at a research institute that justice and its consequences

(turnover intentions) were stronger for those employees who placed more importance on power and achievement compared to those emphasizing benevolence (Lipponen, Olkkonen, and Myyry 2004). Therefore, the employees' personal values functioned as a moderator in the relationship between justice and the outcome variable (turnover intentions). There was no gender component to this study; however, it demonstrates the link between values or attitudes, justice, outcome of a potential turnover (which is related to job satisfaction), as well as linking the vertical hierarchy of the organization to the outcome. In another and later study, there was also an emphasis on justice concerns. Those business employees who held more egalitarian attitudes (i.e., openness to change) were more strongly influenced by concerns about perceived justice, while those who believed power should be distributed unequally (maintain the status quo) experienced less effect on their organizational commitment (Fischer and Smith 2006). An employee's level of openness to change functioned as a moderator between perceived organizational justice and the outcome of his/her organizational commitment attitudes.

In research that was more centered on one type of organizational justice (i.e., amount of pay), Protestant ministers were queried about their: 1) actual pay, 2) perceived evaluation of justice (actual vs. fair pay), 3) perceived justice of their pay, 4) perceived importance of fair pay, and 5) emotional response or pay satisfaction (Younts and Mueller 2001). Here mixed effects were demonstrated. The ministers' perceived justice of their pay mediated the effect of the evaluation of justice (actual pay vs. just pay) on the outcome (pay satisfaction); however, the importance of justice to the respondent moderated the minister's evaluation of justice. While not testing for gendered attitudes, these authors established links between perceptions of the evaluation *and* the importance

of justice upon the outcome of satisfaction, suggesting hypotheses for my research. However, another study published the same year (McDuff 2001) did include men and women Protestant clergy along with multiple measures of organizational justice besides pay (e.g., differential inputs like tenure, education, and work motivation; and subjective rewards such as professional growth, collegial support, and decision-making). McDuff's results suggested that gender differences in job values moderated the outcome of job satisfaction by gender.

Researchers have claimed gender moderates the relationship between career choices, the opportunity structure (vertical or horizontal) and human capital in predicting career success; or, access to opportunity contributes to job satisfaction. And economic provider attitudes (turnover intentions, job/pay satisfaction, or organizational commitment) are influenced by the employee's attitude ratings of importance for objective vs. subjective rewards, such as by power/achievement vs. benevolence, or by the worker's egalitarian (openness to change) vs. traditional (maintain the status quo) value attitudes. Such findings point to potential moderators in the current and future studies, yet these results should also caution investigators to be aware of possible mixed effects (indirect and interactions) within their statistical models.

Indirect (Mediating) Effects: Linking Gendered Attitudes to Vertical or Horizontal Structures & Job Satisfaction

Career has been defined as "a series of status and clearly defined offices" (Hughes 1937:409-410) that connect a person to the institutional social structure. The notion of the vertical hierarchy (career success) is emphasized in the current study with attention to breaks in work continuity, level of earnings, and supervisory duties in physical therapy.

The movement among various primary settings or primary specialties by gender (gender transitioning by horizontal segregation) is also a part of this social structure. Vertical and horizontal transitions in a career can both be affected by one's ethnicity, gender, and age. By examining a specific occupational career and using a subjective (i.e., respondents' attitudes), as well as an objective approach, researchers can also determine how social actions and attitudes relate to the social structure or institution under study. Therefore, the social structures of the respondent's current position as well as the respondent's attitudes on such issues as gender and opportunity can contribute to a better understanding of a worker's current job satisfaction, which contains two elements: 1) a sense of fulfillment from work and realized opportunity and 2) a sense of justice from fair treatment in the workplace. Gender justice can be measured indirectly through attitudes that tap into gender stereotypes and fairness in getting or receiving opportunities in the workplace. The key is to link these gender attitudes from the occupational structure to workplace attitudes. A few organizational justice studies have demonstrated attitudes about justice or perceived fairness by workers based upon gender are linked to job satisfaction (Phelan 1994; Mueller and Wallace 1996).

Career Success and the Vertical Hierarchy

According to some researchers in the occupation of physical therapy, men experience more career success than women (Rozier, Raymond, Goldstein and Hamilton 1998). Career success in a profession has been defined as more wages, benefits, leadership roles, and experience (such as full-time employment and fewer career interruptions). Yet, measures of success can be objective (e.g., salary and position) or

subjective (e.g., human capital, job satisfaction). Employment in heavily female occupations has been positively associated with men's promotional aspirations (Cassirer and Reskin 2000). And, as stated earlier, men in physical therapy are also more likely to own their own practices/businesses when compared to women in the field. In a more detailed earlier study, only the administrative or private practice sections were included when attempting to account for less movement by women into management or self-employment (Rozier, Hersh-Cochran and Whitright 1993). As expected, females were more likely to be salaried, while male PTs were more likely to be self-employed.

Physical therapists (as other professionals) may also define career success differently depending upon such characteristics as their gender, work setting, clinical or nonclinical skills, clients, experience, and personal or administrative responsibilities. Historically, longitudinal studies have defined career success objectively as the number of promotions or amount of salary increases over a defined period of time, while cross-sectional ones (such as the present study) have considered such objective measures as current hierarchical position, salary, or occupational grouping. Regardless of the perspective, career success has been considered a strong predictor of earnings and managerial attainment. Main predictors of career success (for both genders) are human capital, career choices, and social structural opportunities. A good career match (e.g., personality characteristics) and the possibility for growth and improvement often lead to job satisfaction and an increased chance for upward career movement. However, rather than just a stepwise succession of jobs, individuals are also linked to the social structure by their own subjective attitudes. Gender attitudes about opportunities and workplace satisfaction can help to fill this void.

Work-Related Ideologies and Vertical and Horizontal Structural Dimensions

When considering horizontal structure such as location, PTs in large organizations (e.g., hospitals; industry) tend to get more promotions but have less managerial responsibility, while PTs in smaller organizations tend to have more managerial control, such as the self-employed (Kemp, Scholz, Sanford and Shepard 1979; Rozier, Hamilton and Hersh-Cochran 1998). Jobs are either considered line (part of the chain of command) or staff. Line jobs tend to have increased salary, managerial duties, and job satisfaction since they can influence the decision-making process, whereas staff jobs are more marginal and support the operation (delivering care directly to the patient).

The perceived sense of fairness by the worker in the workplace, also referred to organizational justice, has been linked to job satisfaction in many studies (Mueller and Wallace 1996; Cohen-Charash and Spector 2001; Colquitt, Conlon, Wesson, Porter and Ng 2001; Younts and Mueller 2001; McDuff 2001; Clay-Warner, Reynolds, and Roman 2005). In research conducted by Clay-Warner, et al. (2005) workplace justice was an important predictor of satisfaction, even after controlling for personal, job, and organizational characteristics. Depending on the measures employed, some studies indicated indirect (mediating) effects (Kan 2007; Cassirer and Reskin 2000; Diekmann, Sondak and Barsness 2007) others claimed interaction (moderating) effects (McDuff 2001; McIntyre, Bartle, Landis and Dansby 2002; Liponen, Olkkonen and Myyry 2004; Fischer and Smith 2006), while some determined both were present (Younts and Mueller 2001; Ramamoothy and Flood 2004).

In Kan's study (2007) career satisfaction, an overall sense of fulfillment in one's career, was measured to determine work preferences by gender. The overall conclusion of this article was that the relationship between gender-role attitudes and women's employment participation is endogenous, not exogenous. In other words, employment choices are not just influenced by gender-role preferences, but preferences are also affected by employment experience; this suggests an indirect link to the subjective evaluation of that experience (workplace satisfaction).

By comparison, Arthur, Khapova and Wilderom (2005) recommended looking at career through both the objective and subjective lenses simultaneously since they are both interdependent and further argued that many studies have not done so. Boundaryless careers involve opportunities beyond any single employer. Organizations are now less hierarchical, adapting more rapidly in a changing world and allowing individuals to seek other employment opportunities. For comparison, subjective careers can be described as "careers of achievement" based more on the interpretation by the individual in attaining skills and behaviors (the value of work), whereas objective careers as "careers in advancement" in terms of hierarchical achievement of power or prestige, such as rank or salary (Arthur, et al. 2005). This provides another link between the hierarchical and the attitudinal.

My research study considered the shared occupational attachment of attitudes about opportunities (job and promotional), choices made, and opportunities realized within the social structure of that occupation. Subjective measures (attitudes about fairness in opportunities) and objective measures (realizing opportunity be it vertical or horizontal) both contribute to workplace attitudes (job satisfaction).

Cassirer and Reskin (2000) compared the organizational locations and experience by gender and accepted Kanter's contention that location in the organization was most prominent in affecting an employee's aspirations with gender exerting a secondary influence. However, even more relevant to the current study, these two authors also checked whether the association between gender and attitudes was indirect (mediated) by testing the null hypothesis that women have higher promotion aspirations than men *after* controlling for the effects of organizational location. This would reaffirm Kanter's belief that structural location affects workers' promotional ambitions. Kanter's thesis has two steps according to Cassirer and Reskin (2000): 1) a worker's location in the opportunity structure affects the possibility of promotion, which in turn 2) affects the importance placed on being promoted. Therefore, the independent variable was an attitudinal question on the importance of being promoted (subjective). The likelihood of being promoted was measured by the presence of job ladders (objective), the use of particularistic or ascribed criteria (objective), which has traditionally been viewed as a disadvantage to women rather than using formal or achievement criteria, and the employer's earlier evaluations of worker's performance (subjective). Cassirer and Reskin concluded that "supervisors of workers employed in many customarily female occupations pursue customarily male occupations" within the occupations' boundaries, such as operating room nurse and surgical nurse within a career of nursing (2000:451). Men working in typically female occupations also had significantly higher promotional aspirations. Additionally, married males' promotional ambition increased linearly with the increasing percentage of women in the occupation; it is certainly relevant that this was not true for single men in their study.

Testing for Mediation Effects Using Work-Related Attitudes on Organizational Justice

Ramamoorthy and Flood (2004) included gender in their organizational justice research by testing whether perceived justice in the allocation of work rewards mediated the relationship between gender and employee attitudes (organizational commitment)[3] in mainly blue-collar workers within several manufacturing firms. There were mixed effects in their study. Perceived justice mediated the relationship between gender and tenure intent, but this was not demonstrated for commitment. Therefore, moderated regression analysis was used to test for the possible moderating effects of gender between perceived justice and the outcome (organizational commitment). Gender was demonstrated to moderate the relationship between perceived organizational justice and the outcome of commitment, and whether perceived fairness was low or high, women had higher levels of commitment than comparable men in the firms. In fact, at higher levels of perceived justice, women demonstrated greater increases in commitment than men. By contrast, a study of US Navy personnel on job satisfaction demonstrated that at lower pay grades women had more positive perceptions about their work than their male counterparts (Rosenfeld, et al. 1991). However, at higher pay grades (E-6 and above), women's work attitudes were consistently lower than their male counterparts; this "pay grade-by-gender" interaction effect has been termed "the crossover effect" (Rosenfeld, et al. 1991:413). Whether female physical therapists demonstrate a similar pattern of workplace attitudes (lower job satisfaction than comparable males) remains unclear. Yet,

[3]Organizational commitment has been demonstrated to be directly related to job satisfaction in many studies (i.e., higher job satisfaction leads to higher organizational commitment).

as a professional occupation with high educational, licensing, and certification requirements, female PTs may be more similar in workplace attitudes to women at higher military pay grades than to blue-collar workers in the former study.

Although no measure was included on a gendered component, Diekmann, Sondak and Barsness (2007) concluded that at higher levels of status there was also an increased sense of deserving of occupational rewards among respondents (full-time executives working toward their MBA) that in turn mediated the relationship between organizational fairness and job satisfaction. Applied to gendered perceptions about promotions and woman's role in the workplace according to PTs in the present study, those respondents may extend this sense of fairness or equity to their own workplace attitudes.

Several links have been established in the above literature review when examining for indirect effects: whether measuring vertical hierarchy (career success) or predicting workplace attitudes, objective and subjective measures should be included in the model; horizontal segregation affects the potential for promotion and managerial responsibility; organizational justice (perceived fairness in the workplace) has been linked to workplace attitudes, such as career or job satisfaction and organizational commitment; and evidence also exists (Rosenfeld, et al. 1991; Cassirer and Reskin 2000; Ramamoorthy and Flood 2004; and Kan 2007) that connects gender and gendered attitudes and the organizational structure to workplace satisfaction.

Research Hypotheses

Using a gendered description of physical therapy, the theoretical model (attached as Figure 1.1), and the empirical studies cited earlier in Chapter II, one approach to an

occupation's social structure has been outlined. The potential influence of opportunity attitudes upon the horizontal (primary location and primary focus or specialty) and vertical (career success) factors in determining one's current job satisfaction attitudes has been demonstrated. The overall research question is: Do gendered attitudes about opportunities (promotion, jobs) affect the interplay of social structural factors of work at the individual's occupational level in either the vertical hierarchy (measured as career success) or horizontal segregation (measured as either primary setting or specialty) dimensions for physical therapists in determining current workplace satisfaction?

After comparing the *2000 US Census Bureau Five-Percent Sample* for PTs to the more limited target population (only APTA members) of the *2004 Physical Therapy Labor Force Survey* respondents to determine how representative this sample is, the following research hypotheses were considered for *salaried* employees only. There are enough substantial and prominent differences between salaried employees and self-employed PTs (e.g., level of autonomy, vertical hierarchical and horizontal segregation structures, differentially perceived and actual opportunities) that the current theoretical model for the relationships among gendered organizational structures, gender attitudes, organizational justice, and their effects on job satisfaction would need to be modified for self-employed physical therapists.

Specific Research Hypotheses

H_{1a}: The vertical structural variables are related to the horizontal structural variables (tested with coefficient correlation table).

H_{1b}: The vertical (pay, authority, and continuity) and horizontal (primary location and primary specialty) structural variables are related to job satisfaction. Vertical: PTs with higher pay, authority, and continuity have greater workplace satisfaction. Horizontal: PTs located in an outpatient setting have a higher job satisfaction than those located in an inpatient setting. Those PTs specializing in orthopedics-sports have greater workplace satisfaction than those specializing in geriatrics or acute care.

H_2: Perceived gendered attitudes about opportunities (promotions and jobs) affect job satisfaction. On average, female PTs who report women have fewer opportunities (promotions and jobs) in physical therapy are less satisfied than those who report women have similar or better opportunities. On average, male PTs who state women have more opportunities are less satisfied than those males who state women have similar or worse opportunities.

H_3: Perceived gendered attitudes about opportunities (promotions and jobs) have *moderating* (interaction) effects on worker satisfaction within a gendered occupation (vertical and horizontal structures). All reasonable two-way interactions were tested using moderated regression analyses.

H_4: Perceived gendered attitudes about opportunities (promotions and jobs) have *mediating* (indirect) effects between a gendered occupation (vertical and horizontal structures) and worker satisfaction.

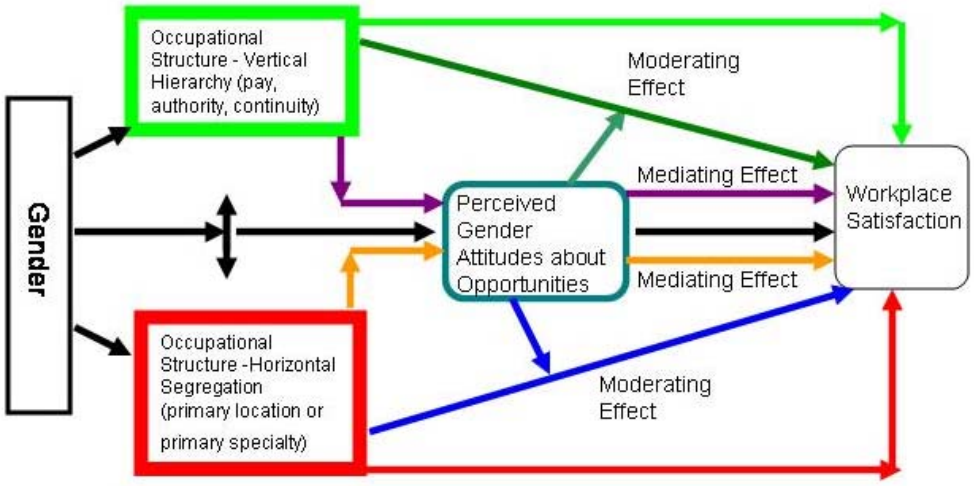

Figure 1.1 A Theoretical Model of a Gendered Occupation, Gender Opportunities & Job Attitudes for Salaried PTs

CHAPTER III

RESEARCH METHODOLOGY

Data Sources

This study mainly employs *The 2004 Physical Therapy Labor Force Survey*, a national study of members of the American Physical Therapy Association in 2004. A second data set (*Public Use Microdata Sample (PUMS) Five-Percent Survey* from the 2000 US Census of Population and Housing*)* was used to test the representativeness of the PT Labor Force Survey sample for the US physical therapy population.

The *Census 2000: 5 percent Public Use Microdata Sample (PUMS)* represents a stratified sample of the full 2000 US Census (about 16 percent of the housing units that received the long-form questionnaire). The complete 2000 5 percent PUMS has information on more than 14 million people representing more than 5 million housing units (U.S. Census Bureau 2003). Person weights are used to extrapolate to the target population of physical therapists in the US. As a result of editing, there are no missing data in PUMS files. Data may be allocated by imputation or from similar information from the record of a housing unit or a person from that unit. Unlike the *2004 PT Labor Force Survey*, physical therapy respondents to the PUMS 5 percent sample may or may not be members of APTA.

The 2004 Physical Therapy Labor Force Survey was funded by the Mississippi State University Research Initiation Program and approved by the Institutional Research Board on the campus of Mississippi State University.

The eight-page national survey was mailed out in January 2004 with a cover letter along with a stamped, self-addressed envelope to return the completed survey. The questionnaire was sent to 4,000 randomly drawn members of the APTA (from its 2003-2004 member list), which is about a 10 percent sample of APTA's active membership list for that year (approximately 45,000 active members). There were 1,662 responses for a 42 percent return rate. Due to the increased price of postage and the length of the survey, there were insufficient grant funds for the mail-out of a reminder post-card two to four weeks after the initial mailing of the questionnaires (as planned in the original proposal). This return rate is exceptional for a one-time mail out.

Measures

Beginning with the 1980 US Census, physical therapy was coded as a separate occupational category (0316). The PUMS 5 percent samples of the entire US population are available for 1980, 1990 and 2000. Chevan and Chevan (1998) have analyzed the 1980 and 1990 data for the occupation of PT by 1) geographic location by state (rate of PTs/10,000 persons) and the 50 largest Metropolitan Statistical Areas (MSAs), 2) social characteristics, 3) employment characteristics, and 4) income. About 31,000 PTs in the US were employed compared to roughly 66,000 in 1990 (Chevan and Chevan 1998).

Source of Descriptive Measures from 2000 PUMS 5 Percent & 2004 Labor Force Surveys

The social and work characteristics for physical therapists from the 2000 PUMS 5 percent survey provided a third set of descriptors to add another historical time point to those from 1980 and 1990. Social characteristics include respondent's sex, age (in years), number of children, race/ethnicity, marital status, education, and US citizenship. Work characteristics included labor force participation, class of worker, place of work, weeks worked in previous year, and usual weekly hours worked in previous year. However, citizenship status, birth place, and weeks worked previous year were not available for respondents from the 2004 PT Study. Additionally, self-employed PTs were separated from employed PTs; however, employed PTs (wages and salary) could not be separated into private or government workers for respondents to the 2004 PT Survey. Median income for all PTs for the 2000 5 percent PUMS and the 2004 PT Survey were also included. Furthermore, median incomes were subdivided by gender, age, race/ethnicity, marital status, educational attainment, class of worker, place of work, and usual weekly hours in previous year.

The social characteristics for physical therapists (all APTA members) collected in 2004 on the PT Labor Force Survey included sex, age, race/ethnicity, marital status, and education (Table 3.1). Work characteristics included labor force participation, place of work, usual weekly hours worked in 2003, and income for wage and salary workers or self-employed. Table 3.2 provides the aggregated categories that were used for each variable already described in Table 3.1.

Table 3.1 2004 Physical Therapy Labor Force Survey: Source of Social & Work Characteristics for Physical Therapists

Social	**Question/Statement**
Gender	What is your gender? Female or Male
Age (years)	In what year were you born? (Calculate age from 2004 – Birth Year)
Race/Ethnicity	What is your race/ethnicity? White, Black, Pac Islander, Native Amer, Asian, Other
Marital Status	What is your marital status? Married, Divorced, Widowed, Separated, Never Married, Partnered Relationship
Education	What is highest level of education achieved? UG, MS, Adv Masters, Prof/Entry Level DPT, Transitional/Post-Prof DPT, PhD degree
Work	**Question/Statement**
Labor Force Participation	Respondent current job title and How would you describe your current employment status? Employed FT; Employed PT; Self-Employed FT, Self-Employed PT
Primary Setting or Place of Work	What is the primary setting of your current job? Acute Care; Inpatient Rehab; Outpatient; Home Health Care; Long Term Care; Sub-acute Care; Academia; Consultant; Other
Primary Focus or Specialty	What is the primary focus of your current job? Pediatrics, Orthopedics/Sports; Geriatrics; Acute Care; Cardiopulmonary; Neurological; Wound Management; Occupational Health; Other
Usual Wkly Hrs	How would you best describe your current employment status? Full-time; Part-time
Annual Earnings	Which of the following best describes your own personal annual income? $19,000 or less; $20-29,999; $30-39,999; $40-49,999; $50-59,999; $60-69,999; $70-79,999; $80-89,999; $90-99,999; $100-149,999; $150,000 & above

Table 3.2 Variables for Salaried Physical Therapists in 2004 PT Survey: Operationalization and Categories

DEMOGRAPHIC FACTORS	OPERATIONALIZATION & CATEGORIES	CODING OF VARIABLES
Age in Years	Younger (less than 40 years); Older (40 years or more)	Dummy with younger as reference group
Marital Status	Ever Married (Married/Partner; Divorced/Separated/Widowed); Never Married (Single)	Dummy with ever married as reference group
Race/Ethnicity	White; Nonwhite	Dummy with white as reference group
Gender	Male; Female	Dummy as female
STRUCTURAL FACTORS		
Employment History		
Number Career Interrupts (career continuity)	None; 1 or More	Dummy with none as reference group
Professional Qualifications		
Education	Undergrad degree; Post-Grad degree (Master or Adv Master; Prof-DPT/PhD/EdD/MD/JD)	Dummy with PG as reference group
Present Position		
Supervisor/Staff [1]	Yes (Supervisor); No (Staff)	Dummy with Staff (Non-Supr) as reference group
Primary Setting (Place of Work)	Sub & Acute Care(Inpatient), Outpatient Care, Chronic Care (LTC & HH); Other	Dummy with Outpatient Care as reference group
Primary Focus	Pediatrics; Ortho/Sport; Geriatrics; Acute Care; Neurological; Occup Health; Mgt/Admin[2]; Women's Health; Other	Dummy with Ortho /Sport as reference group
Annual Earnings	Wage/Salary	Categorical: See Annual Earnings in Table 3.1 above
Usual Weekly Hours	Part-time or Full-time	Dummy with full-time as reference
ATTITUDES - WORK		
Gendered Opportunities	For: Promotions; Jobs	Dummy with no difference between men & women as reference group
Most Important Factor in Current Job	Patient Population; Flexibility; Location; Learning Opportunities; Salary; Ethics; Environment; Autonomy; Job Security; Other	Qualitative responses coded as categorical variable
Current Job Satisfaction	Appendix A (10 statements)	Factor analysis described below

[1]Supervisor is defined as supervising at least one other employee.
[2]Mgt/Admin as primary focus means mainly administrative duties, not patient-centered.

Median personal income for all PTs for the 2000 5 percent PUMS and the 2004 PT Survey data are expressed as nominal dollars (Table 3.3). Annual incomes were subdivided by gender, age, race/ethnicity, marital status, educational attainment, class of worker, place of work, and usual weekly hours in previous year.

Table 3.3 Median Personal Income from Work of PTs in 2004 PT Survey & 1980-2000 PUMS 5 Percent Samples (in nominal dollars)[1]

Gender	Women	Men			
Age (Yrs)	20-29	30-39	40-49	50-59	60 & over
Race/Ethnicity	Non-Hisp White	Asian	African Amer	Other (Hisp)	
Marital Status	Married	Never Married	Div/Sep/Wid		
Edu Attainment	Bachelors	Masters	Professional		
Class of Worker[3]	Private	Government	Self		
Place of Work	Med Office	Hospital	Nursing Home	PT Office	Other
Wkly Hrs Previous Yr[4]	< 20	20-34	35-44	45 & over	

[1]Descriptive statistics for 2000 PUMS will be calculated in this paper.
[3]Self-employed could be separated from employed; however, employed could not be separated into private or government for respondents to 2004 PT Survey.
[3]Usual weekly hrs for previous yr (2003) for 2004 PT Survey are only categorized by < 30 hrs and ≥ 30 hrs.

Source of Measures for Models from 2004 Physical Therapy Labor Force Survey

The salaried physical therapists were selected from the survey data and subsamples were created for men and women. There were two dependent variables (as a result of factor analysis), seven independent variables, and five control variables. Possible interaction and indirect effects among gender, attitudes, and organizational structures within the occupation were also tested.

Dependent Variables

Two factors of current job satisfaction were the dependent variables. The current job satisfaction scale included 10 workplace attitudes on the questionnaire (Appendix A) developed and tested by Speakman, Pleasant, and Sutton (1996), specifically designed for those in physical therapy. Half of these statements reflected positive facets about the

respondent's current job and half reflected negative facets. The negative statements were reverse-coded, so that the higher the overall workplace attitude score, the more positive (satisfied) the PT was with her/his current job or position. Factor analysis (Kim and Mueller 1978a and 1978b; Long 1983; Pett, Lackey, and Sullivan 2003; Garson 2008) was used initially on these 10 workplace attitude statements. Since two statements (#34 on autonomy and #37 on independence) created problems with convergence, these items were dropped. The two resulting factors generated a textbook case in their factor analysis outcomes (see Chapter IV). Reliability of these two factors was also assessed before inclusion in statistical models (Carmines and Zeller 1979).

Independent Variables

The independent variables included the following structural or attitudinal factors: (1) career success in the form of supervisor vs. staff for salaried PTs; (2) earnings; (3) number of career interruptions as a measure of career stability (Rix 1988; Rexroat 1990; Rozier, et al. 1993; Noonan 2001); (4) primary setting; (5) primary focus; and (6) attitudinal factors including gendered opportunities (for promotions and jobs).

The choices of occupational or structural variables reflected the emphasis on the worker's location in the opportunity structure by Kanter (1977), while preserving the gendered approach of Acker (1990), Lorber (2009) and others (Hughes and Kerfoot 2002; Britton and Logan 2008) through the attitudinal variables. The vertical structural aspect or positional inequity (up, down, lateral) of organizations has been linked to male primacy (Charles and Grusky 2004; Baunach 2002; Ridgeway 2006). The vertical structure was operationalized as place within the hierarchy in current position, earnings,

and number of career interruptions or career continuity, based upon empirical research by Rozier, et al. 1993, Melamed 1995 and 1996, Cassirer and Reskin 2000; Crampton and Mishra 1999). Current position was measured as supervisor vs. staff physical therapists and analyzed separately by gender (Cassidy and Warren 1991; Crampton and Mishra 1999). Besides vertical hierarchy, horizontal segregation was also measured by place of work (primary setting) and primary focus or specialty (Rozier and Thompson 1998; MacLean and Rozier 2007). However, in consideration of the research of Arthur, Khapova, and Wilderom (2005) who recommended looking at a career not only through the objective but also subjective lenses as well as gender theorists (Collins 2000 and Lorber 2009), the present study includes both.

Opportunities in the work world may be presented in terms of jobs or promotions. Hachen (1990) looked at job and event histories and concluded that limited opportunities for women and minorities may be due to gender segregation *within* the occupation. Yet, men in female-dominated occupations may receive more opportunities and encouragement than their women colleagues, referred to as "the glass escalator" (MacKinnon 1979; Williams 1995). Promotional and job opportunities can have a key impact on employee's work satisfaction (sense of fulfillment and fairness) and productivity (Miller, et al. 2001). And wherever it occurs, "blocked mobility breeds pessimism and disengagement among workers" (Cassirer and Reskin 2000:439) regardless of their gender; however, accentuating the more positive side, indications of opportunity "foster engagement and optimism" (Cassirer and Reskin 2000:458). Additionally, there is the organizational justice literature, which has correlated attitudinal values to workplace satisfaction, defined as either job satisfaction, organizational

commitment, or turnover intentions (Mueller and Wallace 1996; Colquitt, Conlon, Wesson, Porter and Ng 2001; Younts and Mueller 2001; McDuff 2001; Clay-Warner, Reynolds, and Roman 2005; Ramamoorthy and Flood 2004; Diekmann, Sondak and Barsness 2007; McIntyre, Bartle, Landis, and Dansby 2002; Lipponen, Olkkonen, and Myyry 2004; and Fischer and Smith 2006).

As far as separating the models by gender, internal stratification is the result of organizational, occupational, or individual motives or pressures. This internal demarcation can affect men and women differentially through their degree of autonomy (Lindsay 2007); power and authority (Kanter 1977; Williams 1995; Jackson 1998) and even the gendered composition of their profession (Williams 1995; Rozier, et al. 2001; MacLean and Rozier 2007; Snyder and Green 2008). Since the current model considers only the occupational structure and the gender attitudes, any organizational (at the level of the firm) variables must also be controlled.

Methods

Statistical analyses were performed using *SPSS version 16.0.2* (2008). In the first part of the analysis in Chapter IV, descriptives from the 1980 and 1990 PUMS 5 percent samples for physical therapists by Chevan and Chevan (1998) are compared to the results from 2000 PUMS 5 percent Sample and the PT Labor Force Survey.

Two independent variables (job and promotion) were ultimately used. Originally, there were three attitudinal questions on opportunities for women that came from questions #17 (promotion), #21 (education), and #22 (job). Factor analysis (Kim and

Mueller 1978a and 1978b; Long 1983; Pett, et al. 2003, Garson 2008) indicated that a factor model was inappropriate in this instance.

Multiple regression analysis, run by gender, was the principal statistical technique used in testing the research hypotheses. Multiple regression only demonstrates an association among variables, but these covariates can be separated by the amount of variation explained by the various parts of the model—in this case the social structural (vertical and horizontal) and attitudinal (opportunity) upon the dependent variables (two factor domains of job satisfaction) after controlling for marital status, age, usual weekly hours, race/ethnicity, and education.

Moderated regression analyses were conducted to test the linkages between the structural variables, attitudinal variables, and current job satisfaction. Moderators can affect the direction and/or the strength of a relation between the independent or predictor variable and a dependent or criterion variable; and, unlike mediators, moderators always perform as independent variables (Baron and Kenny 1986). All appropriate interactions terms (two-way) were considered.

There are three criteria that must be met to demonstrate mediation (Kenny, Kashy, and Bolger 1998): 1) Independent variable (IV) needs to be related to the dependent variable (DV); however, this relationship can be weak if IV has a more indirect or distal influence on the DV; 2) IV needs to be related to the mediator; 3) a) the mediator must be related to the DV with the IV included in the model; or b) for complete mediation, the relationship between the IV and the criterion variable (CV) or DV must disappear (or become insignificant) when controlling for the mediator variable. If this relationship between IV and CV (or DV) is lowered but remains significant when controlling for the

mediator variable, there is a partial mediation. There are three basic assumptions in arguing that a variable M mediates the effects of another variable X on a given response variable Y: 1) X is assumed to have a direct effect on M; 2) M is assumed to have a direct effect on Y; and 3) the effect of X on Y is assumed to be indirect by working through X's effect on M, or X → M → Y (Younts and Mueller 2001).

Checks and potential solutions for various problems can arise in regression analyses if the assumptions are violated (Berry 1993). Examining for multicollinearity, the variance inflation factors (VIF) were calculated and values greater than 10 were researched for causes of multicollinearity and potential solutions for the appropriate model. Potential problems with heteroskedasticity were identified with scatterplots of the standardized residuals versus the standardized predicted values or with White's test for every multiple linear regression model tested (Pryce 2002; Garcia-Granero 2002). Normal probability plots of the residuals were also generated for each multiple regression analysis to detect any violations of normality. As mentioned previously, the presence of any substantive interaction effects were tested in these regressions (Jaccard, Turrisi and Wan 1990). The *2004 Physical Therapy Labor Force Survey* data for PT respondents was separated by gender. General career and organizational justice research (Melamed 1995 and 1996; Valcour and Tolbert 2003; Loscocco and Spitze 2007) has indicated there might be a moderating effect by gender, although this has *not* been demonstrated specifically in the occupation of physical therapy or in cross-sectional research (Jaccard, Turrisi and Wan 1990). However, there are no longitudinal studies on the careers of physical therapists.

Dummy variables were created for the controls on marital status, age, the usual weekly hours, ethnicity/race, and education.

Statistical Models

Four models below were tested by gender for *salaried* PTs.

Model 1 tested: 1) the relationship between the vertical and horizontal variables by a Pearson's correlation coefficient; and 2) whether, in a gendered occupation, vertical power (authority, earnings, career continuity) and horizontal segregation (primary setting and primary specialty) can predict job satisfaction (using two domain factors of current workplace attitudes) while controlling for marital status, age, usual weekly hours, race/ethnicity, and level of education.

Model 2 tested the perceived attitudes about opportunities (promotions and jobs) first overall and then by gender and any potential relationship (via gender justice) to vertical hierarchy (annual earnings, authority, career continuity) and/or horizontal segregation (primary setting and focus) with appropriate controls upon the two dependent factors of current workplace satisfaction.

Model 3 tested the potential moderating (interaction) effects of perceived opportunities (promotions, jobs) between vertical hierarchy (annual earnings, authority, continuity) and horizontal segregation (primary setting and focus) upon two job satisfaction factors, along with the appropriate controls in each case. All two-way interactions were also considered.

Model 4 tested the potential mediating (indirect) effects of perceived opportunities (promotions, education, jobs) between vertical hierarchy (annual earnings,

authority, or career breaks) and the two job satisfaction factors, along with the appropriate controls in each case.

Therefore, the entire models for *salaried* female and male PTs appeared (based on the results of factor analyses) in short form (Model A and Model B) and then below in expanded form (Factor 1 or Factor 2).

Model A: $Y1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \text{Controls} + \acute{E}$, (3-1)

And,

Model B: $Y_2 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \text{Controls} + \acute{E}$, where: (3-2)

Y_1 = Factor 1 of Current Job Satisfaction (Model A)

Y_2 = Factor 2 of Current Job Satisfaction (Model B)

X_1 = Vertical Hierarchy

X_2 = Horizontal Segregation

X_3 = Attitudes about Promotion Opportunities

X_4 = Attitudes about Job Opportunities

Controls = Marital Status, Age, Usual Weekly Hrs, Race, and Education Level

É = Error Term

Factor1 (or 2) = $\alpha + [\beta_1(\text{Mgr/Supr}) + \beta_2(\text{Earnings}) + \beta_3(\text{Breaks})] + [\beta_4(\text{PlaceWork}) + \beta_5(\text{Focus})] + [\beta_6(\text{PromOps})] + \beta_7(\text{JobOps})] + [\beta_8\text{Marital}) + \beta_9(\text{Age}) + \beta_{10}(\text{WklyHrs}) + \beta_{11}(\text{Edu}) + \beta_{12}(\text{Race})] + \acute{E}$, (3-3)

Where:

[Factor1 = domain of intrinsic rewards from current job

Factor2 = domain of psychological/physical well-being from current job]

[Mgr/Supvsr = manager/supervisor;

Earnings	=	salary/income per year;
Breaks	=	# of career breaks;] (Vertical Hierarchy of Current Position)
[PlaceWork	=	primary place or setting of work;
Focus	=	primary specialty] (Horizontal Segregation of Current Position)
[PromOps	=	promotion opportunities for women;
JobOps	=	job opportunities for women]
[Marital	=	marital status;
Age	=	age of respondent;
Wkly Hrs	=	part-time or full-time;
Education	=	highest degree achieved;
Race	=	white/nonwhite] (Controls)
É	=	error term

CHAPTER IV

RESULTS

Data for PTs in the US has been collected since the *1980 US Census of Population – PUMS – 5 percent Sample*. The estimated number of employed PTs practicing in the US in 1980, 1990, and 2000 was 30,600, 66,270, and 115,020, respectively. According to the *2000 Annual Report* by APTA, there were approximately 45,000 active PT members (APTA 2010). Given that number and the estimate of all employed PTs in the US according to the 2000 US Census, approximately 39 percent of all practicing PTs in the US were members of the APTA in 2000. Chevan & Chevan (1998) provided descriptive tables for the 1980 and 1990 samples by selecting those cases with the occupational code (0316) for PTs. The 2000 PUMS 5 percent sample was similarly downloaded for PTs to be added as another historical comparison to the original two samples, and it also provided a base for examining the social and work characteristics available in the *2004 Physical Therapy Labor Force Survey*.

Descriptive Statistics

Table 4.1 presents a summary of the social characteristics of employed PTs sampled over three censuses as compared to the 2004 PT Survey. As expected, the workforce is aging. The 2004 PT Survey over-represents the 50 & over age category, yet median age for physical therapists in the 2000 Census (36 years) is fairly close to that for PT

respondents in 2004 (38 years). While percent female ranges from 70 to 75 percent in the three censuses, 78 percent of the 2004 respondents were female. Regardless of the data collection year, whites are also heavily represented in this occupation. APTA (American Physical Therapy Association) officers and board members are keenly aware that their profession does not reflect the statistical means for the various ethnicities in the US. One of APTA's main objectives introduced in 2001 was to increase the number of PTs from other ethnic groups to better match the demographics in the US population (APTA 2007). Since the 2004 sample is slightly older on average, it follows that more would be married (75 percent compared to 69 percent in the 2000 PUMS). And finally in regards to educational attainment, all PT-approved schools must now offer a master's degree leading to a substantial growth in this category since 1990. However, since all PT-approved schools must have a doctorate program in place by 2020, the single-digit figures for a professional degree are somewhat surprising (Table 4.1).

Table 4.1 Social Characteristics of Employed US Physical Therapists from PUMS 5 Percent[1] & 2004 PT Labor Force Surveys[2]

Year/Sample	1980 PUMS (n=1530)	1990 PUMS (n=3112)	2000 PUMS (n=5314)	2004 PT Survey (n=1632)
Age (yrs)	%	%	%	%
20-29	48.9	33.7	23.1	19.6
30-39	30.2	41.9	38.8	34.9
40-49	11.5	16.2	27.1	23.7
50 & Over	9.4	8.2	10.9	21.8
	Yrs	Yrs	Yrs	Yrs
Overall Median Age	30.2	33.5	36.0	38.0
	%	%	%	%
% Female	72	75	70	78
Race-Ethnicity	%	%	%	%
White	93.0	90.2	88.8	93.5
Black	3.6	2.8	2.7	1.0
Other	3.4	7.0	8.5	5.6
Marital Status	%	%	%	%
Married/Partnered	63.7	65.3	69.2	75.2
Never Married	29.0	26.4	22.1	17.8
Div/Sep/Widowed	7.3	8.2	8.7	7.0
Educational Attainment	%	%	%	%
Bachelor's degree	78.4	73.5	59.5	37.6
Master's degree	14.5	16.6	32.2	56.4
Professional degree[3]	7.1	9.9	8.3	5.9

[1]The Public Use Microdata Samples (PUMS) are from the US Census of Population. The 1980 census was the first to identify physical therapy (PT) as a separately coded occupational category (0316). Samples for 1980, 1990, and 2000 are unbiased five-percent random samples. Data above for the 1980 and 1990 censuses for PTs are from results in an article published by Chevan and Chevan in 1998 entitled "A Statistical Profile of Physical Therapists, 1980 and 1990," in *Physical Therapy* 78(3):301-312, while the 2000 results were calculated by the author.

[2]The 2004 Physical Therapy Labor Force Survey was prepared by Jeralynn Cossman, Associate Professor of Sociology at Mississippi State University, and Glenn Irion, Associate Professor of Physical Therapy at University of South Alabama and sampled only active PT members of the American Physical Therapy Association in 2004.

[3]Professional degree includes the DPT, PhD, EdD, MD, DO, DC, or JD.

Under work characteristics for the same sample years (see Table 4.2) the labor force participation rates were high for all three censuses (88 to 92 percent employed). Those in the 2004 Survey were much more likely to be employed (98.6 percent). Since the sampling frame was members of APTA, it is logical that nearly all respondents were employed. The vast majority of physical therapists are also salaried employees (83.6 to 89.3 percent for three census periods and 85.1 percent in the survey sample). The place of work for this occupation has two notable influences. First, the passage of Medicare & Medicaid in 1965 by the federal government signaled a movement beginning in the 1970s from PTs being mainly concentrated in hospitals to placement in more outpatient or medical offices. Secondly, having a central medical disbursement system enabled more PTs to begin establishing their own practices. Hospital employment has ranged from a high of 56.7 percent in 1980 to a low of 38.7 percent in 2000. The approximate 19 percent reduction for respondents located in a hospital environment in the 2000 Census appears mainly in the 2004 survey as a very noticeable increase of PTs working in medical offices (64.5 percent). Comparing weekly hours across the three census datasets to the 2004 survey is complicated by the fact that the part-time/full-time break occurred at 35 hours per week for the census datasets, while in the APTA sample, 30 hours per week was the cut point. Nevertheless, this five fewer hours per week to qualify for full-time for the APTA respondents translates into about 7 percent difference in full-time for the census respondents (~75 percent) compared to the APTA respondents (~82 percent).

Table 4.2 Work Characteristics of All US Physical Therapists from PUMS 5 Percent[1] & 2004 PT Labor Force Surveys

Characteristic/Group	1980 %	1990 %	2000 %	2004 Survey %
Labor Force Participation	n=1741	n=3386	n=6066	n=1655
Employed	87.9	91.9	87.6	98.6
Unemployed	0.7	0.5	1.3	0.3
Out of Labor Force[3]	11.3	7.6	11.2	1.1
Class of Worker	n=1530	n=3112	n=5314	n=1632
Salaried	87.9	83.6	89.3	85.1
Private	67.1	73.7	81.2	N/A[4]
Government	20.8	9.9	8.1	N/A[4]
Self	12.2	16.4	10.6	14.9
Place of Work	n=1530	n=3112	n=5314	n=1632
Total Medical Offices	22.6	43.6	43.8	64.5
Medical Office	4.6	8.3	13.7	N/A[4]
PT Office	18.0	35.3	30.1	N/A[4]
Hospital	56.7	43.8	38.7	18.8
Nursing Home	6.5	3.0	6.4	4.5
Other[5]	14.2	9.5	11.1	12.2
Usual Weekly Hrs	n=1530	n=3112	n=5314	n=1632
Less than 30 hrs	N/A[4]	N/A[4]	N/A[4]	18.1
Less than 35 hrs	22.9	24.8	24.7	N/A[4]
Less than 20 hrs	11.6	9.0	6.0	
20-34 hrs	11.3	15.8	18.7	
30 & over hrs	N/A[4]	N/A[4]	N/A[4]	81.9
35 & over hrs	77.1	75.1	75.3	N/A[4]
35-44 hrs	56.5	49.0	54.4	
45 & over hrs	20.6	26.1	20.9	

[1]The Public Use Microdata Samples (PUMS) are from the US Census of Population. The 1980 census was the first to identify physical therapy as a separately coded occupational category (0316). Samples for 1980, 1990, and 2000 are unbiased five-percent random samples. The datasets above included both employed and unemployed or not in the labor force PTs. Data above for the 1980 and 1990 censuses for physical therapists are from results in an article published by Chevan and Chevan in 1998 entitled "A Statistical Profile of Physical Therapists, 1980 and 1990," in *Physical Therapy* 78(3):301-312.

[2]The 2004 Physical Therapy Labor Force Survey was prepared by Lynne Cossman, currently Associate Professor of Sociology at Mississippi State University, and Glenn Irion, Associate Professor of Physical Therapy at University of South Alabama.

[3]Out of the Labor Force includes such respondents who are retired, disabled/ill, or those no longer looking for work.

[4]N/A = Not Available

[5]Other includes respondents who are involved in teaching/education, research/consulting, home health care, or industry.

Another area of particular interest is how much PTs earned in median (individual or personal) income by age, gender, ethnicity, marital status, education, class of worker, and place of work (see Table 4.3). Even though this question was answered with an estimated dollar amount on the 2000 census and by a categorical response in the 2004 survey, there are still valid comparisons that can be made. APTA respondents had either similar (age 20-29 *and* the professional education level) or higher median incomes (across the remaining categories) than their 2000 census counterparts. However, we expect: 1) men to make more than women, and they do by about $10,000 or the next categorical level; 2) wages to increase with age, as they do; and 3) the self-employed to make more than salaried (but not necessarily the empirically noted three categories higher). Yet, it is not as obvious that: 1) those separated, divorced or widowed would make more than married PTs (unless it is a result of the higher average age of the former respondents, or perhaps married PTs have the advantage of two incomes in the family allowing more flexibility for the second worker in job choice); or that 2) minorities would make more in personal income than whites. The minority income differential could be associated with a premium for being a member of a select group of minorities in the field, the result of the geographic distribution (e.g., PTs from the New England area traditionally have lower incomes than those in the Western part of the U.S), or simply an anomaly of very low numbers of minorities in the 2004 sample (n=107) resulting in a biased sample, or a combination of the above factors. Of the PTs classified as minorities (Asian, Black, Hispanic, or Native American), 48 percent were either in a supervisory position or self-employed; this is higher than the 43 percent of the whites in comparative positions and certainly accounts for part of the higher income for nonwhites. Yet, in the

related health field of nursing, analysis of national data from 2000 indicated (when controlling for other factors, such as experience, education, hours work per week, work setting, and position title) that nonwhites "earn higher average wages than other workers" (Snyder and Green 2008:288).

Table 4.3 Median Personal Income (Med PI) from Physical Therapists' Labor in 2000 PUMS and 2004 PT Surveys

Category	Med PI ($) in 1999 (n=5314)	Med PI ($) in 2003[1] (n=1632)
All PTs	47,000	50,000-59,999
Gender		
Women	44,500 (70%)	50,000-59,999 (78%)
Men	54,100 (30%)	60,000-69,999 (22%)
Age (yrs)		
20-29	41,000 (23%)	40,000-49,999 (20%)
30-39	48,000 (39%)	50,000-59,999 (35%)
40-49	51,000 (27%)	60,000-69,999 (24%)
50 & over	54,000 (11%)	60,000-69,999 (22%)
Ethnicity		
White	46,140 (89%)	50,000-59,999 (93%)
Black	52,000 (2%)	70,000-79,999 (1%)
Other	50,000 (9%)	60,000-69,999 (6%)
Marital Status		
Married/Partnered	47,200 (69%)	50,000-59,999 (75%)
Never Married	44,840 (22%)	50,000-59,999 (18%)
Sep/Div/Widowed	50,800 (9%)	60,000-69,999 (7%)
Education Level		
Bachelor's	47,000 (59%)	60,000-69,999 (38%)
Master's	45,400 (32%)	50,000-59,999 (56%)
Professional[2]	51,000 (8%)	50,000-59,999 (6%)
Class of Worker		
Salaried – PT&FT	46,000 (89%)	50,000-59,999 (85%)
Self-emp – PT&FT	56,200 (11%)	80,000-89,999 (15%)
Place of Work		
Hospital	46,995 (39%)	50,000-59,999 (19%)
Medical Office	48,000 (44%)	50,000-59,999 (65%)
Nursing Home	48,000 (6%)	50,000-59,999 (4%)
Other[3]	43,030 (11%)	50,000-59,999 (12%)

[1]Median income values were calculated by using the income categories listed on survey.
[2]Professional degrees included: DPT, PhD, EdD, MD, JD, & DC
[3]Other includes respondents who are involved in teaching/education, research/consulting, home health care, or industry

2000 US Census Population PUMS 5 Percent Sample

Similar to the analysis of the 1980 and 1990 PUMS 5 percent samples for PTs, there were two main accuracy problems in the 2000 edition: 1) separating PTs from Physical Therapy Assistants (PTAs) with only the occupation code (see Chevan and Chevan 1998 for discussion); and 2) making the determination about who was or was not in the labor force the previous year. In the first instance, level of education (minimum of a bachelor's degree) served as a second proxy to sort these data specifically for physical therapists (see Table 4.2 for number of all PTs for the respective years). In regards to the second issue, employment status was the first filter in separating employed PTs from those not in the labor force (NILF). As an added filter, the respondent must have had some weeks worked or some usual weekly hours, and either personal income (self-employed) or wage income (salaried) the previous year to be included in the final dataset of *employed* PTs in US Census 2000 dataset (n=5314).

2004 PT Labor Force Survey

Since the 2004 PT Labor Force Survey was a primary sample, there were multiple data entry and coding checks as the data were computerized. Qualitative data were also inspected (e.g., work history as a physical therapist, factors considered when accepting current or leaving previous position, and written comments about the survey). The written work history proved to be invaluable as several answers to other questions on the questionnaire (work experience, setting, focus, and employment status) could be confirmed. Many questions on the 2004 PT Labor Force Survey (See Appendix A, page 6, #42, 43, 44 & 45) were verified by checking job history (Appendix A, page 7, #50) for

years of experience, full- and part-time jobs, periods of unemployment, position titles, and reasons for leaving one position for the next. There were also statements in the job history indicating if the respondent was salaried or self-employed, which provided further evidence of the respondent's current employment status (Appendix A, page 8, #53). As evidence of type of employment, respondents must have marked their employment status under demographics, and this response was subsequently matched against the dates of their last or current job and job title under work history to ensure accuracy. Similar to the 2000 PUMS 5 percent sample, all respondents marking some college or an Associate's degree under education (Appendix A, page 8, #55) were eliminated from the sample since licensed PTs must have at least a Bachelor's degree (as discussed in the previous section).[4]

Any questionnaires with serious omissions or incomplete information on variables of interest were eliminated from the final dataset of employed PTs. The final analytic sample consisted of 1,618 respondents. Finally, work history and comments on the questionnaire were used to determined which respondents were currently unemployed, not in the labor force (retired, ill/disabled, stopped looking for work), or had changed careers.

In the final step of data verification, the overall sample of employed PTs (n=1,618) was separated into salaried (n=1,375, or 85 percent of employed) and self-employed (n=243) respondents. As outlined in Chapter II, the self-employed constitute a substantially different group of individuals in such areas as their responses to job satisfaction scales, location in the vertical and horizontal structures, and their

[4] Since the requirement for a bachelor's degree in physical therapy has been in place since 1960, this should not have excluded anyone who might have been granted an exception more than 45 years ago.

consideration of opportunities in the field that in order to test gender's possible role in current workplace attitudes, these two groups must be divided. Models were analyzed using listwise deletion of any missing variable; therefore, the total analytic for salaried, employed PTs in the 2004 survey was 1,112.

Dependent Variables in 2004 PT Labor Force Survey

Referring to Figure 1.1 (*Theoretical Model of Gendered Occupation, Gender Opportunities and Job Attitudes for Salaried PTs*), the importance of gender is considered in vertical hierarchy and horizontal segregation, perceived gender attitudes on opportunities in the field, and how all of these factors potentially affect or are associated with current workplace attitudes. Furthermore, as discussed in Chapter III, the 10-item questionnaire by Speakman, et al. (1996) designed for the occupation of physical therapy was reproduced for the current survey. Since half of these statements were stated from the negative point-of-view, these were recoded so all 10 statements would be positive. It was expected there would be two or three factors as a result of factor analysis (Kim and Mueller 1978a; Kim and Mueller 1979b). In the actual analysis, the two statements related to: "enough autonomy (freedom) to do my work the way I want" and "sufficient independence in decision-making" did not allow for maximum likelihood extraction of three factors after 25 iterations. Upon checking the Pearson correlation coefficient for these two particular items, it was low, which suggests that these two statements may not have been measuring the same domain. Therefore, factor analysis was conducted using the other eight items. The extraction method was maximum likelihood with varimax

rotation as recommended by Kim and Mueller (1978a) with two factors extracted after four iterations and rotation converging in three.

To evaluate the results of the factor analysis, several indicators were considered. The Kaiser-Meyer-Olin (KMO) measure of sampling adequacy (MSA) and Bartlett's test of sphericity were used as indicators of the strength of the linear association among the eight items in the correlation matrix. The specific item MSA ranged from a low of 0.62 to a high of 0.86, which according to one recommendation (Kim and Mueller 1978b:54) can be considered as: .60's = mediocre, .70's = middling, and 80's = meritorious with an overall KMO test statistic of .77. Bartlett's test was significant (χ^2 =3083.4; p = .000), indicating that the correlation matrix was not an identity matrix.

Other useful indicators in determining the final number of factors include two eigenvalues greater than 1.00 (2.94 and 1.98) further suggesting that two factors are optimum, and the total variance explained by the initial Eigenvalues was about 61.5 percent and 50.8 percent for the extracted loadings. The scree plot also indicated no more than two factors should be expected (Pett, Lackey, and Sullivan 2003) and, following the postulate of parsimony, two factors were chosen.[5] For the remainder of this study, factor 1 (four items) will be referred to as "intrinsic rewards" of the job and factor 2 (also four items) as psychological/physical "well-being" on the job (see Table 4.4). The goodness-of-fit test indicated: χ^2=82.3; df =13; sign=.000. The overall mean for intrinsic rewards is 8.1 compared to the overall mean for well-being of 4.4. In agreement with the work of Barnes and Crutchfield (1977), Speakman, et al. (1996), and

[5] A graph of this scree plot, Figure B.1, is available for the interested reader in Appendix B.

Bieker (1999), the mean for level of paperwork (3.6) is ranked lowest in comparison to the other means by item.[6]

Cronbach's alpha (Carmines and Zeller 1979), an internal consistency method, provided reliability estimates for current job satisfaction among PTs for the factor intrinsic rewards and the factor well-being, each composed of four workplace attitudes. In calculating Cronbach's alpha, it has been recommended (Pett, et al. 2003) that inter-item correlations and descriptives should also be considered. Rotated factor results for both factors indicated a higher correlation for intrinsic rewards compared to the latter of well-being (see Table 4.4). Given these results, it is not surprising that Cronbach's alpha = .87 for the intrinsic reward statements, whereas for well-being the Cronbach's alpha = .65. Carmines and Zeller (1979:51) stated that reliabilities should be at least .80 as one general rule "for widely-used scales." The former factor more than meets this criterion; however, even though the latter falls short, the Speakman, et al. (1996) job-satisfaction scale was specifically designed as a tool for measuring job satisfaction for physical therapists. It should, however, be noted that the Speakman, et al. scale has not as yet been widely applied within the field. Only one other research study, which was essentially a pre-test of this survey, was located (Bieker 1999). Secondly, there was no significant improvement in the well-being factor that would have justified elimination of any item from the well-being factor.

[6] For more details on specific MSA values (Table B.1), variance explained (Table B.2), correlations and descriptives (Table B.3) for factor analysis on n=1112 dataset, see Appendix B.

Table 4.4 Rotated Factor Matrix for Eight Items on Current Workplace Attitudes[1] (N=1112)

Items	Factors 1	2
1. Intrinsic Rewards		
fulfilling	.846	.046
challenging – in a positive sense	.839	-.059
interesting	.808	-.076
learning and improving in work	.687	-.111
2. Well-Being		
not overworked	.065	.820
not mentally stressful	-.033	.711
right amount of paperwork	-.018	.443
not physically demanding	-.104	.320

[1]Extraction: Maximum Likelihood; Rotation: Varimax with Kaiser Normalization; Rotation converged in 3 iterations.

The factor scores for each respondent were saved as two variables in the analyses and were used later in the overall model analyses. Regression was selected as the method of generating these two variables since most underlying factors are not completely orthogonal (Kim and Mueller 1978b; Pett, et al. 2003).

Independent Variables in 2004 PT Labor Force Survey

There were three gender opportunity questions on the survey having to do with whether men or women had more, similar, or fewer opportunities in terms of promotions, a college education, and jobs (See Appendix A, third page of survey). Since the thesis of this study is that gender matters when considering placement (horizontal or vertical) within an occupation, it appeared that factor analysis might be able to reduce these opportunity variables into fewer common factors. First, the responses to the three questions had to be recoded. The question on promotion opportunities had three

categories but left gender up to the individual; therefore, responses by males had to be recoded from the female perspective. The last two items (education and job opportunities) had five response categories, which were aggregated into three (worse for women, no difference, better for women) to match those on the promotion opportunity question. Upon further examination of the descriptive statistics of the three opportunity questions (81.7 percent of respondents chose no difference in education opportunities for men and women), only two of the opportunity questions, promotions and jobs (34.5 percent and 48.7 percent no difference, respectively) were included as potential mediators or moderators within the main model.

The main predictors of current workplace satisfaction in the model were either vertical hierarchy or horizontal segregation. The measurement of vertical hierarchy in physical therapy used three measures: personal income, work continuity, and supervisory duties. According to Table 4.5, overall median personal income for salaried respondents was 5.0 (from $50,000 up to $60,000 per year). Slightly less than three-quarters of the respondents had no breaks in employment (greater than one month between jobs), while about 30 percent of sample had some type of supervisory position. The horizontal aspect of work is viewed from one's location or setting in the structure as well as the chosen specialty or focus within the occupation. The overwhelming choice of the participants was in the outpatient setting (60 percent), which reflects the continuing upward trend since the 1970s. Likewise, the choice of specialty is readily apparent in Table 4.5, where almost 50 percent of the sample chose orthopedics/sports, albeit a fairly broad category.

The total salaried sample indicated a female to male proportion of approximately 4 to 1. Controls with percent of respondents in the dataset included: 94 percent white,

83 percent full-time, 65 percent with a post-graduate degree, 80 percent *ever* married, and 60 percent younger than 40 years (Table 4.6).

Table 4.5 Descriptives for 2004 PT Survey Independent Variables Overall and by Gender

	Overall N=1112		Female N=897		Male N=215	
Job Ops	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
worse for women	46.1	1.59 (.587)	46.3	1.59 (.584)	45.6	1.60 (.601)
no difference[1]	48.7		48.8		48.4	
better for women	5.1		4.9		6.0	
Promotion Ops	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
worse for women	62.5	1.40 (.548)	65.6	1.36 (.522)	49.8	1.57 (.621)
no difference[1]	34.5		32.4		43.3	
better for women	3.0		2.0		7.0	
Primary Setting	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
All Inpatient	23.0	2.90 (1.150)	23.7	1.98 (.733)	20.0	2.78 (.818)
sub & acute care	15.9		16.5		13.5	
inpatient rehab	7.1		7.2		6.5	
Outpatient[1]	60.3		58.3		68.8	
Chronic Care	13.0		13.9		8.9	
home health	7.6		8.0		5.6	
long-term care	5.4		5.9		3.3	
Other	3.7		4.0		2.3	
Primary Focus	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
pediatrics	6.4	3.13 (1.978)	7.2	3.28 (1.564)	2.8	3.17 (1.705)
orthopedics/sports[1]	48.9		46.8		57.7	
geriatrics	19.6		21.4		12.1	
acute care	9.3		9.4		8.8	
neurological	4.3		4.5		3.7	
occupational health	1.5		1.1		3.3	
mgt/admin	3.2		2.9		4.7	

Table 4.5 (continued)

women's health	1.5		1.8		0.5	
other	5.2		4.9		6.5	
Job Continuity	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
no breaks[1]	73.7	.26 (.441)	71.9	.28 (.450)	80.9	.19 (3.17)
1 or more breaks	26.3		28.1		19.1	
Personal Income	%	Median (SD)	%	Median (SD)	%	Median (SD)
$19,999 and below	2.5	5.00 (1.884)	2.9	5.00 (1.803)	0.9	6.0 (1.886)
$20,000 - $29,999	3.6		4.5		0.0	
$30,000 - $39,999	8.4		10.0		1.4	
$40,000 - $49,999	21.0		22.6		14.0	
$50,000 - $59,999	25.0		25.2		24.2	
$60,000 - $69,999	17.9		17.5		19.5	
$70,000 - $79,999	11.0		8.9		19.5	
$80,000 - $89,999	4.4		4.0		6.0	
$90,000 - $99,999	3.3		2.8		5.6	
$100,000 - $149,999	2.6		1.3		7.9	
$150,000 and above	.4		.2		0.9	
Supervisory Position	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
not mgt or admin[1]	69.2	.31 (.462)	72.6	.27 (.446)	54.9	.45 (.499)
mgt or admin	30.8		27.4		45.1	
Gender	Freq (%)	Mean (SD)	Freq (%)	Mean (SD)	Freq (%)	Mean (SD)
female[1]	80.7	.19 (.395)	--	--	--	--
male	19.3		--		--	

[1]Designated reference group for the different dummy independent variables.

Table 4.6 Descriptives for 2004 PT Survey Control Variables Overall and by Gender

	Overall N=1112		**Female N=897**		**Male N=215**	
Ethnicity	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
white[1]	94.2	.06 (.233)	95.3	.05 (.211)	89.8	.10 (.304)
Nonwhite	5.8	5.8	4.7		10.2	
Hrs Worked/Wk	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
full-time (≥30) [1]	82.8	.17 (.377)	79.4	.21 (.405)	97.2	.03 (.165)
part-time (<30)	17.2		20.6		2.8	
Education	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
Undergraduate	34.8	.65 (.477)	63.1	..37 (.483)	74.0	.26 (.440)
Post-Graduate[1]	65.2		36.9		26.0	
Marital Status	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
Ever Married[1]	80.4	.20 (.397)	78.9	..21 (.408)	86.5	.13 (.342)
Never Married-Single	19.6		21.1		13.5	
Age	%	Mean (SD)	%	Mean (SD)	%	Mean (SD)
Younger than 40[1]	60.3	.40 (.489)	59.5	..40 (.491)	63.7	.36 (.482)
Older than 40	39.7		40.5		36.3	

[1]Designated reference group for the dummy control variable

Descriptive Statistics by Gender

Tables 4.5 and 4.6 (previous pages) for salaried females and males also provide the descriptives for the independent and control variables used in the multiple regression analyses. Although men were proportionately more likely to believe that women fare better in education opportunities (24 percent vs. 8.5 percent, respectively), almost two-thirds of the female respondents expressed the opinion that promotion opportunities were worse for women compared to about half the men (Table 4.5). The results for job opportunities being better for women (5 percent for females; 6 percent for males) or worse for women (about 46 percent for women or men) were amazingly close. Regardless of gender, the most populated primary setting was outpatient, and the highest proportion specialized in the orthopedics/sports focus. While male PTs were more likely to have had no breaks in employment (greater than one month between jobs), the percentages were closer than expected (81 percent vs. 72 percent for females, Table 4.6). And, following the personal income trends from Table 4.3 for *all* PTs (2004 PT Survey compared to 2000 PUMS Survey for PTs), the salaried males were a full category above comparative females whether using the medians or means for interpretative purposes. Under supervisory by gender, we see one possible reason for this phenomenon—45 percent of males (compared to 27 percent of females) were in some kind of supervisory position. Other expected descriptives included more men were full-time employees (97 percent vs. 79 percent for females), and males were more likely to have *ever* been married (86.5 percent compared to 79 percent for females). On the other hand, 37 percent of the women had earned a postgraduate degree (compared to 26 percent of the

men) and 10 percent of male respondents were from a minority group compared to only about 5 percent of the women (Table 4.6). Finally, men in the sample were on average only slightly younger (64 percent < 40 years; mean age = 37.8 years) than their female counterparts (59.5 percent < 40 years; mean age = 38.7 years).

Correlations between Vertical and Horizontal Structural Variables

Pearson's correlations for the vertical and horizontal variables for all salaried participants demonstrated statistically significant associations between two vertical variables (management/ administration and personal income) and the horizontal variable primary focus (Table 4.7). Other expected statistically significant relationships within vertical measures include personal income with supervisory position and breaks between jobs and also between primary setting and focus, the horizontal variables.

Table 4.7 Pearson Correlations among Vertical and Horizontal Structural Variables (N=1112)

	Primary Setting	Primary Focus	Supervisory Position	Personal Income	Any Breaks
Primary Setting	1.000				
Primary Focus	-.079**	1.000			
Supervisory Position	-.009	**.084****	1.000		
Personal Income	-.035	**.097****	.472**	1.000	
Any Breaks	.027	.008	-.002	-.133**	1.000

**Correlation is significant at the 0.01 level (2-tailed).
Bold values above are those statistically significant between horizontal and vertical structural variables.

Regression between Vertical and Horizontal, Opportunities, and Job Satisfaction

Overall and Gender Differences in Intrinsic Rewards

Multiple linear regression analysis was used to examine the relationships among vertical and horizontal structural variables and two job satisfaction factors *without* including the possible effects of perceived gender attitudes about job or promotion opportunities in physical therapy. The dependent variable in the overall model was the first set of factor scores generated for intrinsic rewards. Any breaks in continuity of employment and working in a chronic care setting (i.e., home health or long-term care) exerted a negative effect on the level of intrinsic rewards derived from the respondent's current position, while employment in the pediatrics specialty and personal income were each associated with a higher level of satisfaction due to intrinsic rewards. The gender dummy was also statistically significant, strongly suggesting that female and male physical therapists respond differentially to their location in the vertical hierarchy and horizontal segregation and their effects upon intrinsic rewards of the job.[7] Where promotion and job opportunities were added to this initial model to generate Model 1in Table 4.8, the results remain similar, with the added statistical significance of promotion opportunities worse for women.

At this juncture, the overall model was separated by gender; and the job satisfaction domain, intrinsic rewards, had to be evaluated for the divided samples. Using listwise deletion, the datasets of female and male salaried physical therapists contained 897 and 215 observations, respectively.

[7] Details for this particular model (sans two opportunities variables) are available in Appendix B, Table B.8 for Model 1.

Table 4.8 Unstandardized Regression Coefficients for Intrinsic Rewards from Overall (N=1112), Female (N=897) & Male (N=215) Samples

	Overall Model 1 Unstd B	Sig	**Females** Model 2 Unstd B	Sig	**Males** Model 3 Unstd B	Sig
(Constant)	.022		.060		.038	
Any Breaks	-.133	*	-.156	*	.067	
Personal Income	.050	**	.060	**	-.018	
Inpatient Setting	-.153		-.062		-.606	*
Chronic Care Setting	-.304	*	-.233		-.459	
Other Setting	-.148		-.222		.601	
Pediatrics Focus	.479	***	.403	**	1.045	*
Geriatrics Focus	-.115		-.210		.038	
Acute care Focus	-.032		-.207		.752	*
Neurological Focus	.034		.108		-.517	
Occup Health Focus	.260		.339		.098	
Mgt/Admin Focus	-.072		-.211		.489	
Women Health Focus	.461	*	.444	*	.476	
Other Focus	.249		.192		.488	
Male	-.209	**	--	--	--	--
NOT White	-.113		-.135		-.037	
Part-time	-.028		.058		-1.530	***
Undergrad Degree	.045		.006		.309	
Never Married	-.131		-.131		-.257	
Age 40 or more	.020		.025		.007	
Promotion Ops Worse	-.183	**	-.244	***	.046	
Promotion Ops Better	.086		.175		-.155	
Job Ops Worse	-.109		-.134[1]		-.017	
Job Ops Better	.082		.371		-.134	
R Square	.083		.110		.170	
F-statistic	4.296	***	4.926	***	1.791	*

[1]p=.054 in Model 2
*p<.05; **p<.01; ***p<.001

Overall, the three models are statistically significant (see F-statistics in Table 4.8) although the R^2's are fairly low. Viewing the results across the overall, the female, and the male samples, clearly and as expected the entire sample is more similar to the female

sample compared to the males. Any breaks in employment, personal income, pediatrics focus, women's health focus, and the attitude that promotion opportunities are worse for women maintain the statistical significance demonstrated in the overall model. However, results for the male sample differ notably. Location in an inpatient setting (compared to those men within outpatient) and those in part-time positions (vs. full-time) on average have lower intrinsic rewards satisfaction scores. By contrast, those men in either pediatrics or the acute care specialties (compared to orthopedics/sports) on average have higher satisfaction scores in the domain of intrinsic rewards. Therefore, one factor in these models remains consistent. Regardless of gender, on average PTs in pediatrics (compared to those in orthopedics/sports) derive greater satisfaction in the intrinsic rewards of their jobs.

Overall and Gender Differences in Well-Being

To test whether the model parameters are the same or different for the populations of female and male PTs, separate regressions by gender were also estimated for the outcome variable, psychological and physical well-being. First, the equation was run without the two opportunities variables,[8] and then the opportunity variables were added to the model (Model 4, Table 4.9). However, once again, gender was statistically significant suggesting the outcome of the well-being factor affects men and women in disparate ways. In the former model, on average only those employed part-time (vs. full-time) were inclined to have an increased sense of well-being at their jobs in the overall sample. When the promotion and job opportunities variables were added in Model 4

[8] See Appendix B, Table B.8 on Model 2 for the specific results on the well-being dependent variable without the two opportunities variables added to the model.

(Table 4.8), a similar significance pattern (i.e., gender and part-time) was demonstrated and, like promotion opportunities in Model 2 for intrinsic rewards, promotion opportunities worse for women (vs. those selecting no difference) was statistically significant and exerted a negative effect upon their well-being scores . When the samples were separated by gender, the results for the female sample were akin to those in the entire sample. The only difference was the depressive effect for women in neurological focus (compared to those in orthopedics/sports) on their well-being scores. In Model 6 for males, any breaks in employment (vs. no breaks), location in an inpatient setting (vs. outpatient), men with an undergraduate degree (compared with post-graduate degree) were on average associated with lower well-being scores. There was no demonstrated effect for either the promotion or job opportunities variables for men on well-being, but all three models (Models 4-6) were statistically significant (see F-statistics in Table 4.9). Several measures were used to assess violations of assumptions for regression models, and none were determined to be problematic for any of the regression models.

Table 4.9 Unstandardized Regression Coefficients for Well-Being from Overall (N=1112), Female (N=897) & Male (N=215) Samples

	Overall Model 4 Unstd B	Sig	**Females** Model 5 Unstd B	Sig	**Males** Model 6 Unstd B	Sig
(Constant)	.269	*	.250		.632	*
Any Breaks	.000		.034		-.338	*
Personal Income	-.033		-.036		-.038	
Inpatient Setting	-.116		-.040		-.645	**
Chronic Care Setting	.174		.125		.285	
All Other Settings	.092		.095		.067	
Pediatrics Focus	-.190		-.160		-.318	
Geriatrics Focus	-.143		-.164		.111	
Acute care Focus	.063		.009		.570	
Neurological Focus	-.161		-.305	*	.731	*
Occup Health Focus	.106		-.014		.244	
Mgt/Admin Focus	-.029		-.196		.570	
Women Health Focus	-.272		-.213		-1.319	
All Other Foci	-.085		.008		-.260	
Male	.224	***	--	--	--	--
NOT White	.131		.099		.410*	
Part-time	.370	***	.357	***	.506	
Undergrad Degree	-.047		.005		-.411	**
Never Married	.072		.089		-.027	
Age 40 or more	-.086		-.114		.118	
Promotion Ops Worse	-.179	**	-.224	***	-.091	
Promotion Ops Better	-.172		-.139		-.351	
Job Ops Worse	-.041		.009		-.206	
Job Ops Better	-.181		-.056		-.441	
R Square	.070		.073		.188	
F-statistic	3.553	***	3.106	***	2.017	**

*p<.05; **p<.01; ***p<.001

Since the overall models for intrinsic rewards (Model 1 in Table 4.8) and well-being (Model 4) were statistically significant, it was necessary to test for the differences in these models and their effects. Using the test of equality of coefficients across two populations (i.e., differences in models and effects), testing the differences in models

effects for intrinsic rewards ($F_{23, 1066} = 2.228$***) and for well-being ($F_{23, 1066} = 1.523$*) indicated that in both cases the null hypothesis (i.e., no difference) should be rejected. The models work differently for men and for women; therefore, the models' parameters should also be allowed to vary as needed. See Appendix B, Figure B.2 for the equation used to calculate these F tests for the intrinsic rewards and well-being outcome variables.

Salaried 2004 PT Sample by Gender

Factor Analyses of Dependent Variables

Since these are gender subsamples of the main dataset, the weighted factor scores (dependent variables) for each factor analysis had to be generated before their separate multiple regressions could be executed. The overall Measures of Sampling Adequacy (MSA) values ranged from .79 to .85 (females) and .78 to .89 (males) for intrinsic rewards and for well-being from .62 to .74 and .64 to .82 for females and males, respectively. As with the overall dataset (n=1,112), the inter-items composing the domain of well-being did not cluster as well as those four composing intrinsic rewards (Table 4.4).[9] The rotated factor matrices on the eight workplace attitude items for women and men in the two subsamples are provided in Table 4.10 (below). From these respective matrices, weighted factor scores for the observations in each subsample were generated and used in multiple regression analyses by gender.

[9] See Tables B.4 through B.7 in Appendix B for more detailed information by gender on: MSAs; number of eigenvalues and total variance explained by two factors; scree plots that were similar to Figure B.1; and correlations, descriptive statistics, and Cronbach's alpha values.

Table 4.10 Rotated Factor Matrix for Eight Items on Current Workplace Attitudes for Female (N=897) & Male (N=215) Physical Therapists[1]

Items	Factors For Females		Factors for Males	
	Intrinsic Rewards	Well-Being	Intrinsic Rewards	Well-Being
1. Intrinsic Rewards				
fulfilling	.826	.077	.899	-.040
challenging – in positive sense	.846	-.045	.825	-.094
interesting	.793	-.057	.854	-.096
learning and improving in work	.693	-.096	.683	-.159
2. Well-Being				
not overworked	.075	.816	.006	.825
not mentally stressful	-.015	.728	-.120	.636
right amount of paperwork	-.019	.428	-.020	.512
not physically demanding	-.066	.305	-.229	.351

[1]Extraction: Maximum Likelihood; Rotation: Varimax with Kaiser Normalization; Rotation converged in 3 iterations for both datasets.

Independent Multiple Regression Analyses by Gender

As to the regression analyses by gender where the parameters were allowed to vary by gender, the factor scores for intrinsic rewards were generated explicitly by gender and served as the dependent variable, while the gender-specific scores for well-being provided the outcome variable for female (or male) respondents (Table 4.11).[10] The signs were as expected for the newly specified, independent gender models.

Gender and Intrinsic Rewards

On average those women in chronic care settings (home health and long-term care) compared to women employed in an outpatient setting were less satisfied with the intrinsic rewards of the job; yet, re-specifying the model led to significance for the

[10] Comparing Table 4.11 with Table B.9, Appendix B (opportunities variables not included) by their respective models 1-4 demonstrated similarities across models. Only women health focus in Model 1 in Table B.9 missed statistical significance (p=.066).

chronic-care setting variable (Table 4.11, Model 1), which was not the case from the earlier model (Table 4.8, Model 2). Other negative, significant relationships for salaried females in Model 1 included the effects of : 1) breaks in employment, 2) women who believed promotion opportunities were worse for their gender, and 3) all inpatient settings (acute, sub-acute, and inpatient rehab), which just missed significance at p=.055. Pediatrics and women's health specialties as well as personal income had positive, significant relationships on the outcome of intrinsic rewards; and, as expected, the overall F-statistic (F=5.239) for this model was also significant.

The results for males in the field in their sense of satisfaction based on intrinsic rewards offer significant similarities and differences. Model 2 was also significant overall (F-statistic = 1.749). Yet, only males in the acute and sub-acute care setting (compared to an outpatient location) had lower satisfaction scores for the domain of intrinsic rewards,[11] while earlier in Table 4.8, Model 3, we only knew that men in *any* inpatient setting (both acute and sub-acute *as well as* inpatient rehab) had significantly lower intrinsic reward scores when compared to those in orthopedics/sports. Males in the pediatrics focus (with reference to men in orthopedics/sports) and surprisingly those in acute care focus had higher satisfaction scores in regards to the intrinsic rewards of the job. By contrast, those males working part-time were more likely to have a lowered sense of intrinsic rewards from the job (Model 2, Table 4.11). Unlike their comparative female workers, breaks in employment and personal income on average demonstrated no

[11] Separating overall inpatient setting into its components (acute & sub-acute and inpatient rehab settings) provided added information that on average males in acute & sub-acute care setting (compared to outpatient) had significantly lower satisfaction scores for intrinsic rewards; however, this did not apply to male respondents in inpatient rehab.

significant association to intrinsic rewards for men. Most notable in Model 2 is the lack of any statistical relationship for males' views on the promotion or job opportunities for women in physical therapy and their attitudes about the intrinsic rewards of the job.

Table 4.11 Unstandardized Regression Coefficients for Intrinsic Rewards & Well-Being for Female (N=897) & Male (N=215) Physical Therapists

	Intrinsic Rewards				**Well-Being**			
	Model 1 Females		**Model 2 Males**		**Model 3 Females**		**Model 4 Males**	
	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig
(Constant)	.019		.192		.251		.459	
Any Breaks	-.159	*	-.007		.039		-.290	
Personal Income	.056	*	-.028		-.026		.001	
Supervisory Position	.033		.010		-106		-.384	**
All Inpatient Setting[1]	-.196[2]		--		-.024		--	
Acute & Sub-acute Setting	--		-1.024	**	--		-.629	*
Inpatient Rehab Setting	--		-.231		--		-.793	**
Chronic Care Setting	-.393	***	--		.062		--	
All Other Settings	-.198		-.223		.123		.221	
Pediatrics Focus	.454	***	1.083	**	-.163		-.426	
Neurological Focus	.186		-.492		-.323	*	.720	*
Women Health Focus	.472	*	--		-.223		--	
Acute Care Focus	--		1.127	**	--		.550	
Mgt/Admin Focus	--		.555		--		.731	*
All Other Foci	-.042		.135		-.088		-.032	
NOT White	-.159		-.004		.091		.358	
Part-time	.041		-1.472	***	.360	***	.354	
Undergrad Degree	.007		.240		.021		-.457	**
Never Married	-.122		-.204		.088		-.129	
Age 40 or more	.043		.039		-.106		.183	
Promotion Ops Worse	-.246	***	-.008		-.221	***	-.066	
Promo Ops Better	.185		-.096		-.139		-.278	
Job Ops Worse	-.128		.016		.005		-.219	
Job Ops Better	.360		-.250		-.051		-.478	*
R Square	.102		.153		.071		.206	
F-statistic	5.239	***	1.749	*	3.549	***	2.519	***

[1]Includes sub-acute, acute care and inpatient rehab
[2]p=.055 in Model 1
*p<.05; **p<.01; ***p<.001

Gender and Well-Being

The sense of psychological and physical well-being, the dependent variable in Model 3, provided different results for these female respondents (Table 4.11). As a group, women with the belief that promotion opportunities were worse in this occupation for women also had a negative and significant relationship to their sense of job satisfaction based upon the domain of well-being. On average, only those females in neurological focus (when compared to women in orthopedics/sports) also had a lower sense of well-being in their jobs (see Model 3, Table 4.11); these results are similar to Model 5, Table 4.9 for females. The only positive, significant relationship in Model 3 was for part-time females who on average had a higher sense of well-being compared to those working full-time. And, overall, Model 3 was statistically significant (F-statistic = 3.549).

In Model 4, those males in either of the two inpatient settings (the acute and sub-acute setting *as well as* the inpatient rehabilitation setting compared to those in an outpatient setting) had a depressive effect on their sense of psychological and physical well-being (Table 4.11). Interestingly enough, the neurological focus (with the same reference group of orthopedic/sports as the female sample) was statistically significant but *positively* so for males; this same focus demonstrated a negative relationship for females in Model 3. Yet, unlike women in Model 3, men with an undergraduate degree (compared to those males with a post-graduate degree) had significantly lower well-being scores (Model 4). With the dependent variable well-being, there was no statistical association between men's attitudes (better or worse compared to no difference) about

women's promotion opportunities in the field. Yet, those men in the study who believed women's *job* opportunities were better than men's had significantly lower well-being scores compared to those who indicated there was no difference in job opportunities. Overall, the F-statistic (2.519) indicated Model 4 was statistically significant.

Since promotion opportunities were significantly related to both dependent variables for female PTs, it remains unclear how women's negative views on promotions affect the interplay in the overall theoretical model. Are these associations moderating or mediating the vertical or horizontal structural relationships in the regressions? The next two sections will aid in answering this question.

Potential Moderating Effects in the Models for Females and Males

The product term approach was used in which the null hypothesis being tested for interaction effects was that the regression coefficient on the particular product term is equal to zero or there is no effect, H_o=0 (Jaccard, Turrisi, and Wan 1990). Using the General Linear Model (GLM) univariate analysis features on *SPSS 16.0.2* (2008), income was entered as a fixed factor with the remaining independent or control variables treated as covariates. Considering the main models' results, *all* rational two-way interactions were tested.

Moderating Effects and Intrinsic Rewards

For the female PTs (n=897) only one interaction was statistically significant—race (not white) x personal income—and it had a lowering effect upon the dependent variable, intrinsic rewards (Model 1, Table 4.12). In other words, on average, the

intrinsic award scores were lower for nonwhite females' personal income (compared to those for white females' income). For males, (Model 2, Table 4.12), there were no moderating effects that demonstrated significance for intrinsic rewards; therefore, the beta values match those in Table 4.11. None of the numerous two-way interactions tested on *promotion opportunities* was less than .05 for the current female model. The key reason for conducting these tests for interaction effects was to aid in explaining how the theoretical model functions for opportunities by gender.

Table 4.12 Unstandardized Regression Coefficients for Intrinsic Rewards & Well-Being for Female (N=897) & Male (N=215) PTs with Any Interaction Effects[1]

	Intrinsic Rewards				Well-Being			
	Model 1 Females		Model 2[2] Males		Model 3[2] Females		Model 4 Males	
	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig
(Constant)	.038		.192		.251		.465	
Any Breaks)	-.145[3]		-.007		.039		-.262	
Personal Income	.069	**	-.028		-.026		.004	
Supervisory Position	.031		.010		-.106		-.424	***
Inpatient Setting	-.205*	*	--		-.024		--	
Acute & Sub-acute Setting	--		-1.024	**	--		-.855	**
Inpatient Rehab Setting	--		-.231		--		-.754	**
Chronic Care Setting	-.382	***	--		.062		--	
All Other Settings	-.209		-.223		.123		.210	
Pediatrics focus	.454	***			-.163			
Neurological Focus	.201		-.492		-.323	*	.396	
Women Health Focus	.471	*	--		-.223		--	
Acute Care Focus	--		1.127	**	--		.751	*
Mgt/Admin Focus			.555				.819	*
All Other Foci	-.053		.135		-.088		-.021	
NOT White	1.030	*	-.004		.091		.363	
Part-time	.046		-1.472	***	.360	***	.340	
Undergrad Degree	.002		.240		.021		-.499	***
Never Married	-.138		-.204		.088		-.133	
Age 40 or more	.047		.039		-.106		.182	
Promotion Ops Worse	-.248	***	-.008		-.221	***	-.044	
Promotion Ops Better	.196		-.096		-.139		-.209	
Job Ops Worse	-.131		.016		.005		-.237[4]	
Job Ops Better	.277		-.250		-.051		-.488	*
NOTWhiteXPersonal Income	-.203	**	--		--		--	
Sub/AcuteSettingXNeuroFocus	--		--		--		2.622	**
R Square	.110		.153		.071		.238	
F-statistic	5.397	***	1.749	*	3.549	***	2.870	***

[1]All reasonable two-way interactions were tested in the models.
[2]No interactions among the variables for Models 2 & 3 means the beta coefficients are the same as in Table 4.11, Models 2 and 3.
[3]p=.053 in Model 1 (any breaks in employment)
[4]p=.051 in Model 4 (job opportunities worse for women)
*p<.05; **p<.01; ***p<.001

Moderating Effects and Well-Being

There were no statistically significant moderating effects for females for the outcome variable, well-being (Model 3, Table 4.12); therefore, these results match the same model already covered in Table 4.11. However, the male dataset was different in testing for interactions. In Model 4, Table 4.12, a positive moderating effect between the sub-acute and acute care setting (location) and the neurological focus (specialty) emerged. Those males in a neurological specialty within an acute care setting (compared to those in orthopedics/sports in an outpatient setting) on average had higher well-being scores. Since there were no demonstrated interactions between the significant *job opportunity* responses and any other control or explanatory variable, the next step was to test for possible mediating or indirect effects in these models.

Potential Mediating Effects in the Models for Females and Males

In Chapter III, the three steps for demonstrating mediation in a theoretical model were laid out. The first step (i.e., explanatory, either vertical or horizontal, variables are related to the outcome, job satisfaction, variables) was already supported with analyses for the *overall* sample for intrinsic rewards and well-being (Table 4.8, Model 1 and Table 4.9, Model 4, respectively). However, the two independent models (for males and for females) must also be evaluated for the effects of the vertical and horizontal variables upon the job satisfaction factors, or X → Y by gender (with no opportunity variables included). Some vertical *and* horizontal variables (e.g., e.g., breaks, personal income and chronic care setting, pediatrics focus) were associated with intrinsic rewards for female PTs (see Table 4.13**,** Model 1), while only horizontal variables (e.g., the sub- and acute-

care setting, pediatrics focus, and acute care focus) were related to intrinsic rewards for males (Table 4.13, Model 3). With respect to relationships to well-being satisfaction, women only had one horizontal variable with statistical significance (neurological focus, Model 3), whereas men demonstrated significance to vertical and horizontal variables (supervisory position, acute & sub-acute setting, inpatient rehab setting, and management administrative focus, Model 4). Overall, each gender sample meets the requirements for step 1 mediation for the satisfaction domains of intrinsic rewards and well-being.

Table 4.13 Unstandardized Regression Coefficients for Intrinsic Rewards & Well-Being for Female (N=897) & Male (N=215) PTs – Step 1 to Test for Mediation

	Intrinsic Rewards				Well-Being			
	Model 1 Females		Model 2 Males		Model 3 Females		Model 4 Males	
	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig
(Constant)	-.165		.170		.136		.272	
Any Breaks	-.186	*	-.005		.021		-.274	
Personal Income	.056	*	-.029		-.026		.002	
Supervisory Position	.072		.011		-.090		-.403	**
All Inpatient Setting[1]	-.182		--		-.011		--	
Acute & Sub-acute Setting	--		1.009	**	--		-.580	*
Inpatient Rehab Setting	--		-.220		--		-.735	**
Chronic Care Setting	-.358	**	--		.096		--	
All Other Settings	-.261		-.236		.099		.191	
Pediatrics Focus	.501	***	1.089	**	-.121		-.477	
Neurological Focus	.211		-.518		-.298	*	.616[3]	
Women Health Focus	.431[2]		--		-.230		--	
Acute Care Focus	--		1.127	**	--		.534	
Mgt/Admin Focus	--		.535		--		.675	*
All Other Foci	-.018		.142		-.084		-.030	
NOT White	-.167		-.017		.068		.323	
Part-time	.040		-1.468	***	.361	***	.320	
Undergrad Degree	.026		.234		.038		-.484	**
Never Married	-.123		-.193		.090		-.126	
Age 40 or more	-.018		.063		-.133		.202	
R Square	.068		.147		.057		.173	
F-statistic	4.268	***	2.135	**	3.578	***	2.584	***

[1]Includes sub & acute care and inpatient rehab
[2]p=.066 for Model 1 (women's health focus)
[3]p=.064 for Model 4 (neurological focus)
*p<.05; **p<.01; ***p<.001

The second requirement states that the explanatory (vertical and horizontal) variables must be related to the proposed mediator, gender attitudes about opportunities or X → M. Since the mediators, two opportunity variables (promotions and jobs), have three ordered categories, the SPSS ordinal regression procedure (Polytomous Universal

Model or PLUM) was selected to fit these two variables as ordinal outcome variables (Norusis 2008). In testing the relationship between the vertical and horizontal variables and the mediator (gender attitudes about opportunities) outlined above, since the overall responses by the female and by the male PTs were both skewed to the lower end of an ordered three-point Likert scale for the promotion and job opportunities questions (see descriptives for opportunities in Table 4.8), the negative log-log link function was chosen in the PLUM procedure; it is recommended when the lower categories are more probable. Both gender samples produced results for *promotion opportunities* for women that did not violate the assumption of parallel lines/planes (see "Test of Parallel Lines" near the bottom in Table 4.14, Models 1 and 2). However, the assumption of parallel lines with *job opportunities* as the potential mediating variable was violated for the female (p=000) and the male (p=.002) samples (Models 3 and 4). The null hypothesis is that the location parameters (slope coefficients) are the same across response categories; therefore, rejecting H_o is undesirable in the PLUM procedure. If the null is rejected, GENLIN (Generalized Linear Model) is recommended as the procedure (*SPSS 16.0.2* 2008; UCLA Academic Technology Services 2009). Since the variable job opportunities is an ordinal variable, the ordinal logistic procedure was selected within GENLIN analysis for models 3 and 4.

Table 4.14 PLUM[1] Ordinal Regression Estimates for Promotion Opportunities and GENLIN[2] Ordinal Logistic Estimates for Job Opportunities for Female (N=897) & Male (N=215) PTs – Step 2 to Test for Mediation

	Promotion Opportunities				**Job Opportunities**			
	PLUM Model 1 Females[1]		**PLUM Model 2 Males[1]**		**GENLIN Model3 Females[2]**		**GENLIN Model 4 Males[2]**	
Threshold	Parameter Estimates	Sig	Parameter Estimates	Sig	Parameter Estimates	Sig	Parameter Estimates	Sig
Worse for Women	-.262		.378		3.481	**	2.782	
No Difference	2.518	***	2.953	***	6.811	***	5.465	**
Location								
Less than Median Income	-.073		.175		-.405	*	-.005	
More than Median Income	-.175		-.049		.039		-.564	
Any Breaks	.244	*	-.352		.318		-.258	
Supervisory Position	-.195		.103		-.374	*	.363	
Inpatient Setting	-.177		---		-.023		---	
Acute & Sub-acute	---		.676		--		-.172	
Inpatient Rehab	---		.429		--		-.369	
Chronic Care Setting	-.452	*	---		-.087		---	
All Other Settings	.411		-.136		.381		-.064	
Pediatrics Focus	-.466	*	.558		-.341		1.077	
Neurological Focus	-343		.269		.365		.663	
Women Health Focus	.170		---		1.976		---	
Acute Care Focus	---		-.780		--		.254	
Mgt/Admin Focus	----		-.198		--		.009	
All Other Foci	-.091		.320		-.274		.281	
NOT White	.313		.122		.252		.055	
Part-time	-.011		.452		.333		.626	
Undergrad Degree	-.228	*	-.029		-.148		.153	
Never Married	-.058		.231		.200		.286	
Age 40 or more	.445***		-.056		.741	***	.664	
Model Fitting Chi-Square	54.097[3]	***	.847[4]		--		---	
Pseudo R^2-Nagelkerke	.071		.061		--		---	
Test of Parallel Lines[5]	.340		.553		--		---	
OmnibusTest–Chi-Square[6]	---		---		54.044	***	11.228	

PLUM = Polytomous Universal Model with Link Function: Negative Log-log in Ordinal Regression

[2]GENLIN = Generalized Linear Model for Ordinal Logistics

[3]Since 56.8 percent of cells had zero frequencies, the goodness-of-fit chi-square values were not reliable and therefore should not be used in interpreting Model 1.

[4]Since 60.3 percent of cells had zero frequencies, the goodness-of-fit chi-square values were not reliable and therefore should not be used in interpreting Model 2.

[5]The null hypothesis for the Test of Parallel Lines is that the slope coefficients are the same across all response categories. Therefore, to fail to reject the hypothesis means the assumption of parallelism is not violated (a desirable outcome). Only Models 1 and 2 meet this requirement.

[6]The Omnibus Test compares the fitted model against the thresholds-only model. The statistical significance demonstrates that the fitted model was a statistically significant improvement over the thresholds-only model.

*p<.05; **p<.01; ***p<.001

Upon examining the PLUM procedure when regressing promotion opportunities on the structural variables (Table 4.14, Models 1 and 2), the results vary noticeably by gender. Female PTs' attitudes on promotion opportunities (Model 1) are related to breaks in employment (vertical) and chronic care setting and pediatrics focus (horizontal). Yet, for men there are no demonstrated relationships to any vertical or horizontal variables and promotional opportunities (Model 3).

In the GENLIN procedure for Model 3 in Table 4.14 for job opportunities, female respondents' attitudes about job opportunities were associated with two vertical indicators (income and supervisory position) but no horizontal relationships. In Model 4 (Table 4.14), the men's sample very clearly illustrated that none of the explanatory (or control) variables was statistically related to the outcome of men's views on the job opportunities for women in physical therapy. Therefore, in this particular instance, a male's view on job opportunities for women in physical therapy does not appear to perform as a mediator between the hierarchical (income, continuity, or supervisory) location or horizontal (setting or focus) placement and the two factors of job satisfaction.

The third requirement to prove mediation is that the potential mediator (i.e., promotion or job opportunities) must be related to at least one of the factors of job satisfaction while controlling for the vertical and horizontal variables (X.→ M → Y). For intrinsic rewards, there was no demonstrated elimination (total mediation) or decrease in significance (partial mediation) when comparing each model, first without the opportunity variables (Models 1 or 3, Table 4.15) for females or males, respectively and then with the opportunity variables added (Models 2 or 4) for females or males.

Table 4.15 Unstandardized Regression Coefficients for Intrinsic Rewards for Female (N=897) & Male (N=215) Samples – Step 3 to Test for Mediation

	Intrinsic Rewards							
	Model 1 Females		Model 2 Females		Model 3 Males		Model 4 Males	
	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig
(Constant)	-.165		.019		.170		.192	
Any Breaks	-.186	*	-.159	*	-.005		-.008	
Personal Income	.056*		.056	*	-.029		-.028	
Supervisory Position	.072		.033		.011		.147	
Inpatient Setting	-.182		-.196[2]		--		--	
Acute & Sub-acute	--		--		-1.009	**	-1.024	**
Inpatient Rehab	--		--		-.220		-.231	
Chronic Care Setting	-.358	**	-.393	***	--		--	
All Other Settings	-.261		-.198		-.236		-.223	
Pediatrics Focus	.501	***	.454	***	1.089	**	1.083	**
Neurological Focus	.211		.186		-.518		-.492	
Women Health Focus	.431[1]		.472	*	--		--	
Acute Care Focus	--		--		1.127	**	1.127	**
Mgt/Admin Focus	--		--		.535		.555	
All Other Foci	-.018		-.042		.142		.135	
NOT White	-.167		-.159		-.017		-.004	
Part-time	.040		.041		-1.468	***	-1.472	***
Undergrad Degree	.026		.007		.234		.240	
Never Married	-.123		-.122		-.193		-.204	
Age 40 or more	-.018		.043		.063		.039	
Promotion Ops Worse	--		-.246	***	--		-.008	
Promo Ops Better	--		.185		--		-.096	
Job Ops Worse	--		-.128		--		.016	
Job Ops Better	--		.360		--		-.250	
R Square	.068		.102		.147		.153	
F-statistic	4.268	***	5.239	***	2.135	**	1.749	*

[1]p=.066 in Model 1 (Women's Health Focus)
[2]p=.055 in Model 2 (Inpatient Setting)
*p<.05; **p<.01; ***p<.001

Likewise for the dependent variable well-being, females (comparing models 5 and 6) and males (comparing models 7 and 8 first without and then with the opportunities

variables) in Table 4.16 each remains similar in their level of significance in Model 6 and Model 8, respectively (i.e., no mediation). In the three steps of mediation, Step 1 should be met, and both Step 2 and Step 3 are essential to prove indirect effects.

Table 4.16 Unstandardized Regression Coefficients for Well-Being for Female (N=897) & Male (N=215) Samples – Step 3 to Test for Mediation

	Well-Being							
	Model 5 Females		Model 6 Females		Model 7 Males		Model 8 Males	
	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig
(Constant)	.136		.251		.272		.459	
Any Breaks	.021		.039		-.274		-.290	
Personal Income	-.026		-.026		.002		.001	
Supervisory Position	-.090		-106		-.403	**	-.384	**
Inpatient Setting	-.011		-.024		--		--	
Acute & Sub-acute	--		--		-.580		-.629	*
Inpatient Rehab	--		--		-.735	**	-.793	**
Chronic Care Setting	.096		.062		--		---	
All Other Settings	.099		.123		.191		.221	
Pediatrics Focus	-.121		-.163		-.477		-.426	
Neurological Focus	-.298	*	-.323	*	.616[1]		.720	*
Women Health Focus	-.230		-.223		--		--	
Acute Care Focus	--		--		.534		.550	
Mgt/Admin Focus	--		--		.675	*	.731	*
All Other Foci	-.084		-.088		-.030		-.032	
NOT White	.068		.091		.323		.358	
Part-time	.361	***	.360	***	.320		.354	
Undergrad Degree	.038		.021		-.484	**	-.457	**
Never Married	.090		.088		-.126		-.129	
Age 40 or more	-.133		-.106		.202		.183	
Promotion Ops Worse	--		-.221	***	--		-.066	
Promo Ops Better	--		-.139		--		-.278	
Job Ops Worse	--		.005		--		-.219	
Job Ops Better	--		-.051		--		-.478	*
R Square	.057		.071		.173		.206	
F-statistic	3.578	***	3.549	***	2.584	***	2.519	***

[1]p=.064 in Model 7 (Neurological Focus)
*p<.05; **p<.01; ***p<.001

Other Potential Factors Affecting Job Selection

Since only two factors were derived from the factor analysis of the ten workplace attitudes by Speakman, et al. (1996) for physical therapists, it might be helpful to know what else these PT's valued (by gender) when they accepted their current position. Respondents were asked to list the three most important reasons they had considered when deciding to accept their present job. The top responses for females and for males were coded, and the results by gender are included in Table 4.17. Since the factor analysis of the Speakman, et al.(1996) scale resulted in two factors or domains (intrinsic rewards and psychological/physical well-being) represented by eight statements in the workplace attitudes, it should be helpful to see what PTs qualitatively ranked by gender as being most crucial in making their final decision to accept their current position. The most remarkable difference based on gender is that males overall more often rated salary and benefits as the number one factor in selecting their current job, while females listed the focus\patient population\patient load more often on a percent basis. For the women respondents, salary and benefits also ranked behind flexibility in scheduling, geographic location, and the opportunity to learn and grow in the frequency it appeared within their job selection process (Table 4.17). The other most obvious difference between these women and men was how often women proportionally chose flexibility in their schedules compared to the men (17.8 percent of women, ranked second vs. 6.2 percent of men, ranked seventh). Such disparities deserve attention in how these potential facets of job satisfaction are impacted by the occupational structure, as well as potentially by cultural determinants.

Table 4.17 Top Factor in Choosing Current Job for Female & Male Respondents in 2004 Physical Therapy Labor Force Survey

	Females		Males	
	Percent	**Ranking**	**Percent**	**Ranking**
Focus/Patient Pop/Patient Load	18.0	1	15.6	2
Flexibility (schedule; hrs/days)	17.8	2	6.2	7
Location (geographic)	16.2	3	15.6	2
Learning Opportunities/ Professional Growth/Challenge	15.7	4	12.8	4
Salary/Benefits	11.1	5	21.3	1
Atmosphere/Environment or Staff/Boss	9.2	6	11.8	5
Autonomy/Independence	6.9	7	11.4	6
Ethics/Integrity/Support from Administrator or Owner	3.7	8	2.4	8
Job Security/Stability	1.5	9	2.4	8
Other	0.0	10	0.5	10

Overall Comparisons between 2004 & 2000 PUMS Samples

The average employed physical therapist in the *2004 Physical Therapy Labor Force Survey* would be described as a 38-year-old white married female with a master's degree in the occupation (Table 4.1). Since these data included *all* employed PTs, she is also more likely to be salaried than self-employed (Table 4.2). And consistent with the trend of the last 30 or 40 years, almost two-thirds (~65 percent) are working in medical offices, as opposed to hospitals, nursing homes, home health, education, and other areas, with 82 percent working at least 30 hours per week. Compared to the 2000 PUMS data for physical therapists, the 2004 APTA respondents are proportionally more likely to be female (78 percent vs. 70 percent), have a master's degree (56 percent vs. 32 percent), and have higher median incomes . In fact, employed males in the 2004 sample were one full category up from females in median income ($60-$70K vs. $50-60K) comparable to

the approximate $10,000 difference in the 2000 PUMS sample ($54K vs. $44K) for males and females, respectively (see Table 4.3).

Descriptives for Salaried PT Respondents in 2004 Survey

For the entire sample of salaried PTs after listwise deletions (n=1112), less than half (48-49 percent) of participants indicated there was no difference between men and women in the job opportunities available in this field. The proportion of females or males who reported no difference between men and women in job opportunities was almost the same (between 48-49 percent). Yet, about 35 percent of all respondents indicated no difference between men and women in promotion opportunities. By gender, 32 percent of females (compared to 43 percent of males chose the option no difference in promotion opportunities (Table 4.5). No studies (either published or graduate theses) considering the workplace attitudes by gender for job or promotion opportunities were located for physical therapy.

Primary setting (location) and primary focus (specialty) comprise the two other main independent variables used to demonstrate possible relationships to the dependent variable, current workplace satisfaction. How these two horizontal measures are structured by type, overall numbers, and gender is central to the purpose of this study. Without a doubt, the principal location overall (60 percent), for women (58 percent), and for men (69 percent) for salaried personnel is the *outpatient* setting. Unfortunately, this category on the 2004 survey (although an accepted setting in the rehabilitation field) does not allow the researcher to separate such respondents by working in either physician (or

other health practitioners') offices, in PT offices, or even in health centers.[12] Separation for *inpatient* PTs by location provided more detail: acute care, sub-acute care, and inpatient rehabilitation, but these settings are much less highly populated compared to even 20 or 30 years ago (See Place of Work, Table 4.2). For the 2004 sample (n=1112) all three inpatient categories added together only resulted in 23 percent of the primary setting being inpatient (compared to 60 percent for outpatient). Twenty-four percent of the female sample was situated in an inpatient location compared to 20 percent of the males. And male PTs have been shown to be less represented in the acute care setting when compared to females (Bieker 1999).

As previously mentioned, the primary focus provided a second horizontal locator in addition to primary setting. Like outpatient setting for location, the most populous specialty on the 2004 survey was orthopedics/sports represented by 49 percent of the overall sample (n=1112), 47 percent of female sample, and 58 percent of male sample (Table 4.5). Since there may be a gendered aspect to specializing in sports therapy as well as contributing to lessening the gap between the next largest specialty (geriatrics: 20 percent overall; 21 percent female sample; 12 percent male sample), future studies involving gender should separate orthopedics from sports in primary focus. The remaining categories by specialty were all below 10 percent of the entire sample, ranging from a high of 9 percent for acute care to a low of 1.5 percent each for women's health and for occupational health.

[12] The North American Industry Classification System (NAICS) does provide industrial codes for such locations.

There are three other areas where more frequent comparisons between female and male workers appear in the literature. The first is continuity of employment or, from the opposing view, breaks in employment. About 74 percent of all PTs in the 2004 survey reported no breaks in their PT careers, which by gender were 72 percent for females and 81 percent for males (Table 4.5). By using the job history of those PT respondents completing this section of the survey, it was observed that many therapists simply cut back to: a part-time job, consulting, being on-call, or weekend work when issues arose (e.g., pregnancy, family illness, and other concerns) during stressful times and resumed full-time work at a later date. Although only a single point in time, the statistics on part-time (less than 30 hours/week) salaried employees (17 percent overall, 21 percent for females, and 3 percent for males) does indicate that women in this field must continue to balance the demands of work and family (Table 4.6).

The second area of interest by gender is income. Sixty-four percent of all salaried respondents and close to the same percentage for women too (65 percent) had a personal income between $40-70K in 2003, while 63 percent of men made between $50-80K (moving one $10K bracket upwards). However, there are at least three principal forces driving these particular results: 1) continuity of employment; 2) level of part-time/full-time work by gender (both discussed above); and 3) the percentage by gender in supervisory positions (supervises at least one other employee).

And not surprisingly, management is also the third area most researched and reported in the literature on work and gender. While only 27 percent of women claimed supervisory status in the 2004 dataset, 45 percent of men in the sample did so.[13]

Discussion of the Hypotheses

A discussion of the four hypotheses advanced at the end of Chapter II is necessary at this point in order to assess what has or has not been shown by this research project in the analyses. Additionally, it should serve as a portal to what the current project's limitations, implications, and recommendations for further research in this area might hold (Chapter V).

Hypotheses 1A and 1B for the Overall Sample (N=1112)

As H_{1a} stated, "The vertical structural variables are related to the horizontal structural variables." According to Table 4.7, the first horizontal measure (primary setting) was not correlated to any of the three vertical measures—location in supervisory position, annual personal income, or breaks (greater than one month) between jobs in physical therapy. However, primary setting was significantly related to the second horizontal measure, primary focus. As shown in column 2 of Table 4.7, both presence in a supervisory position and personal income were positively related to primary focus. In other words, in certain specialties one would expect to see a higher (or lower, depending on the focus) likelihood of the respondents in supervisory positions and higher (or lower)

[13] A study by Rozier, Hamilton, & Hersh Cochran (1998) examined income differences by gender among PT managers. After adjusting for leave taken, hours worked, years worked full-time, number of years at a facility, and number of years in a position, female managers still only earned 89% of average salary by comparable male managers.

personal incomes in their physical therapy careers. There were also two statistically significant correlations within the vertical measures. And, logically, being situated in management was directly and statistically significant for higher incomes, while having any breaks between jobs was negatively correlated with a salaried employee's income. Therefore, since primary setting was significantly related to the second horizontal measure, primary focus, research hypothesis H_{1a} was supported.

H_{1b} carried the theoretical model of a gendered occupation one step further by stating, "The vertical (pay, authority, and continuity) and horizontal (primary location and primary specialty) structural variables are related to current job satisfaction." By viewing Table B.8, Models 1and 2 (Appendix B) on the *overall* model for intrinsic rewards and well-being respectively, the relationships between the vertical hierarchy and horizontal segregation variables were only demonstrated on the satisfaction domain of intrinsic rewards; the opportunities measures were not included in these analyzes.

Both models tested the relationships of the vertical and horizontal measures to each outcome variable. On average a pediatric physical therapist (compared to sports-orthopedic physical therapists) reported a higher level of satisfaction due to intrinsic rewards (i.e., fulfilling, challenging, interesting, and contributing to further learning and improvement in work); and, not surprisingly, income was also directly related to intrinsic rewards. In terms of negative effects, on average, both any breaks in continuity of work (vs. no breaks) and employment in a chronic care setting (i.e., long-term care and home health) vs. those in orthopedics-sports were associated with lower scores in the intrinsic rewards of their current job. Assessing the associations for the well-being outcome

variable, there was a positive relationship between the control variable part-time (vs. full-time) and the intrinsic rewards scores for their current jobs. Those respondents working part-time on average had higher well-being scores. One other critical measure, gender, indicated that both models (intrinsic rewards and well-being) were affected by the gender of the respondents, which led to the addition of the opportunities variables to the models. Since the vertical and horizontal structural variables for the overall model were only related to the intrinsic rewards factor in the overall sample, H_{1b} (without the opportunities variables added) was only partially supported.

Hypothesis 1B by Gender (N_{Female}=897 & N_{Male}=215)

Splitting the overall sample into two independent subsamples by gender demonstrated the effects for intrinsic rewards and well-being satisfaction factors. In Table B.9 (see Models 1-4, Appendix B), there were relationships demonstrated between the vertical and horizontal variables and both domains of satisfaction—intrinsic rewards and well-being. Consistent with H_{1b} there were no opportunities variables included in these models by gender. For female PTs, the vertical measures any breaks and personal income and the horizontal variables chronic care setting and pediatrics focus were significantly related to intrinsic rewards. For males, only the horizontal predictors, acute/sub-acute setting, pediatrics focus, and acute care focus, were related to intrinsic reward scores. Moving on to Models 3 and 4 for women, only neurological reached statistical significance in its relationship to well-being; while for men the vertical marker supervisory position as well as the horizontal predictors acute and sub-acute, inpatient rehab settings and the management/administrative focus were significantly related to the

outcome variable well-being. Therefore, since the vertical and horizontal structural variables for both independent gender models were related to intrinsic rewards and well-being factors, H_{1b} (without the opportunities variables) was supported.

Hypothesis 2 for the Overall Sample (N=1112)

H_2 stated: "Perceived gendered attitudes about opportunities (promotions and jobs) affect job satisfaction." Model 1 in Table 4.8 displays the effects of adding respondents' attitudes about job and promotion opportunities to the regression equation for the intrinsic rewards domain of job satisfaction for the entire sample. All the results described above in the previous section for Table B.8, Models 1 and 2, remained statistically significant for Model 1 (Table 4.8). The addition of promotion and job opportunity attitudes for women (reference, no difference by gender) produced statistical significance for those respondents reporting that promotion opportunities were worse for women (compared to those claiming no difference). On average, those respondents selecting the attitudinal response that women's opportunities for promotions were worse had lower intrinsic rewards scores than those claiming no difference. Additionally, for the first time, women's health focus was positively, statistically significant in Model 1, Table 4.8 (which just missed statistical significance in Model 1, Table B.8, without the opportunities measures, p=.058). On average, those PTs in women's health had a higher level of intrinsic rewards from their current jobs (when compared to orthopedics-sports).

Model 4 in Table 4.9 provides the results for the explanatory effects of these same opportunity attitudes for the *well-being* factor of job satisfaction. The associations (gender and part-time vs. full-time employment) between well-being and the independent

variables remain similar to Model 2 (opportunities variables are absent) in Table B.8. With the addition of the opportunities variables, statistical significance for respondents who reported promotion opportunities are worse for women (juxtaposed to those who claim no difference) exerted a negative influence on well-being satisfaction (Model 4, Table 4.9). At this juncture, since gender demonstrated statistical significance to both outcome variables in the overall model, the sample was divided.

Hypothesis 2 by Gender (N_{Female}=897 & N_{Male}=215)

Table 4.8, Models 2 and 3, and Table 4.9, Model 5 and 6, demonstrate how the same *overall* respective models (by outcome variable) function specifically by gender. A test of equality of coefficients across two populations (i.e., differences in models and effects) indicated the two populations (male and female) differed significantly in their effects on intrinsic rewards and well-being satisfaction domains; they were two independent samples. Therefore, factor analysis by gender was conducted and the regression results discussed here are for those independent models where the parameters were allowed to vary by gender.

Table 4.11 has two independent models—one for males and the other for females with two modifications: 1) while women employed in any inpatient setting are located in one broad category, men working in the inpatient setting are separated into acute & sub-acute and inpatient rehab settings; and 2) under foci, female respondents in women's health focus are included as a separate group, while the acute care and the management-administrative foci are included for the men due to specific differences by gender. Model 1 specifically outlines the statistically significant relationships for the intrinsic rewards

factor of job satisfaction for females. Any breaks, personal income, chronic care setting, pediatrics, women's health, and promotion opportunities worse for women, continued to show a significant association to intrinsic rewards and in the same expected direction but now for women in the independent sample (compared to women in Model 2, Table 4.8).

The remainder of Table 4.11 must be critically evaluated before generalizing about either domain of work satisfaction for women or men in physical therapy. In the re-specified Model 2 for male PTs, on average, being located in an acute/sub-acute care setting had a statistically significant and negative effect on their sense of intrinsic rewards from their current job when compared to those in an outpatient setting and *not* seen in the female sample; yet males in the inpatient rehab location did not. In addition, those men working part-time also had a significantly negative relationship for their intrinsic rewards of the job when compared to those men working full-time; this was also not demonstrated in the women's sample. Yet, those men in pediatrics continued to demonstrate the positive relationship seen in the overall model, yet specific for men (Model 3, Table 4.8) and also demonstrated with females in the same specialty (Model 2, Table 4.8). Since the female and male samples were both positive and significant for pediatrics, one's gender was really not statistically different for those in a pediatrics specialty (when compared to PTs in orthopedics/sports); all three of the samples' analyses indicated that, on average, PT's specializing in pediatrics had higher intrinsic rewards scores when contrasted to their respective reference group of orthopedics/sports.

Model 3, Table 4.11, for the well-being factor indicated that women employed part-time in their current job on average had a higher well-being factor score than women

employed full-time. Perhaps, just being on the job fewer hours per week limits one's stress. There could also be a difference in the level of personal investment in the competitive aspects of the primary job, or other issues (another or secondary job; personal life) may currently have a higher rank in prominence (recognition or status) and importance (value or consequence) to these women. Additionally, those women who claimed promotion chances were worse for women (negative effect) resulted, on average, in lower well-being scores compared to those who reported no such difference. However, on average, women in the neurological focus also demonstrated a lower sense of well-being satisfaction when compared to those in orthopedics/sports.

By contrast, Model 4 (Table 4.11) on the well-being domain of satisfaction for males produced substantial differences when compared to the female model on well-being for *all* inpatient settings (Model 3). Both acute/sub-acute and inpatient rehab settings were inversely and significantly associated with the men's well-being scores. On average, men in these two inpatient settings had lower well-being satisfaction scores (compared to those in orthopedics-sports). Contrary to the *negative* results for the women in neurological specialty (Model 3), men in this same focus had a significant yet *positive* association to well-being scores (Model 4). While women on average compared to their own reference group of orthopedics/sports had lower scores for well-being in a neurological focus, men on average had higher scores in this specialty when compared to other male orthopedic/sports PTs. However, since n=5 for females in neurological specialty and n=8 for males in the same specialty, this result plainly needs to be verified with future studies with larger numbers.

Another conundrum surfaced in the male model for well-being. Upon first glance at the results for a management-administrative focus and a supervisory position for well-being (Model 4) for males, there appears to be a contradiction. Yet, the meaning of each variable differs. The management focus included only those males who considered the overwhelming part of their job as strictly administrative (n=10), while the supervisory position is defined more broadly as *any* responsibilities to supervise others (n=97). This second group has administrative responsibilities but most likely in conjunction with their regular job (in another specialty). Since this latter group has a significantly *negative* (as opposed to positive for the former) relationship to psychological/physical well-being, there are certainly stresses associated with combining administrative functions along with treating and being responsible for patients simultaneously. An unanticipated result for males was the statistically significant, negative effect of a bachelor's degree on the well-being satisfaction component when compared to males who had obtained a post-graduate degree. On average, these men with a bachelor's degree had lower well-being satisfaction scores compared to those with a post-graduate degree. There was one study on job satisfaction among physical therapists (Mueller 2002) where those respondents who were pursuing a post-graduate degree in physical therapy were more likely to remain in the field (i.e., higher job satisfaction); however there was no gender component to this study. Lastly, on average, men who believed job opportunities were better for women (compared to those males who checked no difference) had lower well-being satisfaction scores. This was an expected occurrence according to the second hypothesis. Since perceived gendered attitudes about opportunities were related to job satisfactions factors

in the independent samples by gender (i.e., female PTs with the attitude that promotions were worse for women had significantly lower intrinsic rewards scores as well as significantly lower well-being scores, while male PTs with the attitude that jobs were better for women had significantly lower well-being scores compared to those with the attitude of no difference), H_2 was supported.

Hypothesis 3 on Possible Moderation Effects by Gender

H_3 stated, "Perceived gendered attitudes about opportunities (promotion, jobs) have moderating (interaction) effects between a gendered occupation (vertical and horizontal structures) and worker satisfaction." Table 4.12 for females and males summarizes the results of the only two interactions effects, one for females with intrinsic rewards as the outcome variable and the second for males with well-being as the designated dependent variable. *None of the two-way interactions tested for promotion or job opportunities in GLM was significant for either sample by gender.* The only moderating effect for the female sample suggested that as minority women's personal income went up, their sense of satisfaction from the job's intrinsic rewards declined (compared to white women's income); this is not an intuitive effect. Only five percent of the female sample had membership in a minority group; therefore, it is difficult to generalize about this point. Perhaps salary and benefits were more heavily weighted for this group in selecting their current job, rather than other intrinsic factors. However, examining the top reasons female *minority* women listed when choosing their current job indicated patient population *and* learning opportunities tied for first place (with five other categories tied for third place among which salary/benefits was included). This is

certainly not the chief reason for the above interaction effect. As to the interaction effect for men on the outcome of the well-being factor of worker satisfaction, on average men in the neurological specialty within an acute/sub-acute (inpatient) setting had higher well-being satisfaction scores when compared to males in the orthopedics/sports focus in an acute/sub-acute (inpatient) setting. Only further sampling can determine with confidence if this is a reliable and valid result. In summary, since H_3 stated *perceived gendered attitudes about opportunities (promotion, jobs)* have moderating (interaction) effects between a gendered occupation (vertical and horizontal structures) and worker satisfaction, hypothesis 3 was not supported.

Hypothesis 4 on Possible Mediation Effects by Gender

H_4 stated at the end of Chapter II, "Perceived gendered attitudes about opportunities (promotions and jobs) have mediating (indirect) effects between a gendered occupation (vertical and horizontal structures) and worker satisfaction." The series of three steps that were listed in *Results* (Chapter IV) using PLUM (Polytomous Universal Model) for promotion opportunities as the outcome variable and GENLIN (Generalized Linear Model) for job opportunities as the dependent variable indicated that neither promotion nor job opportunity attitudes (by females or males) had indirect effects between the vertical or horizontal structures and the outcome job satisfaction variables (intrinsic rewards or well-being). See Tables 4.13 through 4.16 for more details on Steps 1 through 3. Below, Table 4.18 provides a synopsis of the three steps in testing these models for possible mediation effects in Chapter 4 by gender and job satisfaction factors.

Table 4.18 Summary of Results for Three Steps Testing for Mediation[1]

Steps	Level of Support for Mediation
1. The independent variables (vertical & horizontal) need to be related to the dependent variables (job satisfaction factors); or X → Y. No job or promotion opportunities variables were included in model.	**Females** – Model 1 – the vertical & horizontal variables are related to intrinsic reward factors; Model 3 – only neurological focus is related to well-being factor; **Supported** **Males** – Model 2 - only horizontal variables (sub- & acute care setting, pediatrics focus, acute care focus) are associated with intrinsic rewards; Model 4 – vertical (supervisor) & horizontal (mgt/admin focus) are related to well-being factor; **Supported** (See Table 4.13.)
2. The independent variables (vertical & horizontal) need to be related to the mediators (promotion & job opportunities) or X → M). No job satisfaction factors were included in model.	**Females** – Model 1 – vertical (any breaks) and horizontal (chronic care setting & pediatrics focus) are related to promotion opportunities; while in Model 3 – only vertical (income, supervisor) are associated with job opportunities; **Supported** **Males** – Neither Models 2 or 3 have any vertical or horizontal relationships to the vertical or horizontal variables; **Not Supported**. (See Table 4.14.)
3. The association between independent (vertical & horizontal) & dependent variables (job satisfaction factors) must disappear (total mediation) or be reduced (partial mediation) when controlling for mediators (promotion & job opportunities) or X→ M→Y.	Adding the opportunities variables (promotion & job) as possible mediators did NOT affect the level of statistical significance for any of the full models for females or males. **Not Supported for Any Models** (See Table 4.15, Models 2 & 4 and Table 4.16, Models 6 & 8.)

[1]To demonstrate mediation, Step 1 should be supported, and Steps 2 and 3 must be supported.

Since Step 1 should be supported and Steps 2 and 3 must be supported, the attitudes by males or females on promotion or job opportunities did not have mediating effects between the explanatory variables and either of the two job satisfaction factor domains.

CHAPTER V

DISCUSSION AND CONCLUSIONS

This case study examined whether and, if so, how vertical hierarchy or horizontal segregation and perceived opportunities for promotions and jobs of women and men in physical therapy were associated with current workplace attitudes. Gender, like other social, political and economic structures at work, constitutes another social dimension of occupational work; these forces vary in power and effect over place and time much as the "matrix of domination" (age, gender, ethnicity, sexuality) and "lived experiences" that Collins described in her work, *Black Feminist Thought* (2000). This case study is unique in its insistence that horizontal and vertical structures in one occupation, along with respondents' attitudes about opportunities in physical therapy by gender, are related to job satisfaction.

First, before proceeding to the hypotheses tested by this project, a basic question should be answered. Is physical therapy a gendered occupation? At the national level from the US Census 2000 5 percent PUMS sample of physical therapists, approximately 70 percent of *all employed* PTs were women; this compares to 78 percent for the overall 2004 PT Survey (Table 4.1). The median income difference between women and men in these two datasets is about $10,000 less for women (Table 4.3), which agrees with previous literature in this profession (Baker and McMahon 1989; Rozier, Hersh-Cochran and Whitright 1993; Rozier, Raymond, Goldstein and Hamilton. 1998; Rozier, Hamilton

and Hersh-Cochran 1998). Women in physical therapy are more likely to be salaried, while men are proportionately more likely to be self-employed. Examining only salaried PTs in the 2004 PT sample, 81 percent were female with 45 percent men (contrasted to 27 percent women) in supervisory positions and 5 percent men (versus 3 percent women) in upper level management. Three percent of men were employed part-time (versus 21 percent of women) in this study, and 19 percent (compared to 28 percent of women) had at least one break in employment. These statistics are common not only in physical therapy but in other female-dominated occupations as well (Cassidy and Warren 1991; Williams 1995; Cassirer and Reskin 2000; Miller, Goddard and Lashinger 2001; Snyder and Green 2008).

The next section summarizes the major findings for each of the hypotheses, which were advanced at the end of Chapter II and discussed near the end of Chapter IV. This review serves as a brief account for the testing and restructuring (as needed) for the theoretical models by gender.

Summary of Hypotheses and Theoretical Models

Table 5.1 below provides a summation of the discussion at the end of Chapter IV for each of the four general hypotheses**.**

Table 5.1 Review of Support for Tested Hypotheses

Hypothesis	2004 PT Study
H_{1a}: The vertical structural variables are related to the horizontal structural variables in the overall model.	**Supported** (Table 4.7)
H_{1b}: The vertical (pay, authority, and continuity) and horizontal (primary location and primary specialty) structural variables are related to current job satisfaction.	**Partially Supported** for overall model (Table B.8) and **Supported** for independent gender models (Table B.9)
H_2: Perceived gendered attitudes about opportunities (promotions and jobs) affect job satisfaction in independent models by gender.	**Supported** (See Table 4.11.)
H_3: Perceived gendered attitudes about opportunities have moderating (interaction) effects between a gendered occupation (vertical and horizontal structures) and worker satisfaction in independent models by gender.	**Not Supported** for opportunities by gender between structural variables and intrinsic rewards or well-being effects (Table 4.12)
H_4: Perceived gendered attitudes about opportunities have mediating (indirect) effects between a gendered occupation (vertical and horizontal structures) and worker satisfaction in the independent models by gender.	**Not Supported** for intrinsic rewards or well-being for either gender (Tables 4.13-4.16)

For H_{1a}, many researchers (Kanter 1977; MacKinnon 1979; Cassidy and Warren 1991; Williams 1995; Jackson 1998; Cassirer and Reskin 2000; Baunach 2002; Mennino and Brayfield 2002; Charles and Grusky 2004; Ridgeway 2006) have connected vertical hierarchy and horizontal sorting with segregation by gender at work, and some (Baunach 2002, Charles and Grusky 2004, and Ridgeway 2006) have expanded that concept to linking male primacy in the former and gender essentialism in the latter. In this case, the vertical-male primacy link and the horizontal-gender essentialism link were realized.

H_{1b} required a bigger leap to move from work's social structure to a relationship to job satisfaction. Beginning in the 1970s, published research in physical therapy began

to question the influences on job satisfaction (Barnes and Crutchfield 1977; Brosky and Cook 1978; Okerlund, Jackson and Parsons 1994; Speakman, Pleasant and Sutton 1996; Bieker 1999; Miller, Goddard and Lashinger 2001; Mueller 2002; Randolph, Doisy and Doisy 2005). However, research by Kanter (1977) and by Cassirer and Reskin (2000) on location and gender was required to make this connection back to job satisfaction.

Moving to hypothesis 2 to include perceived gender attitudes opportunities for promotions and jobs required the literature on organizational justice and the literature on blocked or supported opportunities by gender in the workplace. Those researchers focusing on the latter from a gendered perspective have included Melamed (1995 and 1996), Cassirer and Reskin (2000), MacKinnon (1979), and Williams (1995). A possible connection from social structure and attitudes on opportunities to job satisfaction was provided by research in the field of organizational justice. Until the current research, only three studies (Phelan 1994, Mueller and Wallace 1996, and McDuff 2001) had linked gender and organizational justice to job satisfaction. The choice of the two structural variables reflected my study's emphasis on the worker's location in the opportunity structure based upon the work by Kanter, while preserving the gendered approach of Acker (1990, 1992), Lorber (2009) and others (Collins 2000, Hughes and Kerfoot 2002, and Britton and Logan 2008) through the attitudinal opportunities variables. Finally, by considering the research of Arthur, Khapova, and Wilderom (2005) who recommended looking at a career not only through objective but also subjective lenses and basing the perspective upon the work of gender theorists mentioned above, the present study was designed to include both.

H_3 (moderating effects) and H_4 (mediating effects) were simply the result of consulting the organizational literature and examining those works linking attitudes about fairness in the workplace with some element of job satisfaction, organizational commitment, or turnover intentions. Depending on the measures used, some studies indicated indirect (mediating) effects (Kan 2007; Cassirer and Reskin 2000; Diekmann, Sondak and Barsness 2007); others claimed interaction or moderating effects (McDuff 2001; McIntyre, Bartle, Landis and Dansby 2002; Liponen, Olkkonen and Myyry 2004; Fischer and Smith 2006); while some determined both were present (Younts and Mueller 2001; Ramamoothy and Flood 2004). It helped that three studies on work values for physical therapists claimed respect, caring, empathy, as well as justice were critical in determining job satisfaction attitudes (Thomasma 1996; Triezenberg and Davis 2000; Nosse and Sagiv 2005). While no indirect or interaction effects were demonstrated specifically between social structure, attitudes about opportunities, and job satisfaction the rationale was logical.

At the end of Chapter II an overall theoretical model was proposed (see Figure 1.1). In light of the data analyses, it may be useful to generate a more up-to-date and generalized image of what is known about these models by gender thus far. Figure 5.1 below summarizes what has been demonstrated in the current case study for women in the independent sample in the satisfaction domain of intrinsic rewards. Since there were no interaction or mediation effects among the horizontal or vertical variables *and* the opportunities variables, the perceived gender attitudes assume a more direct effect until shown otherwise by future studies. There is no figure for the well-being satisfaction

variable for the female respondents since the demonstrated associations were few (only part-time employment and the continued negative effects of promotion opportunities worse for women when compared to the no difference category).

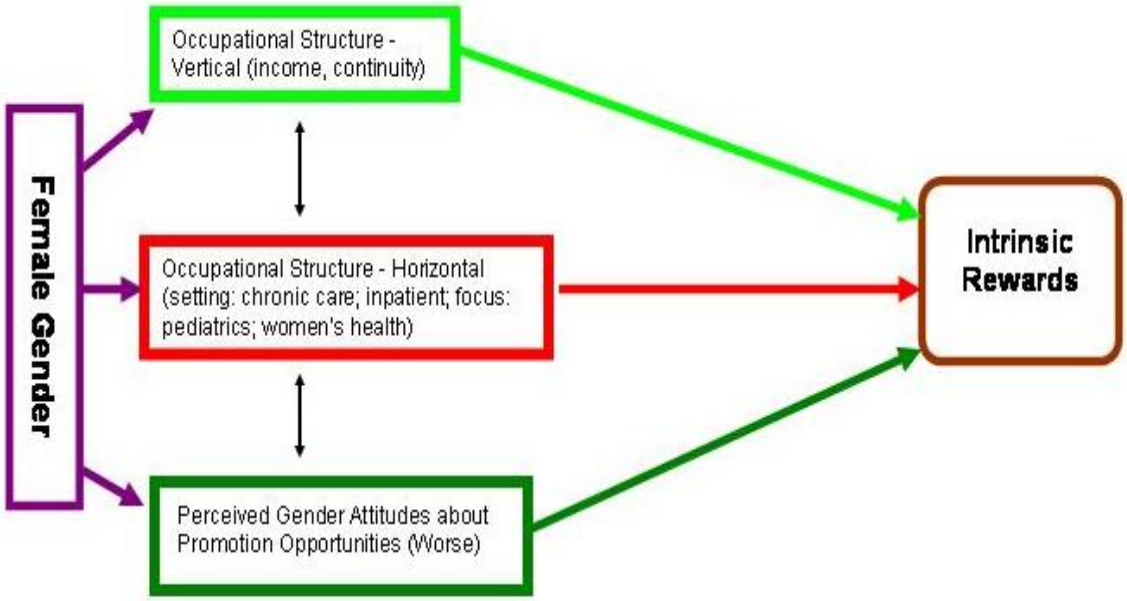

Figure 5.1 A Theoretical Model of a Gendered Occupation, Gender Opportunities & Intrinsic Rewards for Salaried Women[14]

For men in the independent sample, the results were remarkably different except for the positive effect of those in a pediatrics focus upon the job satisfaction intrinsic rewards regardless of gender. The only other effects on intrinsic rewards were the negative effects of the sub-acute and acute care settings and the negative influence of

[14] The only independent or control variables for women that were associated with the well-being factor as the outcome variable were the positive influence of part-time employment and the continued negative effects (like the intrinsic rewards factor) of promotion opportunities worse for women.

part-time employment. The model for the well-being satisfaction factor for male respondents was more complex and is shown below in Figure 5.2. Similar to the subsample of female PTs since promotion or job opportunities variables did not interact with or mediate between the outcome variable and the occupational structural variables, these perceived attitudes are located as a more direct influence upon the well-being satisfaction factor.

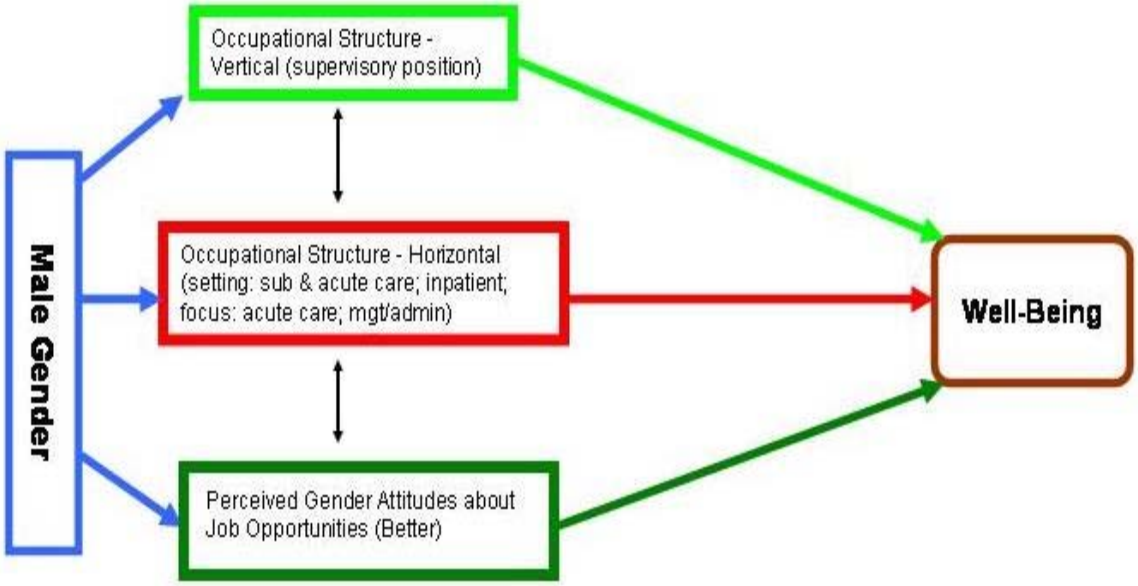

Figure 5.2 A Theoretical Model of a Gendered Occupation, Gender Opportunities & Well-Being for Salaried Men[15]

[15] The only independent or control variables for men that were associated with the intrinsic rewards factor as the outcome variable were the negative effect of the sub-acute and acute care settings, the positive effect of the pediatrics focus, and negative influence of part-time employment.

Limitations of the Research Study

Since the sampling frame for this research was the 2003-2004 members of the American Physical Therapy Association (APTA) who were actively practicing and licensed physical therapists in the US, the results of these analyses might not have been representative of those who were not members of APTA. The US Census 2000 5 percent PUMS sample of physical therapists was analyzed to aid in determining if the APTA survey sample was representative in demographics across a much larger sampling frame (APTA members *and* nonmembers). The three principal differences for all employed PTs in either sample were: 1) the percent male (30 percent vs. 22 percent for the 2004 PT sample), 2) the percent of respondents with a master's degree (32 percent vs. 56 percent in the 2004 PT sample), and 3) the percent of respondents working in medical offices (44 percent vs. 65 percent in the 2004 PT sample). The low percentage of males in the final 2004 data sample after separation of the original sample into salaried and self-employed *and* listwise deletion (19.3 percent) compares to a national level of about 28 percent male in the 2000 PUMS dataset.[16] The occupation of physical therapy is overwhelmingly represented by whites; therefore, other than controlling for race or ethnicity, no other generalizations should be made about this variable. In addition, the data from the 2004 PT Labor Force Survey were self-reported (as were the PUMS data), and some measures (i.e., vertical and horizontal structures, perceived opportunities, and workplace satisfaction) could not be verified with another data source. Lastly, the return rate of 42 percent might have also affected the quality of the data.

[16] The US Census PUMS 5 percent datasets have no missing data since imputation was used.

The survey dataset from APTA was conducted at the individual level in reference to the respondents' occupation at one point in time. Since it was cross-sectional data, there is no way to know how respondents may have responded at other points in time within their careers. Additionally, causation may not be determined without a longitudinal study involving this target population.

Although this research study considered some of the economic, social, and political structures of the occupation of physical therapy, it did not directly address the politics of structures inside or outside of the occupation, such as governmental (state and federal) laws and regulations or organizational differences within firms (public or private) that definitely impact workers in this field. One example at the federal level would be the dramatic effect on physical therapy by regulations within the *Centers for Medicare and Medicaid* (CMS) at the federal level. In the first half of 2008, the limit for coverage ("therapy caps") by Medicare was $1,810 compared to the slight increase to $1,840 in 2009 (in current dollars) for *both* outpatient physical therapy and outpatient speech-language pathology. However, Congress enacted a law on July 15, 2008 to continue to allow for exceptions to the therapy payment process, and this law remained in effect throughout 2009 (CMS 2009). Yet, state and federal regulations do not discriminate on the basis of gender, which is the thrust of the current research. Nevertheless, the changing winds of such political decisions can and do affect employment in this field. In tough times, administrative decisions may be partially based upon age, gender, race/ethnicity, marital status, or sexual preference but not manifestly expressed.

To better account for the overall relationships in the main model, another question on job satisfaction should have been included pertaining to overall job or career satisfaction in physical therapy and not just the physical therapists' level of satisfaction with their current jobs. Yet, one benefit of asking about the respondents' current jobs is that the time-order between the independent and dependent variables was not violated.

Implications of 2004 Physical Therapy Research Study

Given the results presented here, administrators and policy-makers in the arena of physical therapy should look more closely into specific horizontal settings and specialties in the occupation, identifying patterns of male-clustered, female-clustered, or neutral locations and specialties and how each of these affects various domains of job satisfaction. Indeed, if a contented and fairly-treated salaried employee is a productive worker, then it would behoove any profession to respond to these demonstrated patterns and challenges. And likewise, a physical therapist should have more information on where the best fit exists for her or him within this health field (setting, focus) and use that knowledge to match their personal occupational goals. Additionally, if prestige, compensation/benefits, and chance for promotion are ranked highly by the worker, then vertical structure will also contribute to such choices and decisions.

There are also practical implications for other female-dominated professions (e.g., nursing, education, social work, child-care, and library science). There have been more studies on the vertical (promotions, pay/benefits, management) aspects of these fields than with the lateral sorting within these female-tipped occupations. However, this may be changing. Snyder and Green (2008) investigated registered nurses in the US (national

data from 1977 through 2000) and their gendered segregation by vertical (pay, rate of promotion, position title, supervisory vs. patient care) and by horizontal (employment setting, department, patient type) structure. Their conclusion: lateral sorting by gender was much more telling in patterns of horizontal segregation by gender than vertical stratification within the profession of nursing. Comparisons across professions that are predominantly female (especially those more closely related to physical therapy, like nursing) have the potential to reveal how typically bottom-heavy professions (e.g., nursing, physical therapy) handle such occupational structural issues. Yet, there were no studies in the literature where the inter-relationships among gender, occupational structures, and job satisfaction were considered together.

The theoretical implications should be obvious within this research project as the results of the initial theoretical model (Figure 1.1) have been modified with respect to gender, gendered occupational structure, gender attitudes on promotion and job opportunities, and the two domains of job satisfaction (Figures 5.1 and 5.2). Nevertheless, since this study is an initial foray (i.e., case study) on only one sample in one occupation, any generalizing beyond the sample, or beyond the occupation, must be tempered by the need for more research. Hopefully, contemporary gender organizational theorists (e.g., Hughes and Kerfoot 2002, and Britton and Logan 2008) and gender work segregation researchers (e.g., Charles and Grusky 2004, and Snyder and Green 2008) will be joined by others who have specialized knowledge and a creative interest in work, gendered attitudes, and job satisfaction to further explore these models.

While a few earlier studies have considered gender and vertical and/or horizontal structures, none examined their potential effects on certain facets of job satisfaction. Besides adding to the knowledge of social and work characteristics for the gendered occupation of physical therapy, the current study also included the same variables mentioned above (work structure and gender) along with gendered attitudes on promotion and job opportunities and their possible relationships to job satisfaction factors. There was an implied or latent association with a sense of justice or fairness by gender with the attitudinal measures of promotion and job opportunities. Yet, one important methodological implication on this topic is that future studies should focus on the expansion of the concept of gender justice with an explicit definition and the development of appropriate measures and analytical techniques to illustrate their potential relationships to the facets of job satisfaction.

Data should continue to be collected on a national level for physical therapy (e.g., US Census PUMS, APTA, and other public or privately funded datasets) but with added categories for outpatient settings, the separation of orthopedics from the sports specialty, and as mentioned above, the collection of data measures to clear up the ambiguities in the relationship between gender justice and satisfaction in one's work. Over-sampling for males, particularly in gender-clustered areas in the vertical or horizontal structures, must be implemented. Future data collection efforts could also focus on other job satisfaction factors (such as pay/benefits, patient population/load, flexibility in days and hours worked), and retest the two domains derived from this dataset (intrinsic rewards and psychological and physical well-being).

Recommendations & Overall Conclusions

Recommendations for Future Research

Examining the four models (based upon data in Table 4.12) by gender and domains of job satisfaction, the summary of level of support for the four tested hypotheses, as well as Figures 5.1and 5.2 provides enough information to evaluate the strengths and weaknesses of this research project. In light of the relevant research literature introduced in Chapter II (in sociology, psychology, physical therapy, and business) and the relationships tested between two facets of job satisfaction and the gendered aspect of work in physical therapy, job and promotion opportunities by gender, and the vertical and horizontal social structures of one occupation, the following suggestions are made.

For future gender-based studies, the representation of men in either APTA or overall geographic samples (including non-APTA members) must be increased to yield their proportional level within the current occupation. If the intersection of gender *and* race/ethnicity becomes an added issue and the low numbers of minorities in this occupation continue to persist, over-sampling will be required to yield adequate numbers for making confident statements regarding analyses of these concepts.

The original theoretical model (see Figure 1.1, Chapter II) was also predicated upon a proposed latent association between workers (gendered in this case study) who feel a sense of injustice or unfairness in opportunities and their perceived sense of job satisfaction. Studies in related fields on this link between gender and justice (e.g., business, military, religious) indicated that these effects tended to be moderating,

mediating, or both. This has not been shown to be the case as the present study was conceived and designed. However, no research studies using perceived job or promotion opportunities by gender and the two factors of job satisfaction were located. To pursue this line of investigation, several additional questions must be added to any future survey. Some should include questions on fairness in opportunities by gender (e.g., Do you believe this is fair? Do you personally care about this specific inequity?) similar to those queried by Younts and Mueller (2001) on pay (i.e., perceived evaluation of justice; perceived justice; and perceived importance of fairness). There should also be some statements within the job satisfaction domains that consider the issue of justice. Of course, there are other forms that injustice can take at work (pay/promotion, race, or age discrimination) and many may not be gender-based or gender-related. Such statements or questions should help separate the many strands that intersect and enable the researcher to identify how the theoretical model really functions.

As discussed in Chapter IV, future research should consider the identification and grouping of specialty areas within the field of physical therapy. With the gradual migration to outpatient locations (about 60 percent of 2004 sample) in the past 30 to 40 years, additional details need to be available from respondents in order to disaggregate the general outpatient category into such subgroups as those working in physician offices, PT offices, health centers, or the military. It would also be useful to identify public (federal, state, county) from private employees. The issue of focus is slightly more complicated by the fact that many PTs identify the more general orthopedics as their specialty, perhaps to expand their general appeal to the public and/or due to advancement

requiring additional certification for other specialties or sub-specialties. Separating those PTs who consider themselves more sports-oriented would alleviate the large proportion classified in orthopedics/sports (49 percent in the current sample). For researchers only interested in female-dominated specialties (pediatrics, geriatrics, women's health) or male-dominated specialties (sports, electromyography, administration), such foci can be selectively sampled through APTA or by setting using the North American Industry Classification System (NAICS) coding available in the US Census PUMS 5 percent datasets.

Probably the most critical area for improvement is in refining and identifying the job satisfaction domains. It is clear that the two job satisfaction factors, intrinsic rewards and psychological/physical well-being, provided much help in distinguishing the different gender opportunity attitudes among salaried workers. Yet, they leave untouched other domains that respondents in the present study identified qualitatively as significant determinants in their current job selection process. Extrinsic rewards, such as pay and benefits, should be considered as another possible factor. Some other highly-ranked influences on worker satisfaction included patient focus/population/load, flexibility in determining hours and days worked, and geographic location. Factor analysis on additional data could help to identify these other domains of job satisfaction specific to physical therapy.

Overall Conclusions

The central research question advanced in the Introduction was: "Do gender attitudes about opportunities (promotions and jobs) affect the interplay of social structural

factors of work at the individual's occupational level in either vertical (career success) or horizontal (location or specialty) dimensions for PTs in determining their current workplace satisfaction?" The answer is yes for everyone, as well as for men and for women. By expanding upon the three principal research objectives of this case study, the crucial points to remember from the results of analyses will be described.

The first objective ("to build a theory that addresses a gendered organizational perspective at the occupational level and to test this theory for one occupation at the national level") was developed and advanced in Figure 1.1 at the end of Chapter II (*Theoretical Perspective*). The theory was tested across four hypotheses as explained in Chapter III (*Methodology*) and Chapter IV (*Results*). The overall theoretical model was rejected after gender was shown to be statistically significant for the two satisfaction factors obtained through factor analyses, and the test for differences in the models and their effects by gender was statistically significant for both outcome variables.

Specifying two independent models by gender for two job satisfaction factors allowed for the examination and explanation of the second objective ("to examine the relationship and links between vertical (authority, earnings, and career continuity) or horizontal (primary setting and specialty) structures and workplace attitudes. The final statistical model outcomes represent two satisfaction factors for each gender. Results indicated that there are distinct differences between males and females for each factor. The "intrinsic rewards" domain of satisfaction provided the most thought-provoking results for women respondents, while the "well-being" facet of satisfaction equation for the male sample yielded very different results that again required critical thinking.

The vertical linkage to the male primacy cultural view (Charles and Grusky 2004; Ridgeway 2006) was associated with intrinsic rewards factor scores for women respondents. On average, salaried income for these respondents was positively related to intrinsic rewards; women with high income experienced higher intrinsic rewards, while those with breaks (vs. no breaks) in continuity had lower scores. By comparison horizontal linkages to gender essentialism were through the setting chronic care (long-term and home health care) and inpatient setting (vs. outpatient). Both results had a negative effect on intrinsic rewards for the current job. And, as expected by the assumed latent linkage between females with perceived attitudes on promotion opportunities being worse for women (compared to females choosing no difference) and job satisfaction based partially on organizational justice, there was a statistically significant negative relationship between the two.

There are similar comparisons that can be made for males for the well-being factor of job satisfaction. The only significant vertical structure for men in this model was for the supervisory position (i.e., a managing role along with the likelihood of patient responsibilities). Being in a supervisory role had negative effects on the well-being factor scores for men (compared to those with no supervisory, or mainly patient, responsibilities). Consider that some management tasks plus patient care added on top can certainly produce more stress, thereby reducing well-being scores (compared to those with no supervisory responsibilities). Yet, men were still much more likely (47 percent) to be in a supervisory position than women (27 percent)—the male primacy effect.

In the horizontal setting, any inpatient location for males—sub-acute, acute, and inpatient rehab—lowered the well-being factor scores (compared to outpatient). Under horizontal focus, acute care and management/administration were both directly related to well-being. On average, men in these two specialties had higher well-being scores compared to those in orthopedics/sports. The acute care result appears counter-intuitive unless men with this area of specialty are located in facilities outside the hospital setting (e.g., physician, PT-operated, or health center offices). As explained earlier, men in the study who claimed a management focus were totally involved in their administrative duties with no patient responsibilities. This should be less stressful than those men doing double-duty (administrative work and patient care) in a supervisory position. The horizontal structure has been linked to gender essentialism. But, men are highly concentrated in orthopedics/sports physical therapy (58 percent); just 9 percent of male physical therapists are in acute care and all remaining men are spread across 12 other specialties. This makes it difficult, and perhaps unwise, to draw any other conclusions from the current data.

As expected in job opportunities better for women, males had lower well-being scores compared to those who claimed no difference by gender. Yet, promotion opportunities better for women did not result in statistical significance for men. This could be because men do benefit from a glass escalator in physical therapy. By contrast, women who believed promotion opportunities were worse for women demonstrated negative relationships associated with both intrinsic rewards *and* well-being. These

particular results require more investigation by following the suggestions listed in the previous section.

The third objective was "to determine if attitudes about vertical opportunities (promotions and jobs) have either interaction (moderating) or indirect (mediating) effects between the vertical and/or horizontal structures and worker satisfaction." Neither mediating nor moderating effects were supported by analyses in this research project.

Betz and O'Connnell (1989) asked what theoretical approach, gender socialization or social structure, could explain the differences in work orientation for females and males; their conclusion after reviewing the results of 22 studies on either students or workers by examining 10 dimensions of work orientation—socialization. By contrast, the theoretical approach of the present case study was based on a view that an individual has the capacity to recognize forces of socialization (albeit with possible distortions) and modify his or her place in the social structure. The principal force of socialization here was gender, the social structure was occupational work, and reflexivity via collective human agency and institutions provided the feedback.

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APPENDIX A

2004 PHYSICAL THERAPY LABOR FORCE SURVEY

APPENDIX A
2004 Physical Therapy
Labor Force Survey

January 2004

Prepared by:

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And

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Introduction and Purpose of Survey

The purpose of the Physical Therapy Labor Force Survey is to garner information regarding the physical therapy labor force. Results from this survey will be compiled into a report presented to American Physical Therapy Association at their annual meeting in 2004. It is hoped that these results can lead to changes in policy to improve the state of the physical therapy labor force.

As with any data collection procedure, your participation in the Physical Therapy Labor Force Survey is completely voluntary. You may refuse to answer any question(s), and you may terminate your participation in the survey at any time without penalty or risk. The enclosed survey does not request that you provide any identifying information. Faculty and graduate students at the Mississippi State University and the University of South Alabama will analyze the data collected through this survey. Data will be aggregated in the final report in order to protect your confidentiality.

Several questions included in the instrument focus on gender attitudes. These questions come from validated question sets used on national social surveys. They do not reflect the opinions of the researchers or their respective institutions.

Should you have questions concerning the Physical Therapy Labor Force Survey, inquiries should be directed to either of the Co-Principal Investigators for the Physical Therapy Labor Force Survey project. Contact information is provided below.

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Glenn Irion, Co-Principal Investigator, Associate Professor of Physical Therapy, University of South Alabama, 251-434-5091, Girion@jaguar1.usouthal.edu

2004 Physical Therapy Labor Force Survey

The Physical Therapy Labor Force Survey is sponsored by Mississippi State University and University of South Alabama.

Gender Attitudes

Please read the following statements and indicate (using a check or an X) whether you strongly agree, agree, disagree, or strongly disagree with each one of them.

Family & Changing Gender Role Survey (F&CGR) *F& CGR I (1988) has first 10 statements below but NOT 11 or 12. *F&CGR II (1994) & F&CGR III (2002) only has 8 statements; #5 & #8 are missing from II & III (later) surveys.	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Refuse/ Don't Know
1. Having a job is the best way for a woman to be an independent person. GSS 1972-2004						
2. Both the husband and the wife should contribute to the household income. GSS 1972-2004						
3. A husband's job is to earn money; a wife's job is to look after the home and family. GSS 1972-2004						
4. I would enjoy having a job even if I didn't need the money. GSS 1972-2004						
5. A working mother can establish just as warm and secure a relationship with her children as a mother who does not work.						
6. A preschool child is likely to suffer if his or her mother works. GSS 1972-2004						
7. All in all, family life suffers when the woman has a full-time job. GSS 1972-2004						
8. A woman and her family will all be happier if she goes out to work. GSS 1972-2004						
9. A job is all right, but what most women really want is a home and children. GSS 1972-2004						
10. Being a housewife is just as fulfilling as working for pay. GSS 1972-2004						
11. It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family. GSS 2000						
12. Women should take care of running their homes and leave running the country up to men. GSS 1972-2000						

13. If there are a limited number of jobs, do you approve or disapprove of a married woman holding a job in business or industry when her husband is able to support her? GSS Cumulative 1972-1994

- o Approve
- o Disapprove
- o Don't Know
- o NA

14. Do you approve or disapprove of a married woman earning money in business or industry if she has a husband capable of supporting her? GSS 1972-2000

- o Approve
- o Disapprove
- o Don't Know
- o NA

15. People have different opinions about the amount of influence that various groups have in American life and politics. Do you think that women have far too much influence, too much influence, about the right amount of influence, too little influence, or do they have far too little influence? GSS 1972-2004

- o Far Too Much
- o Too Much
- o Right Amount
- o Too Little
- o Far Too Little
- o Don't Know
- o NA

16. Would you say that most men are better suited emotionally for politics than are most women, men and women are equally suited, or women are better suited than men in this area? GSS 1972-2000 Cumulative Data file

- o Men
- o Equal
- o Women
- o Don't Know
- o NA

17. Do you think your being a (man/woman) makes your promotion opportunities better or worse? GSS 1972-2004 Cumulative File

- o Better
- o Worse
- o No Effect
- o Don't Know
- o NA

18. Do you favor or oppose women as pastors, ministers, priests, or rabbis in your own faith or denomination? GSS 1972-2004 Cumulative File

- o Favor
- o Oppose
- o No Opinion
- o Refuse

19. If the husband in a family wants children, but the wife decides that she does not want any children, is it all right for the wife to refuse to have children? 1972-1994 Cumulative File

- o Yes
- o No
- o Refuse

20. If your party nominated a woman for President, would you vote for her if she were qualified for the job? GSS 1972-2000 GSS Cumulative Data file

- o Yes
- o No
- o Wouldn't Vote
- o Don't Know/Refuse

21. Would you say that opportunities for college education are, in general, better or worse for women than for men? GSS 1972-2004 (Cumulative File)

- o Much Better For Women
- o Better For Women
- o No Difference
- o Worse For Women
- o Much Worse For Women
- o Don't Know/Refuse

22. How about job opportunities for women – do you think they are, in general, better or worse than job opportunities for men with similar education and experience? GSS 1972-2004 (Cumulative File)

- o Much Better For Women
- o Better For Women
- o No Difference
- o Worse For Women
- o
- o Much Worse For Women
- o Don't Know
- o Refuse

23. Here are three things the government might do. Some people are in favor of them while other people are against them. Please mark one circle for each statement to show how you feel. GSS 1972-2004 (Cumulative File)

23a. The government should increase opportunities for women in business and industry. GSS 1972-2004 (Cumulative File)

- o Strongly In Favor
- o In Favor
- o Neither
- o Against
- o Strongly Against
- o NA/Don't Know/Refuse

23b. The government should increase opportunities for women to go to college. GSS 1972-2004 (Cumulative File)

- o Strongly In Favor
- o In Favor
- o Neither
- o Against
- o Strongly Against
- o NA/Don't Know/Refuse

23c. Women should be given preferential treatment when applying for jobs or promotions. GSS 1972-2004 (Cumulative File)

- o Strongly In Favor
- o In Favor
- o Neither
- o Against
- o Strongly Against
- o NA/Don't Know/Refuse

24. Being born a man or a woman – how important is that for getting ahead in life? GSS 2000 Data file

- o Essential
- o Very Important
- o Fairly Important
- o Not Very Important
- o Not Important At All
- o Don't Know/Refuse

25. How often would you say that you and your friends think about women's rights? Would you say that you and your friends think about women's rights very often, sometimes, or almost never? GSS 1972-2000 Cumulative Datafile

- o Very Often
- o Sometimes
- o Almost Never
- o Don't Know/Refuse

26. How important is the women's rights issue to you--would you say it is one of the most important, important, not very important, or not important at all? GSS 1972-2000 Cumulative Datafile

- o One Of Most Important Issues
- o An Important Issue
- o Not A Very Important Issue
- o Not Important At All
- o Don't Know
- o Refuse

27. How concerned are you personally about women's rights? Are you very concerned, somewhat concerned, not very concerned, or not concerned at all? GSS 1972-2000 Cumulative Data file

- o Very Concerned
- o Somewhat Concerned
- o Not Very Concerned
- o Not Concerned At All
- o Don't Know
- o Refused

28. How much information do you have about the women's rights issue? Do you have all of the information you need, most of the information, some information, or very little information? GSS 1972-2000 Cumulative Data file

- o All
- o Most
- o Some
- o Very Little
- o Don't Know
- o Refuse

29. How firm are you about your opinion on women's rights--would you say you are very likely to change your opinion, somewhat likely to change, somewhat unlikely to change, or very unlikely to change? **GSS 1972-2000 Cumulative Data file**

- o Very Likely
- o Somewhat Likely
- o Somewhat Unlikely
- o Very Unlikely
- o Don't Know
- o Refuse

R3.a-d on F&CGRIII (2002) & also on GSS 1972-2004 **30. Do you think that women should work outside the home full-time, part-time or not at all under these circumstances:**	Work Full-Time	Work Part-Time	Stay Home	Don't Know	NA	Refuse
a. After marrying and before there are children.						
b. When there is a child under school age.						
c. After the youngest child starts school.						
d. After the children leave home.						
31. If you are married, did you (or your wife, if you are male) work outside the home full-time, part-time, or not at all...						
a. After marrying and before you had children?						
b. And what about when a child was under school age?						
c. After the youngest child started school?						
d. And how about after the children left home?						

Workplace Attitudes

Questions in this section focus on your overall attitudes toward your job. Please circle the most appropriate response [1= very strongly disagree; 10= very strongly agree]. *32-41 is 10-pt scale here but a 7-pt scale in Speakman, et al. (1996)*

	Very Strongly Disagree									Very Strongly Agree
32. My current job has too much paperwork.	1	2	3	4	5	6	7	8	9	10
33. My current job is challenging – in a positive sense.	1	2	3	4	5	6	7	8	9	10
34. My current job does not give me enough autonomy (freedom) to do my work the way I want to do my work.	1	2	3	4	5	6	7	8	9	10
35. My current job is fulfilling (enables me to use my abilities).	1	2	3	4	5	6	7	8	9	10
36. My current job is mentally stressful.	1	2	3	4	5	6	7	8	9	10
37. I have sufficient independence in decision-making in my current job.	1	2	3	4	5	6	7	8	9	10
38. My current job is physically demanding.	1	2	3	4	5	6	7	8	9	10
39. My work is interesting.	1	2	3	4	5	6	7	8	9	10
40. In my current job, I am overworked.	1	2	3	4	5	6	7	8	9	10
41. In my current job, I am learning and improving in my work.	1	2	3	4	5	6	7	8	9	10

Work History Social Stratification of PTs

The questions in this section concern the jobs you have had in physical therapy. Please mark the appropriate answer – clearly – in the space provided..

42. How long have you been a physical therapist? Total yrs practicing PT ___ Months ___ Years

43. How many jobs have you had working as a physical therapist? # of employers (PT;FT)

_____ Full-Time
_____ Part-Time

44. How many times in your job history have you worked more than one job simultaneously?
#_____

45. How many job changes you have made involved periods of unemployment greater than one month between the initial and destination job? # of career interruptions
_____

(If no job changes, skip to question #46.)

45a. Of all the job changes you have made, how many of these changes resulted in:

Autonomy, Income, & Supervision could be used as individual markers for level of career satisfaction

Increased Autonomy (freedom/flexibility) # _____
Increased Income # _____
Decreased Autonomy (freedom/flexibility) # _____
Decreased Income # _____

45b. How many of these job changes resulted in increased authority in terms of supervisory duties? # _____

45c. If one or more, how many job changes resulted in increased authority concerning:

Pay of employees under your supervision # _____
Promotions of employees under your supervision # _____
Hiring/Firing employees under your supervision # _____

45d1. How many of these job changes resulted in decreased authority in terms of supervisory duties? # _____

45d2. If one or more, how many job changes resulted in decreased authority concerning:

Pay of employees under your supervision # _____
Promotions of employees under your supervision # _____
Hiring/Firing employees under your supervision # _____

46. What is the ***primary*** setting of your current job? (*Please indicate the setting for your primary position if you are in more than one position.)*Structural Question

- ☐ Acute Care
- ☐ Inpatient Rehabilitation
- ☐ Outpatient
- ☐ Home Health Care
- ☐ Long Term Care
- ☐ Sub-acute Care
- ☐ Academia
- ☐ Consultant
- ☐ Other: _____

47. What is the *primary* focus of your current job? (*Please indicate the focus for your primary position if you are in more than one position.)* *Structural Question*

- ❑ Pediatrics
- ❑ Orthopedics/Sports
- ❑ Geriatrics
- ❑ Acute Care
- ❑ Cardiopulmonary
- ❑ Neurological
- ❑ Wound Management
- ❑ Occupational Health
- ❑ Other: _____

48. Please list the 3 most important factors you considered when you accepted your current job. Open-ended but these responses could be recoded to reflect what are possible sources of job satisfaction

1. _____
2. _____
3. _____

49. Please list the 3 most important factors you considered when you left your previous job.

1. _____
2. _____
3. _____

50. To aid us in examining transitions in the workplace, please list all physical therapy positions that you have held, beginning with the first and ending with your current. **Do not put specific places of employment; please list only the dates of employment, position you held, and your reason for leaving. We do not wish to have identifying information.** Use the last entry (to determine most recent job title & # of years in this position.

If you need more spaces, please attach a separate piece of paper to the survey before returning it.

Dates of Employment	*Position/Title*	*Reason for Leaving*
Dates of Employment	*Position/Title*	*Reason for Leaving*
Dates of Employment	*Position/Title*	*Reason for Leaving*
Dates of Employment	*Position/Title*	*Reason for Leaving*

Dates of Employment	*Position/Title*	*Reason for Leaving*
Dates of Employment	*Position/Title*	*Reason for Leaving*
Dates of Employment	*Position/Title*	*Reason for Leaving*

Please check the most appropriate response. The questions are merely for classification purposes.

51. What is your gender? (Possible moderating/mediating effects?) Social Stratification issue

- ❑ Female
- ❑ Male

52. What is your race/ethnicity? Social Stratification issue

- ❑ Caucasian
- ❑ African American
- ❑ Pacific Islander
- ❑ Native American
- ❑ Asian
- ❑ Other _____ (Please specify)

53. How would you best describe your current employment status?

- ❑ Employed full-time (30 hours/week or more)
- ❑ Employed part-time (less than 30 hours/week)
- ❑ Self-Employed full-time (30 hours/week or more)
- ❑ Self-Employed part-time (less than 30 hours/week)

54. Which of the following best describes <u>your</u> own personal annual income?

- ❑ $19,999 and below
- ❑ $20,000 - $29,999
- ❑ $30,000 - $39,999
- ❑ $40,000 - $49,999
- ❑ $50,000 - $59,999
- ❑ $60,000 - $69,999
- ❑ $70,000 - $79,999
- ❑ $80,000 - $89,999
- ❑ $90,000 - $99,999
- ❑ $100,000 - $149,999
- ❑ $150,000 and above

55. What is the highest level of education you have achieved?

- ❑ Some College
- ❑ Associates degree
- ❑ Undergraduate degree
- ❑ Master's degree
- ❑ Advanced Master's Degree
- ❑ Professional/Entry-Level DPT
- ❑ Transitional/Post-Professional DPT
- ❑ PhD
- ❑ Other _____

56. What is your marital status?

- Married
- Divorced
- Widowed
- Separated
- Single [Never married]
- Partnered relationship

57. In what year were you born? 19 _____

58. What is the 5-digit zip code of your current residence? _____

Thank you for participating in this survey.

Aggregated results are available upon request from the researchers, who can be reached at Cossman@ssrc.msstate.edu *or* Girion@jaguar1.usouthal.edu

*Notes in lighter shade of gray were not part of the administered survey.

APPENDIX B

ADDITIONAL TABLES, FIGURE, AND EQUATION

Table B.1 Measures of Sampling Adequacy (MSA) for Eight Workplace Attitude Statements in Factor Analysis for Overall 2004 PT Sample (N=1112)

Statement	MSA
Factor 1 – Intrinsic Rewards	
My current job is challenging—in a positive sense.	.80
My current job is fulfilling (i.e., enables me to use my abilities).	.79
My work is interesting.	.82
In my current job, I am learning and improving in my work.	.86
Factor 2 – Psychological/Physical Well-being	
My current job has the right amount of paperwork.	.75
My current job is not mentally stressful.	.65
My current job is not physically demanding.	.72
In my current job, I am not overworked.	.62

Table B.2 Total Variance Explained by Two Factors of Eight Items on Workplace Attitude Scale[1] (N=1112)

	Initial Eigenvalues			Extracted Sums of Squared Loadings		
Factor	Total	% Variance	Cumulative %	Total	% Variance	Cumulative %
1	2.94	36.76	36.76	2.58	32.22	32.22
2	1.98	24.73	61.49	1.48	18.55	50.77

[1]Extraction Method: Maximum Likelihood.

Table B.3 Inter-Item Correlation Matrix and Descriptives for Factor 1 – Intrinsic Rewards and Factor 2 – Well-Being (N=1112)

	challenge (+ sense)	fulfilling	interesting	learning & improving	Cronbach Alpha	Mean	SD
Factor 1 Intrinsic Rewards					0.87	8.1	1.6
challenge: (+ sense)	1.00					8.0	1.7
fulfilling	0.71	1.00				8.1	1.7
interesting	0.66	0.69	1.00			8.4	1.5
learning & improving	0.60	0.55	0.58	1.00		7.9	1.7
	right amount of paperwork	not mentally stressful	not physically demanding	not overworked	Cronbach Alpha	Mean	SD
Factor 2 Well-Being					0.65	4.4	2.3
right amount of paperwork	1.00					3.6	2.2
not mentally stressful	0.31	1.00				4.2	2.1
not physically demanding	0.15	0.23	1.00			4.5	2.3
not overworked	0.36	0.58	0.26	1.00		5.2	2.4

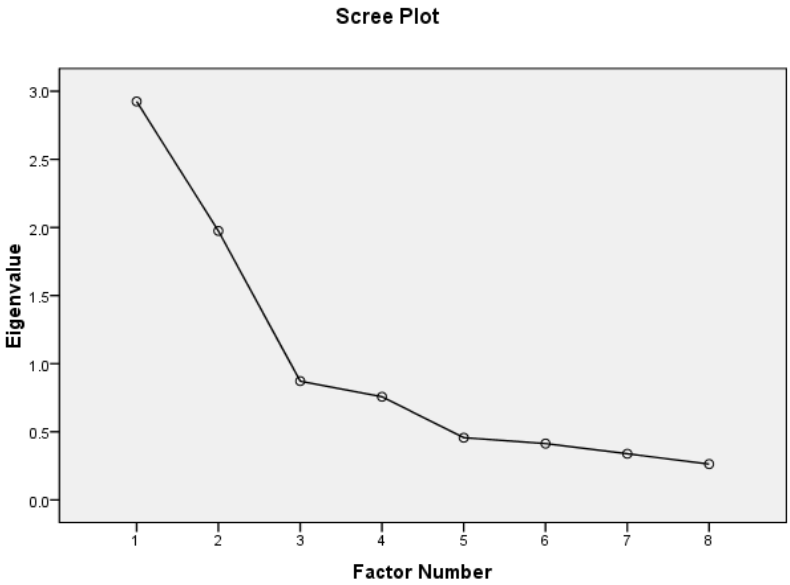

Figure B.1 Scree Plot

Table B.4 Measures of Sampling Adequacy (MSA) for Eight Workplace Attitude Statements in Factor Analysis for Female (N=897) & Male (N=215) PTs

Statements	MSA Females	MSA Males
Factor 1 – Intrinsic Rewards		
My current job is challenging—in a positive sense.	.79	.82
My current job is fulfilling (i.e., enables me to use my abilities).	.80	.78
My work is interesting.	.81	.80
In my current job, I am learning and improving in my work.	.85	.89
Factor 2 – Psychological/Physical Well-being		
My current job has the right amount of paperwork.	.74	.73
My current job is not mentally stressful.	.63	.69
My current job is not physically demanding.	.68	.82
In my current job, I am not overworked.	.62	.64

Table B.5 Total Variance Explained by Two Factors of Eight Items on Workplace Attitude Scale for Female (N=897) & Male (N=215) PTs[1]

Females	Initial Eigenvalues			Extracted Sums of Squared Loadings		
Factors[2]	Total	% Variance	Cumulative %	Total	% Variance	Cumulative %
1	2.88	36.03	36.03	2.52	31.49	31.49
2	1.99	24.85	60.88	1.49	18.64	50.13
Males	**Initial Eigenvalues**			**Extracted Sums of Squared Loadings**		
Factors[2]	**Total**	**% Variance**	**Cumulative %**	**Total**	**% Variance**	**Cumulative %**
1	3.26	40.70	40.70	2.87	35.90	35.90
2	1.85	23.10	63.80	1.40	17.45	53.35

[1]Extraction Method: Maximum Likelihood
[2]Factor 1 is Intrinsic Rewards and Factor 2 is Psychological & Physical Well-Being.

Table B.6 Inter-Item Correlation Matrix and Descriptives for Female PTs: Factor 1 & Factor 2 (N=897)

	challenging: positive sense	fulfilling	interesting	learning & improving	Cronbach's Alpha	Mean	SD
Factor 1 - Intrinsic Rewards					0.87	8.1	1.6
challenging: positive sense	1.00					8.0	1.6
fulfilling	0.70	1.00				8.1	1.7
interesting	0.66	0.67	1.00			8.5	1.4
learning & improving	0.61	0.54	0.56	1.00		7.9	1.7
	right amount of paperwork	not ment stressful	not physically demanding	not overworked	Cronbach's Alpha	Mean	SD
Factor 2 - Well-Being					0.64	4.3	2.3
right amount of paperwork	1.00					3.5	2.1
not mentally stressful	0.32	1.00				4.1	2.1
not physically demanding	0.12	0.23	1.00			4.4	2.3
not overworked	0.35	0.59	0.24	1.00		5.1	2.4

Table B.7 Inter-Item Correlation Matrix and Descriptives for Male PTs: Factor 1 & Factor 2 (N=215)

	challenging: positive sense	fulfilling	interesting	learning & improving	Cronbach Alpha	Mean	SD
Factor 1 - Intrinsic Rewards					0.89	8.0	1.7
challenging: positive sense	1.00					7.9	1.8
fulfilling	0.77	1.00				8.0	1.8
interesting	0.69	0.77	1.00			8.2	1.6
learning & improving	0.56	0.59	0.65	1.00		7.9	1.7
	right amount of paperwork	not ment stressful	not physically demanding	not overworked	Cronbach Alpha	Mean	SD
Factor 2 - Well-Being					0.67	4.6	2.3
right amount of paperwork	1.00					3.6	2.3
not mentally stressful	0.31	1.00				4.4	2.2
not physically demanding	0.25	0.22	1.00			5.1	2.3
not overworked	0.42	0.53	0.28	1.00		5.5	2.4

Table B.8 Unstandardized Regression Coefficients for Intrinsic Rewards & Well-Being in the Overall Model without Opportunities Variables (N=1112)

	Intrinsic Rewards Model 1 Unstd B	Sig	**Well-Being** Model 2 Unstd B	Sig
(Constant)	-.125		.153	
Any Breaks	-.153	*	-.019	
Personal Income	.051	**	-.035	
Inpatient Setting	-.137		-.092	
Chronic Care Setting	-.280	*	.206	
Other Setting	-.181		.086	
Pediatrics Focus	.514	***	-.157	
Geriatrics Focus	-.103		-.150	
Acute care Focus	-.023		.055	
Neurological Focus	.044		-.158	
Occup Health Focus	.298		.154	
Mgt/Admin Focus	-.044		-.025	
Women Health Focus	.431[1]		-.282	
Other Focus	.249		-.089	
Male	-.186	*	.223	***
NOT White	-.127		.106	
Part-time	-.033		.363	***
Undergrad Degree	.062		-.032	
Never Married	-.132		.073	
Age 40 or more	-.022		-.106	
Promotion Ops Worse	--		--	
Promotion Ops Better	--		--	
Job Ops Worse	--		--	
Job Ops Better	--		--	
R Square	.066		.058	
F-statistic	4.070	***	3.512	***

[1]p=.058 in Model 1
*p<.05; **p<.01; ***p<.001

Table B.9 Unstandardized Regression Coefficients for Intrinsic Rewards & Well-Being for Female (N=897) & Male (N=215) Physical Therapists without Opportunities Variables

	Intrinsic Rewards				Well-Being			
	Model 1 Females		Model 2 Males		Model 3 Females		Model 4 Males	
	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig	Unstd B	Sig
(Constant)	-.165		.170		.136		.272	
Any Breaks	-.186	*	-.005		.021		-.274	
Personal Income	.056	*	-.029		-.026		.002	
Supervisory Position	.072		.011		-.090		-.403	**
All Inpatient Setting[1]	-.182		--		-.011		--	
Acute & Sub-acute Setting	--		-1.009	**	--		-.580	*
Inpatient Rehab Setting	--		-.220		--		-.735	**
Chronic Care Setting	-.358	**	--		.096		--	
All Other Settings	-.261		-.236		.099		.191	
Pediatrics Focus	.501	***	1.089	**	-.121		-.477	
Neurological Focus	.211		-.518		-.299	*	.616[3]	
Women Health Focus	.431[2]		--		-.230		--	
Acute Care Focus	--		1.127	**	--		.534	
Mgt/Admin Focus	--		.535		--		.675	*
All Other Foci	-.018		.142		-.084		-.030	
NOT White	-.167		-.017		.068		.323	
Part-time	.041		-1.468	***	.361	***	.320	
Undergrad Degree	.007		.234		.038		-.484	**
Never Married	-.122		-.193		.090		-.126	
Age 40 or more	.040		.063		-.133		.202	
Promotion Ops Worse	--		--		--		--	
Promotion Ops Better	--		--		--		--	
Job Ops Worse	--		--		--		--	
Job Ops Better	--		--		--		--	
R Square	.068		.147		.057		.173	
F-statistic	4.268	***	2.135	**	3.578	***	2.584	***

[1]Includes sub-acute, acute care and inpatient rehab
[2]p=.066 in Model 1
[3]p=.064 in Model 4
*p<.05; **p<.01; ***p<.001

$$F^{1}_{K+1,\ N1+N2-2K-2} = \frac{(SSE_c - SSE_u) * (N_1 + N_2 - 2K - 2)}{SSE_u * (K + 1)}$$

where:

F	=	the value of incremental F statistic
SSE_c	=	Error Sum of Squares for constrained model
SSE_u	=	Error Sum of Squares for unconstrained model
N_1	=	number of observations for Group 1
N_2	=	number of observations for Group 2
K	=	number of parameters

[1]This equation is also referred to as the Test of Equality between Sets of Coefficients in Two Linear Regressions or the Chow Test.

Figure B.2 The Equation for Calculating the Differences in Models & Effects