I, Cara L Metz, hereby submit this original work as part of the requirements for the degree of Doctor of Education in Counselor Education.

It is entitled:
The effects of mental health and physical health on job satisfaction in the mental health field

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The Effects of Mental Health and Physical Health on
Job Satisfaction in the Mental Health Field

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Abstract

This study explores interrelationship among social support, demographic factors, mental and physical health and job satisfaction among mental health professionals. Past research of the impact of health in work among mental health professionals has focused on clinicians who directly provide mental health services to clients and focus on burnout (e.g., Farber & Heifetz, 1982). Little attention has been paid to the other mental health professionals who may also work as supervisors and administrators. This study aimed at investigating how different positions, years of experience, gender and social support would impact mental health professionals’ physical health, mental health and job satisfaction. It was hypothesized that job satisfaction would be positively influenced by mental health and physical health which would be influenced by gender, years of experience, position, and social support. Mental health professionals from three local mental health counseling centers in a Midwest state were recruited to participate in the study. Instruments used included the Duke Health Profile (Parkerson, Broadhead, & Tse, 1990), Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), an Adapted Multidimensional Scale of Perceived Social Support, Hackman and Lawler’s (1971) questions assessing job satisfaction, and a demographic questionnaire. Structural Equation Modeling (SEM) was used to examine the hypothesized relationship among the demographic factors, social support, mental and physical health and job satisfaction. The results from the study were mixed. Not all of the variables studied affected mental health or physical health. Social support was found to influence both physical and mental health; however years-of-experience was only related to mental health. Neither gender of position was found to have significant relationship to mental and physical health. The study found a strong path from social support to mental health, and ultimately to job satisfaction, suggesting the mediating role of
mental health between predicting variables and job satisfaction. It is also noted that physical health, though not having a direct significant relationship to job satisfaction, did have indirect influence to job satisfaction through its significant relationship with mental health. The findings of this study that social support and mental health play an important role in helping professionals’ job satisfaction indicate the importance of maintaining psychological well-being and providing supportive environment to workers in mental health agencies. Counselor educators could apply this finding to incorporate training about self-care and promoting social interaction and support in the curriculum.
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CHAPTER I

Introduction

Background of Problem

There has been much research in the past 30 years studying the factors that contribute to the attainment of job satisfaction. A growing number of research investigations have shown that mental and physical health interacts with job satisfaction. Specifically, research has shown the differences between the interaction in mental and physical health and job satisfaction with respect to gender (Bogg & Cooper, 1994), career level (Bogg & Cooper, 1995; Kirkcaldy & Siefen, 2002; Lu, Tseng, & Cooper, 1999; Siu, Cooper, Donald, 1997), specific mental and physical disorders (Cooper, Rout, & Faragher, 1989; Karasek, Theorell, Schwartz, Schanall, Pieper, & Michela, 1988), person-environment fit (Edwards & Van Harrison, 1993; Furnham & Schaeffer, 1985; Yang, Che, & Spector, 2008), and burnout (Evans, Huxley, Gately, Webber, Mears, Pajak, Medina, Kendall, & Katona, 2006; Humbeek, Van Audenhove, & Declercq, 2004; Martin & Shinke, 1998; Maslach & Jackson, 1982; Prosser, Johnson, Kuipers, Szmukler, Bebbington, & Thornicroft, 1997; Prosser, Johnson, Kuipers, Dunn, Szmukler, Reid, Bebbington, & Thornicroft, 1999). Although there have been numerous research studies on the effects of mental health, physical health, and job satisfaction, most of it deals in the Industrial/Organizational (I/O) Psychology literature, focused on issues pertaining to individuals in the business field. There is a lack of research concerning the health and satisfaction of professional jobs and, specifically, in the mental health profession. Most research completed with the mental health profession focusing on clinicians and burnout (Evans et al., 2006; Farber & Heifetz, 1982; Humbeek et al., 2004;
..0& Schinke, 1998, Prosser et al., 1997; Prosser et al., 1999; Reid, Johnson, Morant, Kuipers, , Thornicroft, Bebbington, & Prosser, 1999). There are few studies on the other career paths of mental health workers and their job satisfaction. It is also unknown if those positions with little to no direct client contact, such as supervisors and administrative/management positions would be different from mental health workers with direct contact or similar to professionals in other settings.

When referring to the mental health profession, a clinical worker who provides clinical interventions to clients comes to mind, but those who are in the profession of mental health have a variety of roles in which they can engage. Even within the same agency, a person with a graduate degree, either a masters or doctoral degree in the mental health profession, such as mental health counselor or clinical social worker, can be employed in different levels of service. For example, mental health professionals may be involved in direct contact with a client, in which they would be acting in the role of the therapist. Mental health professionals can also be in indirect contact with a client by engaging in a supervisory relationship with another mental health professional that has direct contact with clients, as in a clinical supervisor. Finally, mental health professionals can be in administration, in which mental health professionals engage in overseeing the running of a facility, which encompasses direct contact with clients and relies on supervisors and mental health professionals with direct contact to inform them on the everyday interactions with clients. In some cases, individuals might also act as a combination of these duties.

Similar professionals who work with clients or patients in multiple roles, include psychiatric nurses and psychiatrists. Research focuses on the relationship among job satisfaction, mental health, and physical health and the different roles in which a person can be
employed (Cooper et al., 1989; Dallender, Nolan, Soares, Thomsen, & Arnetz, 1999; Williams, Konrad, Schelecker, Pathman, Linzer, McMurray, Gerrity, & Schwartz, 2001). These studies have found that a decrease in job satisfaction leads to an increase in behaviors such as drinking or smoking. The psychiatric medical population is of interest in comparing with the mental health profession because they interact with clients and deal with stressors, as mental health professionals do. Such nature of work is not found elsewhere in the job field. Mental health professions often deal with situations where they are expected to alleviate distress (Maslach & Jackson, 1982), deal with situations where there is emotional and physical suffering, and the chance of transference (Mowardi, 1983) might be heightened. These situations can often be found also in the mental health profession. In these professions, though, there are no studies that look at how job satisfaction differs between different roles these professionals might play, rather they focus on those individuals who have direct contact with clients.

The mental health profession is different than many other professions that have been previously researched, such as physicians (Allibone, Oakes, & Shannon, 1981; Caplan, 1994; Cooper et al., 1989; Green, Duthie, Young, & Peters, 1990; Rucinski & Cybul ska, 1985; Williams et al., 2001), civil servants (Bogg & Cooper, 1994; Bogg & Cooper, 1995), and managers (Fotinatos-Ventouratos & Cooper, 1998; Lu et al., 1999; Siu et al., 1997) due to the mental health professionals’ interactions with clients. In the mental health profession, interactions with clients are primarily on an emotional and behavioral level. The training and focus in for mental health field is on coping and balance, also helping people manage distressing problems within their life. Although many professions might occasionally deal with tense situations, both within their company and with their employees, mental health professionals are specifically trained to deal with crisis management and emotional situations and often spend a
majority of their day dealing with crisis and emotional issues. Mental health professionals, due to their training, often times have differing skill sets than other professions. Those who are in human service-type jobs often try to modify clients’ cognitive structuring, behaviors, or coping skills in order for clients to perform comfortably and effectively in their environment. Due to their day-to-day empathetic dealings with clients, it has been found that social service workers, who deal directly with clients, experience a greater level of work overload, with the lack of rewards and social relationships (Oginska-Bulik, 2005).

Research also focused on the years of experience and age playing a role on job satisfaction. Furnham and Schaeffer (1984) posit that in most cases an older person tends to have more experience in a field, as compared to a younger person who is just starting. With age and years of experience comes greater job satisfaction (Furnham & Schaeffer, 1984; Holland, 1996; O’Brien & Dowling, 1980) and improved mental and physical health (Lu, Kao, Cooper, & Spector, 2000). It is likely that the same pattern will emerge in studying the mental health field, as we find in the for-profit business sector.

**Social support.** Social support has been determined to be an important aspect in the mental health of individuals. There have been studies that have found that improved social interactions can improve anxiety (Farber & Heifetz, 1982; Landisbergis et al., 1992; Lee & Robbins, 1998), depression (Landisbergis et al., 1992), and self-esteem (Lee & Robbins, 1998). There has been research completed that also links social support to improved job satisfaction, with respect to having positive feedback from work from supervisors (Martin & Schink, 1998; Stansfeld et al., 1999). If a person has a good balance between work and home life, with neither interfering too much with the other, job satisfaction has been shown to increase (Casey & Grzywacz, 2008; Haar, 2004; Rudd & McKenry, 1986). Less research has been done looking at
Social support and physical health (Yang et al., 2008). Social support could play an important role in the mental health profession due to spending most of the day with clients, and less time interacting with co-workers.

**Mental and physical health in relationship to job satisfaction.** The existing research that explores job satisfaction and the relationship with mental and physical health is mainly completed in the field of I/O Psychology. Most research is completed in the for-profit business world, comparing types of workers. The culmination of the research shows that in general, management has the highest job satisfaction and the best health (Fotinatos-Ventouratos & Cooper, 1998; Lu et al., 1999), compared to middle managers and blue-collar workers. The lowest satisfaction and health has consistently been found in middle management (Siegrist, 1996; Sui et al., 1997).

Research in mental health workers has focused a lot on burnout. Burnout is the physical and the mental impact that the job has on an individual. The current study is also taking a look at the physical and mental health interaction with job satisfaction. The interaction between mental and physical health is becoming a highly researched area (Ortega, Feldman, Canino, Steinman, & Alegría, 2006; Mykletun, Bjerkeset, Dewey, Prince, Overland, & Stewart, 2007; Parks, Svendsen, Singer, & Foti, 2006). It has been found that those who have been diagnosed with a mental health disorder die 25 years before the rest of the population. The mortality of this population is not due completely to suicide, but to physical disorders such as cardiovascular and pulmonary diseases (Parks et al., 2006). The disparity between the mortality of a population with mental illness and those who do not have any mental illness is so great that it is worthy of examining the relationship between mental and physical health.
Studies have found that in psychiatric disorders, such as anxiety, a connection to diabetes and cardiovascular disease (Hippisley-Cox, Fielding, & Pringle, 1998). Depression and asthma have had research results connecting them (Hippisley-Cox et al., 1998), diabetes, and high blood pressure (Wells, Golding, & Burnam, 1989). There tends to be a stronger relationship between physical and mental health when there is more than one existing mental health diagnosis.

There has also been much research on how mental and physical illness can cause loss of productivity, which then cost the government and companies money. It has been estimated that upwards to as much as $80 billion is lost each year in loss of productivity, absenteeism, turnover, and health issues related to stress (Mann, 1996). Not only is it important to companies for an employee to stay healthy, but it is also important to the employee him/herself. In the mental health field it is important for individuals to stay both mentally and physically healthy due to increasing demands in clinicians’ own productivity. Mental health professionals typically have to see a certain number of clients each month or charge a certain number of direct contact hours required by a counselor’s employer. If a certain workload (i.e. sufficient contact hours) is not reached, there are generally consequences, such as reduced income for the agency and very likely the mental health professional as well, if not job loss. So, if a counselor is severely sick, he or she might have a tough time maintaining the expected productivity. Also, a person in this type of job might feel it necessary to come to work sick in order to keep up with productivity. If productivity hours are not set, then typically a mental health professional is paid for the number of hours he or she charges. It would be important for a mental health professional to stay healthy because otherwise they would not earn the money they need. In addition to decreased productivity, a mental health professional would be unable to take care of his or her client’s welfare as well. Missing work or not working at a person’s greatest capacity can greatly affect a
mental health professional’s effectiveness of services to clients and productivity, as well as the agencies’ efficiency and revenues.

Much of the research published with mental health professionals is on burnout, which can lead to mental health symptoms, distress, and decreased job satisfaction (Evans et al., 2006; Farber & Heifetz, 1982; Humbeek et al., 2004; Martin & Schinke, 1998, Prosser et al., 1997; Prosser et al., 1999; Reid et al., 1999). Burnout is exhaustion due to extreme demands on both a person’s resources and emotions (Evans et al., 2006; Martin & Schinke, 1998). These studies tend to focus on only those who have direct contact with clients (Farber & Heifetz, 1982; Martin & Schinke, 1998; Prosser et al., 1999), and leaves out supervisors and administrators, who also play vital roles to the mental health system. It is important to understand and explore mental health workers at various levels because everyone is an integral part of the system.

This study is using the ecological counseling model (Conyne & Cook, 2004) as the theoretical framework to explain the interrelationship among demographic factors, mental and physical health and job satisfaction. The ecological approach to career development takes into account how one interacts with his or her environment and how it relates to how a person thinks, feels and behaves, which in turn influences satisfaction (Cook, O’Brien, & Heppner, 2004). Much of the research examining how the environment interacts with the person in terms of health is based on a macro-level, which has started to give light to how stress and job congruence can have an effect on one’s health (Schwartz, Pieper, & Karasek, 1988) and job satisfaction.

This study will examine the relationship of physical and mental health and satisfaction, and see how demographic backgrounds such as position held, years of experience, and gender influence health and satisfaction.
Purpose of the Study

The purpose of this study is to investigate the relationships among mental health, physical health, and job satisfaction, and to determine how demographic factors such as job rank, work experience in the counseling field, and gender would affect mental and physical health, and ultimately, job satisfaction. The study further explores whether holding the primary position of therapist, supervisor, or administrator will affect job satisfaction and the interactions with mental and physical health, as well whether social support mediates the relationships between job satisfaction and physical and mental health.

The three variables of significant importance to understand the influence of mental health professionals’ job satisfaction are social support, mental health, and physical health. This study explored the interrelationship among demographic variables including job positions held, social support, mental and physical health, and job satisfaction. The study aimed at investigating whether mental and physical health could be the mediator between individual factors, positions held, support they receive, and their job satisfaction. In the mental health field, the concept of burnout, which takes into consideration the mental health, physical health, and job satisfaction, has been studied with respect to direct service providers, namely therapists. However, most studies have overlooked the various roles played by the mental health professional. The present study aims at examining these roles to see if they follow the same pattern as the for-profit, non-mental health field, in that administrators would have the greatest mental health, physical health, and job satisfaction, and the supervisors having the least.

Hypothesis

The theoretical framework for conceptual model is based on the Ecological Counseling model (Conyne & Cook, 2004), as it pertains to career counseling (Cook et al., 2004). This
study proposed a model that takes into account the interrelationships between three predicting variables: physical health, mental health, and position to job satisfaction. The main hypothesis is that job satisfaction will be positively related to physical health and mental health, which are influenced by the factors of social support, job position, years of experience, and gender. Figure 1 shows the relationship among these variables.

More specific hypotheses include:

1.) The relationship between mental and physical health will be significantly positive.
2.) The relationship between physical and mental health and job satisfaction will be positive.
3.) Those mental health professionals in the main role of administration or management will have a positive relationship with job satisfaction. This positive relationship will be more significant than those in a supervisory or clinical role.
4.) Years of experience will be positively related to job satisfaction.
5.) Social support will be positively related to job satisfaction and mental and physical health.

Significance

This study will add to the understanding of job satisfaction, particularly with the mental health profession. It will also take a closer look at the counseling profession that goes beyond just looking at burnout in those with direct client contact. It will add to the knowledge of possible health risks, and the need for self-care in different positions in the counseling field, including both types of work that involve direct and indirect contact with clients. For example, becoming more aware of how job satisfaction, mental health, and physical health are affected by
Figure 1. Conceptual model
the type of position can bring greater awareness of the need for good self-care practices and supervision for clinicians, supervisors, and administrators.

There is currently no research on job satisfaction that investigates beyond how mental health, physical health, and social support affect job satisfaction. It is important to include position held in the counseling profession when taking into account the mediators of job satisfaction. All of these positions held by those in the mental health field are by those who have the same basic training. This training includes the importance of healthy coping skills, empathy, and the need for self-care in order to avoid burnout. The current study is adding to the current research by examining various levels of career within the same field. It will be sought to study whether the mental health profession’s job satisfaction and health react like the for-profit, non-mental health sector that has already been studied. In taking all positions a mental health professional might hold and understanding their job satisfaction, as it relates to mental and physical health, we can improve the educational training individuals in this profession to be more inclusive and look beyond the counselor/client relationship

This study will contribute to implications for the ecological counseling model, and how it relates to career counseling. It will do so by examining a career path that requires at least a master’s degree, which not a lot of research has focused, while also assessing the different types of positions that one with similar educational backgrounds can hold. In having more education, a person is more invested in the career path that they have chosen, which could cause them to have a greater sense of satisfaction and take more prudent care of their health, especially in having an educational background that emphasizes the need for positive, healthy self care practices.
CHAPTER II

Literature Review

This chapter will review the relevant research in job satisfaction and its association with mental health, physical health, and the relationships between the three. The review will also include the influencing factors to the interrelationship of physical health, mental health, and job satisfaction using career theory and the ecological model. Finally a summary of the literature that synthesizes the current status of pertinent literature will be reviewed.

Job Satisfaction and Health

There have been numerous studies that have investigated the relationship between job satisfaction, and mental and physical health. Job satisfaction can be defined using Locke’s (1976) definition: “job satisfaction results from the perception that one’s job fulfills or allows the fulfillment of one’s important job values” (p. 1307). Mental and physical health have been reviewed in different ways, looking at specific disorders such as hypertension, anxiety, and depression, and other research has looked more at overall health.

Mental health. The relationship between job satisfaction or dissatisfaction and its effects on health has been examined in many studies. Past-published research states findings of a relationship between job satisfaction and mental health (Faragher, Cass, & Cooper, 2005; Henne & Lock, 1985), focusing much attention on depression (Oginska-Bulik, 2005; Tsutsumi, Kayaba, Theorell, & Siegrist, 2001; Van Harrison, 1978) and anxiety (Faragher et al., 2005; Van Harrison, 1978). When job demands are high and a person does not have a lot of ability to make decisions and be independent in their job, they tend to have greater incidences of depression (Tsutsumi et al., 2001), with people who are in positions of management having a decreased risk
for depression, due to their ability to make decisions and be independent in their job (Alterman et al., 2008).

It is also known that in general, most mental health disorders go untreated (Hilton, Scuffham, Sheridan, Cleary, & Whiteford, 2008). So, although many of the studies use instruments that are able to detect a possible mental illness, this would not mean that the individual has recognized a possible mental concern or that the concern necessitated further treatment. Due to overlooking mental health issues, it could be that individual’s work performance is hindered. It has been found that job satisfaction can be associated with several mental health disorders, including depression, anxiety (Edwards & Rothbard, 1999; Faragher et al., 2005), self-esteem (Faragher et al., 2005), and other general mental health conditions (Edwards & Rotherbard, 1999; Faragher et al., 2005).

Although it has been found that mental health and job satisfaction are associated, at this point it is difficult to determine whether job stress causes psychological symptoms or that possibly psychological problems might cause stress and dissatisfaction. A mentally healthy individual coming into a new job will have a greater likelihood to have a healthy, realistic set of expectations (Henne & Locke, 1985) and coping skills. Also, a person who has good mental health will act in a way that reinforces his or her healthy self-concept. A person who is not as mentally healthy will probably think more illogically and possess decreased ambitions, which can affect their job satisfaction and performance (Henne & Locke, 2005).

Physical health. Job satisfaction is related to physical health research has shown (Faragher et al., 2005; Siegrist, 1996; Tsutsumi et al., 2001; Van Harrison, 1996). The amount of stress that is experienced in the workplace can affect the overall health of an individual (Chemers, Hays, Rhodewalt, & Wysocki, 1985; Furnham & Schaeffer, 1984; Oginska-Bulik,
Research has suggested that job dissatisfaction, job distress, and a poor job fit can be linked to cardiovascular disease (Faragher et al., 2005; Karasek et al., 1988; Siegrist, 1996; Van Harrison, 1996) and peptic ulcers (Van Harrisson, 1978). Many of the findings about mental and physical health issues deal with the situation where the demands are high and the rewards are low, thus resulting in decreased job satisfaction. This has been the scenario for cardiovascular disease (Siegrist, 1996) and depression (Tsutsumi et al., 2001).

Cardiovascular disease is related to job satisfaction. As mentioned before, when there exists a situation where the demands on a person are high and the rewards are low, the result is a decrease in satisfaction. Siegrist (1996) found that when the high-effort/low reward situation occurs, there is an increase in cardiovascular disease in looking at “blue collar” workers. Karasek et al. (1988) found similar results in looking at more of a control model. Their study concluded that in looking databases, those males who had little control, but high psychological stress had higher rates of myocardial infarction.

Research has exemplified the relationship between depression and job satisfaction. Tsutsumi et al. (2001) looked at depression in Japanese workers. They found that in situations where there was an imbalance in the amount of effort put into a job versus the amount of reward received there was an increase in depression. They explained that the increase in depression was due to a decrease in perceived power.

Numerous job characteristics affect a person’s health. For example, working in a job that requires physical activity seems to be correlated with a greater risk of engaging in the activities of smoking and drinking (Alterman, et al., 2008). This could also be linked to the social class, due to these jobs tending to be blue collar. Those individuals who work with people will reduce the risk of smoking and drinking, but they may tend to have a higher proclivity to be overweight
and develop hypertension. This could be important to the current study due to the job
description of the social service industry, which requires the helping professionals to deal with
clients and supervisees. Also, having a job in which you guide others, such as a management
position, shows that it tends to have a decreased risk of depression and hypertension (Alterman et
al., 2008).

**Connecting Mental and Physical Health**

Mental and physical health have an influence on one another, which may affect how job
satisfaction acts on mental and physical health. As mentioned previously, individuals who have
been diagnosed with a mental illness die 25 years before those who do not have a mental health
disorder (Parks et al., 2006). The mental and physical health connection is amplified with the
increase of physical health issues, meaning, being diagnosed with two physical illnesses, a
person is more likely to be experiencing mental health symptoms (Cooke et al., 2007). This
could partially be because all emotional reactions involve a physical reaction, which could
influence improper bodily function (Henne & Locke, 1985). Whether poor mental health causes
a decrease in physical health is unknown because the causation has yet to be identified. In
dealing with both mental illness and physical health, there can be costs to productivity, time off,
as well as associated health care costs. These costs can add stress to an individual as well as
contribute to the satisfaction or dissatisfaction of an individual.

**Mental health and heart disease.** Heart disease has been linked to several mental health
disorders. There is a significant positive relationship between those who experience symptoms
of a mental illness and those who have suffered a heart attack (Cooke et al., 2007), hypertension
(Cooke, et al. 2007; Marchand et al., 2005), and cardiovascular disease (Scott, Oakley, Browne,
McGee, & Wells, 2006) as compared to those individuals that are mentally healthy. In fact,
those with a physical illness have a six-fold increase over those who do not have a physical illness for psychiatric morbidity (Cooke et al., 2007). Those who have depression and have been hospitalized for myocardial infarction (MI) have a higher morbidity rate on average than those who did not have depression during the first six months that they are out of the hospital (Frasure-Smith, Lesperance, & Talajic, 1995).

Stress from work is also correlated with heart disease. Research shows that those individuals who are in a work situation with high effort, but low reward tend to increase the incidences of new coronary issues (Siegrist, 1996). Karasek et al. (1988) found that job strain affects the prevalence of MI and were more likely to have coronary issues. Those who work in positions that require low decision latitude and also have a high mental demand have the most job strain (Karasek et al., 1988).

One issue in this area of research is that most studies had relatively small sample sizes. This could potentially have more likelihood of false positive outcomes or limited validity. Another concern to take into account is that there are other factors that may cause heart issues in addition to job strain such as diet, exercise, and smoking (Karasek et al., 1988).

Mental health and obesity. There is a greater prevalence of obesity among people with mental health disorders. Specifically, much research has studied schizophrenia (Dickerson et al., 2006), depression (Carpenter, Hassin, Allison, & Faith, 2000; Herpertz et al., 2006), anxiety (Herpertz et al., 2006; Scott et al., 2006), substance disorders (Herpertz et al., 2006) and bipolar disorder (Dickerson et al., 2006 & Herpertz et al., 2006). Early research on the association between mental health and obesity tends to be mixed regarding whether or not there is a correlation between these two factors (e.g. Noppa & Hallstorm, 1981; Palinkas, Wingard, & Barrett-Conner, 1996). As research progressed over time, the limitations of prior research were
taken into consideration and parameters became more defined such as making a distinction between obesity versus being overweight. With these clarifications, connections between obesity and mental health issues were found and the conclusions became clearer (Friedman & Brownell, 1995).

Obesity and depression have been found to be significantly associated. In studying African American women, Siegel, Yancey, and McCarthy (2000) found that in controlling for income, education, and marital status, depression was significantly positively associated with obesity. In addition, when taking physical activity and diet into account, this relationship still persisted. It is only when the moderating factor of self-reported health was taken into consideration that this relationship changed. If a person perceives his or herself good health, despite being overweight, then, that person’s likelihood of depression is impacted. Women who are obese and were enrolled in some sort of diet plan or program also had more mood disorders than obese women who were of normal weight (Herpertz et al., 2006). As opposed to women, men who are undergoing weight-loss treatment had a lower rate of mental illness than those who were not undergoing treatment (Herpertz et al., 2006). Anxiety was also more frequently seen in obese women than in normal weight women. This could be because of a combination of low self-esteem and the impact of the discrimination obese people may experience in the general public (Herpertz et al., 2006).

Patterns that link mental illness and obesity in men are not as prevalent. Males who suffer from obesity tend to have higher instances of substance disorders such as alcohol or tobacco use (Herpertz et al., 2006). Scott et al. (2006) found that although alcohol use might be higher in males than females, the usage in obese males is not significantly different than those who are of average weight.
Education could be another factor contributing to the relationship between mental health issues and obesity. Several studies have found that the negative relationship between obesity and depression were greater in those females who have obtained higher education (DeJong, 1980; Ross, 1994; Siegel et al., 2000). Because this population tends to be viewed as intelligent, it could be said that higher educated women may be more likely perceived to be more responsible for their actions and appearance. That is, that they should know what it takes to be healthy and have the resources to be at a normal weight and be able to keep their weight at what is considered to be normal. A stigma could also be placed on the higher educated who are obese because it is less common for more educated people to be obese (DeJong, 1980). Because of the greater responsibility placed on the higher educated individuals who are obese and the fact that obesity is less of the norm in this population, more of a stigma and segregation could be created towards these higher educated women, creating a higher susceptibility to depression (Ross, 1994). In the mental health profession an individual must be highly educated, possessing at least a master’s degree. Obesity in the mental health field might create the same stigma and might influence or correlate with decreased mental health.

Results vary in whether obesity causes mental health disorders or that mental health disorders that cause obesity. It is evidenced through a five year follow up study done by Roberts, Deleger, Strawbridge, and Kaplan (2003) that obesity causing mental health is more of a probable association. Roberts et al. (2003) first started in 1994 with a follow up in 1999. Those who were found to be obese in 1994 had a greater likelihood of being depressed than those who were found to be depressed in 1994 had to be obese in the 1999 follow-up, suggesting that there may be a causal relationship that obesity influences depression. Mental health causing obesity is evidenced in Noppa and Halstrom’s (1981) six-year study. Although, in Noppa and
Halstrom’s (1981) study, the researchers did not adjust for the baseline of obesity at the start of the study, so their study may have skewed the results. When the appropriate adjustments were made to this data from the Noppa and Halstrom study, it was found that their results were not significant as they reported to support that depression precedes obesity (Roberts et al., 2003).

**Chronic pain and mental health.** Chronic pain can be defined as recurrent periods of pain with episodes where an individual is pain free, which continues for a number of months or even years (Gatchel, Pang, Peters, Fuchs, & Turk, 2007). Gureje, Von Korff, Simon, and Gater (1998) report that there 29% of Americans have a chance to experience chronic neck and back pain at some point in their lifetime. Gatchel (2004) states that chronic pain is estimated to cost over $70 billion per year due to both loss of productivity and health care costs.

Pain is a prominent problem in the work place, and also can affect one’s emotional wellbeing. Chronic pain has been linked to anxiety, depression, anger (Gatchel et al., 2007), and Posttraumatic Stress Disorder (McWilliams, Cox, & Enns, 2003; Villano, Rosenblum, Magura, Fong, Cleland, & Betzer, 2007). Cooke et al. (2007) found that there was a significant positive correlation between those individuals who are inflicted with pain causing physical illnesses, such as back pain, arthritis, and migraines and individuals who are afflicted with symptoms of a mental health disorder. In that same study, people who were not afflicted with pain causing ailments, there was no significant link with mental health disorders. It has been stated that emotional suffering may cause an individual to have a greater tendency to experience chronic pain, cause someone who already experiences pain to have pain increase. At this point, only correlations have been found. There are no studies that could test whether emotional disorders cause pain or if pain causes emotional issues. For example, DeGroot et al. (1997) have found that a person’s anxiety level can affect how much pain a person can feel, but it can also impact
the length of time it takes a person to heal from injuries or surgeries. When this occurs, a person might be fearful of activities that might cause them to be in more pain and avoid those activities, which could then lead them to be more hypervigilent and anxious (Gatchel et al., 2007).

Just as anxiety is linked with pain, depression is also prominent among people experiencing chronic pain. It has been found that chronic pain, when compared to other physical illnesses, such as asthma, heart disease, or ulcers, have the highest comorbidity with depression and anxiety (Scott et al., 2007). This same result was found over 17 countries with varying backgrounds and cultures (Scott et al., 2007).

**Social support and physical and mental health.** Having a positive support network can be a helpful coping tool. Being able to open up to a friend about both positives and negatives in life can create a useful outlet in order to reduce stress. Having social support positively correlates with being mentally healthy. Social support can be attributed to differences in anxiety (Farber & Heifetz, 1982; Landsbergis et al., 1992; Lee & Robbins, 1998), anger, depression (Landsbergis et al., 1992), self-esteem (Lee & Robbins, 1998) and job dissatisfaction (Landsbergis et al., 1992). In considering self-esteem and anxiety, social support and connectedness seems to be a more influential factor in women than men (Lee & Robbins, 1998; Stansfel et al., 1999).

Friendships and social support have also been found to be beneficial to maintaining improved physical health (Landsbergis et al., 1992; Yang et al., 2008). Those who have the type of and closeness of relationships at work that are close to what they would like their ideal relationships at work tended to have improved physical health, then those who had a decreased amount of positive relationships (Yang et al., 2008). Those who have fewer social interactions have greater instances of depression (Frasure-Smith et al., 1995). This could be because of
several factors, one being that with improved relationships and social outlets, a person can have improved mental wellbeing, which in turn tends to affect one’s physical wellbeing. A person who is more task-oriented than relationship-oriented in association to his or her management style tends to take more sick days, too (Chemers et al., 1985).

Another aspect of improved mental health is support from supervisors. When a person feels that his or her supervisor supports the work done, he or she has a relationship in which he or she feels they can be open and honest and trust in his or her supervisor. A person tends to have more improved mental health than those who do not have that support (Stansfeld et al., 1999). There is also a greater amount of job satisfaction studied when there is a lack of harsh criticism from a supervisor (Martin & Schinke, 1998). In this respect, they are able to gauge whether or not they are performing well and receive positive feedback for their performance, which helps them more than when harsh criticisms are given.

Family life and the quality of relationships at home can sometimes interfere with work. If there is a lot of stress at home, it can lead a person to have a decreased sense of job satisfaction (Frone et al., 1996). Mentally, if a person is able to have a supportive and intimate relationship with his or her family, then they have an enhanced sense of wellbeing. Work can also interfere with family life, which in return can affect the way one feels about his or her job. If a person feels as though he or she is unable to commit enough time to being with his or her family, both physically with them in person and emotionally being there, then mentally, they have a decreased sense of wellness (Stevanoviv & Rupert, 2009).

People who have supportive families and who have help with the household chores, and who are able to obtain appropriate childcare tend to be more satisfied with their jobs (Rudd & McKenry, 1986). These people have more of a balance between work and home life, with
support in the activities they engage in at work and home (Rudd & McKenry, 1986), have decreased impairment at work (Casey & Grzywacz, 2008), and less intention to leave their job (Haar, 2004). More dissatisfaction occurred when there was too much work that overflowed into home life, than when the balance is weighted with more family involvement that might influence work life (Haar, 2004). If one can maintain a balance between work and home, the general health of the family is improved (Rudd & McKenry, 1986).

Research opposing job satisfaction and mental and physical wellness. Much research has investigated the connection between mental and physical health and job satisfaction has found a positive correlation. Not all of the research has found evidence to support the relationship between job satisfaction and mental and physical wellness. A research study found that most of the mental health workers were satisfied with their jobs, but scored high on having poor mental well-being and also scored high for being emotionally exhausted (Prosser et al., 1999). Prosser et al.’s (1999) study was done longitudinally in a community setting. There is a risk in doing longitudinal research in such a setting in that there is often a high turnover rate for the workers, so it is difficult to obtain data over a period of time (Prosser et al., 1999)

Svensen, Arnetz, Ursin, and Erikson (2007) found no difference between job satisfaction in their definition of healthy people and the general population. An issue with this study is that they were comparing people to the World Health Organization’s (WHO) definition of health, which is a person being in the state of “complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (World Health Organization). This definition might be difficult to obtain, especially if looking at whether a person fully meets the criteria of the definition, without looking at a spectrum. Svensen et al. (2007) later goes on to state that in looking at a spectrum of general health complaints a dissatisfied worker has only three more
health complaints that the satisfied worker. Also, there are findings that job stress might lead to increased psychological disorders, but not to physical health concerns like heart disease or sick days (Stansfeld et al., 1999).

In summary, the research has not only connected mental health to job satisfaction, it has found associations between physical health and job satisfaction. Not all studies have found the same link, but it might have been due to measurement or data collection efforts. Not only do mental health and physical health affect job satisfaction, but the interaction with one another, which could then increase the affect each one has on job satisfaction. Job satisfaction factors can be complex because social support both at work and at home can be an influence on satisfaction as well as health.

**Ecological Model Used in Career Counseling**

**Ecological model.** Ecological career counseling theory emerges from Conyne and Cook’s (2004) ecological model of counseling, which has its roots in Kurt Lewin’s (1936) concept that a person’s behavior is a function of the interaction between a person and the environment by which they are surrounded. Ecological counseling also takes into consideration Brofenbrenner’s (1979) concept of systems, in that a person’s environment is composed of overlapping systems that can all interact with one another. Derived from Lewin’s (1936) person and environment interaction and Brofenbrenner’s (1979) systems theory, ecological counseling can be defined as “contextualized help giving that is dependent on the meaning clients derive from their environmental interactions, yielding an improved ecological concordance” (Conyne & Cook, 2004, p. 6).

Further, Conyne and Cook (2004) explained how individuals are like ecosystems, just as any other species. It is our physical environment and those we surround ourselves with that
provide us the support and sustenance we need. It is the meaning that we make of our environment, physical surroundings, and those we surround ourselves with, which determines how we try to sustain ourselves.

**Ecological systems.** Conyne and Cook (2004) describe several different systems that are incorporated into ecological counseling concept that was adapted from both Bronfenbrenner (1979) and Kassambira and Edwards (2000).

*Microsystem.* This is the level that a person has face-to-face contact with those who might influence him/her. Examples of such people would be school, family, peers, etc.

*Mesosystem.* This system incorporates those connections between Microsystems, and the way they relate to one another. This system includes connections between workplace and family, home and school, or peer group and family.

*Exosystem.* This system includes less direct interaction, and more influences from decisions and actions. This level would include health care systems, media, or world of work.

*Macrosystem.* This level can be described as the foundation and ideas that define a person or society. Examples at this level would be written laws, general values, social policy, or general ideology.

**Ecological Model in Career Counseling.** The ecological model can be applied to career counseling. Looking at the varying levels of systems, how the interact with an individual, and how that can affect career choice and success, an understanding of the intricacy of all of the factors involved in shaping a person’s career emerges (Cook, O’Brien, & Heppner, 2004). A lot of career theories do not address important environmental systems that play an important role in career development and satisfaction. For example, gender, race, attractiveness, able-bodiness,
class, and other factors of an individual and the way his or her environment reacts to these factors can influence greatly development, success, and satisfaction (Cook et al., 2004).

What also makes the ecological model different than other theories discussed is that it takes into account that each individual will experience his or her environment differently. Because of a person’s unique ecosystem, he or she may react differently in the same physical environment. A career counselor working in the ecological perspective would try to cultivate cohesive and fulfilling interactions with an individual’s work environment or work experience (Cook, Heppner, & O’Brien, 2002). This can be done through teaching coping skills (Cook et al., 2002), empowerment (Barrio & Shoffner, 2005; Cook et al., 2002) or changing perceptions.

It also goes beyond just focusing on the pressures from the work place, but also how home and family life influence career decisions and satisfaction. For example, how family supports a career decision might be impacted by the expectations they have on an individual surrounding chores and work at home. More specifically is the example of the expectations of the division of housework with a working mother. Depending on the views of the family, a mother might be expected to keep up with the same amount of housework, take care of all of the needs of a child, and still work (Cook et al., 2002). It would be important for a career counselor to see how a person could manage all of the responsibilities, including the need to negotiate to make a balance more manageable (Barrio & Shoffner, 2005; Cook et al., 2002). A career counselor working in the ecological perspective must also try to provide referrals and help so that important needs are met for an individual such as health care, especially if the client has an illness (Barrio & Shoffner, 2005).

The ecological model draws upon various well-known theories to incorporate a holistic idea of career counseling. For example, social cognitive theory helps to incorporate the
macrosystem by discussing values and social influences. Another example is using Super’s (1980) theory in order to see how family and friends provide meaning to career. The purpose of a career counselor in the ecological perspective is to encourage and explore meaning making and to help make a person’s life and career meaning align (Cook et al., 2004). “Career counselors try to empower clients to maximize their individual and environmental potentials and experience congruence, meaning, and success in their vocational endeavors” (Cook et al., 2004, p. 227).

This study is using the ecological model as applied in career counseling. This theory makes sense with respect to the model of the hypotheses. The hypothesis consists of various levels of the ecological theory. At the macro system level we have social support, at the mesosystem level there is level of education, at the exosystem level personality can take an effect on how well it interacts with the environment at work, as well as health care and insurance provided in case one is dealing with a mental illness. Many of our moderating factors that will be examined in this study can be seen across Ecological Career Counseling Theory’s multiple levels.

**Additional Career Development Models**

There are numerous career developmental theories. Each of them has their unique way of explaining job satisfaction, but they end up with a similar conclusion of factors that moderate job satisfaction. Many of the do take into consideration environmental aspects that could influence job satisfaction, as the ecological counseling model does, but not in the same detail.

**Person environment fit.** French and Caplan (1972) describe the formal origins of the Person Environment Fit (PE fit) model, beginning in the Institute for Social Research at the University of Michigan. They used the theory of the relationship between health and job stress and built upon that idea. This model, like the ecological counseling model, has its origins in
Lewin’s (1936) idea in that given the same environment, not every individual will react in the same way. This idea posits that given the same stressor in the same environment, individuals will react differently due to their background, personality, resources, and coping abilities. The idea is that job stress emerges when there is incongruence between personal characteristics, such as behavior styles, needs, and abilities, and the situation of the job, such as resources, demands, opportunities (French & Caplan, 1972; Harrison, 1978).

There are two ways to explain Person-Environment Fit. The first explanation is the Supply-Values fit (S-V). This is the fit of personal goals, motivation, and values and the assets made available by the environment (Van Harrison, 1978; French, Caplan, & Van Harrison, 1982). The second explanation is the Demands and Personal Abilities fit (D-A), which is the fit between a person’s abilities and skills and the job requirements (Van Harrison, 1978; Yang et al., 2008). If there is not a fit between the person and the environment the theory posits that there will be a threat to a person’s wellbeing, which can cause health strains to occur (Chemers et al., 1985; Van Harrison, 1978). These elements of P-E fit affect every worker, no matter what level of position they hold (Marchand et al., 2005). In this idea, there must be an equal balance of needs and supplies or demands and abilities present (O’Brien & Dowling, 1980). When this happens job satisfaction is increased, health is improved; a person feels more confident, enthusiastic, and takes more personal responsibility (Chemers et al., 1985). If too much or too little of either is present it will affect a person’s satisfaction in a negative way, as well as their physical and mental health, and eventually mortality and morbidity (Chemers et al., 1985; Edwards & Cooper, 1990; Edwards & Rothbard, 1999). If there are not enough supplied to do a job and meet the needs of a job, then a person’s satisfaction decreases. If a person has more
abilities than is needed to meet the demands of his or her job, he or she might become bored or want a job that uses his or her set of skills.

Another feature of this theory is that it compares the subjective and objective P and E. The subjective portion is how an individual thinks they are and how they desire their work environment should be and the objective portion is the actuality of an individual’s traits, values, and abilities and the environment in which he/she works (Edwards, Cooper, & Harrison, 1998), “the psychological construction of the world in which he lives” (Van Harrison, 1978, p. 176). The term “contact with reality” relates to the extent to which the subjective and objective environments coincide. The term “accuracy of self assessment” describes the relationship between the subjective and objective person (Edwards et al., 1998).

Van Harrison (1978) describes how there can be both a subjective P-E fit and an objective P-E fit. A subjective P-E fit is the fit between the subjective environment and person, or the person’s perception of this fit. The objective P-E fit is the between the objective environment and person. This is the reality of the P-E fit, regardless of an individual’s perception on it. So, the P-E fit is not the outcome, but rather the interaction between the environment and a person.

This theory also often uses several important terms that should be defined. In the P-E Fit theory, stress is a loosely defined word that often refers to misfits, both subjective and objective, and threatening variables in one’s environment, also, both subjective and objective (French et al., 1982). In other words, job stress in this theory can be defined in that it is the degree that the job supplies do not meet the needs of an individual and the extent to which a person’s abilities do not meet the needs of a job in order to obtain the supplies a job might provide (Van Harrison, 1978). There are also two types of stress that are specified, chronic and acute. Chronic stress refers
more to the stability of the misfit or environment. *Acute stress* is when there is an abrupt intensification of stress (French et al., 1982).

*Strain*, on the other hand, is when there is movement away from the typical response or state of an individual. This can include mental and physiological health conditions, harmful coping mechanisms (French et al., 1982; Yang et al., 2008). Mental strain can lead to depression (Van Harrison, 1978) and anxiety. Physiological strain can lead to heart disease, high blood pressure, and ulcers. Behavioral symptoms can include over-eating, smoking, drinking, or increased trips to see the doctor. Just as a misfit can cause ill health affects, a good fit between person and environment can promote improved self-worth, which can health create improved mental and physical health (Van Harrison, 1978). Finally, it is predicted that all stress causes some sort of strain (French et al., 1982). This stress-strain relationship not only exists in Western cultures, but also seems to a universal affect that can be applied to numerous cultures (Lu et al., 2000).

Two other terms should also be defined. These terms reference a phenomenon that was explained earlier, which is the amount of fit a person has with his or her environment. Although it was explained before that if a person has too much or too little supplies that this will result in dissatisfaction, there are a few terms that can account for variance in this idea. The terms are *conversion* and *carryover*. Conversion refers to an excess in supplies which are saved in order to meet a future need in the same dimension. For example, a person can save extra income for later use. Carryover refers to when an individual uses the supplies excess and applies it to a current need (Sweeney, McFarlin, & Inderrieden, 1990). If the S-V fit is not able to be conserved or carried over, then the idea that either an excess or deficit in S-V fit will affect job satisfaction
and wellbeing in a negative way (Edwards & Cooper, 1990) or if the excess in supplies is substantial (Edwards & Rothbard, 1999).

In order to deal with the work environment, people will use coping skills and defenses. A person evaluates a situation in order to determine how much they will be affected by the lack of a need or value. Coping skills are those behaviors that a person does in order to either change the objective environment or person in order to improve the fit. A person who is able to cope through altering the environment is said to have environmental mastery. Those who cope by altering the person is said to adapt (French, Rogers, & Cobbs, 1974). A person’s need to control their environment is a way for them to cope with demanding work conditions (Siegrist, 1996). Those who are able to cope effectively often find that they have greater mental health and job satisfaction (Lu et al., 1999).

Defenses are those unconscious processes that can warp a person’s perception of both their person and environment, which make it appear to a person that their strain has been reduced (Freud, 1966). In this situation a person might believe that there is a greater P-E fit than actually exists. Examples of this would be using coping techniques such as repression, denial, evasion, or even drugs (Henne & Locke, 1985). A person who distorts his or her abilities to match what is required for the job is said to reduce his or her accessibility of the self, which can affect mental health. A person can also distort their environmental requirements and believe that his or her abilities are sufficient to meet the demands of the environment is said to reduce his or her contact with reality (French et al., 1982).

Person-Environment fit can also be broken up in different ways of looking at this concept. In looking at the P-E fit, one can take the following perspectives: person-vocation fit, person-job/career fit, person-organization fit, person-supervisor fit, or person-group/team fit.
(Kristof-Brown, Zimmerman, & Johnson, 2005). Person-career or vocation fit is the match between personal characteristics and interests and those of the career and that job satisfaction stems from a person’s needs being met by the environment that his or her occupational environment supplies (Kristof-Brown et al., 2005). Person-job fit is much like person-vocation fit, but it focuses more on specific tasks that are employed in the job a person holds (Kristof-Brown et al., 2005) and is often seen in literature as the needs-supplies fit (Harrison, 1978).

The other types of fit have to do with the specific job a person holds. Person-organization fit can be a fit between several different factors. The fit could include between an individual and the personality congruence of an organization, having similar goals, or having comparable values. The next type of fit is the person-supervisor fit. This idea can be between the person and their supervisor or boss, one who is applying for a job and the recruiter with which they deal, or an employee and his or her mentor. Finally, there is the person-group fit. In this fit, there could be a relationship between the personality characteristics, goals, or values (Kristof-Brown et al., 2005).

Perdue, Reardon, and Peterson (2007) found that there was no direct association between P-E fit and job satisfaction, rather they found the relationship to be more indirect. P-E fit was more associated with satisfaction of work tasks rather than overall satisfaction. The researchers used two instruments that were based on Holland’s Theory of Types and Person-Environment Interactions, the Vocational Preference Inventory (Holland, 1985) and Position Classification Inventory (Gottfredson & Holland, 1991). One of the drawbacks of this study, though, was a very high number, 23%, of those participants that were not able to be classified into a category of one of the six Holland types, which could affect the results of both P-E Fit and its ability to be correlated to job satisfaction (Perdue et al., 2007).
In summary, the Person-Environment Fit model is another way of explaining why some people feel more stress in a position than others. This model explores needs being met in a certain position. If needs are not met, than more stress is felt, and the “fit” of a person in a particular position is decreased. This model also discusses how having a decreased fit not only affects mental and physical health, but also job satisfaction.

**Job demand model.** The Job Demand model looks at job stress as a combination of the demands in the work environment as well as the amount of decision-making freedom one has in the job, as opposed to just looking at one characteristic of the work environment. In other words, this model looks at the causes of the stress and the opportunities to change or improve the situation. The decision latitude is the catalyst of the ability to relieve the stress and change it into productive action. That stress that is unable to be relieved will transfer over to mental strain (Karasek, 1979), which can cause mental distress and disorders.

The job demands/control model posits that there are four types of psychological work encounters, which are determined through the interface between decision latitude and psychological demands. The four work experiences are: high-strain jobs, low-strain jobs, passive jobs, and active jobs (Karasek & Theorell, 1990). Each type of job has different effects on an individual that holds that job.

**High-strain jobs** are defined as those jobs that have low decision latitude and a high psychological demand (Karasek & Theorell, 1990). The high psychological demand can be caused by many factors including (a) long working hours, (b) poorer pay compared to counterparts at other jobs, (c) work overload, with more tasks than can be accomplished, or (d) internal feelings of being controlled by others (Bogg & Cooper, 1995). These jobs can often result in having unresolved strain (Karasek, 1979). It is expected that these jobs have the
greatest undesirable affects. These affects can include physical illness, fatigue (Karasek & Theorell, 1990), anxiety (Karasek Theorell, 1990; Landsbergis et al., 1992), or depression.

Low decision latitude can include inability to control your environment, work load, or make decisions like taking breaks, and being social, which the latter two can be a form of coping (Karasek & Theorell, 1990). It has been found that high strain jobs are associated with more sick days, a greater consumption of sleeping pills (Karasek, 1979), as well as a high degree of mental strain and job dissatisfaction (Bogg & Cooper, 1995; Evans et al., 2006; Karasek, 1979; Landsbergis et al., 1992; Prosser et al., 1997), as opposed to those jobs with a higher decision making latitude (Evans et al., 2006).

Low-strain jobs are those who low psychological distress and high decision latitude. These jobs are often associated with relaxation. It is believed that these jobs are to be associated with the lowest risks to psychological and physical illness (Karasek & Theorell, 1990; Landsbergis et al., 1992). People in these types of jobs will tend to have fewer challenges to handle, which allows them to handle each one they encounter to the best of their ability (Karasek & Theorell, 1990) with overall improved mental health than those who have jobs with low decision making latitude (Evans et al., 2006; Stansfeld, Fuhrer, Shipley, & Marmot, 1999).

Passive jobs are jobs those in which there is low psychological distress and low decision latitude. These jobs often underutilize a person’s strengths and skills. Passive jobs have low requirements of what is expected out of a worker, and at the same time, the worker is constrained from actively pursuing more challenging opportunities. This is considered the second most psychological harmful job category (Karasek & Theorell, 1990) and can cause anxiety in a person (Landsbergis, 1992).
Active jobs are those jobs in which there is high psychological distress and high decision latitude. These jobs are considered very demanding, yet allowing the worker to feel as though they have control over the situation (Karasek & Theorell, 1990). These positions allow employees to use their intellectual abilities as well as have strong pressures at work, such as time demands (Karasek, 1979). Those who are employed in active jobs tend to take part in more leisure activity outside of work, compared to the other groups described above, regardless of having an intense work load (Goiten & Seashore, 1980). These jobs result in the highest activity level (Karasek, 1979) that allows individuals to resolve the most stress and get tasks accomplished efficiently. In these jobs, studies have shown the greatest job satisfaction (Karasek, 1979; Lu et al., 1999; Siu et al., 1997), especially if there is a good deal of social support (Landsbergis et al., 1992; Stansfeld et al., 1999) and have better mental health (Lu et al., 1999; Siu et al., 1997; Stansfeld et al., 1999) and physical health (Lu et al., 1999; Siu et al., 1997).

Although this model is simple to understand, a shortfall could be its simplicity. In comparing several jobs, the increased number of variables involved in the equation can reduce the relationship between decision and latitude in a job (Karasek & Theorell, 1990). Fotinatos-Ventouratos and Cooper (1998) found that control had very little to do with job satisfaction. Instead, they saw that depending on a person’s socioeconomic status, a person was most influenced by the structure of the organization and the boundaries between home and work. Also, there could be a lot of interactions between variables; for example, having a physical job can influence mental and physical health.

Also, this theory takes out individual preference and perception. This can be very important because people look for different aspects in a job. Some people might not feel
comfortable making decisions, and therefore seeking those types of jobs out, and could feel more dissatisfied in a stressful job where they are responsible for decisions being made. Also, depending on education, and coping skills, some people are able to handle different tasks and amounts of stress. This can also influence whether a person would develop a health related problem due to the type of job that they hold (Stansfeld et al., 1999).

**Job demands-resources model.** The Job Demands-Resources model was created by Demerouti, Bakker, Nachreiner, and Schaufeli (2001) in order to help explain job strain and job satisfaction. This model is similar to both the PE Fit model that was described before and the Job Demands model. The idea of this concept is that when demands on the job start to exceed the resources that are available, a person starts to feel strain and burnout. The resources that are referred to can be both external, or from one’s environment such as relationships, ability to make decisions, time, but other resources can be internal, such as coping skills. When there is an excess in demands a person might start to separate themselves more from their job, and not be as attentive or detail-oriented as they could be. If the person has the right amount of resources to choose from, they are able to have more motivation in order to do his or her job (Hakanen, Schaufeli, & Ahola, 2008).

Going further into the Job Demand-Resources Model, if the demands are too high and/or there are not enough resources available on a job, then health is significantly impacted. Job demands can be both what the job requires of a person, but can also be the environment in which one is placed. If there is a poor work environment, this tends to increase the burnout one feels from work. When one is more burnt out, he or she has a greater chance of becoming depressed. Although, research has indicated, using the Job Demands-Resources Model, that depression does not influence burnout (Hakanen et al., 2008).
**Trait-And-Factor Theories**

Trait-and-Factor theories are the oldest approaches to career development (Osipow & Fitzgerald, 2000). This approach matches the interests and abilities of an individual with certain vocations containing corresponding needs that can be satisfied by one’s abilities (Osipow & Fitzgerald, 2000). This type of pairing is to determine the level of between the occupation and the individual (Niles & Harris-Bowsley, 2005). It has been stated that this set of theories can be very relevant because they take into consideration both what values and skills people hold, as well as what makes them happy (Holland, 1996b).

**Holland.** John Holland’s Theory of Types and Person-Environment Interactions proposes that various personality types correspond with certain characteristics of work environments. He states that both genetics and personal experience as a child shapes a person’s preferences and dislikes. As the child grows, these preferences develop into interests from which a person can gain “self-satisfaction as well as reward from others” (Holland, 1973, p.12). Later, these preferences evolve into focused proficiencies, which can be correlated to a person’s values. This helps to shape personality characteristics and behaviors (Holland, 1973, 1985, 1996b).

Holland goes on to state that these personality characteristics and behaviors can be expressed in an individual’s career interests. Holland (1973) identified six different personality types. These six include: realistic, investigative, artistic, social, enterprising, and conventional type. A mental health professional as studied in this paper would be classified as the social type. Niles and Harris-Bowlsbey (2005) state that this personality type “prefers activities that entail the manipulation of others to inform, train, develop, cure, or enlighten” (p. 63). Personality characteristics that a person in this category might possess are social, understanding, sympathetic, helpful, patient, or generous (Niles & Harris-Bowlsbey, 2005).
An important aspect of Holland’s theory is congruence which is fit between a person’s personality type and their environment, either current or potential (Niles & Harris-Bowlsbey, 2005). Holland’s theory is part of the influence for the person environment fit theory as it pertains to person-vocation fit (Kristof-Brown et al., 2005). His idea of typology suggests that a person will thrive in a similarly categorized environment (Holland, 1996a). Holland constructs a hexagon to describe the degree of fit between personality types and environment. The highest level of congruence occurs when a person is employed in the environment that corresponds with their personality type. The next highest degree of fit occurs when a person is in a work environment that is adjacent to their personality type (Niles & Harris-Bowlsbey, 2005). The greater amount of congruence a person has with their job, the less frustration and stress they feel while working (Furnham & Walsh, 1991). Gottfredson and Holland (1990) found that congruence is correlated with job satisfaction, in that the more congruency a person has with their environment or job, the greater the job satisfaction.

Holland goes on to talk about continuity. He describes the idea of continuity as a person who stays in the same job or moves jobs that stay in the same occupational category that was described earlier or a related category. He believes that a person’s interests tend to stay steady over time and with age and become more stable (Holland, 1996a). The idea amount that one’s interests stay the same is called consistency (Holland, 1976). The more consistent one is in his or her personality profile, the less stress they feel (Furnham & Walsh, 1991) and the more satisfied they are (Holland, 1976). Stability is also important with environment. A person looks for environmental identity and is said to have greater job satisfaction when this is stable (Perdue et al., 2007). Holland (1997) defines environmental identity as an individual’s perceptions of how stable and clear the rules, objectives, and benefits are of his or her work environment.
There are proponents of this theory. Furnham and Walsh (1991) found that those who were more congruent with their environment tended to have more absences, but less frustration with their jobs. Although, these individuals usually had higher job levels and were more educated, so it could be that they had more opportunity to take off, such as being on salary and getting sick days, versus being hourly and not getting the same benefits. Certain environments tend to attract a wide variety of personality types, such as investigative and social environments, so it could be easier to find those individuals with similar interests (Furnham & Walsh, 1991). In Gottredson and Holland’s (1990) study, they suggested that much of the research and data about the lack of correlation comes from researchers not looking at similar occupations or jobs.

**Theory of work adjustment.** This theory was developed by Lofquist and Dawis in the 1950’s and has been updated and adapted since, but the core of this theory has remained the same. This approach to job satisfaction merges the needs and demands an individual might have with the environmental demands of a job, in order to predict career-related ideas, such as job tenure, satisfaction, or effectiveness (Osipow & Fitzgerald, 1996). The basic notion of this theory is that individuals have two needs, biological and psychological, which they try to fulfill in a work setting.

The biological needs are those for survival such as food, and the psychological are needs such as social approval. This can translate into behavior in a work or vocational setting. When a person’s needs are satisfied in their work environment, they are reinforced and that behavior is made stronger. Also, the work environment has certain needs that need to be met, which corresponds to individual needs. When both of these needs are met, correspondence is present (Isaacson & Brown, 2000). This idea of correspondence is termed work adjustment, or can also be described as the interaction model (Eggerth, 2008).
Factors Affecting Job Satisfaction and Mental and Physical Health

It is important to also look at the demographic information that can have an effect on job satisfaction and mental and physical health. There are several different factors that can affect job satisfaction, like gender differences (Bogg & Cooper, 1994; Cooper et al., 1989; Lu et al., 1999), differences between blue and white collar positions (Fotinatos-Ventouratos & Cooper, 1998; Siu et al., 1997), and personality affects (Bogg & Cooper, 1994; Cooper et al., 1989; Kirkcaldy, Shepherd, & Furnham, 2002; Siegrist, 1996).

Gender differences. There have been several studies that looked at the differences in the affects that gender plays in job satisfaction and mental and physical health, and the results have been mixed. Some have found that females tend to exhibit more stress than their male equivalent counterparts, which in turn has correlated with women reporting more issues with physical health (Bogg & Cooper, 1994; Furnham & Schaeffer, 1984) and mental health (Bogg & Cooper, 1994; Green et al., 1990) and a decreased satisfaction in their job (Bogg & Cooper, 1994).

Not only have Western cultures tend to have women exhibiting more stress, but Eastern cultures as well. In Taiwanese workers, women in management roles experience more stress than their male counterparts. Interestingly, the way that the males coped with their stress was more destructive (e.g. drinking to cope) (Lu et al., 1999). Similar results were obtained in Western cultures (Cooper et al., 1989).

Research is mixed on the subject of the relationships between gender and job satisfaction and mental and physical health. It has been found in other studies that women doctors were generally more satisfied than their male counterparts. Females were found to do better in mental wellbeing, too, with males having higher anxiety levels (Cooper et al., 1989). This study also
found that males and females were affected by different factors. Females’ job satisfaction was more affected by family situations, where males were more affected by job demands.

However, others have not found differences between male and females (Kirkcaldy & Siefen, 2002; Saiyiaden, 1985). For example, in Kirkcaldy and Siefen’s (2002) study, they found that there were no differences in gender when looking at job satisfaction, mental health, physical health, or personality type. They even further state that males and females can be considered, in their study, to have the same stress-health profile, meaning that in men and women, the relationship between stress and mental and physical health are experienced similarly.

Some of the variance in the research can be explained. Males and females can experience stress differently or choose different types of jobs. In Furnham and Schaeffer’s (1984) study, they found that men tended to have greater congruence between their personality and type of job they established, according to Holland’s job types, and that men tended to have greater job satisfaction. Men and women handled stress differently (Cooper et al., 1989; Lu et al., 1999; Tsutsumi et al., 2001), and men reported experiencing a greater amount of stress than their female counterparts (Tsutsumi et al., 2001).

There are some similarities in males and females. Job stress has been found to cause depressive symptoms in both males and females, even though stress causes might vary. Males personality characteristics play a large role in how stress is handled, and in women, control played a larger role than personality characteristics (Bogg & Cooper, 1994). Another similarity is a negative coping mechanism. Mentioned previously men tend to drink more often to deal with their stress, but both males and females have similar coping mechanisms in smoking behaviors (Cooper et al., 1989).
Social class differences. Social class also has an effect on job satisfaction. People who hold the highest management positions tend to experience the least amount of stress (Fotinatos-Ventouratos & Cooper, 1998). Employees who have blue collar jobs will experience more stress than those who hold the highest management positions, but individuals who are in between, middle managers, report experiencing the greatest amount of stress. Middle managers also report experiencing the greatest amount of physical health ailments (Siu et al., 1997). In looking at the research that has been done on job satisfaction, it could be hypothesized that those individuals who are in the position of middle management are more likely to feel a great deal of stress, without a lot of ability to make decisions on their own. This being stated, it can be a difficult comparison considering that those who hold these positions often have different work stressors, education levels, and years of experience. Also in comparing the level of job a person has, it has been found that compared to the general population of workers, those who hold management positions often have increased levels of coping effort (Lu et al., 1999). Also, in middle management positions, there tends to be more role confusion that takes place. Making the transition and finding their place in the company often proves difficult for people in the middle management positions. It often involves managing relationships and friendships at work as well as navigating the office politics that are involved in the day-to-day dealings (Siu et al., 1997).

Another interesting difference between blue and white-collar jobs is the difference in satisfaction theories (Siegrist, 1996). In blue-collar jobs there are fewer opportunities to move up in the work place as compared to white-collar positions. In these positions, a high effort, low reward, low status control situation often occurs, but is often endured because the costs of
disengagement, such as being laid off or moving down in a position, outweighs the costs of lack of control and being inappropriately rewarded. So, in comparing this situation with white-collar positions could be a comparison of two different entities (Siegrist, 1996).

Mental and physical health seem to be affected by stress on the job, regardless of a person’s socioeconomic status. What might vary with mental and physical health are the factors that affect health. In professional and management positions, mental health seems to be affected by aspects which are inherent in these positions, such as pay, number of hours that are worked, variety in work. Those who have blue collar-type positions, who might be lower in socioeconomic status, tend to feel an effect on mental health from the types of and quality of relationships that they have on the job. With concern with physical health, the same factors affect physical health as do mental health, with respect to socioeconomic status (Fotinatos-Ventouratos & Cooper, 1998).

Another difference between the two types of workers is the effects of stress on their performance and productivity. At every level and job type a certain amount of stress is experienced from the work setting. For the most part it is a manageable level of stress, with not one position having profoundly more perceived stress than another. The difference lies in the affects. In general, white collar workers put in more time than it is expected when they are under great stress or demands. Those who hold blue collar positions tend to miss more work, with one study reporting that the loss in man hours can be as great as 351 hours per year; that is almost nine weeks out of the year. As for productivity, both blue and white collar workers tend to have a decrease in productivity when experiencing a great deal of stress at work, but those in the white collar position are less affected than those in blue-collar positions (Hilton et al., 2008).
The type of job also can affect one’s physical and mental health. It has been suggested that those who participate in jobs like assembly line or factory work tend to have mental and physical health that is poorer than those who are in other positions. In these positions, repetitive, almost robotic type work is associated, which could be part of the link to the affects it has on health (Cooper & Marshall, 1976).

**Differences in education level.** Education level of an individual can play a large role in whether someone is satisfied with the occupation or job in which they are employed. Seemingly, it should be that the more highly educated a person is, the more they are devoted to that particular field, which could lead to greater job satisfaction. Although it has been found that even those who are more highly educated can have variance in their job satisfaction, especially if what the individual believes are his or her needs are not being met by the particular job they are employed. This can cause one to not be committed to his or her occupation. This commitment, or lack thereof, can cause some dissatisfaction but it is not necessary for this correlation (Scarpello & Campbell, 1983). One reason that those who are more highly educated are not as affected by this may be that a person with higher education might hold a strong belief in an ability to obtain another position. It can be said that those individuals with more education have more options for what they can do for a job. A person who has more education might feel more free to leave a job if they are not satisfied, so they can find a job that suits them better, leading to greater job satisfaction (James & Jones, 1980).

This can be true with career advancement, as well. If a person feels as though they want to obtain a certain position, whether through qualifications or amount of education, it is important for them to progress through different levels of a position. If a person does not feel that they are advancing at an appropriate rate or do not have the opportunity to make any
advances, they tend to have a decreased job satisfaction (Yang et al., 2008). With this, education also relates to more depression, heavy drinking, and physical health concerns, comparing to those who do not have as much education to those who are more educated (Frone, Russell, & Barnes, 1996).

In the current study, we are looking at three levels of a career, mental health provider, supervisor, and administration. What makes this study different than those completed before is that all of these positions are professional positions, which require about the same education. Taking into account prior research using samples with a variety of education, the hypothesis was based on this research, and will be tested to see if it translates into a less diverse population.

**Differences in years of experience and age.** Years of experience tend to affect job satisfaction, with those who have more experience being more satisfied with their job. This can be explained in several different ways. One line of thought is that a person’s interest stays steady over time, but with age, a person’s interest becomes more stable (Holland 1996). It can be thought that a person who is older will tend to have more years of experience, as compared to a younger person just starting out in a field (Furnham & Schaeffer, 1984) and, in some cultures, a greater chance of promotion (Saiyadain, 1985), and therefore those who are older tend to have better job satisfaction due to the position they hold. In this, a person who is older could therefore have a greater match between what they want in a job and the attributes that are actually performed in a job, which could lead to greater job satisfaction (O’Brien & Dowling, 1980).

Also, it has been shown that age not only affects a person’s job satisfaction (Holland, 1996; James & Jones, 1980), but those who are older have better mental and physical well-being as it concerns work and are less likely to quit (Lu et al., 2000). Those who are younger tend to have more depression and drink more heavily than those who are older (Frone et al., 1996).
This is not necessarily predictive of job satisfaction because there have been studies that have found no relationship between this and years of experience. In Martin and Schinke (1997) study, they looked at social service workers, as this study is examining. They found that it was not necessarily years of experience that influenced job satisfaction and intent to stay, but it might be due to the position that a person holds.

Health Care Workers

There have been many studies that have looked at job satisfaction in physicians and nurses, both those who work in the mental health field and those who work outside of the mental health profession. These generally do not compare differing positions that these professionals hold, comparing them with one another, but the studies tend to compare medical professionals with the general population.

The medical field is an important comparison to the mental health profession. Both of these fields have similar influences upon job satisfaction. It has been studied that there is a lack of communication between supervisors and clinicians, which can cause increased distress. There were also indicators that this profession experiences a great deal of both physical and mental strain (Dallender et al., 1999). Both professions are dealing with those individuals seeking to improve his or her quality of life in some way, either physically or mentally. Another similarity in mental health positions compared to those positions in the medical field is the job promotion schema. They promote people within the profession to jobs that are less clinical and more administrative, often without the business education that their job might incorporate. In comparing medical directors to other management roles, medical directors didn’t have more stress than other managers, but their sources of stress is what differed. Medical directors have a find a balance between clinical and managerial duties. Medical directors tend to find stressful
aspects of their job to include: making clinical errors, attending meetings, taking work home or spending too much time at work, keeping up with new techniques, and being seen as the boss. This population also tends to have greater satisfaction than non-medical directors (Kirkcaldy & Siefen, 2002).

There have been many studies that suggest that doctors have a higher mortality rate than the general population when it comes to death related to stress-related disorders. These include those activities used to try to cope, such as increased excessive smoking rates (Allibone et al., 1981) and incidences of alcohol abuse (Brooke, Edwards, & Taylor, 1991), in combination with incidences of depression (Caplan, 1994; Rucenski & Cybulksa, 1985; Williams et al., 2001), anxiety (Rucenski & Cybulksa, 1985; Williams et al., 2001), and suicide (Registrar General, 1978).

As in other positions, those in the medical field are not exempt from mental and physical health being associated with lower levels or job satisfaction. In fact, those who have poorer mental health often have poorer attendance and greater desire to leave their current practice and poor mental and physical health affected individuals desire to change their specialty (Williams et al., 2001). This can be compared to the phenomena of burnout that mental health professionals experience.

Finally, another comparison of the medical field to the mental health field is the decreased feelings of personal accomplishment, especially when dealing with the chronically ill population. This is an important aspect to explore because when workers are not able to consistently feel like they are making accomplishments in their work, they tend to have a higher risk for burnout (Farber & Heifetz, 1982; Humbeeket al., 2004). Some of the reasons for decreased feelings of personal accomplishment could be that these professions cannot always
rely on instant gratification. People who have chronic health problems might take a long time to see improvement or drop out before treatment is complete (Humbeek et al., 2004).

Although there are several similarities between those in the medical profession and the mental health profession, there are also differences that make it less generalizable to the mental health population. For example, in the medical profession, the majority of workers are men. In the mental health profession, the majority of counselors and social workers are females.

**Mental Health Workers**

Individuals who are employed in the mental health field often experience stressors that other occupations do not encounter. As discussed before those in the mental health profession are often dealing with people on a daily basis on an emotional level and do not always see progress, which could lead to a decrease in satisfaction because there are no rewards or reinforcement for their work. There are other reasons that the mental health profession might not be similar to other research that has been published looking at the P-E fit and how it varies on the type of job an individual holds.

Another aspect of mental health workers is that there is not much room to move up in their field. Most workers who start out as mental health workers will stay in that position or at least continue with some face-to-face contact with clients. This could be a source of dissatisfaction, too, due to the continuing increase in demand, increasing hours, and the factor of burnout.

Mental health workers are also fairly isolated. Their work is with individual clients, so often, they are not able to realize and gauge their work because progress is slow, or sometimes people drop out before treatment is complete. If a mental health worker is able to start to see progress in his or her client, it tends to be a great source for job satisfaction (Prosser et al., 1997).
Individuals do have supervision, but might not have their work or success recognized by their supervisor. In fact, studies have found that those individuals who are in the mental health field tend to have greater job satisfaction when they receive acknowledgment of a job well done (Martin & Schinke, 1998).

Like others in the helping professions, one often cited cause of distress is that there are not enough resources, to go around, meaning that there is a greater demand for services than professionals that exist. This poses an issue often making mental health workers feel overworked or burdened, sometimes having to work extra hours. This can cause a decrease in job satisfaction in mental health workers (Prosser et al., 1997).

**Summary**

There is a great deal of research on job satisfaction and how satisfaction varies depending on the position that is held, but there is very little research that focuses on this in the mental health profession. What research that has been published looks at the effects of job stress on mental and physical health in the mental health counseling profession, commonly referred to as burnout. What is missing from this research is investigating populations other than those who spend most of their time and energy working directly with clients. This is true even though there is a good deal of those who work in mental health that do not solely deal with those face-to-face interactions with clients. Jobs that are not solely working directly with clients include those who are involved in supervision jobs, which combines face-to-face contact, with more administrative duties and administrative positions, which deal primarily with the running of the agency.

In order to better help to educate students and provide a greater perspective on supervision, it is important to look at the entire spectrum of positions someone who obtains a degree in mental health may encounter. Although there are fewer individuals who are in
supervision than counseling and even fewer in the administration roles, it is important to have a more complete picture of the counseling field.

It cannot be assumed that because administrative jobs are more like those in the business field because of the difference in education and background of the mental health profession. In the studies that have been completed in the past, they tend to compare individuals with a vast array of educational levels and experiences, but in the counseling profession, the degree areas are more similar and degree levels do not vary much. This dynamic could influence how much job role plays in job satisfaction. In fact, when a study was done looking at the social service industry, it found that education does not play a role in job satisfaction (Martin & Schinke, 1998) as it does in other industries. This is the reason this study will be comparing the job satisfaction as well as mental and physical health of the various positions held in the mental health counseling. This is important to study in this profession due to the higher susceptibility to burnout and the emphasis that is put on counseling skills, with less emphasis on the other skills that could be needed in the various positions.
Chapter III

Methodology

Participants

The sampling pool for this study was counselors and social workers from 8 mental health centers in one state in the Midwest. From the 8 mental health agencies approached, three agencies agreed to participate in the study. In visiting the 3 agencies, the sampling pool was about 150 potential participants. The criteria for the sampling pool in the study included mental health professionals with (a) at least a master’s degree in mental health counseling, community counseling, or social work, and (b) a license through the state licensing board. Participants in this study were employed in at least one of the following positions: individual or group therapist, clinical supervisor, or administration/management (e.g. Quality Assurance Director, Clinical Director, Chief Operating Officer). Some participants held more than one of these positions, and were asked to identify the amount of time they performed the various roles listed.

Participants for this study were approached at meetings that were previously scheduled. The researcher informed participants that individuals who were licensed mental health professional were welcome to participate. One hundred mental health professionals completed the questionnaire, but only 97 questionnaires were usable, as three participants did not sign the consent form. Of the 97 participants, 77 or 79.4% were females and 21.6% were males. Of the participants in the study, 52.6% were between the ages of 21-35, 20.6% were between the ages of 36-50, 24.7% were between the ages of 51-65, and 1% were over the age of 65. With respect to education distribution, 84.5% had master’s degrees, 14.4% had some post-graduate education, and 1% had a doctoral degree. Professional position/role had 83.5% of participants indicating that they spent most of their time in the clinician role, 9.3% in the supervisor role, and 7.2%
indicated that most of their time spent in the role of administrator/management. Finally, years of experience broke down with 63.9% having 0-10 years of experience, 20.6% with 11-20 years, 7.2% had 21-30 years, and 8.2% indicated having 30-40 years of experience.

**Measurements**

The following instruments were used to measure the variables in the study. In order to collect demographic information, the researcher created a questionnaire. Established instruments measured the variables other than demographic information: mental and physical health, job satisfaction, and social support. Some of the measurements used were in their original form and some others were modified. The detailed information will be as follows.

**Demographic questionnaire.** This researcher-created questionnaire asked participants to answer questions about gender, age, level of education, marital status, licensure held, number of years working in the field, work setting, and percentage of time completing the three positions: clinician, supervisor, administrator/manager. All of these are important factors when taking an extensive look at career satisfaction because they play an important role in choices and accomplishments in an individual’s career (Cook et al., 2004).

Age was the first demographic question asked. Age was assessed by having the participant choose from one of the following choices: A.) 21-35, B.) 36-50, C.) 51-65, D.) Over 65. To evaluate years of experience participants were asked to reply in multiple-choice form. Participants were asked to choose from the following options: A.) 0-10 years, B.) 11-20, C.) 21-30, D.) 31-40, E.) Over 40.

Level of education includes three levels. Participants were asked to indicate their highest level of education. Marital status was also given several options and asked to pick which one best describes them at this time. Work setting was also given the following choices. Finally,
position was asked by having the participants account for the percentage of time spent completing each of the following jobs: A.) Clinician, B.) Supervisor, C.) Administrator/Manager. Appendix A provides a complete list of the questions and responses included in this measurement.

**Job satisfaction.** Job satisfaction was assessed by three questions, which were used by Hackman and Lawler (1971). The first statement to which each participant was asked to respond is “Generally speaking, I am very satisfied with my job.” The participants were then asked to rate on a Likert type scale from one to six. The next statement was “I frequently think of quitting my job,” which was reversed scored. Finally, on the same scale, participants were asked to respond to the statement “Generally speaking, I am very satisfied with the kind of work I have to do in my job.” These three questions were designed to measure overall job satisfaction (Hackman & Lawler, 1971). This measure has an internal consistency of a Cronbach’s alpha of .76 (Hackman & Lawler, 1971). Other studies have found similar internal consistencies. Kreiner (2006) found a Cronbach’s alpha of .75. When compared these questions to two other sets of questions measuring intrinsic motivation and job involvement and found that the job satisfaction questions had discriminate validity (Hackman & Lawler, 1971). The researcher ran a reliability test on the data collected and found an acceptable Cronbach’s alpha of .78, which is consistent with past findings.

**General health.** Mental and physical health were measured using the Duke Health Profile (Parkerson, Broadhead, & Tse, 1990). This 17-item questionnaire consisted of several subscales that could be calculated: physical, mental, social, general health, perceived health, self-esteem, anxiety, depression, anxiety-depression, pain, and disability. For the proposed study only mental health and physical health subscales were used. Sample questions from this
measurement include “During the past week how much trouble have you had with sleep?” or “During the past week how often have you had trouble with feeling depressed or sad?” The detailed list of questions is in Appendix B.

The Duke Health Profile has reasonable reliability and validity. The reliability of the separate subscales range from .55 to .78. Social support has the lowest Cronbach’s alpha score of .55, and general health had the greatest Cronbach’s alpha score of .78. The reliability for the mental and physical health scales being used have a Cronbach’s alpha score of .68 and .67 respectively. In order to assess convergent and divergent validity the Duke Health Profile was compared to Sickness Impact Profile, the Tennessee Self Concept Scale, and the Zung Self-Rating Depression Scale and it was found to have good validity (Parkerson et al., 1990). The researcher ran reliability test on the data collected and found that the reliabilities were very low and did not compare to those found previously. Cronbach’s alpha for physical health was .31 and .50 for mental health.

**Social support.** Social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). This scale consisted of 12 questions that examine social support from friends (FR), family (FA), and significant others (SO). Cronbach’s coefficient alpha for this scale shows that it has good internal consistency with a total value of .88. The subscales, FA, FR, and SO, also showed good internal consistency with Cronbach’s coefficient alphas of .87, .85, .91 respectively (Zimet et al., 1988). Other studies have headed good results for reliability, finding an overall internal consistency of .91 (Dahlem, Zimet, & Walker, 1991). The researcher ran an analysis for reliability for the overall scale for the data collected and found a Cronbach’s alpha of .94 Factorial validity was measured using principle components analysis and found that each of the
three factor’s items loaded strongly with the corresponding factor (i.e. FR, FA, SO) (Dahlem, Zimet, & Walker, 1991). Questions in this questionnaire consist of “there is a special person with whom I can express my sorrows” and “I can count on my friends when things go wrong.” See Appendix C for the complete list of items.

For this study, social support in the work place was measured using an amended version of the MSPSS. Questions were modified to reflect support that an individual receives from co-workers. To do this, words such as “friends,” “special person,” and “family” were replaced by “co-workers.” Duplicate questions were removed. This scale consisted of six questions. These questions included “There is a co-worker there when I am in need” and “My co-workers try to help me.” Appendix D has a complete list of the questions that were in the measurement. The questionnaire was then sent to Dr. Gregory Zimet, the lead author of the MSPSS in order to assess for face validity. Dr. Zimet confirmed the face and content validity. The researcher explored the reliability of the co-worker scale and found a Cronbach’s alpha of .94.

**Procedure**

Each participant was approached at a group meeting at his or her place of employment. The participants were instructed that this was a study being done for a doctoral dissertation. They were informed that the researcher was looking for participants who were licensed in the mental health field. The participants were asked to read over the consent form and to sign the consent to signify their willingness to participate in the study. The researcher also told the participants that the information obtained from the questionnaires would not be given to their employer and that the responses would be kept confidential. After the participants finished completing the questionnaire, the researcher went around and collected the questionnaires.
Participants in the study were approached in a pre-planned work meeting. The researcher presented the participants with the information about the study and why it was being done, as well as information about the confidentiality of the study. The researcher then gave directions about who should participate and to complete the consent before completing the questionnaire. At this time, the researcher handed out the consent forms and questionnaires to the group and instructed the members of the meeting that they were welcome to not return the questionnaire if they did not desire. The questionnaire packet consisted of 10 pages. The first pages were the consent form (See Appendix E). This form outlined the purpose of the study and explained the battery of questions and inventories asked in the study. The consent form gave information on the risks of participating in the study, for which the researcher did not foresee any significant risks for participation. The consent form also outlined information about confidentiality and anonymity. Finally, the consent forms outlined the participant’s ability to withdraw from the study at any time, as well as the ability to only answer the questions they were comfortable answering. An email address and phone number was provided for participants that had questions or concerns about the study. Each participant was asked to print and sign their name if they agree with the information on the consent form before continuing.

**Data Analysis**

Descriptive statistics were performed in order to exhibit the demographic information about each participant (e.g., years of experience, gender, position, etc.). Descriptive statistics were also performed to assess the mean and standard deviation of factors such as social support, mental health, physical health, and job satisfaction. An ANOVA was used in order to compare in group differences between position on both mental health and physical health measures.
Structural Equation Modeling

The hypothesis was that job satisfaction would be positively related to physical health and mental health. Further, mental and physical health would be influenced by the factors of social support, job position, years of experience, and gender. See Figure 2 for a detailed proposed model. In order to find the relationship of these variables, Structural Equation Modeling (SEM) was the data analysis method used. The benefit of using SEM is that it permits the use of research questions that require the use of numerous regression analyses of factors. It was used to examine the relationships between mental health and physical health to the demographic variables, as well as mental health and physical health to job satisfaction. Importantly, it was likely to identify the difference between how much job position influences job satisfaction. SEM is a combination of multiple regression and exploratory factor analysis. It is also referred to as causal modeling because it helps predict the factors involved in influencing the endogenous variables. This type of analysis is useful when working with hypotheses where there are predicted directional relationships (Ullman, 2007). The dependent variable in this study was job satisfaction, and this study was examining whether there is a positive relationship between our endogenous variable and mental and physical health. Also useful, SEM allows one to work with multiple endogenous variables, which are mental health, physical health, and their relationship with our demographic variables (Ullman, 2007).

SEM decreases the likeliness of measurement error from latent variables. In doing so, SEM is able to control for unreliability. It does this by having multiple factors per latent variable, therefore using more of a confirmatory factor analysis, which then reduces the chances for error (Ullman, 2007).
The reason a stratified sample was not used in this particular sample is due to the uneven amount of participants in each group that was anticipated. Each group in helping profession has an uneven amount of people, with therapists having the greatest number, followed by supervisors, and finally the least number of people are in the administrative roles in the helping profession. Due to this, it was difficult to look at a stratified sample and have the study representative of the sample in the population.

Finally, in order to interpret the fit of the model, several indices were used. The first was a chi square index. Good Fit Index was used. As a cut off score, it has been shown that any number above .95 indicates a good fit (Miles & Shevlin, 1998). Lastly, the root mean square error of approximation (RMSEA) was also used to determine fit of model to the data. As a cut off score, there should be a score of less than .05 to indicate a good fit.
Chapter IV
Results

This chapter presents a summary of demographic variables and the results of the data analysis. Descriptive statistics findings are described first, followed by the results of Structural Equation Modeling.

Data Treatment

Data was entered into SPSS by the researcher. Then each paper questionnaire was compared to the data entered in the SPSS database to ensure that the data was entered correctly. Descriptive statistics were then run in order to identify which variables had missing data. The percentage of missing data ranged from 1.0% to 9.2%. Missing data was dealt with by computing the mean score for the variable, replacing the missing data with that mean score, and a new variable was created with the original scores and the replacement means. Descriptive statistics were run again on the data to ensure that all of the missing data was addressed.

Once the missing data was addressed, the researcher, following the instructions of the manual, computed a few new variables so that the scores of the scales and subscales of each instrument were generated. The factor analyses were performed on job satisfaction and social support in order to have the score that best represents the construct of the variable.

Summary of Descriptive Statistics

Position and gender. Professional position was the label that was chosen to describe the position that the participants identified as the type of job he or she spent the highest percentage of time completing (See Appendix A). It was found that the majority of participants spend the majority of their time as a clinician, followed by supervisor, and then administration/management role. The least number of participants had the
administrative/management role as the primary job duties. It was also found that there were more female participants than males, with females outnumbering males in all positions, with the administrative/management role not having any male participants. This accurately represents the population in the helping professionals, which tends to have more females in the field, including higher positions that were labeled as administration and management, Chief Operations Officer, Quality Assurance Manager, and Executive Director.

There were some notable characteristics about the participants’ demographics, seen in Table 1. A majority of the participants were female and in the clinical role. There were no males in the current study who indicated the majority of their time in their job was spent performing the administration role.

The majority of the participants had only a master’s degree, with only one person having a doctoral degree. It also appears that the participants in the study did not have a lot of years of experience. For clinicians and administrators, most participants had between 0-10 years of experience. For supervisors, that number is slightly higher, in that most supervisors had 11-20 years of experience (See table 1 for details). Over half of the sample 52.56%, were between the ages of 21-35. Supervisors tended to be slightly older, on average, than clinicians, with the majority of participants in that category being between the ages of 36-50. Table 1 also indicates that those in the administration role are split in either being younger or older. The administrative role has 42.86% of its participants categorized being between the ages of 21-35 and 42.86% of them being between 51-65.
<table>
<thead>
<tr>
<th>Age</th>
<th>Clinician</th>
<th>Supervisor</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td># of</td>
<td>% of</td>
<td># of</td>
</tr>
<tr>
<td></td>
<td>part.</td>
<td>sample</td>
<td>part.</td>
</tr>
<tr>
<td>51-65</td>
<td>2</td>
<td>2.06%</td>
<td>16</td>
</tr>
<tr>
<td>Over 65</td>
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<td>0%</td>
<td>1</td>
</tr>
<tr>
<td>36-50</td>
<td>5</td>
<td>5.15%</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>21-35</td>
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<td>10.31%</td>
<td>36</td>
</tr>
<tr>
<td></td>
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<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>21-30</td>
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<td>4</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
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<td>5.15%</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
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<td>46</td>
</tr>
<tr>
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<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
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</tr>
<tr>
<td></td>
<td>Some post-grad</td>
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<td>3.09%</td>
</tr>
<tr>
<td></td>
<td>Doctorate</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Years of Exp</td>
<td>0-10</td>
<td>11</td>
<td>11.34%</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5.15%</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.03%</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>21-35</td>
<td>10</td>
<td>10.31%</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>36-50</td>
<td>5</td>
<td>5.15%</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>51-65</td>
<td>2</td>
<td>2.06%</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Over 65</td>
<td>0</td>
<td>0%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Years of experience. Years of experience was determined by one question that asked the number of years working in the helping profession a person had. The average number of years of experience was 1.60 on a scale from 1 through 5 with 1 representing 0-10 years of experience and 5 representing over 40 years of experience. Table 1 has the breakdown of years of experience sorted by job position and gender.

Means and Standard Deviations of Key Variables

Job satisfaction. Job satisfaction was measured by three questions used by Hackman and Lawler (1971). The three questions were about overall satisfaction with job, frequency of thoughts about quitting, and being satisfied with the type of work that is done in the job. At first, a mean score was calculated for each of the questions and then averaged, as the studies of the questionnaires have indicated to calculate. The scales went from 1 to 6, with the higher the number being the greater the job satisfaction, and the second question was reversed scored to reflect this trend. The average score of the three questions combined being 4.67 with a standard deviation of .93.

Factor analysis was then used to determine whether there was a lot of variance in the answers or if they were all related. The result of the factor analysis determined that 70.38% of the variance was explained yielded one factor. The loadings of the factor analysis were saved as a new variable and was used in the Structural Equation Model.

Mental health. The Duke Health Profile (DUKE) (Parkerson et al., 1990) scores were calculated and results for overall mental health were obtained. Scores were calculated following the scoring sheet for the DUKE. The raw scores for questions 8, 9, 10, 11, and 12 were summed and then the sum obtained was multiplied by 10. The average score for the population sampled
was 80.43, with a standard deviation of 15.28 and the scores ranged from 40 to 100. The closer to 100, the better one’s mental health.

In order to compare the three groups, clinicians, supervisors, and administrators, a one-way ANOVA was used. It was found that there was a significant difference between the three groups. Mental health differed significantly across position held, $F(2, 94) = 8.78, p = .000$. A Scheffé post hoc test was completed and showed that the significant difference lied between clinician and supervisor, and it showed that supervisors had significantly better mental health than clinicians, ($M = 77.92, 95\% \text{ CI} [74.607, 81.24]$). All other between group differences were not significant at a $p < .05$ level.

**Physical health.** The DUKE (Parkerson et al., 1990) scores were calculated for the results for overall physical health. Scores were calculated using the scoring sheet for the DUKE. The raw scores for questions 1, 4, 5, 13, and 14 were summed and then the sum obtained was multiplied by 10. The average score for the current population sampled was 69.043, with a standard deviation of 15.95 with a minimum score of 20 and a maximum score of 100. A score of 100 would indicate the best possible physical health.

In order to compare the three groups, clinicians, supervisors, and administrators, a one-way ANOVA was used. It was found that there was no significant between group differences in regards to position and physical health at the $p < .05$ level, with $F(2, 94) = 1.67, p = .194$.

**Social support.** The Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988) was used to obtain scores for social support. The scale was from 1 to 7, with 1 representing “Very Strongly Disagree” and 6 representing “Very Strongly Agree.” The mean score for the population sampled was 5.93 for the friends and family scale with a standard deviation of 1.10. In the Adapted Multidimensional Scale of Perceived Social Support the mean
score for the current sample was 5.36 with a standard deviation of 1.21 was obtained for the with co-worker support scale.

In order to see if social support could be loaded as one factor, a factor analysis of the questions on the scale was completed. To begin, an exploratory factor analysis was ran, using principle axis, on the 18 items that assessed social support. From this four factors emerged. These four factors corresponded to the following categories: co-workers, special person, family, and friends. These four factors accounted for 82.3% of variance.

A confirmatory factor analysis was performed on each of the four groups, using maximum likelihood. For the co-workers group, one factor accounted for 73.37% of the total variance. The special person group, one factor accounted for 92.01% of variance. One factor for the friends group accounted for 86.79% of variance. And the variance explained by loading the family group on one factor was 74.83%. Each of the four group’s factor loading scores obtained from the exploratory factor analysis was used for another confirmatory factor analysis to determine if one factor represents the data well. The confirmatory factor analysis results showed that 48.37% of variance was explained using one variable. Therefore, this factor loading score was saved as a new variable and used in the SEM analysis.

Table 2 presents the detailed look at the means and standard deviations of social support, job satisfaction, mental health, and physical health. In comparing means of positions with social support, both male supervisors ($M = 6.32, SD = .91$) and females ($M = 6.26, SD = .72$) had better social support than both male and female clinicians and management. Mental health was shown to be good in male supervisors ($M = 100, SD = .00$) and female supervisors ($M = 96.67, SD = 8.17$).
Preliminary Results

Specific Hypotheses:

1. The relationship between mental and physical health will be significantly positive. This hypothesis was supported by the data. There was a significantly positive correlation found for mental and physical health, $r (95) = .28, p < .001$. See Table 5 for details.

2. The relationship between physical and mental health and job satisfaction will be positive. This hypothesis was partially supported by the data. There was a significantly positive relationship between mental health and job satisfaction, $r (95) = .37, p < .001$, but there was not a significant correlation between job satisfaction and physical health, $r (95) = .14, p = .16$. See Table 5 for details.

3. Those mental health professionals in the main role of administration or management will have a positive relationship with job satisfaction. This positive relationship will be more significant than those in a supervisory or clinical role. This hypothesis was not supported. There was no significant correlation found between job satisfaction and the main role of a mental health professional, $r (95) = -.08, p = .46$, see Table 5.

4. Years of experience will be positively related to job satisfaction. This hypothesis was not supported by the data. There was not a significant correlation found between job satisfaction and the number of years an individual has been in the mental health field, $r (95) = .067, p = .51$. See Table 5 for details.
Table 2. Mean and Standard Deviation of Social Support, Job Satisfaction, Mental Health, Physical Health

<table>
<thead>
<tr>
<th></th>
<th>Social Support</th>
<th>Job Satisfaction</th>
<th>Mental Health</th>
<th>Physical Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Mean</td>
<td>5.32</td>
<td>5.59</td>
<td>4.82</td>
<td>4.50</td>
</tr>
<tr>
<td>Std. Dev</td>
<td>1.07</td>
<td>1.01</td>
<td>.81</td>
<td>.66</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.10</td>
<td>.57</td>
</tr>
<tr>
<td></td>
<td>Clinician</td>
<td>Super.</td>
<td>Mgmt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.32</td>
<td>6.26</td>
<td>6.19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.91</td>
<td>.72</td>
<td>.66</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5.10</td>
<td></td>
</tr>
</tbody>
</table>
5. Social support will be positively related to job satisfaction and mental and physical health. This hypothesis was partially supported by the data. There was not a significant, positive correlation between social support and job satisfaction, \( r (95) = .08, p = .42 \), but there was a significant, positive correlation with both social support and mental health, \( r (95) = .24, p < .05 \), and social support and physical health, \( r (95) = .21, p < .05 \). See Table 5 for details.

Tables 3 and 4 outline correlations of the exogenous variables by gender. For both males and females, there was one similarity. Age and years of experience were correlated at the \( p = .001 \) level in both genders. The only other exogenous variables that were related for males was position and years of experience, which were negatively related, with \( r (95) = -.52, p < .05 \). Females had several variables that were correlated. Age and marital status were positively correlated, with \( r (95) = .23, p < .05 \). Licensure and years of experience were positively correlated, \( r (95) = .41, p < .001 \). There were two exogenous variables that negatively correlated with work setting in the female data set. These were age and years of experience with \( r (95) = -.32, p < .001 \) and \( r (95) = -.35, p < .001 \), respectively.

**Structural Equation Modeling**

Structural Equation Modeling (SEM) was completed for the hypothesized model (Figure 3). In order to begin the SEM process, the researcher ran a distribution check of the variables. Through this, it was seen that the variables did not follow a normal distribution. Because the endogenous variables did not follow normal distribution, bootstrap was implemented in the SEM process to handle possible bias of standard error estimation resulting from the non-normality (Efron & Tibshirani, 1989). The hypothesized model assessed the predictors of mental and physical health. It was hypothesized that years of experience and social support would have
a positive correlation with mental and physical health. Also, it was hypothesized that those in
Table 3. Pearson Correlations of age, years of experience, marital status, education, licensure, job position, and work setting of males

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Years of Exp</th>
<th>Marital Status</th>
<th>Education</th>
<th>Licensure</th>
<th>Job Position</th>
<th>Work Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years of Experience</td>
<td>.833**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>.207</td>
<td>.240</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-.153</td>
<td>-.264</td>
<td>.015</td>
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<td></td>
</tr>
<tr>
<td>Licensure</td>
<td>.256</td>
<td>.336</td>
<td>.329</td>
<td>-.132</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>Job Position</td>
<td>-.362</td>
<td>-.518*</td>
<td>-.077</td>
<td>.214</td>
<td>-.071</td>
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<td></td>
</tr>
<tr>
<td>Work Setting</td>
<td>-.101</td>
<td>-.065</td>
<td>.063</td>
<td>.116</td>
<td>.116</td>
<td>-.096</td>
<td>1</td>
</tr>
</tbody>
</table>

* indicates significant at .05 level
** indicates significance at .001 level
Table 4. Correlations of age, years of experience, marital status, education, licensure, job position, and work setting of females

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>Years of Exp</th>
<th>Marital Status</th>
<th>Education</th>
<th>Licensure</th>
<th>Job Position</th>
<th>Work Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Years of Experience</td>
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<td></td>
</tr>
<tr>
<td>Marital Status</td>
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<td>.179</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Education</td>
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<td>.080</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Licensure</td>
<td>.177</td>
<td>.414**</td>
<td>.081</td>
<td>-.050</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Position</td>
<td>.009</td>
<td>-.020</td>
<td>-.028</td>
<td>-.015</td>
<td>.030</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Work Setting</td>
<td>-.322**</td>
<td>-.349**</td>
<td>-.020</td>
<td>-.129</td>
<td>.076</td>
<td>.005</td>
<td>1</td>
</tr>
</tbody>
</table>

* indicates correlation is significant at .05 level (2-tailed)
** indicates correlation is significant at .001 level (2-tailed)
Table 5. Pearson Correlations of years of experience, position, social support, job satisfaction, mental health, and physical health

<table>
<thead>
<tr>
<th></th>
<th>Years of experience</th>
<th>Position</th>
<th>Social Support</th>
<th>Mental Health</th>
<th>Physical Health</th>
<th>Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of Experience</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>-.130</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Support</td>
<td>-.006</td>
<td>-.064</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td>.204*</td>
<td>-.182</td>
<td>.243*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Health</td>
<td>.142</td>
<td>.061</td>
<td>.206*</td>
<td>.276**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>.067</td>
<td>-.076</td>
<td>.084</td>
<td>.369**</td>
<td>.144</td>
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</tr>
</tbody>
</table>

* indicates correlation is significant at .05 level (2-tailed)
** indicates correlation is significance at .001 level (2-tailed)
the position of administration would have the better physical and mental health, and that supervisors would have the worst mental and physical health. In the model, it was predicted that women would have better mental and physical health than men. Covariance was explored in the endogenous variables of the model.

In the hypothesized model, mental and physical health’s prediction on job satisfaction was assessed. It was hypothesized that mental and physical health would have a positive correlation to job satisfaction. Also, it was hypothesized that mental health and physical health would be positively correlated.

**Hypothesized model.** In order to compute the SEM, the researcher used AMOS software. In the original model, there were four paths that were at the significant level. These paths included years of experience to mental health, social support to physical health, social support to mental health, and mental health to job satisfaction.

The path of years of experience to mental health and social support to physical health were found to be significant at the $p < .05$ level. Years of experience had a significant positive influence on mental health. Social support had a positive influence on physical health, which was significant. The parameters of social support positively influencing mental health and mental health positively correlating job satisfaction were found to be significant at the $p < .001$ level. The strongest path in the original model was that mental health positively influenced job satisfaction. See Figure 3 for the original model results.

There were paths that were not found to be significant in the original model. There was no significance between position and either physical health or mental health. There was also no significant path between years of experience and physical health. Physical health was also not found to have a significant influence on physical health. Lastly, gender was not found to have
significant path to either mental or physical health, and also had the least path coefficients out of all of the variables to both physical and mental health. The modification indices in AMOS showed that no other paths should be examined.

The original model fit the data well. Chi-square indicated a good fit, with $\chi^2 (6, N = 97) = 2.59, p = .86$. The model fit indices indicated a good fit (See Table 6). In looking at the Good Fit Indices (GFI) the original model had a GFI of .993. Any number above .95 indicates a good fit (Miles & Shevlin, 1998). Further, looking at the root mean square error of approximation (RMSEA), which should be less than .05, a .000 was attained. This number also indicates a good fit.

**Modified model.** From the original model, the researcher adjusted the model based upon the original model’s findings to create a second model. Because of the low significance gender played in the original model with mental and physical health, a second analysis was completed gender removed from the model. The other insignificant factors were kept in the model because although they were shown to not be significant, there was a much greater path coefficient of these variables towards mental and physical health than gender. Position was specifically kept in due to the original model’s hypothesis of the role that it would play and the previous research findings.

When analysis was ran on the second model without gender, the significance of the paths in the original model became less significant, indicating that although it did not seem to play a role in the model, gender acted like a suppressor variable. Although gender acted as a suppressor variable, the amount of change that was indicated in the significance levels was minimal.
Figure 2. Original SEM Model
In our second model, years of experience influence on mental health was positively significant and so was social support’s influence on physical health at the $p < .05$ level. Social support also had a positive influence on mental health as mental health influenced job satisfaction at the $p < .001$ level. Years of experience’s influence on physical health approached significance, but $p = .084$, not enough to make it significant. Physical health continued to not significantly affect job satisfaction.

Analysis of how well the model fit the data was run on the second model. This also indicated that there was a good fit between the model and the data. In this model, our GFI increased slightly to .994 and the RMSEA stayed at .000. Chi-square also improved, $\chi^2 (3, N = 97) = 1.81$, $p = .61$.

With higher model fit indices than the hypothesized model, it was decided to continue to leave gender out as a variable. Even though the model was a better fit than the original, it was decided to run another model to see if removing physical health as a factor that influenced job satisfaction, due to the lack of significance in this path, and instead influenced mental health would improve the significance of the overall fit of the model and understanding the path to job satisfaction.

**Final model.** A third analysis was completed. In this analysis, it was hypothesized in this model physical health could positively influence mental health, which, in turn, would indirectly affect job satisfaction, since no direct link was indicated through the data analysis. An analysis was ran on the third model, and it was found that physical health positively influenced mental health at $p = .03$. 
Figure 3. Second SEM Model
There were other changes when examining this model. The significant influence of years of experience to physical health were no longer significant, $p = .11$ as well as influence of years of experience on mental health, $p = .06$. Social support had a significant positive influence on physical health at $p < .05$ level and a significant positive influence on mental health at $p < .001$ level. Mental health continued to have a significant positive influence on job satisfaction at the $p < .001$ level. Finally, although still not significant, the influence on job position to physical health approached significance, $p = .08$.

Analysis of how well the model fit the data was run on the second modified model. This also indicated that there was a good fit between the model and the data. In this model, $\chi^2 (5, N = 97) = 2.95$, $p = .71$, our GFI decreased slightly to .99 and the RMSEA stayed at .00. Although the fit of the model was not as good as the second model run, it did more closely reflect our original hypothesis, and it was decided to keep this as the final model. AMOS indicated that there were not any modification indices required.

Because the final model still contained insignificant paths, it was decided to test if the path from years of experience to physical health was taken out, would it improve the overall fit of the model. The result from this was that there was an improved significance of physical health influencing mental health and years of experience positively influencing mental health both at the $p < .05$ level. There was no change in the influence of mental health on job satisfaction, social support on mental health, and job stress on mental health.
Figure 4. Final SEM Model
In looking at the goodness of fit, it seems as though there was a good fit in accordance with \( \chi^2 (6, N = 97) = 5.49, p = .48 \) which is significant at the \( p < .05 \). Looking at the GFI and RMSEA scores, it does show that this model is also still a good fit, with scores of .98 and .00 respectively. The major finding in all of the models is that there is a strong path that related social support to mental health, which has a strong, significant relationship to job satisfaction. To ensure that this model would not be greatly affected by gender, the gender variable was put back into the final model. Gender still acted as a suppressor variable as it had in the hypothesized model, but it lowered how well our model fit, with \( \chi^2 (10, N = 97) = 9.07, p = .53 \), a GFI score of .97 and a RMSEA score of .00. Due to the decrease in the fit of the model, gender was not kept in the final model.

Although there was a best fit of data with the first modified model that was run, it was decided not to keep this as the final model. In looking at the fit of the model with the hypothesis, it was decided to make the third model ran our final model because it lends more to the original hypothesis with respect to the role position plays, due to its increasing approach to significance that was achieved.
Table 6. Good Fit Indices for each model tested

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi Square</th>
<th>Probability</th>
<th>GFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Model</td>
<td>$\chi^2(6) = 2.590$</td>
<td>$p = .858$</td>
<td>.993</td>
<td>.000</td>
</tr>
<tr>
<td>Model 2</td>
<td>$\chi^2(3) = 1.812$</td>
<td>$p = .612$</td>
<td>.994</td>
<td>.000</td>
</tr>
<tr>
<td>Final Model</td>
<td>$\chi^2(5) = 2.948$</td>
<td>$p = .708$</td>
<td>.990</td>
<td>.000</td>
</tr>
<tr>
<td>Model 4</td>
<td>$\chi^2(6) = 5.49$</td>
<td>$p = .483$</td>
<td>.982</td>
<td>.000</td>
</tr>
</tbody>
</table>
Chapter V

Discussion

This chapter will review the background and design of the study. The major findings of the study will be presented and discussed in relation to the existing literature. Further, this chapter will discuss the implications of the findings as well as address the limitations of the research. Finally, thoughts for future research to improve the studies about job satisfaction, health, and positions held by mental health professionals will be discussed.

Background of the Study

The relationship between physical health and mental health has been found to influence job satisfaction. The literature also found that positions in an organization had significant impact on individuals’ job satisfaction. In graduate training young mental health professionals are taught to safeguard themselves against burnout (Evans et al., 2006; Farber & Heifetz, 1982; Humbeek et al., 2004; Martin & Schinke, 1998, Prosser et al., 1997; Prosser et al., 1999; Reid et al., 1999). Burnout, which is the mental and physical distress from a job, can lead to dissatisfaction of jobs and mental or physical health problems. Little attention has been paid in research and graduate training on the mental and physical health as well as job satisfaction among helping professionals, particularly whether the mental health workers who have other roles, namely supervisor and administrator/manager in the mental health agencies. Also, research on in dealing with the mental health profession has not looked at other factors that can decrease the risk of burnout by finding moderating factors that can influence mental and physical health. In doing this, there can be some protection from the distress mental health jobs put on a person’s mental and physical health.
Research that has focused on comparing various roles and their health and job satisfaction has been completed in Industrial and Organizational (I/O) Psychology literature. In these studies I/O Psychologists have focused on mainstream business. These studies have found that those in management have the best health and job satisfaction and those in middle management tend to have the worst mental health (Frone et al., 1996; James & Jones, 1980). Further, much of the research has focused on various models, which include the Person-Environment Fit Model and the Job Demand Model.

In the present study job satisfaction was examined through the Ecological Model (Conyne & Cook, 2004). The Ecological Model emphasizes that humans are like ecosystems. We make meaning out of our environment, physical surroundings, and those we surround ourselves with, which determines how we try to sustain ourselves (Conyne & Cook, 2004). This can be done at various levels microsystems, mesosystems, exosystems, and macrosystems (Bronfenbrenner, 1979 & Kassambira & Edwards, 2000). Using this model, the researcher examined the relationships between gender, social support, job position, and years of experience on mental and physical health, and how health then influences job satisfaction. The present study encompasses several levels of the Ecological Model.

**Brief Review of Methodology**

The study employed Structural Equation Modeling to address these research questions: Does job position affect mental and physical health in the helping profession directly? Does mental health and physical health have an effect on job satisfaction directly? Do social support, gender, and age influence mental and physical health directly? Is job satisfaction conjointly influenced by gender, years of experiences, mental and physical health, and social support? Participants were recruited at three mental health agencies. Demographic information collected
included: age, years of experience, gender, marital status, educational degree, licensure status, percentage of time spent doing various roles, which included clinician, supervisor, and administration/management, and finally job setting. To collect information for job satisfaction, three job satisfaction questions were used that had established validity and were used originally by Hackman and Lawler (1971). Mental and physical health were assessed using the Duke Health Profile (Parkerson et al., 1990). Social support was assessed by two different variations of the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988). The original survey assessed aspects of social support that include friends, family, and significant others. This researcher modified the survey to assess for social support from co-workers and the face validity was confirmed by the senior author of the original MSPSS.

Participants were 97 licensed mental health workers in 3 agencies in Midwestern region. There were 100 surveys collected, but only 97 had usable data due to three of the participants not signing the consent form. The participants had an average of 16.2 years of work experiences in the mental health field.

The descriptive statistics, correlations, and factor analyses were performed to prepare the data for structure equation modeling. The AMOS program was used in order to conduct Structure Equation Modeling. After the original model, three more models were run until the most parsimonious model was found.

Major Findings

The original model hypothesized that gender, main job position, years of experience, and social support would contribute to mental and physical health, and then eventually affect job satisfaction. Social support was originally assessed using two questionnaires, but factor analysis
was conducted and justified using the one factor loading, which was used in the SEM model for social support.

The final model had several changes from the original model. In the second model ran, gender was taken out of the model early because although it played a role as a suppressor variable, it had little significance to the overall model. When the final model was achieved, gender was put back into the model to test if it still did not impact the model, except for a slight suppression factor. Although, gender continued to act as a suppressor variable, it still did not impact the model fitness or path coefficient significantly. What was significant or insignificant before continued to remain significant or insignificant respectively. In looking at the model fit summaries, adding gender to the final model decreased the fit of the model.

The path between physical health to job satisfaction was removed in the final model. Instead the path between physical health and mental health was put in the model as a factor that positively influenced mental health. This was done because there was no significant relationship between physical health and job satisfaction. The added path between physical and mental health was found to be significant one and the model also had the good model fit index. The only variable that influenced physical health in the final model was social support. In making this change, though, the path between job position and mental health started to approach significance. The fit index of the last model was not as good as Model 2, because of the influence this change had over job position, it was decided that this would be the best model that represented the original hypothesis.

The main hypothesis was that job satisfaction was positively related to physical health and mental health, which are influenced by the factors of social support, job position, years of experience, gender. The results of this study found that there were several factors that influenced
mental health, which included social support, years of experience, and physical health. There was only one factor that influenced physical health in a significant manner, which was social support. It was also seen that only mental health directly impacted job satisfaction significantly, rather than both mental and physical health having a direct impact.

The relationship between job position and job satisfaction in the original hypothesis was not supported. This finding is in contrast to the I/O Psychology literature, which states that those in the position of management/administration will have the greatest job satisfaction and mental and physical health and that those in the position of supervisor would have the least job satisfaction as well as mental and physical health. In the current study there was no significant path found between job positions either mental and physical health or job satisfaction. Although in the final model, this was approaching significance, it cannot be stated with certainty that job position has any effect on mental health, leading to differences in job satisfaction.

Interestingly, gender did not appear to play a significant role in mental health. When taken out of the model, though, significance levels did decrease slightly with respect to the variables relationships with one another. This caused the researcher to classify gender as a suppressor variable.

Discussion of the Findings

In the current study it was found that years of experience positively influencing mental health. This was in accordance to most of the previous research that has been conducted (Holland, 1996; Saiyadain, 1985). This could be for many reasons, such as in having more years of experience, a person might be older, and it has been theorized that with age comes a steadier job interest over time (Holland, 1996). A person, who has a steadier job interest, often has better self-esteem, which in turn improves mental health. In addition, with more experience often
comes promotion (Saiyadain, 1985), which one can choose to accept or, if a person is happy in their current role, choose to turn down, which would allow them to be more comfortable with where they are in their career.

In the current study, it was found that social support played a large role in influencing mental health. Not only that, in the final model, it was the only variable having a significant path to physical health. This is supported by the previous research that has been completed. Previous research has shown that anxiety (Farber & Heifetz, 1982; Landsbergis et al., 1992; Lee & Robbins, 1998), anger, depression (Landsbergis et al., 1992), and self-esteem (Lee & Robbins, 1998) have all been influenced by social support. Being able to express feelings about stress and life situations to another listening, caring person can often be a relief. Feeling like your feelings are being supported can be therapeutic.

The finding that physical health is also significantly impacted by social support is also backed up by previous research. Physical health has had previous research showing that it is also positively influenced by social supports. Previous research has also found that employees report less illness when management works from a relationship approach, rather than just being task oriented with their employees (Chemers et al., 1985). The current research supports this in showing that social support affects a person’s physical health positively.

Physical health was found to be a contributing factor to mental health and indirectly influenced job satisfaction through mental health in the current study. There has been much research that has supported the mental and physical health connection. Research has found that those who have physical illness are six times more likely to have a mental illness (Cooke et al., 2007). There has been much research that links mental health and specific physical health issues such as increased risk of heart disease (Cooke, et al. 2007; Marchand et al., 2005; Scott, Oakley,
Browne, McGee, & Wells, 2006), obesity (Friedman & Brownell, 1995; Herpertz et al., 2006), and chronic pain (Gatchel et al., 2007; McWilliams, Cox, & Enns, 2003; Villano, Rosenblum, Magura, Fong, Cleland, & Betzer, 2007). There has not been research that has discovered whether there is a causality of these two variables, though.

With respect to physical health not playing a direct significant role in job satisfaction, previous research has shown that there is a connection between physical health and job satisfaction, but the characteristics of physical health were specific, such as cardiovascular disease (Fargher et al., 2005; Siegrist, 1996; Van Harrison, 1996) and peptic ulcers (Van Harrisson, 1978). In the current study, general physical health was assessed. General health seems to influence mental health more than job satisfaction. It could be the stress that physical health puts on an individual, and having to handle both the stress of a mental health worker’s own health, while also managing the stress of clients could create a more prominent influence on job satisfaction than just the physical health concern would.

Mental health’s positive significant influence on job satisfaction provided the strongest path in the entire model. Exploring the previous research, this is comparable to the research that has been completed exploring burnout in mental health workers, which shows a that a decrease in mental health can lead to a decrease in job satisfaction (Evans et al., 2006; Farber & Heifetz, 1982; Humbeek et al., 2004; Martin & Schinke, 1998, Prosser et al., 1997; Prosser et al., 1999; Reid et al., 1999) due to the demands the mental health profession puts on a person’s emotions and resources (Evans et al., 2006; Martin & Schinke, 1998). The current study takes this one step further, though. Previous research has examined those who have direct contact with clients only, but the present research has presented evidence that even those who play a more hands off role could be susceptible to lowered job satisfaction due to a decrease in mental health and social
support. This could be because although those in higher positions are not dealing directly with clients, the demands of their job might be experienced as higher due to the fact that it is outside of their formal training. Research has shown with higher demands, often times mental health can be affected (Tsutsumi et al., 2001).

In looking at gender, the results from the current study are in line with the current research about gender’s role on mental health, physical health, or job satisfaction. In the literature, gender is found to have mixed results in its effects on mental and physical health. Some studies even have found that there doesn’t seem to be a difference in how job stress affects mental and physical health (Kirkcaldy & Siefen, 2002; Saiyiaden, 1985), but in how males and females deal with that stress (Cooper et al., 1989). In the current study, there was a lack of evidence that supported that gender directly influenced any other variable in the model.

Mental health service fields tend to attract more females than males, compared to the other work fields. For instance, in research completed in business settings and I/O Psychology fields, there were more males than females in upper level positions. Because of over-representation of female professionals in the mental health service field, many of the administration/management positions are occupied by females. Such unbalanced gender distribution was also the case in the current study.

The findings of the current study appear to be similar to the studies about medical professions. Because both mental health and medical professionals must deal with people’s emotional and behavioral issues on daily bases, their own mental health can be neglected and put in jeopardy (Dallender et al., 1999). As there is a decrease in their mental health, job satisfaction could decrease. Also, in the medical and mental health professions, job satisfaction could decrease when progress is not seen readily in clients/patients. This could also create some issues
in a person’s self-esteem and feeling accomplished in their field, which then might lead to increased stress and decreased mental health.

As stated previously, the current study did not find a significant influence of job position on mental health or physical health as was originally hypothesized. In looking at research in the other fields, whose educational and/or work history background is in medicine, and who lack the business background where management skills are taught. There might be several reasons for this lack of significance. Through the literature review, it is known that in the medical field, promotion can come with greater stressors that the practitioner does not feel equipped to handle.

Kirkcaldy and Siefen (2002) found that those medical professionals in the medical director position often have a hard time balancing their duties, being seen as the boss, completing administrative tasks. One reason for their difficulty of balancing work duties is that the training for both the medical profession and the mental health field is targeted more toward practitioners. As a mental health professional moves up and out of the role of clinician, they have less training in their new role and might not feel as equipped due to the change in demands from more client focused to administrative, business-like duties. This differs from the type of positions that industrial/organizational psychology research has investigated in that although duties do change, there is not as vast of a difference and possibly more training and focused education on the various roles that can be held.

In looking at our major findings, they seem to lend credence to the ecological model upon which the research was based. The current study has shown that there are many levels that affect job satisfaction, both directly and indirectly. The main findings show that social support can improve and hinder health of an individual, mainly mental health. Not only does social support influence mental health, but physical health also has an influence. The relationship is positive, in
that the better a person’s physical health, the better a person feels mentally. Mental health seems to be affected at the microsystem level with the social, face-to-face interaction a person has with others and also at the exosystem level with regards to health. This then extends to how mental health influences job satisfaction at several levels of the ecological model.

In summary, the major finding from the current study was the significant path in which social support strongly and significantly influences mental health, which then in turn, significantly impacts job satisfaction. The ecological model our original hypothesis was based upon supports this. We interact with our environments based upon ecosystems. We all might have a similar work environment, but our unique ecosystem determines how we interact with it. A person who has social supports both in and out of the workplace is more likely to feel mentally and physically healthy. Having an able body and mind can impact how one feels about their job. Looking beyond the workplace to find the factors that influence one’s satisfaction for their work is an important concept in looking at ways to help improve the education and workplace environment and support of mental health professionals.

**Limitations of Study**

There were several limitations of this study including biases from the sampling and in the methodology. Limitations in the sampling include the size of the data set and representation. Methodology limitations refer to the measurement issues.

The size in the current study was relatively small because the sampling pool was only the local region. One hundred questionnaires were collected, with 150 originally expected, and 97 questionnaires were usable. The three questionnaires that were not used were due to the participant not signing the consent form. Structural Equation Monitoring needs a large sample size to obtain reliable results.
Another issue was the even smaller size of participants in certain job positions in the sample. In the current study, there was a good representation of clinicians, but fewer supervisors and even less administrators/manager. Although the sample represents the distribution of jobs closely to what is seen in the population, a greater number of participants would give more information for the supervisors and administration job positions. Also, a greater number of participants might lend to more gender differences, in that there were no male participants surveyed in the management role.

The data collection was based on the questionnaire and instruments that were self-reported. Self-reporting may not be the most reliable way to collect data. Often times it can be inflated or underestimated to be what participants believe is more socially acceptable. Social desirability refers to the trend of answering questions in a way that puts a person in a desirable light, whether it is done intentionally or subconsciously (Edwards, 1953; Klassen, Hornstra, & Anderson, 1976). Also, the data was collected while the participants were still at work, sometimes with their supervisors and management team in the same room. Although it was stated verbally that the information would not get back to their employers, there could have been some concern that any information the participants gave could negatively impact them and their job in some manner.

The current study also had a limited representation of settings in which a mental health professional can be employed. The agencies that agreed to participate in the research were all community mental health agencies, meaning agencies that work with clients who are underserved, and often have Medicaid or do not have insurance. One of the agencies that agreed to participate had therapists that dealt with clients who have private insurance, but these therapists are still under the same management of the community mental health agency.
Another limitation of this study was related to the timing and the contextual factors that affect one of the study sites during the data collection. One of the agencies had undergone a merger in the last few years. With mergers, there are often associated numerous changes that can affect job satisfaction, job status, both physical and mental health, and social support. Roles are often changed, and people in new roles might have lower job satisfaction than normal. Stress from the merger also might affect people’s health. If expectations of clinicians have changed, then spending more time at work, feeling as though there is little support at the job from co-workers or management could become an issue.

The measurement was another limitation. In order to decipher what category to put each participant in with regards to job position, the researcher decided to ask about the percentage of time spent completing each role. In order to use SEM, it was necessary to use a continuous variable, and requesting a percentage was able to yield this. In asking the percentage of time spent in each role and only considering the largest percentage of time as the main role could have led to blurred role identification or duties. Misinterpretation of the role the participant believed to be their main role might have occurred because a person might consider their highest role to be their main role, even if they spend more time in a different role. Finally, an inaccurate representation of the amount of time spent on a particular role could have also been a factor due to confusion of definition or self-report bias. Also, it is unknown how long a person had been in a particular role. If a person just entered into a role, stress might have increased due to learning about the role and managing time in the new role.

Another measurement issue was related to the Duke Health Profile (DUKE). Although DUKE is considered a decent measurement, it asked overarching questions to get at a person’s physical and mental health. In asking questions in the manner in which it did, it might have
missed detection of more specific health concerns addressed in earlier research, such as cardiovascular disease (Fargher et al., 2005; Siegrist, 1996; Van Harrison, 1996) and peptic ulcers (Van Harrisson, 1978). Also, in looking at the reliability of the measurement in the current study, there was a low Cronbach’s alpha for physical health of .31.

**Suggestions for future research**

In future research, a larger number of participants from wider settings are needed to validate the current study’s results. A greater number of participants might yield a better representation of each position a person in the mental health profession may hold. In turn, this could improve the possibility of having a better-represented sample.

Another change for future research could be with the variable of professional position/role. In the current study, a participant’s position was assessed by asking each participant to gauge the percentage of time he or she spent completing different roles. From this data, the highest percentage of time doing a particular role was taken as the deciding factor in the assignment of that individual’s profession position for this investigation. In future studies, the assignment of professional role (i.e., position) might be assessed in a different manner. For instance, it could be measured by asking the exact title of participants’ job or what position a person considers their main position.

With respect to professional position/role and future research, the percentage of time spent participating in a particular role could be used to determine the main job position. Jobs in the mental health field often overlap, in that supervisors do not spend 100% of their time supervising clinicians, but might also spend time participating in the role of the clinician/therapist or completing administration duties. Due to this, it can be unclear as to what role to classify a participant. By taking into account the percentage of time a participant partakes...
in a role, then a trend might appear, such as the greater amount of time spent in a particular role yields a different impact on mental or physical health. It could be, the more balanced the roles, the decrease in the difference of the effects on mental and physical health.

Future research might also focus on particular physical or mental conditions. The Duke Health Profile had several subscales that were not included in this study. It could be that, although overall mental or physical health were not affected by some of the variables, there might be particular health issues that were more affected than others. For example, in the literature review, it was found that ulcers created from job stress influenced a person’s job satisfaction (Van Harrison, 1978). In the Duke Health Profile the questions used to deduct physical health would not have picked up on this particular issue. Perhaps a more comprehensive inventory or medical history might yield different results on physical health’s influence on job satisfaction.

Each of the mental health facilities visited were considered community mental health facilities. One facility visited had a portion that saw individuals who had private insurance, but it was still owned and managed by a community mental health agency. In the future, more research should be performed on agencies aside from community mental health. This should be able to confirm external validity of the current study’s findings.

Community mental health centers often times have a high volumes of paperwork, poor attendance, and require a clinician to see a high volume of clients each week. This can bring on stress and decrease in job satisfaction. Jobs in private practice often times require less paperwork, a more relaxed schedule, but do not bring in the diversity in types of jobs held, mainly only having clinicians. Hospital positions might be higher paid, have a more regular schedule, and not require a certain number of people to be seen. Often times, though in a
hospital setting the clients seen have a more severe level of mental illness, and clients are only seen for a short period of time. All of these factors could bring a new richness and greater dimension to further studies.

In future research, it might benefit to look at other factors that could affect job satisfaction that previous research has found could be possible factors in job satisfaction in the business world. These could include salary, treatment and support from management, work/life balance (Casey & Grzywacz, 2008; Haar, 2004; Kirkcaldy & Siefen, 2002; Rudd & McKenry, 1986), workload (Kirkcaldy & Siefen, 2002; Prosser et al., 1997), and promotion opportunities (Martin & Schinke, 1997; Saiyadain, 1985). There are quite a few other variables that could influence both health and job satisfaction in the mental health profession that were not included in this current research. The ecological model emphasizes looking at many different levels that influence behavior and beliefs, and the current study only began to look at a few of the possible factors. Including other factors would increase the understanding of the numerous factors that shape job satisfaction in helping profession.

Also, it was found that gender was a suppressor variable, but was only a small factor in the overall model, and it was decided that gender be removed in the final model. From the literature, there is an indication that although there are mixed reviews on the gender differences in health as related to job stress and satisfaction, there might be greater differences between the way males and females deal with stress (Cooper et al., 1989; Lu et al., 1999; Tsutsumi et al., 2001). In future research, the gender difference in coping with stress could be explored more, looking at behaviors such as drinking, smoking, exercise, depending on others when feeling more stressed out.
With respect to social support, another variable that could be examined would be support received from superiors. Past research has found that workers tend to have better relationships with supervisors or management tend to report having not only better mental health (Stansfeld et al., 1999), but also job satisfaction (Martin & Schinke, 1998). The current study looked at support from co-workers, but did not specify whether that was peers or superiors. It could be that each of these aspects influences health differently.

**Implications for Practitioners and Counselor Educators**

**Implications for practice**

It is important to keep in mind that that mental health professionals not only look at burnout and maintaining support and health in the clinician role, as previous research has mainly focused. People in the roles of supervisors and administration need to also be aware of maintaining health and support. These positions are as susceptible to a decrease in job satisfaction and burnout as clinicians. The current study shows there is no significant difference in the mental health of any of the professional roles played. Prevention against burnout should be taken no matter what role a person plays in an agency. Peer support for supervisors and administrators should be a priority. This can be difficult because there are fewer individuals at the higher positions, which can create some isolation. It is vital that those in the higher positions either seek out support within their own practice or develop a support group of those who are in the role of administration in order to decrease isolation that might be felt.

Another implication for counseling practice would be to have supervisors and administrators focus time and effort in making sure that employees are actively engaging in social interaction and maintaining both physical and mental health. Although, this can be difficult to help with relationships outside of the work setting, there can be actions taken to
promote this within the workplace. Counseling agencies could be sure to make group/peer supervision meetings a regular occurrence, not only for clinicians, but possibly all levels of mental health professionals. Team building activities could be set up regularly to help build relationships and trust among co-workers and also with supervisors and administrators.

Work places in the mental health profession need to be open to allowing their professionals the flexibility to be able to take care of mental and physical health needs. This could be in the form of allowing flexible scheduling such as seeing clients later or earlier to allow for doctor’s appointments. It could also mean setting reasonable productivity levels, so that a mental health professional feels as though they can afford the time off to take care of themselves. Work places might also make efforts to reward proactive or preventive measures that a worker might take.

**Implications for counselor education**

With the findings from this study about the factors that influence mental and physical health, as well as job satisfaction, counselor education programs can put more focus on these particular aspects in teaching prevention for well-being to students. In this study, the most significant path that was found was the effect of social support on mental health, and mental health’s positive influence on job satisfaction. Counselor educators can use this knowledge to create new plans to help emerging counselors become aware of and develop skill sets to build strong social support. Also, counselor educators need to emphasize the importance of keeping one’s mental and physical health up to date and discuss the impact of declining health on one’s ability to help as well as being able to persevere on the job. It should be encouraged to maintain preventative efforts and emphasize resources to help maintain good physical and mental health.
such as regular exercise, eating right, tracking one’s own stress, and discussing how even mental health professionals might need their own counselor to help with mental well-being.

Not only is it important to teach new counselors about how they can prevent burnout in themselves, but also teach therapists interested in future careers encompassing becoming a supervisor and/or administrator about burnout in themselves and those they oversee. This can be included in both supervision classes and classes at the doctoral level. The component in these types of classes may include how to set up a system that elicits good social support, such as having regular group or peer supervision, working on team building activities, or possibly encouraging time spend on focusing on maintaining connections both in and out of the workplace.

**Conclusions**

There were several significant findings in this study. Social support positively influenced mental health, which then positively influenced job satisfaction. Further, years of experience and physical health had an indirect positive influence on job satisfaction. These findings support the applicability of the ecological counseling approach to understand job satisfaction. A person’s job satisfaction is affected by multiple factors including both personal factors such as years of experiences, positions held in the organization and by more systematic factors such as support from co-workers and family members. Mental health’s role, a mediating factor between other demographic factors, physical health, and social support, and job satisfaction, confirmed the importance of promoting of psychological well-being in work settings. Counselor educators can use this information to help create a prevention class, that focuses on helping counselors maintain proper social support as well as teaching mental health professionals with supervisory and administration interests to facilitate social support in work environments. Mental health
workers can use this information to help keep themselves healthy and satisfied not matter what type of position they might hold, by keeping a balance between work and social support both in and out of the workplace.


Turner-Bowker, D. M., Bayliss, M. S., Ware, J. E., & Kosinski, M. (2003). Usefulness of the SF-8 Health Survey in comparing the impact of migraines and other conditions. *Quality of Life Research, 12*, 1003-1012.


Appendix A
Demographic Questionnaire

Please enter in the following information

1.) Age:
   a.) 21-35
   b.) 36-50
   c.) 51-65
   d.) over 65

2.) How many years have you been in the mental health field?
   a.) 0-10
   b.) 11-20
   c.) 21-30
   d.) 31-40
   e.) over 40

3.) What is your Gender?
   a.) Male
   b.) Female

4.) What is your current marital status?
   a.) Single
   b.) Single With Children
   c.) Married
   d.) Married with Children
   e.) Divorced
   f.) Divorced with Children
   g.) Living with partner (unmarried)
   h.) Living with partner with children (Unmarried)

5.) What is your highest completed degree?
   a.) Masters Degree
   b.) Some Post-Graduate Education
   c.) Doctorate Degree
6.) What is your current licensure?
   a.) Counselor in Training
   b.) Professional Counselor
   c.) Professional Clinical Counselor
   d.) Professional Clinical Counselor - Supervisor
   e.) Social Worker in Training
   f.) Licensed Social Worker
   g.) Licensed Independent Social Worker
   h.) Licensed Independent Social Worker – Supervisor
   i.) Psychiatrist
   j.) Nurse Practitioner

7.) Please indicate the percentage of time that is spent doing each of the following roles?
   _____ Clinician
   _____ Supervisor
   _____ Administrator/Management

8.) What is your primary work setting?
   a.) Private practice
   b.) Community Setting
   c.) Hospital
   d.) Government Setting (E.g. VA, Army, Navy, Air Force, Marine
Appendix B

Duke Health Profile (DUKE)

INSTRUCTIONS: Here are some questions about your health and feelings. Please read each question carefully and check (√) your best answer. You should answer the questions in your own way. There are no right or wrong answers. (Please ignore the small scoring numbers next to each blank.)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes, describes me exactly</th>
<th>Somewhat describes me</th>
<th>No doesn’t describe me at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like who I am</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am not an easy person to get along with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am basically a healthy person.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I give up too easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have difficulty concentrating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am happy with my family relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am comfortable being around people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TODAY would you have any physical trouble or difficulty:</td>
<td>None</td>
<td>Some</td>
<td>A Lot</td>
</tr>
<tr>
<td>Walking up a flight of stairs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Running the length of a football field</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DURING THE PAST WEEK: How much trouble have you had with:</td>
<td>None</td>
<td>Some</td>
<td>A Lot</td>
</tr>
<tr>
<td>Sleeping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hurting or aching in any part of your body</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting tired easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling depressed or sad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervousness.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DURING THE PAST WEEK: How often did you:  
Socialize with other people (talk or visit with friends or relatives)  
- None  
- Some  
- A Lot  

Take part in social religious, or recreation activities (meetings, church, movies, sports, parties)  

DURING THE PAST WEEK: How often did you:  
Stay in your home, a nursing home, or hospital because of sickness, injury, or other health problem.

<table>
<thead>
<tr>
<th>None</th>
<th>1-4 Days</th>
<th>5-7 Days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the “1” if you **Very Strongly Disagree**
Circle the “2” if you **Strongly Disagree**
Circle the “3” if you **Mildly Disagree**
Circle the “4” if you are **Neutral**
Circle the “5” if you **Mildly Agree**
Circle the “6” if you **Strongly Agree**
Circle the “7” if you **Very Strongly Agree**

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.
Appendix D

Adapted Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the “1” if you Very Strongly Disagree
Circle the “2” if you Strongly Disagree
Circle the “3” if you Mildly Disagree
Circle the “4” if you are Neutral
Circle the “5” if you Mildly Agree
Circle the “6” if you Strongly Agree
Circle the “7” if you Very Strongly Agree

1. There is a co-worker who is around when I am in need. 1 2 3 4 5 6 7
2. My co-workers really try to help me. 1 2 3 4 5 6 7
3. I get the emotional help and support I need from my co-workers. 1 2 3 4 5 6 7
4. I can count on my co-workers when things go wrong. 1 2 3 4 5 6 7
5. I can talk about my problems with my co-workers. 1 2 3 4 5 6 7
6. My co-workers are willing to help me make decisions. 1 2 3 4 5 6 7
Appendix E

Adult Consent Form for Online Survey
University of Cincinnati
Department: College of Education, Criminal Justice, and Human Service
Primary Investigator(s): Cara L. Cashour
Faculty Advisor: Mei Tang

Title of study:
The effects of psychological health and physical health on job satisfaction: A study comparing positions in the mental health field

Introduction:
You are being asked to take part in a research study. Please read this paper carefully and ask questions about anything that you do not understand.

Who is doing this research study?
The person in charge of this research study is Cara L. Cashour-Metz of the University of Cincinnati (UC) Department of Education, Criminal Justice, and Human Service.

What is the purpose of this research?
The purpose of the current research is to investigate how psychological and physical health affects job satisfaction in the mental health profession. This research also seeks to determine whether the position held in the mental health field will affect the association between psychological and physical health and job satisfaction.

Who will be in this research study?
About 150 people will take part in this study. You may be in this study if you are a licensed mental health professional who holds a license in Mental Health Counseling, Community Counseling, Psychology, or Social Work in the United States.

What will you be asked to do in this research study, and how long will it take?
You will be asked to respond to several multiple-choice questions. It will take approximately 10-15 minutes.

Are there any risks to being in this research study?
This investigational procedure poses minimal risk; that is no more risk than you experience in normal daily living.

Are there any benefits from being in this research study?
You will not receive any benefits from participating in this research study. However, your participation may help to discover how psychological and physical health affects job satisfaction in the mental health profession.

What will you get from being in this research?
There are no incentives for participating in this research.

**Do you have choices about taking part in this research study?**

If you do not want to take part in this research study you may return the packet blank or incomplete or disregard the packet.

**How will your research be confidential?**

Information about you will be kept confidential by not keeping any identifying information with the survey. All of the identities of individuals will be coded as to not keep the name of the individual with their questionnaire information. Consent forms and questionnaires will be kept separately to protect the identities of participants. The information collected will be kept on a computer and backed up on a flash drive. All documents will be password-protected to protect it from access or release to unauthorized persons. The original paper copies will be kept in a locked filing cabinet.

The results of this study will be submitted and may be published in the professional literature and may be presented at a national or regional professional conference, but no publication or presentation will contain identifying information. An electronic copy of your information will be kept for five years in a password-protected document. After five years, the records will be deleted. The paper copy of your information will also be kept for five years and will be shredded thereafter.

Agents of the University of Cincinnati may inspect study records for audit or quality assurance purposes.

**What are your legal rights in this research study?**

Nothing in this consent form waives the legal rights you may have. This consent form also does not release the researcher, the institution, or its agents from liability for negligence.

**What if you have questions about this research?**

If you have any questions or concerns about this research study, you should contact Cara Metz at 937-623-2019 or cashoucl@email.uc.edu.

The UC Institutional Review Board – Social and Behavioral Sciences (IRB-S) reviews all non-medical research projects that involve human participants to be sure the rights and welfare of participants are protected.

If you have questions about your rights as a participant or complaints about the study, you may contact the Chairperson of the UC IRB-S at (513) 558-5784. Or, you may call the UC Research Compliance Hotline at (800) 889-1547, or write to the IRB-S, 300 University Hall, ML 0567, 51 Goodman Drive, Cincinnati, OH 45221-0567, or email the IRB office at irb@ucmail.uc.edu.

**Do you HAVE to take part in this research study?**

No one has to be in this research study. Refusing to take part will NOT cause any penalty or loss of benefits that you would otherwise have. You may start and stop at any time. To stop being in this study you may not go to the next question, and return your packet unfinished or may choose not to return your packet.
Agreement:
I have read this information and have received answers to any questions I asked. I give my consent to participate in this research study. I will receive a copy of this signed and dated consent form to keep.

Participant Name (please print) ___________________________

Participant Signature ________________________________  Date ______

Signature of Person Obtaining Consent _____________________  Date ______