Spring 5-2012

The Impact of a Direct Care Training Program on the Self-Efficacy of Newly Hired Direct Care Employees at State Mental Health Facilities

Marcus Wayne Lewis
University of Southern Mississippi

The University of Southern Mississippi

THE IMPACT OF A DIRECT CARE TRAINING PROGRAM ON THE SELF-EFFICACY OF NEWLY HIRED DIRECT CARE EMPLOYEES AT STATE MENTAL HEALTH FACILITIES

by

Marcus Wayne Lewis

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2012

ABSTRACT

THE IMPACT OF A DIRECT CARE TRAINING PROGRAM ON

THE SELF-EFFICACY OF NEWLY HIRED DIRECT CARE EMPLOYEES

AT STATE MENTAL HEALTH FACILITIES

by Marcus Wayne Lewis

May 2012

Self-efficacy has been shown to be an important element in the success of individuals in a variety of different settings. This research examined the impact of a two week new employee orientation training program on the general and social self-efficacy of newly hired direct care employees at state mental health facilities. The research showed that the training program did not have a statistically significant impact on the social self-efficacy of the new employees after the training or after one month on the job. The research also showed that the two week new employee orientation program did not have a statistically significant impact on the general self-efficacy of the newly hired employees immediately following the training. Lastly, the research showed that one month on the job resulted in a statistically significant increase in the general self-efficacy of the new employees.

The University of Southern Mississippi

THE IMPACT OF A DIRECT CARE TRAINING PROGRAM ON THE SELF-EFFICACY OF NEWLY HIRED DIRECT CARE EMPLOYEES AT STATE MENTAL HEALTH FACILITIES

by

Marcus Wayne Lewis

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:

John R. Rachal_____
Director

W. Lee Pierce_____

Lin Harper_____

James Johnson_____

Susan A. Siltanen_____
Dean of the Graduate School

May 2012

ACKNOWLEDGMENTS

The author would like to thank the dissertation committee chair, Dr. John Rachal, and the other committee members, Dr. Lin Harper, Dr. J. T. Johnson, and Dr. W. L. Pierce for their guidance, support, encouragement, and patience throughout the duration of my studies and dissertation. The writer would also like to thank Ms. Doris Vines for her help throughout the duration of the research and dissertation. Special thanks go to Dr. Mark Sherer with The Institute for Rehabilitation and Research at Memorial Herman for his assistance with and permission to use the self-efficacy questionnaire.

TABLE OF CONTENTS

ABSTRACT……...…….ii

ACKNOWLEDGMENTS…….….iii

LIST OF TABLES……...……...vi

CHAPTER

I. INTRODUCTION……...…....1

Background
Self-Efficacy
Problem Statement
Significance of the Study
Definitions
Hypothesis
Delimitations
Limitations
Assumptions
Justification

II. REVIEW OF LITERATURE……...…11

Theoretical Framework of Self-Efficacy
The Importance of the Fluid Nature of Self-Efficacy
Understanding the Differences Between Self-Efficacy and Self-Esteem
Self-Efficacy in Various Settings
Self-Efficacy in Healthcare
Self-Efficacy in an Employment Setting
Self-Efficacy and Gender
Discussion

III. METHODOLOGY……43

Participants
Self-Efficacy Increasing as a Result of Training
Training
Location
Procedure for Data Collection
Self-Efficacy Scale

IV. FINDINGS…….....51

Demographics
Data Analysis

V. DISCUSSION……59

Demographics
General Self-Efficacy
Social Self-Efficacy
Limitations
Future Research
Implications for Practice and Policy

APPENDIXES……...…79

REFERENCES……..84

LIST OF TABLES

Table

1. Gender Distribution of Sample……...……...……52

2. Ethnicity Distribution of Sample..…….……...……...…….…52

3. Highest Educational Level Distribution of Sample..……...……..…53

4. Age Distribution of Sample..……...……..…...54

5. Means of General Self-Efficacy……....….55

6. Means of Social Self-Efficacy…...……57

CHAPTER I

INTRODUCTION

Background

Two major concerns in the healthcare industry today are high employee turnover rates and performance of employees providing direct patient care. Hospitals and other healthcare providers are faced with the daunting tasks of recruiting, hiring, training, and replacing the direct patient care workforce. The cost of these efforts is inevitably passed along to the consumers of these services in both financial terms and also in decreased quality of care.

While there are many reasons why employees would leave their new jobs, this research measured if there were statistically significant changes in the self-efficacies of employees after completing the new employee training program. A comparison of the self-efficacy ratings were made before the new employee orientation program, immediately after the new employee orientation program, and after one month on the job.

New employee orientation and training is a large expense to many companies. Von Bergen and Mawer (2007) found that the top 100 United States companies annually spent $6 billion on new employee training programs. If an employee leaves after the employer's investment of training and orientation to the new job, the employer is then faced with repeating the cycle of recruiting, hiring, and training another new employee, thus prolonging the need for qualified staff. Furthermore, a lack of qualified employees creates a deficit in the quality of care the patients receive. When the existing staffing levels do not meet an acceptable standard, the employees are not able to provide an adequate level of care. This lowered quality of health care delivery occurs when an employee quits during the recruitment process and during the training process, since the

newly hired employee is still attempting to obtain the necessary skills and knowledge to provide the appropriate care.

There are many components to a new employee training program. Zhao and Namasivayam (2009) assert that there are generally three elements of an employee training program: transfer of knowledge, retention of knowledge, and application of knowledge. Transfer of knowledge is the training element of a new employee orientation program. This element is often the easiest part of a new employee training program. In the simplest of terms, transfer of knowledge is taking the knowledge required for a new job and giving it to the new employee. The second element is retention of knowledge by the new employee. This element focuses on the learner's role in the new employee orientation program. The last element is the application of knowledge. The application of the knowledge is where the responsibility of the employer and the responsibility of the employee come together to result in the implementation of the training in the job capacity.

Self-Efficacy

The concept of self-efficacy was initially introduced by behavioral psychologist Albert Bandura in 1977. Bandura described self-efficacy as a person's belief in his or her ability or capability to successfully perform a task (Bandura, 1977). In later works, Bandura (1986) explained that the outcomes of self-efficacy could be summarized in four categories. The first outcome category is that an individual's choices are influenced by his or her self-efficacy. The second outcome category is that an individual's persistence and effort to overcome a challenge is influenced by his or her self-efficacy. The third category is that an individual's anxiety and stress is directly related to his or her self-efficacy. Lastly, the fourth outcome category is that self-efficacy influences an

individual's performance and coping (Bandura, 1986). Bandura (1998) expanded on the concept of self-efficacy and indicated that human behavior is determined by two key elements. The first element is self-efficacy. The second element is outcome expectancy. The two elements are not independent of each other. However, the concept of outcome expectancy explains that even if an individual has a high degree of self-efficacy, he or she may not be motivated if there is not a correlating outcome worthy of exerting the energy necessary. Additionally, if an individual has a low degree of self-efficacy, he or she will not be motivated to exert energy regardless of the outcome expected.

Hackett and Betz (1981) further expanded on the self-efficacy theory in a career setting and found that self-efficacy influenced career and college choices. Self-efficacy is an important element in job success because research has shown that self-efficacy engages an individual to "mobilize the motivation, cognitive resources, and course of action needed to meet given situational demands" (Woods & Bandura, 1989, p. 408). According to Whiston (1993), the outcome expectations of self-efficacy are categorized into three categories. Those categories are determining whether or not behavior will be initiated, determining how much effort will be expanded, and determining how long one will persist in a behavior in the face of adversity. Additionally, Bandura (1977) establishes that the higher the perceived self-efficacy of the individual, the greater the effort that will be exerted to accomplish the task. Conversely, the lower the perceived self-efficacy of the individual, the less effort the individual will exert to accomplish a task. While some argue that there are a multitude of factors influencing and interfering with an individual's self-efficacy, Coleman and Karraker (1997) report that the central point or theme of self-efficacy is whether a person believes in his or her ability to perform the task at hand. The theory of self-efficacy establishes that whether an

individual even exerts the effort to accomplish a task is predictable by self-efficacy beliefs in his or her ability. The theory also establishes that once the individual determines he or she will attempt a task, the amount of energy exerted will be dependent on the level of self-efficacy beliefs of the individual (Romano, 2001). The consequential effects of self-efficacy are shown to be substantial. Schwarzer (1992) reports that self-efficacy influences how a learner thinks, feels, and acts.

Bandura (1997) further explains that an individual's self-efficacy is not a constant, but can be viewed as a fluid emotion that can change over time and depending on the task. Research has indicated that high self-efficacy can help an employee deal with career issues, such as career change, but low self-efficacy is correlated with job withdrawal (Judge, Thoresen, Pucik, & Welbourne, 1999). Lema and Agrusa (2006) found that an adult learner's experience gained through age, experience, emotional and intellectual development into adulthood was not a good predictor of self-directed learning, but an adult learner's self-efficacy was a significant predictor of his or her self-directed learning readiness.

Staff turnover in the healthcare industry has two primary adverse effects on the provider's ability to deliver quality patient care. The first adverse effect is the amount of money (employee time and financial resources) spent on recruiting, hiring, training, and replacing the direct care employee who leaves employment. These resources could be more efficiently utilized to provide additional services to the patient population. The second adverse effect is the lack of consistent quality care that can result from a high turnover in staff. Due to a new employee's learning curve, the consistent quality of care delivered by a more senior staff member can be disrupted when the employee leaves employment and thus result in a lower overall quality of care provided to the patient.

Concerns of high turnover are not exclusive to the healthcare industry. A 1998 survey of business owners indicated that staff shortages were of primary concern in providing services for customers (Lemmon, 2002). The provision of services to customers in the healthcare system spans well beyond common business issues, such as the economic impact of not having a product available on time or meeting a deadline. A staff shortage caused by high turnover in the healthcare industry could result in a wide array of outcomes ranging from higher stress levels among employees to more severe consequences such as neglect or even death of patients. Organizations should examine the role of self-efficacy in the success of new employees. An employee who completes a new employee training program without an increase in self-efficacy may lack the motivation to be optimally successful in the job and may inevitably decide to leave the organization, resulting in staff shortages due to high turnover of direct care employees.

Problem Statement

The problem that was addressed in the research was to examine the impact of a new employee training program on the self-efficacy of newly hired employees. Obviously, it is important for a new employee to receive the necessary knowledge, skills, and resources to perform a job. However, knowledge, skills, and resources alone will not guarantee a successful employee training program. An employee's belief in his or her ability to do a job has an important impact on job performance.

Significance of the Study

The purpose of this research was to determine if there is a statistically significant impact of a new employee orientation program on new employees' self-efficacy. An essential element associated with the success of new direct care employees is the new employee training process. This process is often an employee's first introduction to a

new job. An employee typically enters a new job with a self-perception regarding his or her ability to do the job. Behavioral psychologist Albert Bandura (1977) described this self-perception as one's self-efficacy. Although there is an abundance of literature to support the relationship between higher self-efficacy and job performance, prior to the research it was unclear if newly hired direct care employees were experiencing increased self-efficacy at the conclusion of new employee training. This could be a vital component of job performance, turnover rate, and the quality of care patients receive.

This study examined if there is a statistically significant difference between the self-efficacy of newly hired employees at two state mental health facilities after the completion of the two week training program and again after working in their new positions for one month. This research was very important because it examined the impact of a training program on the self-efficacy of newly hired direct care employees. Although the primary purpose of the training was to equip the adult learner with necessary skills to be successful in his or her job, one must not overlook the importance of the impact of the training on the learner's belief in his or her capability to perform the job. On a broader perspective, this research could have a tremendous impact on training modules utilized for training newly hired direct care employees at healthcare facilities nationwide.

Definitions

Adult learner: an individual over the age of 18, who has accepted roles and responsibilities in his or her society that are commonly regarded as the roles and responsibilities of an adult, and who possess the self-motivation to learn

Direct care worker or direct care employee: a position or an individual working in a Mississippi Department of Mental Health facility providing direct, hands-on patient care to the individuals served by the facility

General self-efficacy: an individual's overall beliefs with regard to his or her ability or capacity to accomplish a task, persevere in the face of adversity, persist to complete a task, set goals, learn, succeed at project completion, confidence, and self-reliance

Mental health facility: a facility in Mississippi operated by the Mississippi Department of Mental Health and that predominantly provides care and services for patients with mental illness or intellectual and developmental disabilities

Self-efficacy: an individual's beliefs about his or her ability or capacity to accomplish a task (Bandura, 1977)

Self-esteem: an individual's generalized feeling of self-confidence or self-worth on multiple levels (Bandura, 1977; Sterrett, 1998)

Social self-efficacy: an individual's belief about his or her ability or capacity with regard to making friends, interactions in social settings, developing friendships and maintaining friendships

Quit self-efficacy: an individuals' belief about his or her ability of capacity to quit smoking

Hypotheses

Hypothesis (1) There is a statistically significant difference between the self-efficacy scores of direct care workers at the time of hire and immediately after the completion of a two week training program.

Hypothesis (2) There is a statistically significant difference between the self-efficacy scores of direct care workers at the time of hire and one month after completion of a two week training program.

Delimitations

This research was conducted on the campuses of two state mental health facilities. The research involved newly hired employees within a two month period, until an acceptable number of participants were obtained for the research. Based on historical hiring information, the population was predicted to be predominantly female, African-American, under the age of 25, graduated high school or earned a General Educational Development (GED) credential, and to have no additional formal education.

Limitations

There were several limitations of the study. The responses to the questionnaires were self-reported. This was a limitation because the participants could have reported what they felt were socially desirable answers and not how they actually felt. Another limitation was that the participants may have had exaggerated high or low views of their own self-efficacies. The recall effect could have been another limitation of the study if the participants remembered their answers from the initial questionnaires. Another limitation to the study was the differing external factors that could have influenced the self-efficacies of the participants. Another limitation of the research could have been that it was not directly experimental research, since there was not a control group for the study. Lastly, the final limitation could have been the reading ability of the participants.

Assumptions

There are environmental and social factors that could influence self-efficacy scores and, therefore, it could not be concluded that self-efficacy was exclusively

influenced by the training program. Another primary assumption was that the participants provided honest answers to the self-efficacy questions.

Justification

This research is crucial to the health care industry. Research and literature supports the importance of a high self-efficacy to the overall performance, productivity, and retention of new employees (Gist, Schowerer, & Rosen, 1989; Quinones, 1995; and Tannenbaum, Mathieu, Salas, & Cannon-Bowers; 1991). Although there is an abundance of research and literature on self-efficacy in a variety of different professions and industries, no research or literature could be identified in the direct care profession. Additionally, no research or literature could be identified that calls for a study of this nature. The direct care profession is a critical link in the delivery of the services in the health care industry. Direct care workers are the front-line providers of necessary services to patients. This research has the potential to provide a greater understanding of the outcomes of the new employee training these professionals receive.

If the research demonstrated that self-efficacy ratings of newly hired direct care employees improved after the completion of the two week training program, then it supported the desired outcome of not only preparing the new employees to perform their jobs, but also improving their own beliefs or self-perceptions about their capabilities or abilities to perform in their new jobs. The optimal desired outcome of the training was to both provide the new employees with the knowledge and skills to successfully perform their jobs and also to improve their beliefs about their abilities or capacities to perform their new jobs. Research findings that supported this outcome have the potential to result in the development and implementation of techniques that would focus on further increasing participants' self-efficacy ratings. Research findings are that show the self-

efficacy ratings of newly hired direct care employees were unchanged or decreased, show that optimal desired outcomes were not achieved. A potential benefit of this finding could involve the development and implementation of training techniques that are designed to improve participants' self-efficacies. The overall benefit of this research was obtaining a greater understanding of the impact of the training on the self-efficacies of the newly hired employees for the purposes of developing and implementing training techniques in the new employee training program that would assist in improving the self-efficacy ratings of newly hired direct care employees.

CHAPTER II

REVIEW OF LITERATURE

Theoretical Framework of Self-Efficacy

There is a significant amount of research and writing on the concept of self-efficacy since the concept originated in the works of psychologist Albert Bandura in the 1970s. Self-efficacy has been studied in a multitude of diverse fields and settings. This literature review examines several concepts of self-efficacy, including: relationship to training, ability to perform a task, shaping of self-efficacy, relationship to self-esteem, sports, education, health, gender, age, leadership, and employment. In addition to the research and writings of Bandura, the other primary sources of research for this literature review were online databases. Online databases accessed through the University of Southern Mississippi and the University of Houston at Clear Lake include: Academic Search Premier, Access World News, Business and Company Resource Center, Business Source Complete, EBSCOhost, Education, ERIC, Google Scholar, Health Source: Nursing/Academic Edition, MEDLINE, Psychology and Behavioral Sciences Collection, PsychINFO, and Regional Business News.

The concept of increasing self-efficacy is best described by Bandura. Bandura (1997) suggests that individuals can change their beliefs about their ability to accomplish a task and in turn have a resulting improvement in behavior:

> A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. They set themselves challenging goals and maintain strong

> commitment to them. They heighten and sustain their efforts in the face of failure. They quickly recover their sense of efficacy after failures or setbacks. They attribute failure to insufficient effort or deficient knowledge. (Bandura, 1997, p. 71)

People with high self-efficacy will redouble their efforts because they see challenges are obtainable and desire to meet the challenges with appropriate resources (Bandura, 1997). Bandura also explains the resulting impact on an individual who has a lower self-efficacy.

> They have low aspirations and weak commitment to the goals they choose to pursue. When faced with difficult tasks, they dwell on their personal differences, on the obstacles they encounter, and all kinds of adverse outcomes, rather than concentrate on how to perform successfully. They slacken their efforts and give up quickly in the face of difficulties. They are slow to recover their sense of efficacy following failure or setbacks. (Bandura, 1997, p. 1)

Conversely to individuals with high self-efficacy, individuals with low self-efficacy will see obstacles as indications of their own personal deficits and therefore may refrain from engaging in the task because of the believed inability to accomplish it (Bandura, 1997).

Bandura (1977, 2001) disagrees with the social cognitive theory that people are just simply a response to their environments. Bandura theorizes that people proactively respond in shaping their environments and are not just reactive to their circumstances. His theory also suggests that self-efficacy is a foundation for how people interact in these environments. Self-efficacy is a fundamental element in how and why people act, react, confront or avoid issues, and exert necessary energy to accomplish a task. It is critical to recognize the important role self-efficacy plays with regard to human behavior in a

variety of different circumstances and situations. Bandura places importance on the role of individuals in their environment and suggests that it is a fundamental element of a human's relationship to the environment where he or she lives.

In the more than 34 years that followed after behavioral psychologist Albert Bandura initially identified the concept of self-efficacy in 1977, Bandura has extensively covered the topic through research and writings. An important finding is that there are four outcome categories of self-efficacy: choices are influenced by self-efficacy, persistence and effort to overcome a challenge are influenced by self-efficacy, anxiety and stress are directly related to self-efficacy, and self-efficacy influences performance and coping (Bandura, 1986). These four outcome categories have been the basis and subject of many writings and research. There is more literature which supports Bandura's concept than disagrees with the concept. The sheer fact that over three decades after the introduction of the concept of self-efficacy, it is still a widely discussed characteristic in a variety of different industries is a true testimony to the importance of the theory in the study of human behavior and interaction. There were no articles, research, or books that discussed the concept of self-efficacy without noting the writings or research of Bandura.

The Importance of the Fluid Nature of Self-Efficacy

Ayotte, Margrett, Hicks-Patrick (2010) found that there was an anticipated relationship between self-efficacy and perceived barriers, self-regulatory behavior, and outcome expectancies. They studied the relationship between self-efficacy and perceived barriers, outcomes expectancy, and self-regulatory behaviors as they relate to 116 adults choosing to engage in physical activity. Their study examined the indirect effect of self-efficacy on three constructs: perceived barriers, self-regulatory behavior, and outcome

expectancies. Perceived barriers included both personal barriers and also environmental barriers. Examples of personal barriers could be the health of the participant, the participant being too tired, or the participant being sick. Examples of environmental barriers could be the participant not having access to a gym, the weather, or the participant not having adequate transportation. The second construct of their study involved self-regulatory behaviors. Examples of self-regulatory behaviors of the participants could be the failure to set goals or the failure to act on these goals. The last construct of their study dealt with outcome expectancies. Outcome expectancies are the expected results of the physical activity. For their research, outcome expectancies could be how the participants thought they would feel after the activity or how much weight they would anticipate losing after a workout plan. Their study determined that self-efficacy was directly related to all three constructs of perceived barriers, self-regulatory behavior, and outcome expectancies and physical activity. This research furthers the concepts proposed by Bandura that self-efficacy beliefs can be predictors of outcomes since in the Ayotte et al. research determined that there was a significant relationship to the three constructs and self-efficacy.

Bandura (1998) also expounded on the concept of the four outcome categories and indicated that human behavior in general was a product of two closely tied elements. These two elements are self-efficacy and outcome expectancy. The introduction of outcome expectancy suggested that there was a dependence on the expectations of the individual that influenced the amount of effort he or she would exert, regardless of the level of self-efficacy. The concept of outcome expectancy furthered the study of self-efficacy and showed that self-efficacy alone was not the only element driving individual action.

Bandura (1997) reports that individuals who have high self-efficacies are more easily able to take on a challenging task because they look at it as a challenge, rather than an insurmountable task. Individuals with high self-efficacies are more resilient, set more challenging goals, maintain a strong desire to complete the goals, and do not look at failure as a personal fault. Bandura also reports that individuals with lower self-efficacies set lower goals, have less goal commitment, avoid setting goals that may not be easily achievable, do not respond well to obstacles, and abandon difficult to reach goals quickly. Bandura (1977, 2001) also discusses the relationship of self-efficacy and the social cognitive theory and how self-efficacy is the basis of this theory. The concept of self-efficacy, according to Bandura, explains that basic fundamental element of why people act and how they act. An interesting concept that was not explored in any element of depth by Bandura is the concept of individuals who have unreasonably high and unsupported self-efficacies for a task and the impact of this false sense of ability has with regard to performance. An example of this could be an individual who has limited ability to sing, but believes himself or herself to be a good singer. If this individual enters into a singing performance, the adverse impact of the unrealistically high self-efficacy would have the potential to cause negative consequences to the singer. No literature could be found that addressed the impact of an unrealistically high self-efficacies or unrealistically low self-efficacies with corresponding task ability in relation to the individual's ability to accept guidance or feedback from others. Another concept related to unrealistically high or unrealistically low self-efficacies is the limitation of the self-reporting nature of self-efficacy. Neither Bandura, nor others in the field of self-efficacy have researched or reported on the need for measuring tools that could compare self-reported self-efficacy of a task or ability with actual performance of an individual on that same task or ability. If a

tool could be utilized that would provide an objective and independent measure of self-efficacy, the tool would help eliminate biases that may come with the self-reporting nature of self-efficacy.

An important concept related to self-efficacy that Bandura (2001) covers is the fluid nature of self-efficacy. It is this fundamental characteristic which increases the importance of this study and research in the field of self-efficacy. If self-efficacy was a static characteristic that each individual was born with or developed at a certain age, the research on ways to improve self-efficacy would be less important. Instead, the research and focus would be on how to work with individuals who have low (or high) self-efficacies. However, the literature predominantly supports the concept that self-efficacy is a fluid belief that can change and is dependent on the situation (Bandura, 2001; Tschannen-Moran & McMaster, 2009).

Bandura's research explains the important role that self-efficacy can play in a direct care training program. A training program that is not developed around the fundamental needs related to participants' self-efficacies could severely jeopardize the learning process. The concept of self-efficacy as a fluid belief is encouraging to training programs that desire to address not only curriculum/knowledge transfer, but that also desire to improve self-efficacy of learners. The significance of the fluid nature of self-efficacy is very important to employee training programs. It suggests that with appropriate interventions, self-efficacy can be changed. While this has the potential for positive outcomes of training, a decrease in self-efficacy could be a negative and unintended outcome of training. The majority of the research and writings in the field of self-efficacy focuses on the positive outcomes of higher self-efficacies and not the potential for the unintended decrease in self-efficacies.

Self-efficacy has been shown to have a direct impact on variables important to training. Quinones (1995) researched the impact of self-efficacy on effort and persistence of learners in a training environment and found that there was a direct positive relationship between the amount of effort and persistence exerted by the learners and the learners' self-efficacies. This study was a solidly designed study that has been supported and cited in additional research. Additionally, it furthers the concept of Bandura that the amount of effort and persistence exerted by the participants has a direct relationship to the learners' self-efficacies. Tannenbaum et al. (1991) researched the impact of training on the development of the learner's self-efficacy. Their research showed that the performance of the trainees in the training process had a significant impact on the trainees' self-efficacies upon entering the workforce. Not only does this research support the importance of self-efficacy to the training environment, taking it a step further, self-efficacy could potentially be used as a tool when making promotional decisions regarding two otherwise equally qualified candidates. Gist et al. (1989) determined that participants' reaction to training had a direct impact on the participants' self-efficacies. Learners who had positive reactions had an increase in self-efficacy ratings related to the task being trained. Conversely, participants who had negative reactions to training had a decrease in self-efficacy ratings related to the task being trained. The research of these three studies collectively further supports the importance of a training program that is designed to enhance the self-efficacy ratings of the learners. The studies were consistent in their findings and overall recommendations regarding the importance of training programs providing more than knowledge or skills transfer. The studies exemplify the importance of self-efficacy with regard to a learning environment

and the potential adverse outcomes that could result from a decrease in self-efficacy ratings of learners.

The importance of knowledge as it relates to a learner's perceived self-efficacy has been examined in previous studies. Harrison, Rainer, Hochwarter, and Thompson (1997) examined the role of self-efficacy as a predictor of computer-related performance of 776 college employees in the United States. Their study established that participants' increased performances with computers were significantly related to higher levels of self-efficacy and that participants' decreased performances with computers were significantly related to lower levels of participants' self-efficacy. Although not a new concept, their research further supports the relationship between self-efficacy and task performance. An area that was not discussed by Harrison et al. was the potential for self-efficacy measures to be used as a screening tool for hiring new employees. If a job is determined to have a high degree of mandatory computer-related tasks and self-efficacy is determined to be a good predictor of computer-related performance, an objective measure of self-efficacy could be utilized when making employment decisions between two otherwise equally qualified candidates for the job. The use of self-efficacy measuring tools for employment purposes is not a topic that was not widely researched or discussed in the literature.

Heckman and Grable (2011) examined the relationship between self-efficacy and several variables. Their study concluded that one's self-efficacy is positively related to his or her ability to perform a desired task. They found that perceived self-efficacy of the learner was positively correlated with the learner's financial knowledge, such as balancing a check book or paying bills. Although their study primarily focused on the relationship of perceived self-efficacy and financial knowledge, a generalization could be

applied to the relationship between self-efficacy and general knowledge in a subject or task. If a newly hired employee has a lack of knowledge of his or her job expectations, then it could be concluded that he or she would have a lower self-efficacy with relation to the job assignment. Once an employee's general job knowledge is expanded, then it could be theorized that his or her self-efficacy could also increase. This concept is important to this research because it shows the linkage between self-efficacy of the learner and desired performance. It also further supports the need for a desired outcome of increasing self-efficacy as a result of the two week training program. The research by Harrison et al. (1997) and Heckman and Grable show the relationship of self-efficacy and performance in differing fields. Although both fields are significantly different from each other and this study, there was no known research on the impact of direct care training programs on the self-efficacy ratings of newly hired employees.

Additionally, research has shown that past performance of an individual is a significant predictor of an individual's self-efficacy (Vancouver, Thompson, & Williams, 2001). Even when the positive past performance experience is in a training environment, individuals who have positive perceptions of their performance are more likely to have higher self-efficacies of the task in comparison to individuals who have experienced negative perceptions of their performance of the same task. It has been shown that individuals with higher self-efficacies are more likely to complete tasks with greater accomplishments because self-efficacy has been shown to affect task choice, persistence, and effort. Individuals with higher self-efficacies have also been shown to have increased abilities to overcome challenges related to task accomplishment. The finding that self-efficacy has been shown to affect task choice, persistence, and effort is important to the development of job training modules that utilize demonstration and

participation, such as the one in this study. A learner who has a positive experience with a demonstration module is more likely to develop a higher sense of task self-efficacy when faced with a real problem outside of the learning environment. Conversely, individuals who have lower self-efficacies have been shown to have decreased abilities related to overcoming task challenges (Bandura, 1991; Gist & Mitchell, 1992). Research in the field of successful task performance and demonstration is important to the this study because task performance and demonstration are basic elements of the training program.

MacPherson and Myers (2010) examined *quit* self-efficacy of smokers. Their study examined several different factors related to quit self-efficacy and revealed several findings important to the study of self-efficacy. They asked both genders to score their quit self-efficacy on a 10-point Likert-type scale indicating how confident the respondent was that they could quit smoking. Quit self-efficacy was not a significant predictor of actual attempts to quit for either gender. However, it was determined that quit self-efficacy is a significant predictor of success for quitting. MacPherson and Myers concluded that while quit self-efficacy was not a significant predictor of who would attempt to quit, it was a significant predictor of success after quitting. Their findings demonstrate that quit self-efficacy is a good predictor of long-term success, but not a good predictor of initial engagement of attempt. Their research did not support their original hypothesis that self-efficacy would be a predictor of initial attempts to quit smoking. However, it did show that quit self-efficacy was a good predictor of long term success for quitting. This was one of the few studies that could be identified that disproved a relationship between self-efficacy and another variable that was initially thought to have a positive relationship. The study was well designed, but should possibly

be replicated at some point with differing social factors, since social factors are often very significant with relation to a smoker deciding to quit.

Reich, Bickman, and Heflinger (2004) explain that there are four categories of characteristics that shape an individual's self-efficacy. The four categories are personal attitudes, knowledge, skills, and resources. The four categories are significant to the development of training programs that are geared toward increasing participants' self-efficacies. Bandura (1997) suggests that there is a positive relationship between attitudes and behaviors. One could argue that attitudes and behaviors are separate factors that might have overlapping characteristics and therefore should be studied independently. However, Bandura also asserts that attitudes and behaviors are cognitive factors that should be viewed collectively because they both impact self-efficacy. One's attitude towards a job related task could greatly impact behavior. Likewise, one's behavior about a job related task could also greatly impact attitude. The second category is the learner's knowledge. The greater degree of information and knowledge an individual has about the subject, the greater the self-efficacy will be in relation to that task. The third category of characteristics that shape an individual's self-efficacy is the learner's skills. One who has a higher skill set would be expected to have a higher self-efficacy when achieving a task. Zimmerman (1995) and Bandura (1977) draw conclusions that although increased skills can result in higher self-efficacy, an increased skill set will not always result in a proportional increase in the learner's self-efficacy. The final category of characteristics that shape an individual's self-efficacy is the amount and type of resource available. One type of resource is non-material. Examples of non-material resources could be emotional support, love, and compassion. The other type of resources can be classified as material resources, such as computers, manuals, and books.

Haring and Beyard-Tyler (1984) assert that there are four activities that can help improve self-efficacy in a career setting: focusing on the successful performance accomplishments, receiving verbal persuasion and encouragement, attending to emotional arousal, and participating in vicarious or observational learning exercises. Bandura (1986) states that these four activities can increase self-efficacy, either individually or collectively. Bandura (1997) also suggests that a critical element in the shaping of self-efficacy is the learner's social support system. He specifically reports that increased social support yields higher feelings of self-efficacy, which can result in increased learning. The responsibility for initiation of these activities is mutually shared by the employee, as well as by the employer. Haring and Beyard-Tyler suggest that by an employer providing opportunities for these activities and the employee taking advantage of these activities, the result will be an improvement in the employee's self-efficacy. The inclusion of these activities in a new employee orientation program might also improve the self-efficacy of the learners. The learning structure can impact self-efficacy in an adult learner. Self-efficacy can and should be fostered in a learning environment (Pintrich & Schunk, 1996). They suggest that the four core elements of minimal social comparison, positive communication, realistic and course specific feedback, and challenging tasks can all influence the self-efficacy of the learner. These studies further support the fundamental concept of the fluid nature of self-efficacy (Bandura, 2001). It is the fluid nature of individuals' self-efficacies that makes the research on this topic important. If a training program is able to incorporate the four categories of characteristics that shape individual learner's self-efficacy with the four activities central to improving career self-efficacy, in an learning environment that provides the learner a social support system and contains the four core elements, the learning environment

could have a statistically significant positive impact on the success of the training program.

Understanding the Differences Between Self-Efficacy and Self-Esteem

It is important to understand the differences between self-efficacy and self-esteem. There is a large amount of research that use the two terms interchangeably without regard to their differences. They are not interchangeable and have a basic fundamental difference. Self-efficacy is a belief in one's ability or capability to perform, accomplish, or be successful with regard to a specific task, behavior, or action (Bandura, 1977). Self-esteem is a more generalized feeling of self-worth or self-confidence on multiple levels (Bandura, 1977; Sterrett, 1998). For example, an individual may have a very high self-efficacy regarding his or her ability to utilize a specific computer program at work. However, this same individual may have an overall low self-esteem. Although they are different terms, there are related qualities for both. For example, a high degree of self-efficacy for a job-related task for an individual who places a great deal of importance on his or her career may result in an increase in the individual's overall self-esteem. While there are similarities and overlapping qualities of the two, it is important to understand the fundamental differences.

Another difference between self-esteem and self-efficacy is the fluid nature of self-efficacy compared to the relatively stable and fixed nature of self-esteem (Van der Bijl, van Poelgeest-Eeltink, & Shortridge-Baggett, 1999). Van der Bijl et al. (1999) report that although an individual can experience a change in self-esteem as a result of significant life changes, self-esteem is a more fixed belief in comparison to self-efficacy. Therefore, self-efficacy is a more measurable characteristic relevant when studying the

impact of training programs, due to the fluid nature of it and also the relevance to a specific task or job.

While the differentiation of self-efficacy and self-esteem is understandable, one could argue that their differences are not as apparent as some literature suggests. The two concepts are primarily differentiated at two levels: task-specific (self-efficacy) vs. generalized feelings (self-esteem) and fluid nature (self-efficacy) vs. more fixed beliefs (self-esteem). There is a great deal of research that examines generalized self-efficacy. This research does not always describe self-efficacy in terms of specific tasks, but rather in terms of a generalized feeling of an ability to do something. An example of this would be a person who had a strong confidence level in his or her ability to perform a variety of different tasks. This individual could have a high degree of generalized self-efficacy and also an overlapping high degree of self-esteem. Also, one could argue that self-esteem is a more fluid belief than Bandura (1977) and Sterrett (1998) report. Since there are overlapping characteristics of the two concepts and both have some degree of a fluid nature, they are often times confused and wrongly used interchangeably.

Self-Efficacy in Various Settings

Not only is self-efficacy important in employment tasks, self-efficacy is also significant in athletic performance in sporting events. One of the most widely researched areas on self-efficacy is with regard to sports. There are a multitude of studies that examine self-efficacy of athletes and the relationship to performance. Research has demonstrated that an athlete's performance can be influenced by his or her perceived self-efficacy (Vealey, 1986). This study examined the role of self-efficacy as it relates to success in golfing and found a significant relationship between athletes' performances and high self-efficacies. Additionally, Vargas-Tonsing (2009) studied the impact of

coaches' pre-game speeches on athletes' self-efficacies. This study showed that coaches have the ability to positively impact athletes' emotions and self-efficacies through pre-game speeches. The role of a coach could be similar to that of an adult educator in a new employee training program. The coach, similar to the adult educator in a new employee training program, is tasked with educating, motivating, and providing guidance to the athletes. The significance of this relationship is that one can utilize the knowledge obtained from self-efficacy in sports and apply it to self-efficacy of education in a new employee training program. This comparison of sports to employment and the role of a coach to an adult educator is one that was not found in literature or studies. There are similarities between the two and when studied comparatively, could yield significant lessons that are applicable to both adult education and also sports.

Even prior to beginning work, self-efficacy has been shown to play an important role in an individual's career choice. Feldt and Woelfel (2009) examined several variables related to career choice and career success. They validated that self-efficacy was a factor in educational achievement, job obtainment, and job success. Their research is a solidly designed study with strong applicability to the this study. Specifically, a demonstrated correlation between self-efficacy and educational achievement and job success is an important factor when studying the impact of a training program on the self-efficacy of newly hired employees. It demonstrates that there is a significant relationship between self-efficacy and educational achievement and also between self-efficacy and job success. Both educational achievement and job success were desired outcomes of the new employee training program in this study.

A student who lacks self-efficacy may not exert the necessary level of effort or desire because of a sense that the effort will end in unsuccessful results (Tschannen-

Moran & McMaster, 2009). Their research examined four professional development formats as they relate to self-efficacy. Their study concluded that to improve participant mastery of a subject matter, a method that included follow-up coaching had the strongest impact on the learner's self-efficacy. This finding is relevant to this research because the variance of and sometimes absence of follow-up coaching for the newly hired direct care workers in this research. While follow-up coaching has been shown to have a significant impact on the self-efficacy of the learners, it was a variable that was considered in the research study.

Forneris et al. (2010) studied the effects of a school-based training and intervention program designed to improve the self-efficacy of students related to healthy eating habits. The training intervention attempted to improve self-efficacy healthy eating habits in the following categories: eat healthy, perceived taste of low-fat foods, fat and fiber knowledge, and fat, fiber, fruit, and vegetable intake. Forneris et al. found that the students who participated in the study had a significant increase in their healthy eating self-efficacy and their fat and fiber knowledge. However, they did not find a significant increase for fat, fiber, or fruit and vegetable intake. This research is very significant because it demonstrates how an intervention program designed to educate the participants resulted in a higher self-efficacy for the participants. However, the intervention program did not result in the desired outcome of action with regard to increasing intake of certain foods. It is important to note that they did find differences in healthy eating self-efficacy with regard to gender and ethnicity.

Self-Efficacy in Healthcare

Bandura (1977) reports that learners who are not successful may fail to accomplish goals not because they lack the knowledge, skills, and abilities to perform the

tasks, but instead because they lack the self-efficacy related to the task performance. Pajares (1996) showed that self-efficacy influences learning, skill development, and academic motivation in a variety of diverse learning experiences. More specifically to learning in the health care industry, Harvey and McMurray (1994) showed that self-efficacy significantly impacted career progress in nursing education. Individuals with high self-efficacies were more likely to succeed at nursing educational pursuits than those with lower self-efficacies. The impact of self-efficacy with regard to learning in the health care industry could be a result of the type of training required to prepare nurses and direct care workers for successful job performance. Many nurse and direct care worker education programs are a combination of didactic education with hands-on experiences in a learning lab or in a clinical setting. The research of Harvey and McMurray is very relevant to the study because it was conducted in the health care industry and involved the education of nursing students, which is similar in many regards to the foundations of educating direct care workers. Saks (1994) reported that on-the-job training stress and anxiety could be minimized if the learner has higher self-efficacy. Both academic preparation and on-the-job training is a significant component to any nursing or direct care training program. Therefore, if a student is exposed to a positive learning environment that improves his or her task or career self-efficacy, he or she is likely to have a lower level of stress when performing the job.

There is a considerable amount of research and literature that examines the role of self-efficacy in healthcare. A large percentage of this research and literature focuses on the self-efficacy of the patient. However, there are studies that look at the relationship between self-efficacy and the healthcare provider. O'Leary (1992) studied the impact of self-efficacy on stress levels of individuals. Participants with high self-efficacies were

found to have lower levels of perceived stress. As expected, participants with low self-efficacies were found to have a greater ability to influence or control their physiological responses to the stress levels. An individual with a greater control of his or her physiological responses to stress could have lower blood pressure, less headaches, and less worrying. An individual who had a higher self-efficacy would be able to respond or cope better to an increasing level of stress on the job.

There are findings that can be derived from studying patient self-efficacy that can also be applied to employee self-efficacy. Lyons (2003) studied the importance of self-management training programs for patients with chronic illnesses. Their research revealed that it is not only important to equip the patient with the skills necessary to adapt and treat the illness, it is also critically important to increase the patient's self-efficacy related to his or her belief that he or she can use the skills. Therefore, the self-management training programs for patients should have a clearly defined goal to improve the self-efficacy of the patient. This finding increases the importance of evaluating the learner's actual use of the skills so that necessary positive reinforcements can be provided by the educator. Additionally, the educator should take this opportunity to make sure the patient has an understanding and acknowledges his or her ability to be successful. Lastly, Lyons suggests that learner self-efficacy can be improved by self-management training programs offered in a group format. There are many demonstrated benefits from the group format training. The first demonstrated benefit is that by observing others successfully perform tasks, the observer's self-efficacy can be increased. Secondly, self-efficacy of the observer can be also be increased by seeing another person show confidence when learning a new task. Lastly, learners can benefit from each other's experiences while individualizing their own goals and needs and at the same time

developing a formal or informal support network that can continue after the training is completed. These three demonstrated benefits of group format training are relevant to this research study because a majority of the learning environment in the study was conducted in a group format where there was great potential for the learner to benefit from the learning experiences of others.

Another important research topic in the study of patient self-efficacy is examining the compliance or adherence to medical recommendations. While this topic is broad, there is a considerable amount of research with regard to the relationship between self-efficacy and the treatment adherence of patients who have HIV or other diseases. Johnson et al. (2007) thoroughly researched the relationship between treatment adherence and self-efficacy. Their study found that patients with lower self-efficacy ratings were more likely to report not attending appointments. They concluded that self-efficacy played an important role in the adherence of patients to the treatment program prescribed by their medical providers. Research in the field of patient self-efficacy has also been conducted with patients diagnosed with arthritis. Yip et al. (2007) examined the effect of an arthritis self-management program on the self-efficacy of patients who suffer from arthritis. Their research showed that the self-management program could have both short and long term benefits on the self-efficacy of the participants. Lastly, self-efficacy with regard to diabetes management is also widely researched and published. The concept of how well a patient complies to the difficult task of managing his or her diabetes has been examined in research (Van der Bijl et al., 1999). Van der Bijl et al. found that high self-efficacy was a significant predictor of compliance with managing diabetes in patients with type two diabetes mellitus. Other research in the field of diabetes management determined that high self-efficacy was related to the prescribed increase in physical activity of patients

with type two diabetes and a low self-efficacy was related to decrease physical activity in patients with type two diabetes (Dutton et al., 2009). This research is relevant to the field of self-efficacy because it demonstrates that contrary to education and direction from a medical provider, individuals with low self-efficacy ratings did not take the appropriate action, which in this case was physical activity.

A qualitative study conducted by Knight (2004) revealed significant findings with regard to self-efficacy of adolescents who suffer from asthma. Knight's study looked specifically at the self-efficacy beliefs of the adolescents that their own actions would make positive differences in controlling asthma. Low self-efficacy was demonstrated by participants who had high feelings of limitations and fear. High self-efficacy was associated with adolescents who felt that exercise and trigger factor avoidance would make positive differences. Participants who had high self-efficacy ratings had feelings of empowerment to continue to make positive strides in their own abilities to control asthma. Even when the participants had a high degree of self-efficacy related to their beliefs to make positive differences controlling asthma, the participants acknowledged the limitations with regard to controlling their environmental factors. Examples of environmental factors outside their control were weather, smoke, smog, and dust particles. There were two very significant self-efficacy related findings that were derived from the study. Knowledge combined with self-efficacy and social support yielded an improvement in behaviors that provide better outcomes in controlling asthma. Also, positive experiences resulted in high self-efficacy. When participants realized that the interventions were working, they were more likely to follow-through on them and, therefore, had a higher self-efficacy. These studies of the healthcare recipients yielded similar results showing that there is a significant relationship between patient self-

efficacy and successful performance of the patient in the care and treatment of his or her disease or illness.

Jones, Mandy, and Patridge (2009) demonstrated that self-efficacy has been shown to play an important role in the health, well being, and quality of life of individuals who are sick. Additionally, their study demonstrated that patients with higher self-efficacies also had greater functional independence than patients who had lower self-efficacies. Jones et al. researched the impact of a self-management workbook that was based primarily on self-efficacy principles of Bandura. The workbook contained four main areas of focus. All areas of focus were designed specifically to address the sources of self-efficacy. Section one of the workbook provided ten stories from contributors on how stroke affected their lives and how they were able to overcome the challenges brought about after experiencing the physical and psychological set-backs of a stroke. Section two described individual solutions to common problems experienced by stroke victims. Section three described different strategies utilized to reach and improve functional activity and participation. Lastly, Section four contained a diary section for the participants to record and reflect on weekly personal targets. The researchers provided self-efficacy questionnaires to patients prior to and after the implementation of the workbook to determine if the educational components of the workbook showed a significant improvement in the self-efficacy ratings of the participants. Their study concluded that participants who were provided the self-management workbook and worked it for the required 14-week period had a significant increase in their self-efficacy ratings. This is a very good study that demonstrated the capacity for training to improve self-efficacy of the learner. This is relevant and applicable to this study. Although this study is not primarily based on a self-management curriculum, there are portions of the

training that are self-study. Additionally, the research by Jones et al. demonstrates the potential positive impact on self-efficacy ratings of a training program that is built around fundamental principles of self-efficacy. This research demonstrates the necessity of providing a learner not only with the basic knowledge and skills, but also incorporating the importance of self-efficacy principles in the learning process.

The physiological impact of self-efficacy on the health and well being of employees has also been examined in prior research. Employees who have high self-efficacies have been found to have higher job satisfaction levels (Jex & Bliese, 1999). Conversely, employees who have low self-efficacies have been found to have higher rates of anxiety and depression (Jex & Gudanowski, 1992). Self-efficacy is an important predictor of job satisfaction levels of employees and also of the overall coping abilities of employees. Specific to the healthcare industry, research has demonstrated that when an employee believes that he or she has control over his or her work, then the employee will have a lower level of sickness that can be attributed to the physiological impact of the job (Hochwalder & Brucefors, 2005). There are fundamental basics of self-efficacy that can be learned from the study of self-efficacy of patients and applied to self-efficacy in an employment setting. These studies support the overwhelming evidence suggesting the importance of maintaining and/or increasing self-efficacy in the workforce. No studies could be identified which expressed a benefit or desire for a lower self-efficacy in the workforce.

Self-Efficacy in an Employment Setting

Zhao and Namasivayam (2009) researched post-training self-efficacy and revealed two critical findings related to new employee training. First, there was a positive relationship between self-efficacy and training acquisition. When a new

employee learns the materials presented to him or her, then the result is an increase in self-efficacy. Second, the resulting increase in knowledge will not directly result in an increase in action until the learner believes he or she is capable of using the newly acquired knowledge. These findings suggest that it is the learner's self-efficacy that permits, or conversely prohibits, the new employee from utilizing what is learned in a new employee training program. Zhao and Namasivayam further suggest that employers can improve employees' self-efficacy ratings by providing experiences that allow newly hired employees to demonstrate the concepts they have learned. These findings are relevant to the research because they suggest the importance of an employer providing supervised experiments that allow the employee to safely practice the knowledge and skills that have been taught. Many healthcare employee training and education programs already provide training opportunities that engage the employees in the education and do more than just knowledge transfer. Additionally, Anyster, Goodman, and Wallis (2006) studied the self-efficacy among employees in an international fruit marketing company. They found that self-efficacy in an employment setting came from three primary sources: accomplishments, persuasive feedback from others, and social comparative information. A successful new employee orientation program can address all three of these sources for the new employee. The limitation of the applicability of the research findings to this study is primarily related to the industry and location of the study. It was conducted in South Africa in a fruit export company. Bandura (1977) maintained that an individual's performance was the single greatest contributor to self-efficacy. If one can successfully perform a task, then he or she is more likely to have a higher degree of self-efficacy with relation to that specific task. Additionally, Green (2003) found that the awareness and development of self-efficacy should be a learning objective of the teacher. By cultivating

a learning environment that focuses on the development of self-efficacy in the student, the teacher will help the student become a more independent learner. It is through this intentional objective that a teacher can better help the student in his or her efforts to increase self-efficacy.

When looking at factors that influence job satisfaction, it is important to consider a study by Perdue, Reardon, and Peterson (2007). Their study focused on the relationships between person-environment congruence, self-efficacy, environmental identity, and job satisfaction. Their study revealed that self-efficacy and environmental identity were related to facets of job satisfaction. The importance of this concept in a work setting is to understand the relationship of self-efficacy with regard to employee satisfaction and retention of employees. Their conclusion was that job satisfaction among employees was a product of self-efficacy and environmental identity is important to the development and retention of staff. Employees who lack satisfaction in their jobs are more likely to leave employment and seek more fulfilling jobs. Although their study was also in a service industry (hotel industry), there are some limitations to how this can be applied to the healthcare industry. It would be interesting and more relevant to this research study to see the replication of their study in the healthcare industry to determine if there is the similar importance placed on environmental identity. Regardless, an organization that does not address self-efficacy and environmental identity in their initial training and on-going training programs may miss the opportunity to improve employee job satisfaction levels, which could result in a higher attrition rates of employees. Another study in the hotel industry was conducted by Karatepe, Arasli, and Khan (2007). They found that self-efficacy was a significant predictor of organizational commitment in

the hotel industry. Their study also revealed that organizational commitment was inversely correlated with an employee's intention to leave the organization.

A learner's self-efficacy has a direct and an indirect impact on his or her interaction in a work environment. Posadzki, Stockl, Musonda, and Tsouroufli (2010) found that higher self-efficacy ratings can improve individuals' capability to learn from others and to prospectively manage difficult situations in an academic environment. This increase in capabilities can in turn have an impact on their ability to carry out their job task once they enter the workforce. Cunningham and Mahoney (2004) examined the impact of training motivation on the self-efficacy of employees. Their study was conducted with part-time employees in a college athletics department. The participants took part in a training program. After the training, several factors were measured. Their study yielded important findings related to the field of self-efficacy, particularly with regard to post-training self-efficacy. Their findings indicate that participants with a higher degree of self-efficacy post-training entered the training with a higher degree of training motivation. The findings of their research are very important to the study of post-training self-efficacy because it suggests that factors other than the actual training have the potential to impact the participants' post-training self-efficacy ratings. Their findings might suggest that a participant's post-training self-efficacy would not be related to the training, but instead predicted by his or her motivation to participate in the training. Another study conducted by Tierney, Quinlan, and Hastings (2007) examined the impact of a training course on the self-efficacy of staff that worked in facilities providing services to clients with intellectual and developmental disabilities. Their research showed that a training course could have a measurable impact on the self-efficacy of the

staff. Not only was there a significant impact after the training, the impact was significant three months after the training concluded.

Pare, Sicotte, Poba-Nzaou, and Balouzakis (2011) conducted two cross-sectional studies to examine the role of self-efficacy as it related to readiness for change in the workforce. Their studies examined the concept that employees who have high self-efficacies are more likely to be comfortable in their current skill sets and are more likely to be open to acquiring new skills sets necessary for change. They theorized this concept because employees with high self-efficacies, who are also comfortable with skill sets, will long to regain that comfort level in the stage of change, and therefore, will be more open to learning. Their study found that high self-efficacy was related to organizational readiness for change in only one of the two studies. They concluded that several factors, such as politics, organizational conflict, and organizational climate contributed to only one study supporting the belief that employees who had a high self-efficacy were more likely to be open to acquiring new skills sets. Due to their inconsistent findings and belief that organizational and political factors influenced the study, this study is not highly regarded as a significant contribution in the study of self-efficacy.

Yanar, Budworth, and Latham (2009) conducted research on self-efficacy of women in a job search environment. Their experiment trained women in verbal self-guidance, learning to avoid the use of negative self-deprecating language in favor of more positive speech. The training was conducted in 90-minute sessions over four consecutive days. Before and after the training, the participants' self-efficacies were measured. It was determined that individuals who completed the training had significantly higher self-efficacy ratings with regard to reemployment. The participants of the training program also had significantly higher persistence in their job searches. Lastly, the participants

who completed the verbal self-guidance training were also more likely to find a job six months and one year after the training. This study was well developed. It showed that a training class could have a measureable impact on the self-efficacy of the participants. Additionally, it was important because it provided longitudinal follow-up on the participants.

Hammond and Feinstein (2005) report that exposure to opportunities for self-development and formal education has been shown to increase self-efficacies of adult learners. They also found that when an adult had a higher perception of the ability to achieve, self-efficacy was shown to increase when the learner was exposed to opportunities for self-development and formal education. Lastly, they found that adults who pursue education may select more challenging jobs, which results in increasing self-efficacy in comparison to adults who select less challenging jobs.

Self-efficacy is not only an important concept for employees, but it is also important with regard to leadership characteristics. Transformational leaders are those leaders that are creative and inspire followers to make independent decisions (Munir & Nielsen, 2009). Several studies have been conducted to determine the impact of a transformational leadership style in an employment setting on the self-efficacy of the employees. Munir and Nielsen conducted a longitudinal study on the impact of the relationship between the sleep quality and self-efficacy of healthcare employees who worked in a transformational leadership environment. They found that sleep quality and transformational leadership are closely related. However, the relationship is negative initially, but appears to result in improved sleep quality over time. They also found that although transformational leadership is related to self-efficacy, it appears that it is not directly through this relationship that the leaders influence sleep quality of the

employees. This study involved other random controllable and uncontrollable variables that decrease the significance of the study. In a second study conducted by Mullen and Kelloway (2009), the impact of transformational leadership styles was studied among employees in long-term health care organizations. Their study revealed, among other things, that safety-specific transformational leadership training results in higher perceptions of self-efficacy among employees.

Duggleby, Cooper, and Penz (2009) examined the relationship between hope and several variables, including self-efficacy among personal care aides. They found that the personal care aides' hopes were important parts of their internal motivation for job satisfaction and decreased burnout. Their study concluded that there was a statistically significant positive relationship between hope and self-efficacy of the care givers. Additionally, their study suggests that health care employers should find ways to improve personal care aides' self-efficacies because of the direct relationship between self-efficacies and the personal care aides' hopes. Their study also supported the concept that health care employers should identify ways to improve aides' self-efficacies. This is a solid study that is well designed and applicable to this research study because it examined self-efficacy in a similar population.

Studies of self-efficacy have been conducted which focus primarily on the quantitative measurable outcomes of employees as related to self-efficacy (Barling & Beattie, 1983; Taylor, Locke, Lee, & Gist, 1984). Barling and Beattie studied the number of policies sold and the value of the policies in a life insurance company as both measures related to the employee's self-efficacy. Taylor et al. studied the number of citations received and the number of publications of researchers as they relate to employees' self-efficacy. While these quantitative measurable outcomes are important, the focus of this

research was on the behavioral measurements of self-efficacy and not on the quantitative productivity or measurable outcome of the employees.

There is a significant amount of research on self-efficacy. However, it was surprising that there was not an abundance of literature covering self-efficacy in the work environment. Additionally, no literature could be identified that covered the more specific topic of self-efficacy for direct care workers in relation to a new employee training program. While disappointing, this fact increases the significance of this research study.

Self-Efficacy and Gender

The development of gender-role socialization has been shown to occur at an early age among young children (Kerr, Miller, & Reid, 2002; Sullivan & Mahalik, 2000). This development of what a woman should/should not do and what a man should/should not do for a career choice influences an individual's self-efficacy. If one selects a career choice outside his or her traditionally accepted gender-role, then the individual may enter this employment setting with a lower self-efficacy. A lower career self-efficacy will impact persistence and performance of the employee. Therefore, it is very important for an employer to recognize deeply entrenched psychological barriers of gender-role socialization and offer employee training programs that are sensitive to this issue. It is important to recognize that the gender-role socialization is not just one-sided. Both males and females can experience this in a work setting. For example, a male nurse entering a historically female field may experience a lower self-efficacy, as could a female engineer entering a historically male field (Fitzgerald, 1980; Sullivan & Mahalik, 2000).

Discussion

There are several important themes in the research and literature on self-efficacy. The first significant theme is the concept originally proposed by Bandura (1997) that self-efficacy can be a predictor in the amount of effort an individual exerts to complete a task. Individuals with high self-efficacies were found to exert more effort to complete a task, while individuals with low self-efficacies were found to refrain from engaging in a task because of a belief that they lacked the abilities that were necessary to successfully accomplish tasks. Bandura further expounds on this concept and theorizes that individuals are not reactive creatures in their environments, but rather proactive creatures who act, react, confront or avoid issues, and exert energy as a result of their self-efficacies.

Another important theme in the research and literature on self-efficacy is the concept of outcomes theory originally proposed by Bandura (1986). Bandura reports that many behaviors displayed by an individual are based on the anticipated outcomes of individuals. Bandura's outcome theory suggests that there are four primary outcome categories of self-efficacy: choices are influenced by self-efficacy, persistence and effort to overcome a challenge is influenced by self-efficacy, anxiety and stress is directly related to self-efficacy, and self-efficacy influences performance and coping. Another very important theme in the research and literature on self-efficacy is the fluid nature of self-efficacy. The overwhelming majority of the research supported the concept that self-efficacy was not a static belief, but rather a fluid belief that changes many times throughout a lifetime of an individual with regard to many different situations or circumstances (Bandura, 2001; Tschannen-Moran & McMaster, 2009). It is this fundamental basic concept of the fluid nature of self-efficacy that makes it important to

research and study and suggests the possibility that it might be improved in a work setting.

The impact of self-efficacy in a training environment is another significant theme in self-efficacy. Research has shown that there is a direct relationship between a learner's self-efficacy and the amount of effort and persistence exerted by the learner (Quinones, 1995). Also along the lines of self-efficacy and training, Tannenbaum et al. (1991) and Gist et al. (1989) demonstrated that training could have a significant and direct impact on a learner's self-efficacy. Another important theme in the literature and research on self-efficacy is the differentiation between self-efficacy and self-esteem. Self-efficacy has been described as a belief in one's ability or capability as it relates to a specific task (Bandura, 1977). Self-esteem is more broad in nature with regard to generalized feelings of self-worth or self-confidence on a multitude of levels that are not specific to task or performance accomplishments (Bandura, 1977; Sterrett, 1998).

The studies and research on self-efficacy in an employment setting arrived at several conclusions that are important to the research study. Zhao and Namasivaya (2009) found that an increase in knowledge did not result in an increase in action until the learner believed in his or her capabilities to perform the task. Additionally, multiple studies found that there are direct and indirect positive relationships between a high self-efficacy and desired motivation, employee satisfaction, and commitment in the workforce (Anyster et al, 2006; Cunningham & Mahoney, 2004; Karatepe et al., 2007; Pare et al., 2011; and Perdue et al., 2007).

Lastly, research on the relationship between performance in many different professions, sports, and situations and self-efficacy is another important theme in the research and literature on self-efficacy. Self-efficacy has been shown to have a direct

significant impact on the performance of individuals in computer-related tasks of college students (Harrison et al., 1997), financial task performance (Heckman & Grable, 2011), athletic performance (Vargas-Tonsing, 2009; Vealey, 1986), career choice and success (Feldt & Woelfel, 2009), student performance (Tschannen-Moran & McMaster, 2009), school-based training and intervention programs (Forneris et. al 2010), and in healthcare employment settings (Harvey & McMurray, 1994). There is an abundance of literature on the importance of self-efficacy in many aspects of our lives. The primary conclusion and finding with regard to self-efficacy is that self-efficacy plays a critical role in how people respond in various situations. It serves as a motivator, an encourager, a discourager, and the basis for how people act or react. There was not one study or literature reviewed that suggested that that there was a desire for an individual to have a low self-efficacy or that low self-efficacy was a desired direct or indirect outcome in any type of setting, business, education, personal achievements, or sports. It is a concept that has been thoroughly researched and written about since the original research by Bandura in the 1970s and it continues to be a highly researched topic in the fields of education, training, and psychology.

CHAPTER III

METHODOLOGY

Participants

Participants in this study were newly hired direct care employees at two different facilities. One facility was a regional facility for individuals with intellectual and developmental disabilities. The second facility was a psychiatric hospital. At least 40 newly hired direct care employees were selected to participate in the study during at least a two month period. All participants were at least 18 years of age. Participation in the study was completely voluntary. All participants had at least passed the General Educational Development test. The instructors administering the questionnaires offered to read the questions for the participants.

Self-Efficacy Increasing as a Result of Training

Although a study could not be identified that compares the self-efficacy ratings of participants before a direct care training program, Matt, Bellardita, Ficher, and Silverman (2006) demonstrated that it is possible for a three week training program to have a statistically significant impact on the self-efficacy ratings of participants. Their study examined the impact of a three week pre-employment training program on the self-efficacy of an ethnically and socially diverse group of participants. Participants of their study were given self-efficacy questionnaires before and after the training. Their training program focused on general skills to obtain employment and not specific skills needed in the course of their employment. Upon completion of the training, the participants were again given self-efficacy questionnaires. The results of their study showed that regardless of ethnic, gender, or social economic status, participants who completed the program had higher self-efficacies upon completion of the program. Additionally,

Sterrett (1998) demonstrated that adult learners participating in a job club training program could increase their self-efficacies. The job club was a training program designed to prepare participants for seeking employment. Participants met in ten sessions, for a total of 30 hours, over the course of five weeks. Self-efficacy and self-esteem were measured before and after the participants completed the training program. It was determined that the participants did not experience an overall increase in their self-esteem. However, the participants did have an increase in their self-efficacy ratings as measured by Career Search Self-Efficacy Scale.

Training

The training for the participants of this study was not intentionally designed to improve the participants' self-efficacies. The purpose of the training was to provide the participants with the necessary knowledge, skills, and abilities to successfully provide the care to the patients. The training that was provided was from a standardized curriculum that focused on the technical competencies necessary to function successfully in the job. While there was no intentional effort to improve the self-efficacy ratings of the learners, this was a desired outcome.

There has been no known study that examined the impact of this training on participants' self-efficacies. This study examined the impact of the training on the participants' self-efficacies and was the first known self-efficacy research on this training program. Although no study was found that examined self-efficacies of newly hired direct care employees, there are studies that have shown that high levels of self-efficacy are associated with effective learning in the field of nursing (Chacko & Huba, 1991). Their research examined the achievement levels of nursing students and demonstrated that there was a statistically significant relationship between nursing students' self-

efficacies and the learning outcomes of the students. They showed that the higher the self-efficacy, the improved effectiveness of the learning of the students.

The training of the participants was provided by licensed practical nurses (LPNs) who work in the Staff Education Departments at the two facilities. The training materials were comprised of two primary sources. The first source was the *Mississippi Nurse Aide Candidate Handbook, January 2011*. The topics that were covered in this training are listed in Appendix A. The second source of training materials was the *CNA/DCW Training Module* (2010). The topics that were covered in this training are listed in Appendix B. The training duration was approximately 2 weeks or 80 hours. The training was provided through lecture, demonstration, and learner participation.

The direct care workers received a work assignment after successful completion of the required two week training and demonstration of the required skills. After arriving on the work unit, the direct care workers were provided with additional orientation that was specific to the work assignments. This additional orientation was typically referred to as a *building* or *unit* orientation, was provided by a charge staff member or shift leader, and lasted less than one week. The *building* or *unit* orientation was documented and evidence of completion was maintained in the employees' official training records. After completion of the *building* or *unit* orientation, the direct care workers were then assigned a mentor to work beside them until the observable skill competencies were demonstrated. The initial training and orientation process was completed after the observable skills competencies were demonstrated by the direct care workers.

Location

The research was conducted at an intermediate care facility for the mentally retarded (ICFMR) in Whitfield, Mississippi and a state psychiatric hospital in Meridian,

Mississippi. The ICFMR is a regional center that serves persons with intellectual and developmental disabilities. The center provides intellectual and developmental disability services for approximately 285 clients on campus and another 1,400 individuals in community settings (Hudspeth Regional Center, 2011). The state psychiatric hospital is a facility that provides psychiatric, chemical dependency, nursing home, and community services. The facility employs approximately 1,150 employees (East Mississippi State Hospital, 2011).

Patient care at both the ICFMR and the state psychiatric hospital was provided by many disciplines, including direct care employees. All newly hired direct care employees at both facilities were required to complete a two week training program prior to working with patients. The primary purpose of the training program was to provide the employees with the skills necessary to perform their jobs successfully.

Procedure for Data Collection

The first step in data collection was to seek approval from the Institutional Review Board (IRB) at the University of Southern Mississippi (USM). University of Southern Mississippi IRB approval documentation is in Appendix C. Both research facilities agreed to accept USM IRB approval and did not require additional IRB approvals. Data collection involved providing participants with self-efficacy questionnaires prior to their two week training program. Participants were administered a self-efficacy questionnaire (Sherer et al., 1982). Each time the self-efficacy questionnaire was administered, it was in a controlled setting at the facility and was administered by a member of the facilities' Staff Education Departments. The participants were assisted by the individuals administering the questionnaire, if the participants needed assistance. Participants were again administered the self-efficacy questionnaires after completing the

two week training programs. Lastly, after one month of performing in their new positions, participants were again administered the self-efficacy questionnaires. Results from the pre-training self-efficacy questionnaires, post-training self-efficacy questionnaires, and one month in their new position self-efficacy questionnaires were compared to determine if there was a statistically significant difference between the participants' self-efficacy before the training, compared to their self-efficacy after the training, and again compared to their self-efficacy after they had worked in their new jobs for one month.

Self-Efficacy Scale

The self-efficacy scale that was utilized was a 30 item questionnaire in which the participants rated their responses using a five point Likert scale ranging from *disagree strongly* to *agree strongly* (Sherer et al., 1982; Sherer & Adams, 1983). A copy of the demographic questions that were asked of the participants is attached in Appendix D. Permission to utilize the self-efficacy questionnaire from Dr. Mark Sherer is attached in Appendix E. The self-efficacy scale yielded two distinctly different scores: one for general self-efficacy and one for social self-efficacy. Although the social self-efficacy scores were measured because they are a part of the self-efficacy scale, the significant focus of this research was on the general self-efficacy scores because it was believed that the two week training program impacted the participant's overall beliefs with regard to his or her abilities or capacities in a work setting. The measures of the social self-efficacy primarily focused on relationships and interactions in social settings. While these abilities or capabilities could be important, they were not thought to be as significant as the measures related to general self-efficacy.

The new employee staff development instructors read aloud the instructions and all items of the questionnaires, when requested by a participant. This encouraged participants to seek assistance if they had a problem reading or understanding the items on the questionnaires. The questionnaires were given to all new employees on the first day of orientation, after the two week orientation program, and then again after working in their new job for one month. The questionnaires were given in a classroom setting. All scorings of the instrument were done by the researcher.

The self-efficacy scale that was utilized in this study has been utilized in several prior studies. Koolhaas, Brouwer, Groothoff, and van der Klink (2010) utilized the scale in a cluster-randomized controlled study to determine if participants of the study who were provided an educational intervention had an increase in self-efficacy related to beliefs in abilities to retain healthy lifestyles while working. Their study determined that the intervention improved problem-solving abilities of supervisors and workers. They also showed that the intervention improved the self-efficacy of the participants when compared to the self-efficacy of participants who did not receive the intervention. Ranchor et al. (2002) utilized the self-efficacy scale in a study that examined the potential for several factors, including self-efficacy, to predict the short and long term psychological adaption of patients diagnosed with cancer. Their study determined that patients who had a low self-efficacy also had a higher level of psychological distress. Additionally, they found that younger patients and those patients who had a higher level of education were found to have a higher level of self-efficacy. However, self-efficacy was not a short term or a long term predictor of adjustment abilities of the patients. Baker, O'Brien, and Salahuddin (2007) utilized the self-efficacy scale in a study of 123 shelter workers to look at the relationship between self-efficacy and productivity at work.

Their study determined that high levels of time pressure and low levels of self-efficacy were predictors of emotional exhaustion of the shelter workers. Conversely, high levels of self-efficacy for dealing with pressures at work were predictors of personal accomplishment at work. Employees who had high levels of work-related productivity self-efficacy were found to have lower levels of emotional exhaustion. The last example of the use of the self-efficacy scale is a study conducted by Corrigan, Watson, and Barr (2006). Their study looked at the relationship between self-efficacy and several other variables to stereotype agreement, self-concurrence, and self-esteem. Their study found that self-concurrence and self-esteem were significantly related to self-efficacy. They also found that stereotype agreement was not significantly associated with self-esteem and self-efficacy, but they were associated with stereotype awareness.

The self-efficacy questionnaire was divided into two basic measures. The first measure included 17 questions related to general self-efficacy. General self-efficacy questions measured an individual's overall beliefs with regard to his or her ability or capacity to accomplish a task, persevere in the face of adversity, persist to complete a task, set goals, learn, succeed at project completion, confidence and self-reliance. The second measure included six questions related to social self-efficacy. Social self-efficacy questions measured an individual's beliefs about his or her ability or capacity with regard to making friends, interactions in social settings, developing friendships, and maintaining friendships. General self-efficacy questions yielded a Cronbach alpha reliability coefficient of .86. Social self-efficacy questions yielded a Cronbach alpha reliability coefficient of .71. Both general and social self-efficacy measures for this questionnaire have demonstrated the internal consistency or reliability necessary for use in research. Additionally, research correlating the measures of self-efficacy scale with other

personality characteristics, such as internal control, external control, personal control, social desirability, ego strength, interpersonal competency, and self-esteem has been conducted. Construct and criterion validity for the general and social self-efficacy questions has been demonstrated (Sherer et al., 1982).

CHAPTER IV

FINDINGS

This research was conducted to determine if there was a statistically significant impact on the self-efficacy of newly hired employees after completion of a new employee training program and after working on the job for one month. The participants of the study were asked to provide demographic information and to complete a 30-item self-efficacy questionnaire that asked about the participants' general self-efficacy and social self-efficacy. The questionnaire was administered to each participant on three separate occasions: before the new employee training, after the new employee training, and after one month working on the job.

Demographics

There were a total of 55 participants who completed the first self-efficacy questionnaire and the demographic information questionnaire. There were 8 participants who did not complete all three self-efficacy questionnaires or were taken out of the study because the participant submitted incomplete or illegible self-efficacy questionnaires. There were a total of 47 participants who completed the entire study. Due to the fact that the demographic information questionnaire and the self-efficacy questionnaires were anonymous, the demographic information for the 8 participants who did not complete the study or who submitted incomplete or illegible self-efficacy questionnaires could not be separated from the 47 participants who completed the entire study. Therefore, the demographic information reported includes the 47 participants who completed the entire study, and also includes the demographic information of the 8 participants who did not finish the study.

Thirty-four or 61.8% of the participants were female. Twenty-one or 38.2% of the participants were male (see Table 1).

Table 1

Gender Distribution of Sample

	Frequency	Percent
Female	34	61.8
Male	21	38.2
Total	55	100.0

Forty-eight or 87.3% of the participants were African American. Seven or 12.7% of the participants were White. None of the participants self-identified as Asian, Latino, Native American, or Other (see Table 2).

Table 2

Ethnicity Distribution of Sample

	Frequency	Percent
African American	48	87.3
White	7	12.7
Total	55	100.0

Seven or 12.7% of the participants had a General Educational Development (GED) credential. Thirty-six or 65.5% of the participants had a high school diploma. Three or 5.5% of the participants completed trade school. Six or 10.9% of the participants had an associate's degree. Two or 3.6% of the participants had a bachelor's degree. One or 1.8% of the participants had a master's degree (see Table 3).

Table 3

Highest Educational Level Distribution of Sample

	Frequency	Percent
General Educational Development	7	12.7
High School Diploma	36	65.5
Trade School	3	5.5
Associate's Degree	6	10.9
Bachelor's Degree	2	3.6
Master's Degree	1	1.8
Total	55	100.0

The minimum age of the participants was 18. The maximum age of the participants was 52. The mean or average age of the participants was 27.35, with a standard deviation of 8.38 (see Table 4). The mode age was 21.

Table 4

Age Distribution of Sample

	N	Minimum	Maximum	Mean	Std. Deviation
Age	55	18	52	27.35	8.38

Data Analysis

The first research hypothesis was: There is a statistically significant difference between the self-efficacy scores of direct care workers at the time of hire and immediately after the completion of a two week training program. The second research hypothesis was: There is a statistically significant difference between the self-efficacy scores of direct care workers at the time of hire and one month after completion of a two week training program.

Participants completed a self-efficacy questionnaire on three separate occasions. The questionnaire was completed by the participants before the training, after the training, and after one month on the job. The questionnaire consisted of 17 general self-efficacy questions that were scored, six social self-efficacy questions that were scored, and seven filler questions that were not scored.

The minimum total possible score of the general self-efficacy questions on each questionnaire was 17 and the maximum total possible score was 85. The results of the analysis with regard to general self-efficacy determined there was not an observable difference between the before the training scores and the after the training scores. The mean general self-efficacy score before training was 76.34, with a standard deviation of

5.42. The mean general self-efficacy score after training was 76.40, with a standard deviation of 6.83. However, with regard to general self-efficacy, there was an observable difference between the after the training score and after one month on the job score. The mean general self-efficacy score after one month on the job was 78.00, with a standard deviation of 6.14 (see Table 5).

Table 5

Means of General Self-Efficacy

	Mean	N	Standard Deviation
General SE PT	76.34	47	5.42
General SE AT	76.40	47	6.83
General SE OJ	78.00	47	6.14

Note. SE= self-efficacy, PT= pre-training, AT = after training, OJ = after one month on the job.

The next step of the analysis was to conduct a multivariate test. This was chosen because there was a need to simultaneously examine and analyze more than one variable. The multivariate test was conducted on general self-efficacy scores of the three questionnaires. Pillai's Trace is considered the most reliable of the multivariate measures, partially because it offers the greatest protection against Type 1 errors with small sample sizes. A Type 1 error occurs when a mistake in a testing process results in a true null hypothesis being incorrectly rejected. Pillai's Trace is the sum of variance which is explained by the calculation of discriminate variables. It calculates the amount of variance in the dependent variable (participant answers to the self-efficacy questions), which is accounted for by the greatest separation of the independent variables (intervals

when the self-efficacy questionnaire is administered to the participants), while providing a greater protection against a Type 1 error. Pillai's Trace indicated that there was a statistically significant difference in the general self-efficacy questionnaire scores among the three questionnaires $F(2, 45) = 5.69$, $p = .006$. However, the multivariate test is not designed to report exactly where the statistically significant difference occurred or if the statistically significant difference was an increase or a decrease. Therefore, further analysis had to be conducted to determine exactly where the statistically significant difference occurred.

A pairwise comparison test was performed to determine exactly where the statistically significance difference occurred and if the difference was an increase or a decrease. The pairwise comparison test compared the following: (1) the pre-training general self-efficacy questionnaires to the after training general self-efficacy questionnaires and to the after one month on the job general self-efficacy questionnaires; (2) the after training general self-efficacy questionnaires to the pre-training general self-efficacy questionnaires and to the after one month of the job general self-efficacy questionnaires; and (3) after one month on the job general self-efficacy questionnaires to the pre-training general self-efficacy questionnaires and to the after training general self-efficacy questionnaires. The pairwise comparison showed that there was a statistically significant difference between the general self-efficacy scores after the training questionnaires and after one month on the job questionnaires. Furthermore, pairwise comparison showed that general self-efficacy scores increased between the after training questionnaires and the one month on the job questionnaires.

The results of the analysis for social self-efficacy determined that there was not an observable difference between the social self-efficacy scores before the training and the

social self-efficacy scores after the training. The minimum total possible score on the social self-efficacy questions on each questionnaire was 6 and the maximum total possible score was 30. The mean social self-efficacy score before training was 22.26, with a standard deviation of 4.16. The mean social self-efficacy score after training was 22.79, with a standard deviation of 3.74. Additionally, there was also not an observable difference between the after the training social self-efficacy scores and the after one month on the job social self-efficacy score. The mean social self-efficacy score after one month on the job was 22.77, with a standard deviation of 3.82 (see Table 6).

Table 6

Means of Social Self-Efficacy

	Mean	N	Standard Deviation
Social SE PT	22.26	47	4.16
Social SE AT	22.79	47	3.74
Social SE OJ	22.77	47	3.82

Note. SE= self-efficacy, PT= pre-training, AT = after training, OJ = after one month on the job.

A multivariate test was conducted on social self-efficacy scores of the three questionnaires. The Pillai's Trace indicated that there was not a statistically significant difference between the scores of the social self-efficacy questions on the three questionnaires $F(2, 45) = .994$, $p = .378$. Since there was not a statistically significant difference between the social self-efficacy questions among the three questionnaires, no further testing was required on the social self-efficacy data.

The first research hypothesis was: There is a statistically significant difference between the self-efficacy scores of direct care workers at the time of hire and immediately after the completion of a two week training program. This research hypothesis was rejected with regard to general self-efficacy as evidenced by the pairwise comparisons. The second research hypothesis was: There is a statistically significant difference between the self-efficacy scores of direct care workers at the time of hire and one month after completion of a two week training program. This research hypothesis was accepted with regard to general self-efficacy as evidenced by the pairwise comparisons. Based on the pairwise comparison of the of the general self-efficacy questionnaires, it was determined that the statistically significant difference occurred between the after training questionnaires and the after one month on the job general self-efficacy questionnaires. The scores on the questionnaires after one month on the job increased. This indicated that the general self-efficacy of the participants did not increase after training, but did increase after working on the job for one month. There was no statistically significant difference in the social self-efficacy scores of newly hired employees after the training or after one month on the job.

CHAPTER V

DISCUSSION

Behavioral psychologist Albert Bandura (1977) described self-efficacy as an individual's perceived ability or capacity to perform a task. In later works, Bandura (1997) further explained that self-efficacy was not a constant belief, but a fluid belief that could change over time and depending on the circumstances. For example, an individual may have a low self-efficacy when first introduced to a new task or duty that the individual is expected to perform. However, after appropriate training and exposure to individuals who are able to perform the task, the individual's self-efficacy related to the new task may increase. Self-efficacy has been widely researched and studied in many different settings.

The purpose of this research was to determine if there is a statistically significant difference in the self-efficacy scores of newly hired direct care employees in state mental facilities after completion of a mandatory new employee orientation and training program. Additionally, the research also examined if there was a statistically significant difference in the self-efficacy scores of the newly hired direct care employees after working on the job for one month. Although the primary purpose of the training is to equip the adult learner with necessary knowledge and skills to be successful in his or her job, one must not overlook the importance of the impact of the training on the learner's belief in his or her capability to perform the job.

A total of 47 participants at two mental health facilities completed the study. The participants were all adult learners. Each participant completed one anonymous demographic information questionnaire and three anonymous self-efficacy questionnaires. The self-efficacy questionnaires were administered by a staff

development instructor at the mental health facilities at three separate intervals: prior to the training, immediately after the training, and after one month on the job. The self-efficacy questionnaire was designed to separately measure general self-efficacy and social self-efficacy.

Demographics

Demographic data of the participants were important in several areas. The majority of the participants in the study were female (61.8%). The profession of a direct care worker within the healthcare industry generally attracts more female employees. Therefore, these findings were expected. While this statistic is not surprising, it could weaken the comparability of this research with other self-efficacy research in non-predominantly female industries.

Another important finding in the demographic data was the homogeneity with regard to the ethnicity of the participants. The vast majority of the participants (87.3%) self-identified as African American, while only 12.7% self-identified as White. Additionally, none of the participants identified themselves as from any other ethnic group. The ethnicity statistics are not consistent with the total population in the state of Mississippi. According to the United States Census Bureau (2010), 59.1% of the population in Mississippi identified as white and 37.0% of the population identified as African American. However, the research was conducted at two mental health facilities in cities, or near cities, where the ethnic demographic make-up is more similar to that of the participants. According to the United States Census Bureau (2010), the ethnicity demographic make-up of Jackson, Mississippi is 70.6% African American and 27.8% White and the ethnicity demographic make-up of Meridian, Mississippi is 54.4% African American and 44.0% White. The ethnicity demographic make-up of the two cities is one

explanation for the vast difference between the percentage of African American participants and the percentage of White participants. Although the lack of diversity in the ethnicity of the study participants can be explained, this factor could also limit the comparability of this self-efficacy research with other studies whose participants are more ethnically diverse.

The last relevant finding was the educational level of the participants in the study. The minimum requirement for the direct care worker position is a General Educational Development (GED) credential. The vast majority of the participants had either a GED credential or high school diploma (78.2%). Collectively, participants with all other educational levels only accounted for 21.8% of the total participants of the study. There was not an option on the demographic questionnaire for the participant to indicate if he or she was currently in school pursuing further education. However, some participants wrote-in on the questionnaire that they were currently pursuing higher education. Since the minimum requirement for the position is a GED credential, the percentage of participants with a GED credential or high school diploma was expected. The fact that the vast majority of participants have a GED credential or high school diploma may lessen the comparability of the self-efficacy research to those industries that have significantly higher educational requirements or even no educational requirements. An individual with higher educational training or lower educational training may begin working in a new position with a statistically significant different self-efficacy than someone who has a different educational training.

General Self-Efficacy

The first part of the analysis of data focused on the elements of the questionnaire that measure general self-efficacy. There were 17 questions that measured general self-

efficacy that were intermingled between six social self-efficacy questions and seven non-scored filler questions. The general self-efficacy questions asked the participant to rate himself or herself in a variety of different areas that were specific with regard to accomplishing a task, perseverance in the face of adversity, persistence to completion of a task, goal setting, learning, success at project completion, confidence, and self-reliance. The participants were provided a general self-efficacy statement and asked to rank their feeling on that statement on a five point Likert Scale ranging from *Disagree Strongly* to *Agree Strongly*. Points were assigned to each rating where *Disagree Strongly* was scored one point, *Disagree Moderately* was scored two points, *Neither Agree nor Disagree* was scored three points, *Agree Moderately* was scored four points, and *Agree Strongly* was scored five points. The minimum possible total score for general self-efficacy was 17 and the maximum possible score was 85.

The general self-efficacy scores showed that there was not an observable difference between the scores of the participants before the training and after the training. This lack of significance is observable between the mean score prior to the training of 76.34, compared to a mean score after the training of 76.40. The standard deviation from the mean on the general self-efficacy scores prior to the training was low (5.42), indicating that scores on the questions were close to the mean of 76.34. Furthermore, the standard deviation from the mean on the general self-efficacy scores after the training was also low (6.83), indicating that the scores on the questions were close to the mean of 76.40.

However, there was an observable difference between the general self-efficacy scores after the training (mean of 76.40) and after one month on the job (mean of 78.00). The increased mean general self-efficacy score after the one month on the job, compared

to mean general self-efficacy score after the training indicated that there was an increase in the general self-efficacy of the participants after one month on the job that was no present after the two week training. There was also a low standard deviation from the mean on the general self-efficacy scores after one month on the job (6.14) indicating that the scores on the questions were close to the mean of 78.00. This portion of the analysis only reports that there was not an observable difference between the general self-efficacy scores after training. However, there was an observable difference between the self-efficacy scores after the training and after one month on the job. Additional testing of the data was required to determine if the observable difference was statistically significant.

A Multivariate test was run to determine if there was a statistically significant difference between the general self-efficacy scores on the three questionnaires. The Pillai's Trace multivariate test was selected because it provides the greatest protection from incorrectly rejecting a null hypothesis with a small sample size. Pillai's Trace calculates and compares the amount of variance in the dependent variable which is accounted for by the greatest separation of the independent variable, where the dependent variable is the participant answers to the general self-efficacy questions and the independent variable is the three intervals when the self-efficacy questionnaires were administered.

The Pillai's Trace multivariate test showed that there was a statistically significant difference between the three test scores. This means that there was more than just an observable difference between the scores on the three questionnaires. The Pillai's Trace multivariate test showed that at some point between the three questionnaires, there was either a statistically significant increase or a statistically significant decrease in the scores on the general self-efficacy questions. If there was an increase in the general self-

efficacy scores between the first questionnaire before the training and the second questionnaire after the training or between the second questionnaire after the training and the third questionnaire after one month on the job, it would indicate that the participants had an increase in their general self-efficacy. An increase in the general self-efficacy scores would indicate that the participants had an increase in perceived ability or capacity to perform a task in the areas measured by the general self-efficacy questions. Conversely, if there was a statistically significant decrease in the general self-efficacy scores between the first questionnaire before the training and the second questionnaire after the training or between the second questionnaire after the training and the third questionnaire after one month on the job, it would indicate that the participants had a very undesirable decrease in their general self-efficacy. A decrease in the general self-efficacy scores would indicate that the participants had a decrease in perceived ability or capacity to perform a task in the areas measured by the general self-efficacy questions. Since the Pillai's Trace multivariate test only measures statistical significance variance in the dependent variable which is accounted for by the greatest separation of the independent variable and does not identify an increase or a decrease or the location of the statistically significant difference, additional tests were performed on the general self-efficacy questions.

A pairwise comparison test was performed on the general self-efficacy scores to determine where the statistical significance occurred and if the statistical significance was an increase or a decrease in the participants' general self-efficacy scores. The pairwise comparison test showed that there was not a statistically significant difference between the general self-efficacy scores of the participants after the training. The pairwise comparison test compared the self-efficacy scores of the participants before the training

and after the training to get these results. This means that the participants did not have a statistically significant increase or a decrease in their general self-efficacy scores after the training, when compared to their general self-efficacy scores prior to the training. However, the pairwise comparison test determined that there was a statistically significant difference between the general self-efficacy scores after the training and general self-efficacy scores after one month on the job. The pairwise comparison test also determined that the statistically significant difference between the general self-efficacy scores after the training and after one month on the job was an increase. This means that the participants had a statistically significant increase in their perceived ability or capacity to perform a task in the areas measured by the general self-efficacy questions after one month on the job, which they did not experience immediately following the training.

The first primary conclusion of the analysis of the general self-efficacy questions is that the participants in the study did not experience an increase or a decrease in the general self-efficacy scores after completion of the two week training program when compared to their scores on the general self-efficacy questions prior to the training. The second primary conclusion of the analysis of the general self-efficacy questions is that the participants in the study did experience an increase in their general self-efficacy scores between the after the training general self-efficacy scores and the after one month on the job general self-efficacy scores. This suggests that the participants had an increased belief in their abilities or capacities in the areas of accomplishing a task, perseverance in the face of adversity, persistence to completion of a task, goal setting, learning, success at project completion, confidence, and self-reliance after one month on the job that they did not have after completion of the two week training.

One possible explanation for the lack of an increase in general self-efficacy after the training could be the result of a lack of peer observation and practice of the skills that were taught. A component of the training does include the participants practicing skills in a laboratory environment under the supervision of an instructor. However, once the participants complete the two week training, they receive additional informal training by a peer or supervisor and are allowed to practice the skills with their peers in their actual work settings. The additional experiences and interactions could be a contributing factor to the increase in self-efficacy after one month on the job that was not present immediately after the training. Another possible explanation for the increase in general self-efficacy after one month on the job is the additional month of experience and training. By the time a participant completed the third and final questionnaire after one month on the job, he or she had worked at the facility for approximately six weeks, compared to approximately two weeks on the job at the time of the completion of the second questionnaire after the training. This additional time on the job allows the participants opportunities to have additional experiences that could increase general self-efficacy. Additionally, in the month on the job, the participants were faced with several tasks that they must accomplish. The collective experiences that are gained from accomplishing these individual tasks could result in an increase in the participant's beliefs about their capabilities to accomplish future tasks. Additionally, one of the areas measured by the general self-efficacy questions is the belief in the individuals' ability to persevere in the face of adversity. As the participants experience adversity challenges in their jobs, the outcome of overcoming these adversities could be an improvement in their confidence to persevere when faced with future adversities. An example of this could be a direct care worker who, for the first time, is faced with a patient who is choking. The

direct care worker may have a great degree of fear and doubt as to how to handle the situation. However, when the direct care worker successfully performs the necessary procedures, a positive outcome could be achieved. This experience with adversity could improve the employee's overall belief with regard to his or her abilities when faced with a similar adversity in the future. This is an example of an experience that a new employee could encounter on the job, which he or she could not fully experience in a training laboratory. Lastly, new employees' beliefs about their confidence and self-reliance are other areas that could be improved after one month on the job. Newly hired direct care workers will face many challenging tasks during their first month of employment. They will face some of these tasks without the presence of a co-worker or a supervisor. Similar to how collective experiences of accomplishing individual tasks can improve confidence in the participants, the collective experiences of successful outcomes and self-reliant situations could also result in an improvement in the participants' overall self-efficacy ratings. The successful individual accomplishments of the newly hired direct care workers during their one month on-the-job experiences have the potential to collectively have a positive impact on their self-efficacy ratings of the participants.

The results of this study are consistent with the findings of both Zimmerman (1995) and Bandura (1977). They assert that a skill set alone will not always result in a proportional increase in the learner's self-efficacy. New employees who complete the training are not allowed to go to their work assignments until they can demonstrate both knowledge and skills that are taught in the two week new employee training program. This demonstration of knowledge and skills supports that the learners have received and understand the elements of the training. The study found that the learners did not have an increase in their general self-efficacy, which is consistent with the concept that newly

learned skills alone will not always result in an increase in self-efficacy. An explanation for the increase in general self-efficacy after one month on the job could be the amount of coaching and guidance the learner receives on the job in comparison to the classroom training. Tschannen-Moran and McMaster (2009) demonstrated that follow-up coaching had the strongest impact on the learner's self-efficacy. More follow-up coaching is provided in the one month on the job than is provided in a classroom environment and therefore this research is consistent with the earlier findings of Tschannen-Moran and McMaster.

Additionally, Reich et al. (2004) found that there were four categories of characteristics that shape self-efficacy: personal attitudes, knowledge, skills, and resources. For a training program to improve the learner's self-efficacy, the training program must also incorporate into the curriculum activities and strategies with the goal of a desired outcome to improve the learner's personal attitudes about the task. This is important to individuals who are providing patient care because of the nature of their jobs. Direct care employees are the front-line caregivers to individuals in the mental health facilities. They interact directly with patients on a daily basis and, therefore, their attitudes are important. The concept of shaping self-efficacy through attitudes was further supported by Bandura (1997) with the assertion that attitudes are cognitive factors that impact self-efficacy.

The importance of a higher self-efficacy alone should not be the exclusive desired outcome of the direct care training. Research has demonstrated that individuals with higher self-efficacies have increased abilities to overcome challenges and conversely, individuals with lower self-efficacies have decreased abilities to overcome challenges (Bandura, 1991; Grist & Mitchell, 1992). Additionally, Harrison et al. (1997) showed

that increased performance on a task was significantly related to higher levels of self-efficacy. Conversely, it was also shown that decreased performance on a task was also significantly related to lower self-efficacy. Therefore, it is important to note that an increase in self-efficacy should not exclusively be a short-term desired outcome of the direct care training program. The increase in self-efficacy has the potential to result in improvements in the employees' long-term coping skills and performance when faced with challenges. Bandura (1977) further explained this concept by showing that the higher the self-efficacy, the greater effort an individual would exert to accomplish a task. This could mean that an increase in an employee's self-efficacy that is obtained through a training program could have the potential for the employee to exert more effort in his or her work performance. Schwarzer (1992) took the concept even further by showing that self-efficacy influences how the learner thinks, feels, and acts in various situations.

General self-efficacy scores were most likely not statistically different after the training for several reasons. The training lacked an explicit focus on the development of the learner's self-efficacy. While the training met the fundamental responsibility of providing the participants with the knowledge and skills necessary to perform the job, the training lacked the necessary activities and structure that have been demonstrated to support a learner's improvement in self-efficacy. Furthermore, general self-efficacy scores were most likely statistically different after one month on the job because the benefit of a social support system on the job, experiences on the job, and the amount of time the participants had to work in the new job. All three of these collectively could have been contributing factors in the measureable impact on a learner's self-efficacy. The importance of an employee's high self-efficacy spans beyond a reportable measure

or score. A higher self-efficacy has been shown to impact an employee's ability to be successful in a job.

Social Self-Efficacy

The second part of the analysis of the data focused on the elements of the questionnaire that measured social self-efficacy. There were six questions that measured social self-efficacy. The social self-efficacy questions asked the participant to rate himself or herself in several different areas that were specific with regard to: making friends, interactions in social settings, developing friendships and maintaining friendships. The participants were provided a social self-efficacy statement and asked to rank their feeling on that statement on a five point Likert Scale ranging from *Disagree Strongly* to *Agree Strongly*. Points were assigned to each rating where *Disagree Strongly* was scored one point, *Disagree Moderately* was scored two points, *Neither Agree nor Disagree* was scored three points, *Agree Moderately* was scored four points, and *Agree Strongly* was scored five points. The minimum possible total score for social self-efficacy was six and the maximum possible total score was 30.

The social self-efficacy scores showed that there was not an observable difference between the scores of the participants before the training and after the training. This lack of significance is observable between the mean score prior to the training of 22.26, compared to a mean score after the training of 22.79. The standard deviation from the mean on the social self-efficacy scores prior to the training was low (4.16), indicating that scores on the questions were close to the mean of 22.26. Furthermore, the standard deviation from the mean on the social self-efficacy scores after the training was also low (3.74), indicating that the scores on the questions were close to the mean of 22.79. There was also not an observable difference between the social self-efficacy scores of the

participants after the training compared to the social self-efficacy scores of the participants after one month on the job. The mean social self-efficacy score after one month on the job was 22.77, compared to the mean social self-efficacy score after training of 22.79. Additionally, the standard deviation for the social self-efficacy score after one month on the job was low (3.82), indicating that the scores on the questions were close to the mean of 22.77. Additional testing of the data was required to confirm that there was not a statistically significant difference between the social self-efficacy scores on the three questionnaires.

A multivariate test was run to determine if there was a statistically significant difference between the social self-efficacy scores on the three questionnaires. The Pillai's Trace multivariate test was selected. The Pillai's Trace multivariate test showed that there was not a statistically significant difference between the social self-efficacy test scores on all three questionnaires. This means that the participants did not experience a statistically significant increase or decrease in their perceived ability or capacity to make friends, interact in social settings, develop friendships, or maintain friendships after the training or after one month on the job. It is important to note that although the social self-efficacy was measured in this research, there was not an expectation that the direct care training would have any impact on the social self-efficacy of the participants. The training was not expected to have an intentional or an unintentional impact on the perceived belief in the participants' abilities or capacities to make friends, interact in social settings, develop friendships, or maintain friendships.

Social self-efficacy scores were most likely not statistically different at any interval for many reasons. No research could be found that supported or negated the importance or benefit of employees having increased social self-efficacy. The training

did not provide a focus on the development of the learner's social self-efficacy. While there are potential benefits of an employee's increased social self-efficacy in the work environment, it could be theorized that social self-efficacy increases, for most individuals, could be results of social interactions and experiences outside of the work environment.

Limitations

There were several limitations of the study that are important to mention. An obvious limitation of the study was the self-reporting nature of the data by the participants. Although all elements of the study were anonymous, new employees participating in the study could have reported what they felt were socially desirable answers and not how they really felt about their abilities. This issue was further complicated by the work-related nature of the general self-efficacy questions. A new employee may not have felt comfortable answering that he or she strongly disagrees with a statement that could have been a direct reflection on his or her ability to perform at a new job. A comparison could be made with administering self-efficacy questionnaires to individuals participating in a volunteer social event. Self-efficacy questionnaires administered to participants at a volunteer social event, compared to self-efficacy questionnaires administered to new employees who are depending on the incomes to support themselves, could potentially yield different overall self-efficacy ratings. Participants in volunteer social events could be more inclined to be more honest when rating self-efficacies compared to new employees who are dependent on the jobs and could possibly feel that the ratings are not socially acceptable in an employment setting. Measures were placed in the research to ensure the anonymity of the participants and their responses. Even with these protective measures in place, there was still the potential

that participants would answer according to what they felt were the best answers and not how they actually believe with regard to their capabilities.

Along the lines of the self-reporting limitation, an additional factor to consider was that some participants may have an exaggerated high or low view of their self-efficacy. Without being able to specifically test the actual competency or ability, self-efficacy rating is a reported confidence in ability to perform a task and not an actual measure of one's ability to perform a task. There were no indications that the participants exaggerated their self-efficacy ratings either high or low. However, it could be speculated that there might have been internal pressures of being on a new job that would result in participants overestimating or exaggerating their self-efficacy ratings. The training program was designed and implemented exclusively to provide the participants with the necessary knowledge and skills to perform at their jobs. The trained knowledge and skills were tested prior to the new employees performing their new jobs. Therefore, an exaggerated high or low self-efficacy should not have a direct impact on an employee's task performance on the specific skills that are trained. However, an exaggerated high or low self-efficacy could have an indirect impact on their overall job performance with regard to ability to solve problems when faced with adversity, set goals, learner, succeed to completion, confidence, and self-reliance. These capabilities or learner abilities may not be immediately evident with new employees, but may affect their long term job performance.

Another limitation of the study was the recall effect. The participants may have remembered answers from the initial questionnaire. The second questionnaire after the new employee training was administered two weeks after the first questionnaire. The third questionnaire was administered approximately four weeks after the second

questionnaire. Not only could the recall effect impact the results of the answers, there was an unequal amount of time between the three questionnaires.

Differing external factors that could have influenced the self-efficacies of the participants were additional limitations. The following are examples of differing external factors that were out of the control of the study and that could have influenced the participant's self-efficacy: participant's supervisor, amount of additional training received once the participant completed the two week training, location and shift of work assignment, and personal experiences outside of work. A new employee who is assigned a job with a helpful and mentoring supervisor may have experienced an increase in his or her self-efficacy in comparison to a new employee who did not experience the help and guidance of a similar supervisor. Another limitation of the research could have been that it was not directly experimental research. There was not a control group for this study. Lastly, a final limitation could have been the reading ability of the participants. Although all participants had at least a general educational development credential or a high school diploma, it may not have guaranteed that the participants were able to read at a 12th-grade reading ability.

Future Research

There are many opportunities to further the research of general self-efficacy with newly hired direct care employees. An important area of research that would further this study would encompass a measure to test the accuracy of an individual's self-reported general self-efficacy related to his or her performance on specific related tasks. A measure of this nature would determine if the individual has an unreasonably high or low and unsupported view of his or her general self-efficacy. Research that does not measure specific performance in comparison to self-efficacy is relying on an individual's self-

reporting of self-efficacy. In research involving employees, there is always the potential bias of reporting the way they think they should report in an employment environment and not the way they actually feel about their perceived abilities or capabilities. A measure that would actually test employees' self-efficacy would minimize the bias created when employees' possess unreasonably high or low and inaccurate self-efficacies.

A change in both the approach to the training and the activities in the training and then repeating the study would be a way to further the research on self-efficacy of newly hired direct care employees with the desired result of improving the participants' general self-efficacy. The approach to the training could be modified to include the four core elements Pintrich and Schunk (1996) have shown will foster self-efficacy in the training environment: minimal social comparison, positive communication, realistic and course specific feedback, and challenging tasks. The activities of the training could also be modified to include the four core elements that Haring and Beyard-Tyler (1984) demonstrated will improve self-efficacy in a training environment: focusing on successful performance accomplishments, receiving verbal persuasion and encouragement, attending to emotional arousal, and participating in vicarious or observational learning exercises. When the training approach and activities are modified, the study could then be repeated. The original group of participants from this research could serve as the control group. The experimental group could include newly hired direct care employees who participated in the revised training program. The results of the two groups could be compared to determine if the general self-efficacy scores differed significantly between the experimental group and the control group.

Another way to expand this research would be to include more demographically diverse participants and then compare the general self-efficacy scores of the different demographic groups to determine if there are statistically significant differences between the groups. One of the deficits of the research is the lack of diversity among the participants in most of the demographic groups. Repeating the study with a larger, more diverse group of participants would further the research. Additionally, performing pairwise comparisons between the groups would also be of interest to study the general self-efficacy score differences between the groups and the changes between and within the groups. Additional research could also focus on the benefits to employees that have higher social self-efficacies. Although this research did not delve into that area and available research in the area was very limited, a high social self-efficacy could increase an employee's confidence in his or her job and ability to seek assistance from co-workers.

Lastly, another important area for future research in the field of self-efficacy could examine if low self-efficacy predicts job attrition and if high self-efficacy predicts job retention. This research would need to be expanded to remove the anonymity of participants so the participants could be tracked on a long term basis. A longitudinally study to determine if there is a statistically significant difference between the self-efficacy ratings of participants and their attrition or retention from the workforce would be a significant contribution to the research on self-efficacy. The retention of staff in any environment is important to the successful operations. However, retention of direct care workers is critical to the quality and continuity of care provided to the patients. While attrition and retention of staff in the direct care worker profession is important to the provision of patient care, it is not the only reason to study self-efficacy. Self-efficacy has

lasting impacts on the ability of staff to successfully perform in their jobs on many different levels.

Implications for Practice and Policy

The primary implication for practice and policy changes as a result of this research is the need to incorporate elements in the training that have been demonstrated to increase a learner's self-efficacy. Haring and Beyard-Tyler (1984) showed that four activities can help improve an employee's self-efficacy: focusing on the successful performance accomplishments, receiving verbal persuasion and engagement, attending to emotional arousal, and participating in vicarious or observational learning exercises. If these four activities could be incorporated in the direct care training modules, it would have the potential of increasing the general self-efficacy of the new employees after training. Bandura (1997) also suggests that a social support system of the learner was an important element of shaping the self-efficacy. This concept is consistent with the increase in the observed general self-efficacy of the participants after working on the job for one month because once the new employee leaves the two week training, he or she has a peer social support system in the work environment. However, by incorporating professional activities that encourage the new employees to support each other, a more formalized peer supportive social system for the new employees may be developed and implemented as part of the two week training program.

The training is designed to teach the participants specific knowledge and skills that are necessary to perform their jobs of providing direct patient care. Each module in the training is both knowledge and skills based. There is not an intentional element in the training designed to address the participants' self-efficacies. Any increase or decrease in the participants' self-efficacies is an indirect and unintended outcome of the training and

not an intentionally designed component of the training curriculum. While it is very important to provide participants with the necessary knowledge and skills, this training program needs to be revised to intentionally improve the self-efficacies of the participants.

APPENDIX A

TOPICS COVERED IN THE *MISSISSIPPI NURSE AIDE CANDIDATE HANDBOOK, JANUARY 2011*

-Quick Reference
-Introduction
-Eligibility
-Application and Scheduling
-Cancellation and Rescheduling
-Exam Day
-The Written (Or Oral) Exam
-Written (Or Oral) Exam Content Outline
-Sample Questions
-Self-Assessment Reading Test
-The Skills Evaluation
-Skills Listing
-Score Reporting
-Grievance Process
-The Registry
-Mississippi Nurse Aide Certification
-Frequently Asked Questions.

APPENDIX B

TOPICS COVERED IN THE *CNA/DCW TRAINING MODULE*

Module 1
Introduction, Role of the Nurse Aide, Client's Rights, Ethical Aspects, Transferring the Client, Client Protective Devices, Knowledge of Methods of Protecting Clients from Injury, Addendum to Safety, Knowledge of When to Take Emergency Action, Seizures, Infection Control, Key Terms

Module 2-Introduction, Cardiovascular System, Elastic Stockings, Knowledge of Procedure for Measuring Blood Pressure, Knowledge of Proper Temperature Measuring Techniques, Knowledge of Normal Pulse, Knowledge of Basic Structure and Function of the Respiratory System, and Height and Weight

Module 3-Introduction, Activities of Daily, Nutrition/Hydration/Elimination, Diabetes Mellitus, Knowledge of the Function of Fluid in the Body, Therapeutic/Technical Procedures, Knowledge of the Function of the Urinary System, Urinary Catheters, Knowledge of Methods used in Bladder and Bowel Retraining, Knowledge of Proper Procedure for Perineal Care, Knowledge of the Functions of the Upper and Lower Digestive Systems, Elimination, Enema, and Ostomies

Module 4-Introduction, Knowledge of Signs of Pressure Ulcers, Comfort and Positioning Devices, Basic Body Positions, key Terms, Knowledge of Age-related Changes Resulting in Bone and Muscle Wasting and Resulting Conditions, Care of a Patient With a Hip Fracture, Instructing the Client in the Use of Equipment, Range of Motion Exercises, Elastic Stockings, Knowledge of Proper Technique for Making an Occupied/Unoccupied Bed, Knowledge of the Function of Proper Rest and Sleep for the Client, Guidelines for Moving and Lifting Patients, Knowledge of Self-Care Activities for the Client, and Braces

Module 5-Introduction, Physical Care Skills, Knowledge of the Physical and Emotional Benefits of Bathing for the Client, Back Rubs, Knowledge of the Purpose of Mouth Care, Knowledge of Morning and Evening Care to be Provided for the Client, Activities of Daily Living, Knowledge of Spiritual and Cultural Needs of the Client, Knowledge of Dying Clients Physical/Emotional Needs, Knowledge of Emotional Stages of Grieving, and Knowledge of the Proper Care of the Deceased Client

Module 6-Introduction, Psycho Social Care Skills, Emotional and Mental Health Needs, Knowledge of Appropriate Techniques for Helping the Client Express Anger, Knowledge of Ways to Support the Sexuality of the Client, Knowledge of the Use and Importance of Reality Orientation Techniques, Knowledge of Behavior Expressed by the Client with Dementia or other Cognitive Impairments, Knowledge of ways to Modify the Nurse Aides' Behavior in Response to the Client's Behavior, Alzheimer's Disease, Physical Changes of Aging, Communication, Knowledge of Good Listening Behavior, Key Terms, and Knowledge of Importance of Reporting Changes in the Client's Condition.

APPENDIX C

UNIVERSITY OF SOUTHERN MISSISSIPPI IRB APPROVAL DOCUMENT

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjec must be reported immediately, but not later than 10 days following the event. This shoul be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **11080901**
PROJECT TITLE: **The Impact of a Direct Care Program Training Program on the Self-Efficacy of Newly Hired Direct Care Workers at a State Psychiatric Hospital**
PROJECT TYPE: **Dissertation**
RESEARCHER/S: **Marc Lewis**
COLLEGE/DIVISION: **College of Education & Psychology**
DEPARTMENT: **Adult Education**
FUNDING AGENCY: **N/A**
IRB COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF PROJECT APPROVAL: **08/15/2011 to 08/14/2012**

Lawrence A. Hosman
Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair

8-16-2011
Date

APPENDIX D

SELF-EFFICACY DEMOGRAPHIC QUESTIONNAIRE

You are being asked to participate in a study conducted by Marc Lewis, doctoral candidate at the University of Southern Mississippi. This study examines the relationship between self-efficacy of participants after the completion of the two week direct care training module and after working at your job for one month. Participation in this study is completely voluntary and you may decline to participate or you may withdraw at any time. The Institutional Review Boards at the University of Southern Mississippi has approved this study. The results from this study will be reported in a group format only, meaning that individual participants will not be singled out or separated in order to assure confidentiality of responses. Please do not put your name on any of the forms, as this will insure confidentiality of your responses. If you have questions or concerns regarding this study, please contact Marc Lewis at (601) 351-8054.

Please answer each of the following questions. All information will be kept confidential and only reported in a group format. Thank you for your participation in this study.

Demographic Information

Gender ____Female
____Male

Ethnicity
____African American
____Asian
____Latino
____Native American
____White
____Other: Please specify_____

Age ____

Highest education level obtained
____GED
____High School Diploma
____Trade School
____Associates Degree
____Bachelor's Degree
____Master's Degree
____Post-Master's Degree

APPENDIX E

PERMISSION TO USE SELF-EFFICACY QUESTIONNAIRE

TIRR MEMORIAL HERMANN
Rehabilitation & Research

August 3, 2011

Marc Lewis
PO Box 201
Whitfield, MS 39193-0201

Mr. Lewis:

I am pleased to give you permission to utilize the Self-Efficacy scale in your dissertation research on self-efficacy. As a reminder, please properly cite the scale in any publication or future research.

If you have any questions or need additional information, I can be contacted at (713) 799-7007.

Sincerely,

Mark Sherer, Ph.D., ABPP, FACRM
Senior Scientist, Director of Research
Director of Neuropsychology
TIRR Memorial Hermann
Clinical Professor of Physical Medicine and Rehabilitation
Baylor College of Medicine
University of Texas Medical School at Houston
1333 Moursund
Houston, TX 77030

REFERENCES

Anyster, W., Goodman, S., & Wallis, T. (2006). The formation of self-efficacy beliefs of skilled professional employees in a South African fruit export organization. *Journal of Business Management*, *37*, 19-28.

Ayotte, B., Margrett, J., & Hicks-Patrick, J. (2010). Physical activity in middle-aged and young-old adults: The roles of self-efficacy, barriers, outcome expectancies, self-regulatory behaviors and social support. *Journal of Health Psychology*, *15*, 173-185.

Baker, L., O'Brien, K., & Salahuddin, N. (2007). Are shelter workers burned out? *Journal of Family Violence*, *22*, 465-474.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191-215.

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory.* Englewoods Cliffs, NJ: Prentice-Hall.

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, *50*, 248-287.

Bandura, A. (1997). *Self-Efficacy: The exercise of control.* New York, NY: W.H. Freeman.

Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology & Health*, *13*, 623-649.

Bandura, A. (2001). Social Cognitive theory: An argentic perspective. *Annual Review of Psychology*, *52*, 1-26.

Barling, J., & Beattie, R. (1983). Self-efficacy beliefs and sales performance. *Journal of Organization Behavior Management*, *51*, 41-51.

Chacko, S., & Huba, M. (1991). Academic achievement among undergraduate nursing students: The development of a causal model. *Journal of Nursing Education*, *32*, 255-289.

Coleman, P., & Karraker, K. (1997). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, *18*, 47-85.

Corrigan, P., Watson, A., & Barr, L. (2006). The self-stigma of mental illness: Implications for self-esteem and self-efficacy. *Journal of Social and Clinical Psychology*, *25*, 875-884.

Cunningham, G., & Mahoney, K. (2004). Self-efficacy of part-time employees in university athletics: The influence of organizational commitment, valence of training, and training motivation. *Journal of Sport Management*, *18*, 59-73.

Duggleby, W., Cooper, D., & Penz, K. (2009). Hope, self-efficacy, spiritual well-being and job satisfaction. *Journal of Advanced Nursing*, *65*, 2376-2385.

Dutton, G., Tan, F., Provost, B., Sorenson, J., Allen, B., & Smith, D. (2009). Relationship between self-efficacy and physical activity among patients with type two diabetes. *Journal of Behavioral Medicine*, *32*, 270-277.

East Mississippi State Hospital website. Retrieved December 29, 2011 from http://www.emsh.state.ms.us

Feldt, R., & Woelfel, C. (2009). Five-factor personality domains, self-efficacy, career-outcome expectations, and career indecision. *College Student Journal*, *43*, 429-437.

Fitzgerald, L. (1980). Nontraditional occupations: Not for women only. *Journal of Counseling Psychology*, *27*, 252-259.

Forneris, T., Fries, E., Meyer, A., Buzzard, M., Uguy, S., Ramakrishnan, R., Lewis, C., & Danish, S. (2010). Results of a rural school-based peer-led intervention for youths: Goals for health. *Journal of School Health*, *80*, 57-65.

Gist, M., & Mitchell, T. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, *17*, 183-211.

Gist, M., Schwoerer, C., & Rosen, B. (1989). Effects of alternative training methods on self-efficacy and performance in computer software training. *Journal of Applied Psychology*, *74*, 884-891.

Green, D. (2003). Self-efficacy: A communication model for the development of self-efficacy in the classroom. *Journal of Teaching in Social Work*, *23*, 107-116.

Hackett, G., & Betz, N. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior*, *18*, 326-339.

Hammond, C., & Feinstein, L. (2005). The effects of adult learning on self-efficacy. *London Review of Education*, *3*, 265-287.

Haring, M., & Beyard-Tyler, K. (1984). Counseling with women: The challenge of nontraditional careers. *School Counselor*, *31*, 301-309.

Harrison, A., Rainer, R., Hochwarter, W., & Thompson, K. (1997). Testing the self-efficacy-performance linkage of social-cognitive theory. *The Journal of Social Psychology*, *137*, 79-87.

Harvey, V. & McMuray N. (1994). Self-efficacy: A means of identifying problems in nursing education and career progress. *International Journal of Nursing Studies*, *31*, 471-485.

Heckman, S., & Grable, J. (2011). Testing the role of parental debt attitudes, students income, dependency status, and financial knowledge have in shaping financial self-efficacy among college students. *College Student Journal*, *45*, 51-64.

Hochwalder, J. & Brucefors, A. (2005). Psychological empowerment as a predictor of ill-health. *Personality and Individual Differences*, *39*, 1237-1248.

Hudspeth Regional Center website. Retrieved December 29, 2011 from http://www.hrc.state.ms.us

Jex, S., & Bliese, P. (1999). Efficacy beliefs as a moderator of the impact of work-related stressors: A multilevel study. *Journal of Applied Psychology*, *84*, 349-361.

Jex., S., & Gudanowski, D. (1992). Efficacy beliefs and work stress: An exploratory study. *Journal of Organizational Behavior*, *13*, 262-279.

Johnson, M., Neilands, T., Dilworth, S., Morin, S., Remien, R., & Chesney, M. (2007). The role of self-efficacy in HIV treatment adherence: Validation of the HIV treatment adherence self-efficacy scale. *Journal of Behavioral Medicine*, *30*, 359-370.

Jones, F., Mandy, A., & Partridge, C. (2009). Changing self-efficacy in individuals following a first stroke: Preliminary study of a novel of self-management intervention. *Clinical Rehabilitation*, *23*, 522-533.

Judge, T., Thoresen, C., Pucik, V., & Welbourne, T. (1999). Managerial coping with organizational change: A dispositional perspective. *Journal of Applied Psychology*, *84*, 107-122.

Karatepe, O., Arasli, H., & Khan, A. (2007). The impact of self-efficacy on job outcomes of hotel employees: Evidence from Northern Cyprus. *International Journal of Hospitality & Tourism Administration*, *8*, 23-46.

Kerr, B., Miller, W., & Reid, M. (2002). Sex-based occupational segregation in U. S. state bureaucracies. *Public Administration Review*, *62*, 412-423.

Koolhaas, W., Brouwer, S., Groothoff, J., & van der Klink, J. (2010). Enhancing a sustainable health working life: Design of a clustered randomized control trial. *BMC Public Health*, *10*, 461-469.

Knight, D. (2004). Beliefs and self-care practices of adolescents with asthma. *Issues in Comprehensive Pediatric Nursing*, *28*, 71-81.

Lema, J., & Agrusa, J. (2006). *Journal of Teaching in Travel & Tourism*, *4*, 37-50.

Lemmon, K. (2002). Turnover of certified nursing assistants: A major problem for long-term care facilities. *Hospital Topics*, *80*, 21-26.

Lyons, K. (2003). Self-management of parkinson's disease: Guidelines for program development and evaluation. *Physical & Occupational Therapy in Geriatrics*, *21*, 17-31.

MacPherson, L., & Myers, M. (2010). Examination of a process model of adolescent smoking self-change efforts in relation to gender. *Journal of Child & Adolescent Substance Abuse*, *19*, 48-65.

Matt, G., Bellardita, L., Fischer, G., & Silverman, S. (2006). Psychological resources and mental health among the difficult to employ: Can a pre-employment training program make a difference? *Journal of Vocational Rehabilitation*, *24*, 33-42.

Mississippi Nurse Aide Candidate Handbook, January 2011. Philadelphia, PA: Pearson Vue.

Mississippi State Hospital CNA/DCW Training Manual (2010). Whitfield, MS: Mississippi State Hospital Public Relations Department.

Mullen, J., & Kelloway, E. (2009). Safety leadership: A longitudinal study of the effects of transformational leadership on safety outcomes. *Journal of Occupational and Organizational Psychology*, *82*, 253-272.

Munir, F. & Nielsen, K. (2009). Does self-efficacy mediate the relationship between transformational leadership behaviours and healthcare workers' sleep quality? *Journal of Advanced Nursing*, *65*, 1833-1843.

O'Leary, A. (1992). Self-efficacy and health: Behavioral and stress-physiological mediation. *Cognitive Therapy and Research*, *16*, 229-245.

Pajares, F. (1996). Self-efficacy beliefs and mathematical problem solving of gifted students. *Contemporary Educational Psychology*, *21*, 325-344.

Pare, G., Sicotte, C., Poba-Nzaou, P., & Balouzakis, G. (2011). Clinicians' perceptions of organizational readiness for change in the context of clinical information system projects: Insights for two cross-sectional surveys. *Implementation Science*, *6*, 2-17.

Perdue, S., Reardon, R., & Peterson, R. (2007). Person-environment congruence, self-efficacy, and environmental identify in relation to job satisfaction: A career decision theory perspective. *Journal of Employment Counseling*, *44*, 29-39.

Pintrich, P., & Schunk, D. (1996). *Motivation in education: Theory, research and applications.* Englewood Cliffs, NJ: Prentice Hall.

Posadzki, P., Stockl, P., Musonda, P., & Tsouroufli, M. (2010). A mixed-method approach to sense of coherence, health behaviors, self-efficacy and optimism: Towards the operationalization of positive health attitudes. *Scandinavian Journal of Psychology*, *51*, 246-252.

Quinones, M. (1995). Pretraining context effects: Training assignment as feedback. *Journal of Applied Psychology*, *80*, 226-238.

Ranchor, A., Sanderman, R., Steptoe, A., Wardle, J., Miedema, I., & Ormel, J. (2002). Pre-morbid predictors of psychological adjustment to cancer. *Quality of Life Research*, *11*, 101-113.

Reich, S., Bickman, L., & Heflinger, C. (2004). Covariates of self-efficacy: Caregiver characteristics related to mental health services self-efficacy. *Journal of Emotional & Behavioral Disorders*, *12*, 99-108.

Romano, J. (2001). School personnel prevention training: A measure of self-efficacy. *Journal of Educational Research*, *90*, 57-63.

Saks, A. (1994). Moderating effects of self-efficacy for the relationship between training methods and anxiety and stress reactions on newcomers. *Journal of Organizational Behavior*, *15*, 639-654.

Schwarzer, R. (1992). *Self-efficacy: Thought Control of Action.* London, England: Taylor and Francis.

Sherer, M., & Adams, C. (1983). Construct validation of the self-efficacy scale. *Psychological Reports*, *53*, 899-902.

Sherer, M., Maddux, J., Mercandate, B., Prentice-Dunn, B., Jacobs, B., & Rogers, R. (1982). The Self-efficacy Scale: Construct and validation. *Psychological Reports*, *51*, 663-671.

Sterrett, E. (1998). Use of a job club to increase self-efficacy: A case study of return to work. *Journal of Employment Counseling*, *35*, 69-78.

Sullivan, K., & Mahalik, J. (2000). Increasing career self-efficacy for women: Evaluating a group intervention. *Journal of Counseling & Development*, *7*, 54-61.

Tannenbaum, S., Mathieu, J., Salas, E., & Cannon-Bowers, J. (1991). Meeting trainees' expectations: The influence of training fulfillment on the development of commitment, self-efficacy, and motivation. *Journal of Applied Psychology*, *76*, 759-769.

Taylor, M., Locke, E., Lee, C., & Gist, M. (1984). Type A behavior and faculty research productivity: What are the mechanisms? *Organizational Behavior and Human Performance*, *34,* 402-418.

Tierney, E., Quinlan, D., & Hastings, R. (2007). Impact of a 3-day training course on the challenging behavior on staff cognitive and emotional responses. *Journal of Applied Research in Intellectual Disabilities*, *20*, 58-63.

Tschannen-Moran, M., & McMaster, P. (2009). Sources of self-efficacy: Four professional development formats and their relationship to self-efficacy and implementation of a new teaching strategy. *The Elementary School Journal*, *110*, 228-245.

United States Census Bureau website. Retrieved February 4, 2012 from http://quickfacts.census.gov/qfd/states/28000.html

Vancouver, J., Thompason, C., & Williams A. (2001). The changing signs in the relationship among self-efficacy, personal goals, and performance. *Journal of Applied Psychology*, *86*, 605-620.

Van der Bijl, J., van Poelgeest-Eeltink, A., & Shortridge-Baggett, L. (1999). The psychometric properties of the diabetes management self-efficacy scale for patients with type two diabetes mellitus. *Journal of Advanced Nursing*, *30*, 352-359.

Vargas-Tonsing, T. (2009). An exploratory examination of the effects of coaches' pre-game speeches on athletes' perceptions of self-efficacy and emotion. *Journal of Sport Behavior*, *32*, 92-111.

Vealey, R. (1986). Conceptualization of sport confidence and competitive orientation: Preliminary investigation and instrument development. *Journal of Sport Psychology*, *8*, 221-246.

Von Bergen, C., & Mawer, W. (2007). Recouping training and development costs using pre-employment agreements. *Employee Responsibilities and Rights Journal*, *19*, 127-143.

Whiston, S. (1993). Self-efficacy of women in traditional and nontraditional occupations: Differences in working with people and things. *Journal of Career Development*, *3*, 175-186.

Woods, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, *56*, 407-415.

Yanar, B., Budworth, M., & Latham, G. (2008). The effect of verbal self-guidance training for overcoming employment barriers: A study of turkish women. *Applied Psychology*, *58*, 586-601.

Yip, Y., Sit, J., Fung, K., Wong, D., Chong, S., Chung, S., Chung, L, & Ng, T. (2007). Effects of a self-management arthritis program with an added exercise component for osteoarthritic knee: Randomized controlled trial. *Journal of Advanced Nursing*, *59*, 20-28.

Zhao, X., & Namasivayam, K. (2009). Post-training self-efficacy, job involvement, and training effectiveness in the hospitality industry. *Journal of Human Resources in Hospitality & Tourism*, *8*, 137-152.

Zimmerman, B. (1995). *Self-efficacy in career choice and development*. New York, NY: Cambridge University Press.