Implementation & Evaluation of a Peer Mentor Walking Program for Transitionally Housed Women in Missoula, MT

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IMPLEMENTATION AND EVALUATION OF A PEER MENTOR WALKING PROGRAM FOR TRANSITIONALLY HOUSED WOMEN IN MISSOULA, MT

By

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ABSTRACT

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Implementation and Evaluation of a Peer Mentor Walking Program for Transitionally Housed Women in Missoula, Montana

Chairperson: Dr. Annie Sondag

Single women and families with children are rapidly growing segments of the homeless population (NCH, 2009b). Homeless women generally report a lower quality of life, and are at a greater risk for various physical and mental health issues than their housed counterparts (NCH, 2009a). Mental illness, including depression and anxiety, impacts 20 to 25% of the homeless population in the United States, compared to 6% of the general population (NCH, 2009b). Social support can serve as a mediating factor between undesirable life events and depression (La Gory, Ritchey, Mullis, 1990). Unfortunately, the social support system among homeless individuals is sometimes eroded by homelessness itself, or the circumstances leading to homelessness. Additionally, because homeless individuals rarely have access to traditional treatment services for anxiety and depression, there is a need for different and innovative depression interventions. The purpose of this project was to implement and evaluate a peer mentor walking program for women in transitional housing. The program was based on a thorough needs assessment and was developed as a low-cost means of addressing the physical, social, and mental health needs of homeless women living in a transitional housing facility. Nine program participants and nine volunteer mentors were matched and met for weekly walks. Formative evaluation of the pilot program informed changes that needed to be made to improve the intervention in the future. A preliminary assessment off the effects of the program on mental health outcomes indicated the program had the desired effect on aspects of participants’ mental health including self-esteem, depression and anxiety. The results of this pilot study suggest a positive impact for peer mentor walking programs on the mental health of homeless women. Although further research is needed, peer mentor walking programs may enhance mental health by increasing self-efficacy with regard to coping with stress through physical activity and positive social relationships.
Acknowledgements

First and foremost, I’d like to thank the women, mentors, and staff members who helped make this program a reality. Thank you to the women at the transitional housing facility for taking a leap of faith and participating in this program; I hope it has been a positive and worthwhile experience. Your dedication and optimism is inspiring. Also, thank you to the mentors who volunteered to dedicate their time and to the wonderful staff members who helped organize meetings, provided feedback, and offered positive encouragement along the way. Without you, this project would not have been possible.

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CHAPTER I

INTRODUCTION

The traditional picture of homelessness is that of middle-aged, alcoholic white men living on “skid row.” While this may have been somewhat true of the homeless population in the 1980s, the current homeless population is more heterogeneous. There are an estimated 3.5 million men, women, and children who experience homelessness each year (National Coalition for the Homeless [NCH], 2009b). Of these, 17% are single women, and 30% are families with children (Finfgeld-Connett, 2010). Moreover, homelessness is not an issue solely in densely populated urban areas. Rural states, including Montana, also battle with homelessness. Direct service workers in Montana report they are serving more and more homeless individuals each year (Montana Council on Homelessness, 2006), and the wait lists for transitional housing are increasing.

Mental illness is the third leading cause of homelessness among single adults (NCH, 2009c). Six percent of the general population is affected by a severe mental illness. In comparison, almost 25% of the homeless population is affected (NCH, 2009c). Individuals experiencing a severe mental health issue may be unable to maintain employment or pay rent and often end up on the streets or in emergency shelters. Mental health issues may also be a result of homelessness. Each case is unique, but in general, homelessness is accompanied by many stressors including inability to meet basic needs, being in vulnerable situations, being dependent on others for shelter and food, and a feeling of lack of control over life events. These stressors put homeless individuals at a higher risk for mental health issues such as depression and anxiety.
Mental health is a crucial aspect of quality of life, having the potential to impact physical health as well. Those with mental health issues may not be able to prevent certain health issues including respiratory infections, skin diseases, and exposure to tuberculosis or HIV. Self-medication is also more common among individuals with mental health issues; self-medicating with street drugs puts individuals at an increased risk for disease transmission (NCH, 2009c). Moreover, mental health issues and stress can exacerbate common illness including the seasonal flu and cold (Craft-Rosenberg, Powell, Culp, & the Iowa Homeless Research Team, 2000).

Lack of health insurance or resources for adequate health care also intensifies the impact of many mental and physical health issues among the homeless. Treatment for mental health issues associated with homelessness, including depression and anxiety, can be a costly and time-intensive endeavor. Without some sort of insurance coverage, mental health services are out of reach for most low-income individuals. Furthermore, in an Australian study, the various forms of treatment for depression were found to be effective in relieving depressive symptoms in only 35% of cases (Cuijpers et al., 2008). Shifting the manner in which mental health issues are approached from a treatment-focused approach to a more prevention-oriented approach has the potential to not only decrease the global burden of disease, but also be more accessible and effective for those impacted by mental health issues (President’s New Freedom Commission on Mental Health, 2004).

In order to determine appropriate mental health promotion strategies for transitionally housed women in Missoula, a needs assessment was conducted in the spring of 2011 by
two graduate students at The University of Montana. The transitionally housed women reported high rates of depression, anxiety, and low self-esteem. Furthermore, they often lacked the resources needed to access mental health services. After a review of the related literature, and a consideration of the Self-Efficacy Theory, a peer mentor walking program was developed. Several small-scale studies have examined the impact of both social support and physical activity on various aspects of mental health. In many cases, both social support and physical activity have been shown to either prevent mental health issues from occurring in the first place, or have a positive impact on existing mental health issues. The pilot-test of this program that combined both social support and physical activity methods to enhance mental health provided a starting point for community-based mental health prevention efforts among homeless women in Missoula, Montana.

**Purpose of the Project**

The purpose of this project was twofold. First was to develop and implement a peer mentor walking program for homeless women living in a local transitional shelter. Second, to conduct a pilot study to evaluate the effects of this program on specific aspects of participants’ behaviors and mental health. Formative evaluation was conducted to determine how well the program was being implemented and the potential for sustainability. The impact of the program was examined by assessing changes in participants’ exercise patterns and relationships. Outcome evaluation was conducted by measuring self-esteem, depression, and anxiety pre-program, post-program, and at two weeks follow-up.
Statement of the Problem

Single women and families with children are rapidly growing segments of the homeless population (NCH, 2009b). Homeless women generally report a lower quality of life, and are at a greater risk for various physical and mental health issues than their housed counterparts (NCH, 2009a). Mental illness, including depression and anxiety, impacts 20 to 25% of the homeless population in the United States, compared to 6% of the general population (NCH, 2009b). Studies indicate that those with more undesirable life events, fewer social supports, and fewer coping skills are more likely to experience depressive symptoms. Further, social support can serve as a mediating factor between undesirable life events and depression (La Gory, Ritchey, Mullis, 1990). The social support system among homeless individuals is sometimes eroded by homelessness itself, or the circumstances leading to homelessness. Additionally, since homeless individuals rarely have access to traditional treatment services for anxiety and depression, there is a need for different and innovative depression interventions.

Significance of the Study

Given the prevalence of low self-esteem, anxiety, and depression among women who are homeless, and the positive effect of social support and physical activity on these mental health issues, it is critical that community health professionals develop low cost, effective programs to address those issues. This program, Walking on Sunshine, was designed to give women in a transitional housing facility in Missoula, Montana a source of social support, in the form of a peer mentor to walk with, in order to prevent or alleviate depression and improve self-esteem. This study also evaluated the process, impact, and
outcome of *Walking on Sunshine*. Funding and resources for homeless women are an area of national concern, so by offering a community-based intervention that utilizes volunteer mentors rather than mental health professionals, sustainability is more probable.

Additionally, the results of this pilot study were shared with case managers and staff at the local transitional housing facility so that they may initiate or continue the program for their female residents.

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**Research Questions**

The research questions for this study focus on the formative, impact, and outcome evaluation of the *Walking on Sunshine* program for women in transitional housing, and are as follows:

**Formative Evaluation Research Questions**

1. To what extent did participants take part in the peer mentor walking program?
   a. How many times each week are the mentors and participants walking?
   b. What percentage of participants finished the 8-week program?

2. What were the perceived outcomes of participating in the peer mentor walking program?
   a. How much was this outcome valued by program participants?

3. Who supported the participants in their participation in the peer mentor walking program?
   a. How much did participants value the support from these individuals?
4. What were the barriers to participating in the peer mentor walking program?
   a. How influential were these barriers in regard to program participation?

5. What skills and/or resources were needed in order to participate in the peer mentor walking program?
   a. How influential were these skills and/or resources in program participation?

6. How satisfied were the following parties with the peer mentor walking program:
   a. Program participants?
   b. Peer mentors?
   c. Staff?

7. What changes can be made in order to improve the peer mentor walking program?

Impact Evaluation Research Questions

1. How have the participants’ exercise habits changed since the beginning of the mentor walking program?

2. How have the participants’ social relationships changed since the beginning of the mentor walking program?

Outcome Evaluation Questions

1. Was there a difference in self-esteem among program participants before, immediately after, and two weeks after the peer mentor walking program, Walking on Sunshine?
2. Was there a difference in level of anxiety among program participants before, immediately after, and two weeks after the peer mentor walking program, *Walking on Sunshine*?

3. Was there a difference in depressive symptoms among program participants before, immediately after, and two weeks after the peer mentor walking program, *Walking on Sunshine*?

4. What were the perceptions of women who participated in the peer mentor walking program, *Walking on Sunshine* in regards to:
   a. the extent in which the intervention did or did not improve their self-esteem, anxiety, and depression?
   b. the aspects of the intervention that were powerful in improving their self-esteem, anxiety, and depression?
   c. whether or not the intervention would be beneficial to future women in transitional housing?

**Delimitations**

The delimitations of the study were as follows:

1. The study was delimited to persons receiving transitional housing services from the transitional housing facility in Missoula, Montana in January, 2012.

2. Data were collected using a pre-, post-, and follow-up- surveys and focus groups.

3. Data collected through the surveys, interviews, and focus groups were restricted to participants’ self-report.
4. The participants for this study were limited to women who volunteered to be a part of the program.

**Limitations**

The limitations for this study were as follows:

1. Information gathered in this study from the pre-, post-, and follow-up- surveys was limited to the voluntary action of the participants completing the questionnaire.

2. Information gathered in this study from the interviews and focus groups was limited to participants, mentors, and staff members being able to attend the focus group or interview and participate.

3. The information collected from the surveys, interviews, and focus groups was based on self-reporting which can produce socially desirable answers that may or may not be honest or accurate.

4. The study was limited by the small population of participants in the intervention.
Definitions of Terms

**Anxiety**: There are varying levels of anxiety. Feelings of anxiety are a normal reaction to stress and can help an individual overcome a tense situation or study harder for an exam. This level of anxiety is healthy. However, when anxiety is exaggerated and excessive, and an individual dreads everyday situations, or becomes excessively worried unprovoked, then the anxiety has become a disorder, that has potentially disabling effects (National Institute of Mental Health, 2011). Symptoms of an anxiety disorder include persistent worry or fear, difficulty concentrating, fatigue, irritability, sleep problems, restlessness, and a variety of physical symptoms.

**Depression**: According to the World Health Organization, depression is a common mental disorder that presents with lowered mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. These problems can become chronic or recurrent and may negatively impact an individual’s ability to take care of day-to-day tasks. (World Health Organization, 2011).

**Homelessness**: The new definition of homelessness as defined by the U.S. Department of Housing and Urban Development includes four broad categories of homelessness. These four categories are as follows:

1. People who are living in a place not meant for human habitation, in emergency shelter, in transitional housing, or are exiting an institution where they temporarily resided if they were in shelter or a place not meant for human habitation before entering the institution.
2. People who are losing their primary nighttime residence, which may include a motel or hotel or a doubled up situation, within 14 days and lack resources or support networks to remain in housing.

3. Families with children or unaccompanied youth who are unstably housed and likely to continue in that state.

4. People who are fleeing or attempting to flee domestic violence, dating violence, sexual assault, stalking, or other dangerous or life-threatening situations related to violence; have no other residence; lack the resources or support networks to obtain other permanent housing (National Alliance to End Homelessness, 2012).

**Mentor:** A mentor is a nonjudgmental advisor. A mentor is not necessarily a trained counselor, but is someone who is respected by their mentee. Mentors are perceived by their mentees as experienced, successful at what they do, and a good role model. A mentor guides the mentee to self-empowerment by spending quality time and providing acceptance and support (Lee, 2007).

**Pilot study:** A pilot study is a “trial study carried out before a research design is finalized in order to assist in defining the research question or to test the feasibility, reliability and validity of the proposed study design” (Cambridge Institute for Research, Education and Management, 2004).

**Self-esteem:** Self-esteem “is a personal judgment of worthiness that is expressed in the attitudes an individual holds about him/herself” (Saade & Winkelman, 2002, p. 432).
**Social support:** The definition of social support varies from one study to another. For the purposes of this project, adequate social support indicates a sufficient number of available others that individual believes she can turn to in a time of need (Saade & Winkelman, 2002). This number may be different, depending on the individual.

**Transitional housing:** Transitional housing facilitates the movement of homeless individuals and families into permanent housing. Individuals may live in these facilities for up to 24 months where they often receive supportive services such as childcare, job training, life skills classes, and a furnished apartment. These services help individuals move toward living independently (HUD, 2009).
CHAPTER II
REVIEW OF LITERATURE

Since the wage and employment instability of the early 1980’s, homelessness has been an area of national concern, not only for men, but for women and families as well. As previously stated, there are an estimated 3.5 million men, women, and children that experience homelessness each year (NCH, 2009b). Homeless individuals, women in particular, generally report a lower quality of life and more mental and physical health problems than their housed counterparts. Twenty-five percent of homeless individuals are impacted by mental illness, compared to only 6% of the general population (NCH, 2009c). Further, women are over twice as likely to experience mental health issues as men. These health issues often go untreated due to a lack of resources and available effective interventions.

The first part of this chapter discusses aspects of homelessness including the federal act to support programs for the homeless, transitional housing facilities, and the quality of life and health status of homeless women. Next is a description of current mental health treatments or interventions, and research indicating how social support and physical activity both have a positive impact on various aspects of mental health including depression, anxiety, and self-esteem. The chapter concludes with a brief description of two behavior change theories, Self-Efficacy Theory and the Theory of Planned Behavior, that provide a framework for the proposed program and research questions, respectively.
History, homelessness was not seen primarily as a housing issue, but rather it was defined as a loss of personal ties and relationships in society. The traditional picture of homelessness is that of middle-aged, alcoholic white men living on “skid row.” In reality, “skid row” referred to areas where there were many single room occupancy hotels, boarding houses, inexpensive eating places, and short-term labor employment agencies. These areas attracted transient laborers, and these men were not technically without housing. Many on “skid row” actually had addresses and places to sleep; however, they lacked a “normal family life” (Shlay & Rossi, 1992). At the end of World War II, homelessness was removed from the national spotlight as many renewal efforts were made across the nation. Homelessness rates resurfaced in the early 1980s due to various social and economic forces (Shlay & Rossi, 1992; Weinreb & Rossi, 1995; Wong, Park, & Nemon, 2006). Key economic factors influencing homelessness were the inequalities in wages, primarily among the low-wage workers and increasing unemployment that peaked during this time. The homelessness issue slowly gained national attention and rates have continued to climb. To this day, homelessness remains a significant social problem (Wong, Park, & Nemon, 2006).

Today, homelessness refers directly to the housing situations of individuals and its incidence is higher in the United States than any other industrialized nation (Finfgeld-Connett, 2010). It is estimated that 3.5 million men, women and children experience homelessness each year. Of these, 17% are single women, and 30% are families with children (National Coalition for the Homeless, 2008 in Finfgeld-Connett, 2010).
Homelessness is not caused by a single predictable factor. Rather, individuals become homeless often as a result of many, interrelated life circumstances and social factors. The increasing number of people living in poverty combined with the lack of affordable housing options is leading to greater incidence of homelessness. Life circumstances often leading to homelessness, particularly for women, include domestic violence, sexual abuse, unemployment, mental illness, and substance abuse (Finfgeld-Connett, 2010). Poor health can also result in homelessness. A serious illness or injury can begin an individual or family’s downward spiral to homelessness as they may lose their job, be unable to pay rent, and possibly be evicted or lose their house (NCH, 2009a).

Homelessness is not unique to densely populated urban areas. Rural states including Montana are also seeing growing rates of homelessness. An annual point-in-time survey, 2011 Montana Homeless Survey, conducted in Montana, shows that 2,281 homeless individuals were identified on the night of January 31, 2011, throughout the state (Montana Department of Public Health & Human Services [DPHHS], 2011). This number may only represent a fraction of the homeless population in the state, as homeless individuals are often hard to locate. While the number of homeless individuals sleeping on the street is growing in Montana, the majority are sleeping in tents, cars, abandoned buildings or staying with family or friends. Further, homeless individuals stay in motels, hospitals, treatment facilities, jails, and shelters. Due to these factors, it is difficult to truly quantify the number of homeless individuals in the state and in the nation as a whole. Nevertheless, surveys show the number is growing from one year to the next, and
direct service workers report they are serving more and more individuals (Montana Council on Homelessness, 2006)

In Montana, individuals are homeless due to systemic factors, personal vulnerabilities, and social policies. In 2006, 60% of respondents reported disability or poverty being the leading contributor to their homeless status. Included in the disability category of the survey were drug and/or alcohol problems, mental health issues, physical disabilities, and HIV/AIDS. Further, having lost a job or not having job skills, eviction, and car problems were all contained in the poverty category (Montana Council on Homelessness, 2006). Therefore, the specific causes of why people are homeless in Montana cover a wide range of issues, making each situation unique.

According to the U.S. Census Bureau (2011), 89% of Montana residents are white. However, only 69% of the homeless individuals surveyed in 2006 reported being white (Montana Council on Homelessness, 2006). Minorities in Montana, especially American Indians, were disproportionately represented among the homeless individuals surveyed. American Indians make-up about 6% of the Montana population, but 20% of the survey respondents identified as American Indian. Other minority groups in Montana, including Hispanic/Latinos, Blacks, Native Hawaiians, Asians and others, were also over-represented in the 2006 Survey of the Homeless (Montana Council on Homelessness, 2006).
The McKinney-Vento Homelessness Assistance Act

The McKinney-Vento Homelessness Assistance Act of 1987 was the federal government’s first response to homelessness (NCH, 2006). As the number of individuals and families needing support services related to homelessness rose in the early 1980s, responsibility was primarily a local issue. It was believed that homelessness would be contained at the end of the recession that was happening at that time, and efforts included short-term emergency shelters and emergency food programs for those in need (Wong, Park, & Nemon, 2006). At that point, President Reagan did not view homelessness as a national issue. Only after homelessness continued through the more stable economic times of the later 1980s, and an in-depth advocacy campaign was carried out, did President Reagan sign the law in 1987.

To this day, it remains the only major federal legislative response to homelessness (NCH, 2006). The act has undergone several amendments and currently has nine titles. Title IV authorizes the emergency shelter and transitional housing programs administered by HUD, including the Emergency Shelter grant program, the Supportive Housing Demonstration Program, Supplemental Assistance for Facilities to Assist the Homeless, and Section 8 Single Room Occupancy Moderate Rehabilitation. While the act has indeed created many valuable programs that have saved lives and helped many across the nation regain stability, it has not ended homelessness. The only way to end homelessness is to address the root causes, but until then, this act remains an important component of the response to homelessness (NCH, 2006).
In addition to the federal government’s involvement with homelessness, it is important to note that most of the response toward homelessness is rooted in the private sector. Since the 1980s, churches, private charities, social agencies, and religious groups have continued to raise funds, obtain abandoned buildings, volunteer their time, and recruit staff to set up various programs for homeless individuals in their community (Weinreb & Rossi, 1995). Many programs today receive funds from a combination of private, local, state, and federal government funding sources.

**Transitional Housing**

The Continuum of Care (COC) model for homeless service delivery was a result of the McKinney-Vento Act. This model is meant to address homelessness at various levels and meet the various needs of the different subgroups of homeless individuals and families across the nation (Wong, Park, & Nemon, 2006). Emergency shelters, transitional housing, and permanent supportive housing are the three predominant types of programs that lie within COC. These programs vary in terms of maximum allowed length of stay, the range and type of support services available, and the type of individuals and/or families served (Fischer, 2000).

Emergency shelter programs are perhaps more well-known in the general population, but represent a decreasing number of the residential homeless programs across the nation. In early studies of homelessness by HUD, emergency shelters represented almost all of the residential homeless programs available. However, in a 1996 survey, only 47 percent of the programs were emergency shelter programs. Furthermore, 37 percent were
transitional housing programs, and 16 percent were permanent supportive housing programs. Emergency shelter programs are meant to be the entry point to the COC, and provide short-term housing and services to meet the immediate needs of individuals. Individuals who seek assistance from an emergency shelter program vary considerably, from recently homeless individuals, with few if any health problems, to chronically homeless individuals with severe disabilities.

Different from emergency shelter programs, transitional housing programs were designed to provide an interim residence and support services for those who may not have current access to permanent housing (Wong, Park, & Nemon, 2006). The goal of transitional housing is to promote “housing readiness” and self-sufficiency through various services including case management, employment training, life skills courses, and housing assistance. The efficacy of transitional housing programs has been a topic of concern since their inception after the McKinney-Vento Act. An initial report by the United States General Accounting Office ([GOA], 1991) measured client success by whether the participants left their transitional housing residence with housing and a source of income. About 40 percent of clients surveyed had satisfied these conditions upon leaving the transitional housing program; half of the 40 percent were in households where one adult had found employment and the other half received income from social security or some form of public assistance. This report also indicated that the more time individuals spent in the program and the more services they utilized, the more likely they were to succeed. Further, individuals without mental health or substance abuse issues were more likely to succeed than those with issues (GOA, 1991).
The long-term effects of transitional housing programs remain inconclusive, but various research studies have identified short-term benefits of these programs including that transitional housing programs are better than the alternative of being un-housed (Tsai, Mares, & Rosenheck, 2010; Weinreb & Rossi, 1995), offer a variety of intensive services (Shlay & Rossi, 1992), and promote employment preparation and receipt of public assistance (Fischer, 2000).

The third level of the COC includes permanent supportive housing programs designed for individuals with disabilities so severe that they are unable to maintain independent housing without support. These programs are long-term and residents participate in mainstreamed services in the community. Most residents of permanent supportive housing programs were previously homeless and have serious mental illness, chronic substance abuse problems, physical disabilities, or AIDS and related illnesses (Wong, Park, & Nemon, 2006).

Local Transitional Housing Facility

The local transitional housing facility is a nationally recognized transitional housing facility that began serving homeless families in 1991. This transitional housing program is part of a non-profit organization in Missoula that offers a wide variety of programs and services in order to “reach out in faith to provide food, shelter, clothing, and essential services to the community’s hungry and homeless.” A major goal of the facility is to break the generational cycle of poverty and homelessness. In order to be eligible, families must be considered homeless and income qualified. Families can stay there for
up to two years. During their stay, they receive case management, life skills classes, job training, and financial training. The local transitional housing facility offers a stable and encouraging environment where families can work toward independence and self-sufficiency (Poverello Center, Inc., 2006).

**Homelessness among Women**

Concurrently with changing economic trends, the number of homeless women and families is increasing nation-wide. The term “new homeless” has been used to define this segment of the homeless population (Finfgeld-Connett, 2010; Montgomery, 1994). In Montana, according to the 2011 Montana Homeless Survey, there are more homeless men (1,524) than women (718). However, homeless women are more likely to have accompanying family members and/or children (Montana DPHHS, 2011). Specific to Missoula County, 110 women were surveyed for the 2010 Montana Homeless Survey (Montana DPHHS, 2010). Of these, 49% were single with children and 28% were alone without children. Seventy-eight percent of the respondents identified themselves as being white, while another 14.5% identified as American Indian. The women ranged in age from under 18 to 61 years old, and had varying levels of education from no high school diploma or GED to a Bachelor’s degree. All cited surveys collected data from the sheltered and unsheltered homeless.

According to a meta-analysis by Finfgeld-Connett (2010), becoming homeless is a gradual process that often begins in early childhood. Certain features of early life increase the likelihood of homelessness as an adult, particularly for women. These
features include abuse, neglect, abandonment, transience, poverty, and parental mental health issues. Young girls in these situations are less likely to have developed problem-solving or critical thinking skills by the time they reach adulthood. As a result, they often choose unsafe or maladaptive behaviors and situations that contribute to their homeless status.

For some women, homelessness is an essential step taken in order to break away from a previous maladaptive relationship or situation including domestic violence, drug or substance abuse, and violence. Women remove themselves from the situation after they believe all other options have been exhausted. Some studies show domestic violence to be the leading predictor of homelessness (Montgomery, 1994), and according to the American College of Obstetrics and Gynecologists (2010), of all homeless women, anywhere from 20 to 50% become homeless as a result of fleeing an abusive relationship.

Quality of Life

In general, compared to housed women, the quality of life of women who are homeless is poor due to multiple complex stressors. Homelessness is one of the least desirable life events imaginable, and comes with many chronic and daily stressors. Many women struggle to obtain food, shelter, and health care. Being unable to meet their basic needs is of course detrimental to their quality of life. Because they are in a vulnerable and sometimes desperate situations, women who are homeless may find themselves forming unhealthy attachments with men who may be violent or abusive (Finfgeld-Connett, 2010). Also contributing to a poor quality of life may be flawed problem-solving and
decision-making skills. Particularly when women have lived in poverty or homeless situations for a long period of time, they may not have ever been able to develop appropriate skills to deal with life’s stressors. Further, women who have dealt with a lifetime of abuse and neglect may have feelings of powerlessness, helplessness, and shame (Fingfeld-Connett, 2010). These feelings are detrimental to quality of life and mental health.

**Health Status**

Women who are homeless are more susceptible to a multiplicity of mental and physical health issues. Moreover, poor health can be both a cause and a result of homelessness (NCH, 2009a).

According to Belle and Doucet (2003), among women, poverty is one of the most consistent predictors of depression. It is reported that severe mental illness affects 20 to 25% of the homeless population in the United States, compared to 6% of the general population (NCH, 2009c). Mental illness was the third leading cause of homelessness among single adults reported in a 2008 survey performed by the U.S. Conference of Mayors (NCH, 2009c). Moreover, the National Institute of Mental Health (2008) reports that women are about twice as likely as men to experience mental illness during their lifetime. Adverse life events for poor women are often more frequent, more threatening, and more uncontrollable than the life events for those in the general population. Despite being at high-risk for depression, poor women are rarely able to receive mental health
services (Belle & Doucet, 2003). Mental health issues among homeless women will be discussed more in following sections.

Not only is the mental health of women compromised by homelessness, but so is physical health. Moreover, mental health may directly impact physical health in that those with mental illness might not be taking the necessary precautions to prevent certain diseases, especially diseases related to inadequate hygiene including respiratory infections, skin diseases, or exposure to tuberculosis or HIV. Those with mental health issues may also be more likely to self-medicate with not only drugs or alcohol, but also street drugs, putting them at risk for disease transmission via injection drug use (NCH, 2009c).

According to Craft-Rosenberg, Powell, Culp, and the Iowa Homeless Research Team (2000, p. 886), “Homeless individuals are more likely to have health problems than are non-homeless individuals.” Further complicating the health status of homeless individuals, particularly women, is that 15.3 percent of the population does not have health insurance according to the 2007 United States Census Bureau. The likelihood of an individual having insurance is linked closely to their annual income. Almost 25 percent of Americans who make less than $25,000 each year are uninsured. Moreover, 70 percent of individuals receiving services through the Health Care for the Homeless program do not have health insurance (NCH, 2009a).

Not only is lack of insurance a contributor to homelessness in that sometimes people are forced to choose between paying their rent or their medical bills, but it can also contribute
to the poor health status of those already homeless. Heart disease, cancer, liver disease, kidney disease, skin infections, HIV/AIDS, pneumonia, and tuberculosis are all common among homeless individuals (O’Connell, 2005), and the lack of health insurance makes it unlikely these individuals will receive adequate or timely health care. Other barriers to health care exist among homeless individuals including lack of knowledge about diseases or how to get treatment, lack of access to medical services, embarrassment, inability to fill out forms, nervousness about answering questions properly, and self-consciousness about appearance and/or hygiene, especially if living on the streets (NCH, 2009a).

Common illnesses, including the seasonal cold or flu, can easily escalate into more severe problems among homeless individuals due to ongoing stress, exposure, and lack of treatment options. Malnutrition, dental problems, family planning issues, genitourinary problems, and sexually transmitted diseases also negatively impact women who are homeless at disproportionate rates to their housed counterparts (Silver & Pañares, 2000). Consequently, homeless individuals are three to four more times likely to die than the general population, and homeless men and women are at similar risks of premature mortality, even though women generally have a higher life expectancy (NCH, 2009a).

**Addressing Mental Health**

As mentioned, it is reported that severe mental illness affects 20 to 25% of the homeless population in the United States, compared to 6% of the general population (NCH, 2009c). Mental illness was the third leading cause of homelessness among single adults reported in a 2008 survey performed by the U.S. Conference of Mayors (NCH, 2009c), and is the
leading cause of disability in not only the United States, but Canada and Western Europe as well (President’s New Freedom Commission on Mental Health, 2004). Mental illness has severe consequences at the individual, familial and societal level. Suicides as a result of preventable and untreated mental illness cause more deaths each year throughout the world than homicide or war. Further, the financial cost of mental illness is extremely high at an estimated $79 billion each year. Of the $79 billion, approximately $63 billion represents the loss of productivity as a result of mental illness (President’s New Freedom Commission on Mental Health, 2004).

Treatment after diagnosis is the current way mental health professionals approach mental illnesses. However, treatment effectiveness is debatable in some cases. Studies out of Australia have shown that existing treatments used in the mental health arena do not reduce the burden of depressive disorders by more than 35%. This includes both pharmacological and psychological methods for treatment (Cuijpers et al., 2008). In the research arena, prevention of mental illness is a topic of resurging popularity.

For economic and practical reasons, universal prevention which targets the entire population may not be the best route for efforts. Rather, selective prevention interventions that target high-risk groups might be most effective in preventing certain mental health issues, including depression and anxiety. Specific to depression, this notion is supported by a meta-analysis conducted by Beekman et al. (2010) regarding preventing depression in high risk groups. They conclude that “focusing attention on high-risk groups is likely to be more fruitful than adopting universal prevention
strategies” (p. 11), and cite various depression prevention programs that led them to this conclusion.

Beekman et al.’s findings are particularly applicable to women who are homeless as they are at an increased risk for developing mental health issues due to varying social and economic factors. For this group of high-risk individuals, prevention, followed up by treatment when necessary, may be an effective way to improve mental health and quality of life. Specific to self-esteem, depression, and anxiety, interventions incorporating social support or physical activity have shown to be particularly successful and are discussed in more detail below.

Impact of Social Support on Mental Health

Social support, or the lack thereof, and its impact on various aspects of mental health have been heavily researched. The level of social support can be a predictor of mental health among the general population as well as among homeless populations (Toro, Tulloch, & Ouellette, 2008), but unfortunately, people who are homeless often lack the social support that most people depend on in particularly hard or stressful situations. One study found that homeless women in emergency shelters and transitional housing could count on fewer people in times of need, had less contact with friends and family, and received less support from family members than housed women (Leticq, Anderson, & Koblinsky, 1998). Stigmatization of homeless individuals with disabilities, substance abuse issues, or HIV, and alienation from family and friends often leads to their lack of adequate social support (Health Care for the Homeless Clinicians’ Network, 2004). Lack
of social support, particularly during stressful life events such as homelessness, is associated with low self-esteem, anxiety, depression, and other mental health issues (Toro, Tulloch, & Ouellette).

Promoting or providing social support is becoming popular in current community-based interventions. Even national government summaries have noted the importance of peer support services in the mental health care system (President’s New Freedom Commission on Mental Health, 2004; U.S. Department of Health and Human Services, 2004). Peer-based Interventions strive to use social support to mediate the depressed moods often caused by negative or new life events. Additionally, when volunteer peers are utilized, costs and barriers of utilizing traditional mental health services can be avoided. Nonprofessional peers are available for many circumstances, and at little to no cost (Pfeiffer, Heisler, Piette, Rogers, Valenstein, 2010).

Depending on the intervention, the term “peer” can take on a variety of meanings. In an attempt to define peer support for the health care arena, Dennis describes peer support as the “giving of assistance and encouragement by an individual considered to be equal” (2003, p. 323). It is important to note that a peer is neither a lay helper nor a paraprofessional. While the use of peer support among homeless populations has not been documented, peer support interventions with other marginalized populations including low-income new mothers, socially isolated individuals, gay men (Dennis, 2003), and victims of domestic violence (Taft, Small, Hegarty, Watson, Gold, & Lumley, 2011) has been.
Social Support and Depression

Results from individual trials utilizing peer support in mental health interventions are varied; some have found peer based support to be effective in preventing depressive symptoms (Dennis et al., 2009; Taft, Small, Hegarty, Watson, Gold, & Lumley, 2011), while others have been inconclusive, but promising (Dennis, 2003; Murphy, Cupples, Percy, Halliday, & Stewart, 2008). Peer support interventions for depression have been used in a variety of populations including postpartum women, cancer patients, self-identified depressed women, caregivers, elderly individuals, and mothers of preschool-age children (Pfeiffer et al., 2010).

Pfeiffer et al. (2010) conducted a meta-analysis on the efficacy of peer support interventions for depression. Seven of the studies in the meta-analysis compared a peer support intervention to usual care. Most of the subjects in these seven studies were female, and there was a significantly greater reduction in mean depression scores in the peer support group than in the usual care group. Final results of their meta-analysis concluded that these interventions help reduce depression symptoms, but that additional larger randomized controlled trials are needed.

Social Support and Anxiety

The limited research regarding social support and anxiety indicates that social support is often related to a decrease in anxious feelings. In a study of parents with ill children, social support groups were recommended to reduce the stress, anxiety, and worry of these parents (Bayat, Erdem, & Kuzucu, 2008). Furthermore, in a study of women
experiencing stillbirths, the anxiety of women with higher perceived family support was significantly lower than their counterparts with low perceived family support (Cacciatore, Schnebly, & Froen, 2008). The stress and anxiety buffering effects of social support were also documented in a study of low-income pregnant women (Norbeck & Anderson, 1989). While the relationship between social support and anxiety has not been heavily researched in the general population, the fact that the relationship has been shown in these specific populations facing particularly stressful life events gives reason to measure the relationship in a population of transitionally housed women.

**Social Support and Self-Esteem**

Self-esteem is an important aspect of mental health and well-being. Individuals with higher self-esteem generally experience fewer symptoms of depression and anxiety (Elavsky, 2010). Self-esteem is alterable, and research has proven that it can be influenced by social support. In a study of individuals with mental health issues, it was determined that when peer contact was present, client’s self-esteem increased (Verhaeghe, 2008). Women, in particular, tend to develop their self-esteem based on their relationships. Therefore, without positive social relationships, it is difficult to develop and maintain positive self-esteem. This idea is the premise of the self-in-relation theory (Peden et al., 2004; Surry, 1985) which states that close relationships offer women a validation of self-esteem and serve as a buffer from stress. Further, the positive impact of social support on self-esteem is often cyclical in that as a result of an increase in self-esteem, individuals are motivated to establish and maintain additional social relationships (Pyszczynski, Greenberg, Solomon, & Arndt, 2004).
Impact of Physical Activity on Mental Health

It is now well established that physical activity can have a positive influence on mental health. This finding is consistent regardless of certain life stressors. Craike, Coleman, and MacMahon (2010) concluded that leisure time physical activity may serve as a coping resource among individuals who are faced with particularly traumatic events that require significant personal adjustment. Moreover, one study showed that the relationship between physical activity and mental health is always positive, and among women, this relationship occurs regardless of the level of intensity (Asztalos, De Bourdeaudhuij, & Cardon, 2009).

The explanation regarding the effectiveness of physical activity on aspects of mental health is that exercise might interfere with negative thoughts (Jorm, Christensen, Griffiths, & Rodgers, 2002). These negative or irrational thoughts are what often lead to the mental health issues of interest in this study: depression, anxiety, and self-esteem. Furthermore, from a physiological perspective, exercise can increase the levels of the neurotransmitters that buffer stress and depressed moods (Jorm et al., 2002). More strenuous forms of exercise also release endorphins, which can be described as a “natural painkiller.”

Physical Activity and Depression

The association between physical activity and depression has been extensively researched, and it is generally accepted that increased physical activity can reduce feelings of depression. In a meta-analysis of the effectiveness of various complementary
and self-help interventions for depression, exercise was one of the methods with the best evidence for effectiveness (Jorm et al., 2002). Particularly of interest is that participation in physical activity has been found to decrease feelings of depression specifically among women (Teychenne, Ball, & Salmon, 2008). Moreover, specifically among women, a low level of physical activity has been found to be associated with a greater risk of depression (Mikkelsen, Tolstrup, Flachs, Mortensen, Schnohr, & Flensborg-Madsen, 2010).

**Physical Activity and Anxiety**

Physical activity has been shown to reduce anxiety both among individuals diagnosed with an anxiety disorder and among individuals without a diagnosed anxiety disorder but who have occasional anxious feelings, including feelings of uneasiness, apprehension, tension, fear, worry, and concern (Conn, 2010). In a study assessing various effective complementary or self-help interventions for anxiety, exercise was found to be one of the more effective methods for generalized anxiety disorder, and aerobic physical activity was found more effective than anaerobic physical activity, including strength and mobility exercises (Jorm, Christensen, Griffiths, Parslow, Rodgers, & Blewitt, 2004).

In a meta-analysis by Conn (2010), specific criteria for physical activity interventions addressing anxiety were identified. First, interventions with supervised physical activity were more effective than those interventions without. Conn speculates that a supervisor may provide guidelines for intensity, duration, and frequency, in addition to providing needed social support to the client. The intensity of physical activity was also important.
in regards to impacting anxiety, and low-intensity physical activity had insufficient effects.

**Physical Activity and Self-Esteem**

In a two-year longitudinal study of middle-aged women, participants in a walking intervention had a higher increase in self-esteem than did women in the control group or yoga intervention group. While the increase in self-esteem was noted, it is not necessarily a direct result of physical activity. Rather, it is an indirect route in which increased physical activity increases self-perceptions related to physical condition and body attractiveness, which in turn increases global self-esteem (Elavsky, 2010). Regardless of the mechanism, this relationship is important. Self-esteem is a critical component of mental health, and an enhanced or high level of self-esteem is often related to lower levels of depression and anxiety.

Additionally, a study evaluating the impact of an 8-week walking program with middle-aged women found that women in the intervention showed significant improvements in not only their timed mile walk and diastolic blood pressure, but also in self-reported self-esteem (Palmer, 1995).

**Self-Efficacy Theory**

The Self-Efficacy Theory was developed by Albert Bandura in 1977, and remains one of the most widely-used behavior change theories in health education. Self-efficacy refers to the belief in one’s own ability to successfully accomplish a behavior or action.
Therefore, self-efficacy directly affects behavior. Individuals are more likely to attempt a task if they believe they can succeed, and less likely to make an attempt if they believe they will fail. Individuals with high self-efficacy toward a certain behavior, or a more efficacious outlook in general, are more likely to approach challenging or threatening tasks with confidence (Hayden, 2009).

Self-efficacy can be enhanced via four factors: vicarious experience, mastery experience, verbal persuasion, and physical and emotional states. Vicarious experience refers to the observation of other’s successes and failures. These observations are most influential with the models are similar to one’s self. When a model is successful in a behavior or action, the observer’s self-efficacy is likely to increase. On the other hand, when a model fails, an individual’s self-efficacy is threatened.

Mastery experience occurs when an attempt to do something results in success. This mechanism for increasing self-efficacy might be the most influential. Moreover, mastery can be facilitated by completing smaller goals before moving to larger goals. By completing small goals first, mastery is gained, giving an individual a greater sense of self-efficacy when approaching a larger task. In order to develop a strong sense of self-efficacy, difficult tasks need to be attempted, in addition to smaller tasks, in order to overcome obstacles and adversity.

The third mechanism through which self-efficacy can be enhanced is verbal persuasion. If individuals are persuaded they can achieve a task, they are more likely to do so. This
verbal persuasion can be very influential when it comes from a credible and respected source, however, it is not as influential as vicarious or mastery experience (Siegle, 2000). Conversely, if individuals are told they cannot do something successfully, self-efficacy often decreases, and they may give up quickly.

Emotional arousal, according to Self-Efficacy Theory, is the last mechanism influencing self-efficacy. Emotional arousal refers to the physical and emotional states that an individual feels while attempting a task. If an individual feels fear, anxiety, worry or stress about a particular task, they are less likely to perform the task; or, if they try to perform, they are more likely to fail. These emotions heavily influence self-efficacy. When emotional states are identified and addressed, then an increase in self-efficacy is possible (Hayden, 2009).

**Theory of Planned Behavior**

The Theory of Planned Behavior was developed by Ajzen and Fishbein in 1980, and is an expansion of the Theory of Reasoned Action developed by Fishbein in 1967. The Theory of Planned Behavior is based on the concept of intention. Intention refers to the extent to which an individual is ready to engage in a certain behavior. This theory states that the three constructs, behavioral attitudes, subjective norms, and perceived behavioral control, all influence an individual’s intention which in turn influences whether or not they adopt the behavior (Hayden, 2009).

Behavioral attitudes refer to the attitude about and value placed on the outcome of a certain behavior. If the outcome of a behavior is viewed as positive or as a good thing,
then the individual’s attitude will be favorable. This attitude increases their intention, and, ultimately, their likelihood of engaging in the behavior. However, if their attitude toward the outcome is negative, then the likelihood of them completing the behavior is low.

Also influencing intention is subjective norm. Subjective norms are the perceived social support or pressure to engage in a particular behavior or activity. How much an individual values the support or pressure from others, or how and to what extent they wish to comply, is also an aspect of subjective norms. Important people influencing subjective norms might include family members, friends, peers, health care providers, or others that are held with high regard.

Perceived behavioral control was added to the original Theory of Reasoned Action because this theory was not useful in predicting behavior when an individual believed they had no control over the behavior. The only difference between the Theory of Reasoned Action and the Theory of Planned Behavior is that the latter theory includes the construct of perceived behavioral control. Perceived behavioral control is similar to self-efficacy or one’s belief in their ability to complete a task. However, self-efficacy refers to a belief in “ability” whereas behavioral control refers to perceived “control” over performance of a particular behavior. Perceived behavioral control is impacted by the beliefs an individual has regarding the internal and external factors that may hinder or facilitate a particular behavior (Sharma & Romas, 2012). Examples of internal or external factors might include knowledge, skills, access, and resources. Also important is
the perceived influence or power that these internal and external factors have in the hindrance or facilitation of the behavior (Hayden, 2009; Sharma & Romas, 2012).

**Conclusion**

Those who are homeless are at an increased risk for physical and mental health issues. These health issues have detrimental impacts on the quality of life of those affected. Because the causes of homelessness specifically among women lead to a decline in mental health and quality of life, the literature supports the need for more low-cost mental illness prevention programs. With a shift in emphasis to prevention, we may see a reduction in the global burden of disease caused by mental health issues including depression and anxiety. Both social support and physical activity have been linked to an increase in mental health in terms of increased self-esteem and decreased symptoms of depression and anxiety. These links have been observed not only in the general population, but also in populations with additional stressors and/or demanding life experiences. These findings make the use of social support and physical activity a viable option for the prevention of mental health issues among women in transitional housing.
CHAPTER III

METHODOLOGY

The purpose of this project was to organize, implement, and evaluate a peer mentor walking program pilot study designed to prevent or alleviate low self-esteem, anxiety, and depression among women in transitional housing.

Program Development

The proposed program, *Walking on Sunshine*, was developed based on a thorough needs assessment using the PRECEDE logic model (Green & Kreuter, 2005) conducted spring, 2011. This needs assessment identified the health related needs of women who are homeless in Missoula, Montana. The first phase of the PRECEDE logic model is to assess the quality of life of the target population. Researchers carried out the first phase of the model by conducting surveys with women in transitional housing, and completing interviews with local key informants. Results of the first phase of research revealed that this population had a lower than average quality of life, and that housing, poverty, and unemployment were the main negative determinants of quality of life.

In the second phase of the PRECEDE model student researchers assessed the health issues of these women. Over half of the women surveyed reported mental health issues including depression and anxiety. Telephone interviews were conducted during the third phase of the model and allowed the student researchers to assess the behavioral and environmental factors that contributed to the identified mental health issues. Lack of coping skills, lack of social support, and the lack of sunlight were the three main factors
identified. In the fourth phase, student researchers identified factors that influence a lack of coping skills, lack of social support, and the lack of sunlight via focus groups with the target population and with the key informants. Almost twenty independent influencing factors were identified, and of these, student researchers focused on the factors that were the most important to the target population in contributing to overall mental health and the most changeable according to previous research. The most important and changeable factors identified were: 1) Lack of knowledge about what comprised a trusting relationship, 2) Lack of encouragement to form and maintain relationships, 3) Lack of confidence and self-esteem, 4) Lack of support from someone trustworthy, 5) Desire to use physical activity as a coping skill, 6) Lack of encouragement from others to want to actively cope, and 7) Lack of encouragement to go outside for physical activity.

After student researchers analyzed the most important and changeable influencing factors, a lack of self-efficacy among the target population seemed to be the overriding theme. Self-efficacy in terms of utilizing active coping strategies, building trustworthy social relationships, and participating in physical activity was lacking. Moreover, the ability to do these things was important to the target population, and they desired to be able to make changes.

Self-efficacy theory proposes that self-efficacy can be enhanced through four mechanisms. Below is a brief description these four mechanisms and how they were addressed by the peer mentor walking program, *Walking on Sunshine*:
1. **Vicarious Experience** occurs by observing others complete a specific behavior. In order for vicarious experience to increase self-efficacy, the model must be someone similar to the observer.

   For the purposes of this project, female peer mentors were matched with program participants based on commonalities in age, race, education, and life experience when available. These mentors were asked to model engagement in the peer mentor walking program and a positive social relationship which the participants could observe and in turn increase their own self-efficacy or confidence in program participation and building or maintaining social relationships.

2. **Mastery Experience** occurs by personally experiencing and being successful at a specific task or behavior. One way to gain mastery experience is to start small, and accomplish small tasks before moving on to the larger behavior change.

   In this program, participants walked with their mentor once a week. When they completed this smaller task of weekly walking with one peer mentor, they may have an increased self-efficacy allowing them to have attempted additional walking each week or pursuing additional social relationships.

3. **Verbal Persuasion** is the verbal support and encouragement given by others.

   The peer mentors were a source of verbal persuasion for the participants of the walking program. Not only were they model active participation in the program by being dependable, but they were also asked to
verbally share their beliefs in the participant’s ability to succeed at the weekly walking program and to continue walking and building relationships after the program ends.

4. **Emotional States** refers to the emotions the body feels before or during a task or behavior. When these states are negative or discouraging, an individual is likely to terminate the attempt, and, conversely, if the emotional states are positive, then the behavior will likely continue.

   In this program, peer mentors were asked to model positive emotional states related to being physically active. This program provided participants with an outlet from their daily activities, they were in the company of a motivational peer mentor, and they were given the opportunity to feel stress relief and the positive effects of physical activity.

   (Bandura & Adams, 1977; Hayden, 2009)

The program was designed to give women in transitional housing the support they need to increase self-efficacy toward utilizing active coping strategies, building social relationships, and participating in physical activity. In turn, these behaviors have the potential to enhance the mental health status of the program participants.

**The Peer Mentor Walking Program**

The peer mentor walking program was designed as an 8-week intervention. Based on a meta-analysis of depression interventions by Jane-Llopis, Hosman, Jenkins, and Anderson (2003), interventions with less than eight sessions did not provide enough time
for acquisition and practice of new skills or behaviors. In the meta-analysis, it was concluded that there was no difference regarding the length of time between interactions. The CDC (2011) recommends 30 minutes of moderate-intensity aerobic physical activity five days each week in order for adults to maintain and promote wellbeing. Moderate-intensity physical activity is described as working hard enough to increase heart rate and begin to sweat. Because only one 30-minute walk each week occurred with their mentor, participants were encouraged to walk additional times throughout the week with their children, with other participants, with friends or family, or alone in order to meet the recommended guidelines. The rationale behind only one meeting each week with a mentor was that over the course of the program, participants will gain the self-efficacy and motivation through mechanisms previously described, and be able to initiate physical activity on their own.

Specifically, the following strategy objectives were identified for the peer mentor walking program:

1. Participants of the peer mentor walking program will meet with a peer mentor eight times.
2. Participants of the peer mentor walking program will demonstrate an increase from baseline in self-esteem scores based on the Rosenberg Self-esteem Scale.
3. Participants of the peer mentor walking program will demonstrate a decrease from baseline in depressive symptom scores based on the Center for Epidemiological Studies Depression Scale.
4. Participants of the peer mentor walking program will demonstrate a decrease from baseline in anxiety scores based on the Generalized Anxiety Disorder Scale.

Implementation Plan

The implementation plan for Walking on Sunshine was as follows:

1. **Welcome Gathering.** A welcome gathering was held on a weeknight at the local transitional housing facility Community Center. At this gathering, participants and mentors met, introduced themselves, decided on a meeting time, and discussed their mentoring agreement (see Appendix A). Dinner and beverages were provided, and those who attended participated in an “ice breaker” activity (see Appendix B). The program planner reminded participants and mentors about the program details, and was available for questions. Pedometers, walking shoes, walking log (see Appendix C), and participant handouts (see Appendix D) were distributed to program participants.

2. **Weekly Walks.** The week following the welcome gathering, mentors and participants began walking on a weekly basis at their prearranged time. If a mentor or participant needed to cancel or reschedule a meeting, they either arranged it during the walk prior or notified the program planner who then notified the other party. Participants recorded weekly walks with their mentor, as well as any other walks they took, in their walking log.
Research Design

The research aspects of this project included formative, impact, and outcome evaluation methods. Formative evaluation is described as “evaluation that is carried out partway through a program or intervention to identify any needed ‘mid-course’ adjustments” (Simons-Morton, Greene, & Gottlieb, 1995, p. 220). Sometimes the terms “process evaluation” and “formative evaluation” are used interchangeably. The distinction between the two, however, is that formative evaluation is often done during a pilot study to gather feedback regarding the process and evaluation of a program. This feedback is then used to modify program components, instruments, and data collection procedures, accordingly. For this project, formative evaluation data was collected via three methods (see Figure 1). Data from each of these three sources was used to inform changes and modifications that should be made for future programs in order to have a greater impact on mental health issues faced by women in transitional housing.

![Figure 1. Formative evaluation data sources for the proposed peer mentor walking program pilot study.](image)
Impact evaluation was conducted in order to assess the immediate effects of the program behaviors, specifically, engagement in physical activity and social relationships. Outcome evaluation of the program was conducted in order to gain feedback regarding various aspects of mental health of participants. Outcome evaluation takes place after a program or intervention and determines whether or not the program had the desired impact on participants, and if it should be continued or modified for future use (Simons-Morton, Greene, & Gottlieb, 1995). A non-experimental design was utilized, and data was collected via pre-, post-, and follow-up surveys. Non-experimental designs are applicable in community settings, and can answer the question, “Did the program meet its objectives?” by measuring the same variables among the same group before and after an intervention, and then comparing the results (Simons-Morton, Greene, & Gottlieb).

Target Population

The target population for this project was women over the age of 18 living at a local transitional housing facility in Missoula, Montana in January 2012.

Protection of Human Subjects

All research materials were approved by the Institutional Review Board (IRB) at the University of Montana to ensure protection of human rights (see Appendix E). Information and data for this project was collected on a voluntary and confidential basis.
Recruitment of Peer Mentors

Mentors for the peer mentor walking program were recruited through various methods. The volunteer opportunity was posted on the Western Montana Volunteer Center website, craigslist.com, and the Missoula Aging Services newsletter. The volunteer mentor opportunity was also discussed at all of the Poverello Center volunteer orientations that were put on by the volunteer coordinator. Each interested individual was required to complete the volunteer orientation at the Poverello Center, as well as a screening interview with the program planner. Upon recruitment, mentors received an informational booklet defining the typical mentor process, what it means to be a mentor, aspects of effective communication, and who to contact with concerns. Lastly, a thirty minute mentor orientation was held at the local transitional facility before the welcome gathering.

A peer mentor is defined as someone who is a nonprofessional with similar stressors or health problems to those of the target population. Utilizing peer support promotes the mutual support from an experienced peer (peer mentor) to a novice peer (program participants) (Pfeiffer et al., 2010). Mentors were recruited based on characteristics such as age, race, previous life experience, etc., that they share with women of the target population when possible. Many mentors who were recruited were students at The University of Montana and did not closely match the characteristics of women participating in the mentor walking program.
Recruitment of Participants

Participants of the Walking on Sunshine pilot study were women residing at the local transitional housing facility who volunteered to be a part of the program. The program was discussed at tenant meetings by the program planner and in weekly case management sessions by the case manager. At these times women who expressed interest in the program were given a participant recruitment form (see Appendix F) to be filled out and returned to their case manager who passed them onto the program planner. Women who were living at the local transitional housing facility in January 2012 were eligible to participate in the program.

Before the start of the program, participants were asked to read and sign an informed consent regarding the research aspects of this project (see Appendix G). They were also given the opportunity to ask their case manager or the program planner any questions regarding the purpose of the project and data collection.

Formative Evaluation Data

Peer Mentor Focus Group and Participant Focus Group

Instrumentation Development

The first two sources of formative evaluation data came from focus groups with the peer mentors and program participants. The structured questions for the peer mentor focus group (see Appendix H) and the participant focus group (see Appendix I) were developed based on guidelines from Simons-Morton, Greene, and Gottlieb’s text, “Introduction to Health Education and Health Promotion” (1995), regarding how to conduct formative evaluation for health promotion programs. Formative evaluation focus group questions
were divided into three sections: 1) program procedure questions, 2) Theory of Planned Behavior questions, and 3) general impression questions.

Program procedure questions were asked to determine how often participants and mentors were meeting. Questions guided by the Theory of Planned Behavior were asked in order to gain an understanding of the attitudes, subjective norm, and control beliefs of the participants which according to the theory impact intention to engage in behavior change. In this program, the desired behavior change was participation in the peer mentor walking program. Framing focus group questions around this theory, helped researchers gain an understanding of participants’ attitudes about the program, and their perceived benefits as well as perceived barriers to program participation. Additionally, asking about subjective norm was helpful in determining whether participants had the social support necessary to participate. The focus group ended with questions regarding the overall impressions of the peer mentor walking program, and focus group participants were able to add any additional comments about the program at this time.

Data Collection

The peer mentor focus group was held during the fifth week of the program at the local transitional housing facility’s community center. Light snacks and beverages were available, simply thanking the mentors for taking the time to be a part of the formative evaluation process. Notes were taken during the focus group, and the focus group was audio recorded in order to verify responses. Focus group participants filled out a basic
demographic questionnaire (see Appendix J). Names of mentors being interviewed were not recorded or connected to the data. The focus group lasted approximately one hour.

The focus group for the participants of the peer mentor walking program was also held during the fifth week of the program at the local transitional housing facility’s community center. Participation in the focus group was voluntary and those who participated received a $5.00 cash incentive before the start of the focus group. Pizza and drinks were provided for women who chose to participate. Focus group participants had the opportunity to ask questions and were reminded that the information shared during the focus group should not be shared outside of the group meeting. Notes were taken during the focus group and the focus group was audio recorded in order to verify responses. Focus group participants filled out a basic demographic questionnaire (see Appendix J). Names of participants being interviewed were not recorded or connected to the data. The focus group lasted approximately one hour.

**Staff Interviews**

**Instrumentation Development**

The third source of formative evaluation data came from individual interviews with four staff members at the local transitional housing facility. These staff members interact with the participants on a daily basis. The structured interview questions (see Appendix K) were similar to the peer mentor and participant focus group questions in that they were meant to illicit perceptions regarding the peer mentor walking program. The interview questions were divided into three main categories: 1) program procedure questions, 2)
Theory of Planned Behavior questions, and 3) general impression questions. For a description of these categories, see the instrumentation development of the peer mentor and participant focus group questions (p. 47-48).

**Data Collection**

A convenient meeting time was arranged with the four staff members at the local transitional housing facility during the fifth and sixth weeks of the peer mentor walking program. Each staff member filled out a basic demographic questionnaire (see Appendix J). The interviewer took notes during and recorded each interview. Each interview lasted approximately 10 to 15 minutes. Names of staff being interviewed were not connected to the data.

**Impact Evaluation Data**

To evaluate the impact of the mentor walking program on the desired behaviors of exercise and engaging in social relationships, participants were asked about these behaviors during the focus group. Participants were simply asked whether they recognized any changes in their level of physical activity or engagement in social relationships since the start of the program. Staff members at the transitional housing facility were also asked whether they noticed any changes in the physical activity levels of the program participants.
Outcome Evaluation Data

Participant Pre-, Post-, and Follow up-Surveys

To evaluate the outcome of the peer mentor walking program, participants completed a survey prior to beginning the program, immediately after the program, and again two weeks after completing the program.

Instrumentation Development

The surveys consisted of four parts. The first part was a brief demographics section (see Appendix L), followed by three valid and reliable scales (see Appendix M) discussed in more detail below. The post- and follow up-surveys also consisted of six short questions regarding the participants’ perceptions of how the program influenced aspects of their mental health (see Appendix N).

Rosenberg Self-Esteem Scale (RSE). Participants’ self-esteem was assessed using the RSE; the most commonly used self-report scale for self-esteem. The RSE has been empirically validated more than any other self-esteem measure, and has been deemed a reliable measure of global self-worth and self-esteem (Robins, Hendin, & Trzesniewski, 2001). The scale consists of ten statements regarding how an individual generally feels about themselves. The statements were answered on a four point scale ranging from strongly agree to strongly disagree. Positive statements were given a score of zero, one, two or three for answer of “strongly disagree,” “disagree,” “agree,” or “strongly agree,” respectively.
Negative statements were scored in the reverse. Scores were summed, and could range from zero to 30 with a higher score indicating a higher level of self-esteem.

**Center for Epidemiological Studies Depression Scale (CES-D).** The CES-D was used to measure depressive symptomatology among the program participants. This self-report scale has been shown to be valid and reliable across many different populations (Radloff, 1977). The scale is not designed to clinically diagnose individuals, but it is based on depressive symptoms that are seen in a clinical setting. It consists of 20 questions regarding possible depressive symptoms that have been either experienced rarely or none of the time, some or a little of the time, occasionally or a moderate amount of time, or most or all of the time during the past week. Responses were given a score of zero through three based on how often the symptoms have been experienced (for positive items, the scoring was reversed), and then summed for a total score between zero and 60. A higher score indicates the presence of more symptomatology.

**Generalized Anxiety Disorder Scale (GAD-7).** The GAD-7 was developed as a brief scale for generalized anxiety and is an offshoot of the longer Patient Health Questionnaire that is used as a diagnostic tool that health care professionals use for mental health disorders. The scale is quick and easy for patients to understand and complete. The GAD-7 is a self-report scale assessing scores for seven common anxiety symptoms experienced in the past two weeks and has been previously validated in a sample of 2,740 patients in a primary care setting.
(Spitzer, Kroenke, Williams, & Lowe, 2006). Answers of “not at all,” “several days,” “more than half the days,” or “nearly every day” were given scores of zero, one, two, or three, respectively. Scores could range from zero to 21, with 5, 10, and 15 representing the cutoff points for mild, moderate, and severe anxiety (Patient Health Questionnaires, 2011).

**Data Collection**

Program participants were given time during a case management session with the case manager at the local transitional housing facility during the week prior to the start of the walking program, the week following the walking program, and two weeks after the completion of the walking program to complete the pre-, post-, and follow up-paper surveys. Participants were able to ask the case manager clarifying questions at the time of filling out the survey. Names of participants were not linked to specific survey responses. Approximate time to complete each survey was 10 to 20 minutes.

**Data Analysis**

**Formative Evaluation Data: Interviews and Focus Groups**

Interview and focus group data was analyzed qualitatively. Audio recordings were transcribed and the transcriptions and notes from the meetings were read and analyzed for common themes. Common themes were those that came up frequently in the responses of the interviews and focus groups. Common themes identified in the interviews and focus groups were used to inform changes that need to be made in order for the intervention to be more successful in the future.
Impact Evaluation Data: Focus Group

Responses during the participant focus group regarding changes in exercise habits and social relationships were noted in order to assess whether these behaviors changed over the course of the program.

Outcome Evaluation Data: Pre-, Post-, and Follow Up- Surveys

Outcome evaluation data collected in the three surveys was entered into an SPSS database. In SPSS, descriptive statistics, one-way repeated measure ANOVA, and correlation analyses were used to analyze the data. Descriptive statistics included simple measurements to describe the properties of the data (Selvin, 2004). They provided a general summary of the data. However, statistically significant change or difference could not be determined using descriptive statistics. One-way repeated measures ANOVA analyses were used to determine statistical significance. Additionally, a correlation analysis was employed to examine the relationship between number of weeks walked and changes in mean self-esteem, depression, and anxiety scores. Lastly, responses regarding the participants’ perceptions of the influence of the intervention on aspects of their mental health defined using descriptive statistics. With these statistics, it was determined whether or not social support and physical activity in the form of a peer mentor walking program had an impact on participants’ mental health, specifically their self-esteem, anxiety, and depression.
CHAPTER IV

RESULTS

The purpose of this project was to implement and evaluate a peer mentor walking program for women in transitional housing. This chapter presents the results of program implementation in addition to results of formative, impact, and outcome evaluation.

Program Implementation

Nine participants were matched with mentors and began the peer mentor walking program. The women varied in age, education level, and personal history. Nine volunteer mentors were recruited to be matched with the participants in the mentor walking program. The mentors also varied in age, education level, and their reasons for volunteering to be mentors. It was attempted to match participants and mentors by age. At the welcome gathering, however, those who were present were paired together regardless of their age.

<table>
<thead>
<tr>
<th>Age</th>
<th>Volunteers (n=9)</th>
<th>Mentors (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-30</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>31-40</td>
<td>4</td>
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</tr>
<tr>
<td>41-50</td>
<td>2</td>
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</tr>
<tr>
<td>51-60</td>
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<td>0</td>
</tr>
<tr>
<td>61-70</td>
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</tr>
</tbody>
</table>

Table 1. Ages of program participants and mentors.
Six of the nine pairs met at the initial welcome gathering, signed the mentoring agreement, and decided on a day and time to walk each week. The remaining three pairs met with the program coordinator based on a time that was convenient and filled out the mentoring agreement and decided on a day and time to walk. Participants and mentors began walking in January and continued for eight weeks until mid-March. When either party needed to re-schedule or cancel a walk, they contacted the program coordinator to reschedule. Some pairs were able to walk almost every week, while others were unable to meet on a weekly basis (see Figure 2). The average number of weeks walked was 5.33 weeks. Additionally, one pair decided to begin walking twice each week.

<table>
<thead>
<tr>
<th>Education</th>
<th>Participants (n=9)</th>
<th>Mentors (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some high school</td>
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<tr>
<td>High school diploma/GED</td>
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<tr>
<td>College degree</td>
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<td>1</td>
</tr>
<tr>
<td>Graduate degree</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 2. Education levels of program participants and mentors.
Formative Evaluation

The formative evaluation consisted of data gathered from two focus group and four key informant interviews. Both focus groups and the interviews were conducted during the fifth and sixth weeks of the walking program. The first focus group consisted of five program participants and the researcher. Focus group participants ranged in age from 21-46 years. Three of the participants were walking on a regular basis, while the remaining two had only walked two times each. Focus group participants ranged in education level, from no high school diploma, to trade/vocational school experience. All participants were unmarried mothers. Three participants were employed; annual income for the focus group participants ranged from $0 - $30,000. The focus group was audio-recorded and lasted approximately one hour. The researcher attempted to follow-up by
telephone with the four program participants who were unable to attend the focus group in order to gather their feedback about the program. One interview was conducted and lasted approximately ten minutes. Two calls were made to the remaining three participants, but the researcher was unable to make contact with them.

Concurrently, key informants, including volunteer mentors and staff members at the transitional housing facility, were interviewed. Volunteer mentors were invited to take part in a focus group and five mentors attended. The mentors ranged in age from 23 to 66 years. All were single; two were mothers and three did not have any children. The mentors ranged in their level of education from some college to a graduate degree. The focus group was audio-recorded and lasted approximately 65 minutes. The mentors who were unable to attend the focus group were contacted via e-mail in order to gain their insights; three mentors responded. The remaining mentor was unable to be contacted.

Four staff members at the transitional housing facility were interviewed regarding their insights and perspectives about the mentor walking program. Among these four staff members interviewed, two were direct care staff, one was a case manager, and one was a practicum student. Each interview was audio-recorded and lasted 10 to 15 minutes.

The first part of the focus groups and interviews focused on how often participants and mentors were walking and how they perceived the program. The majority of the interviews centered on the questions that were developed based on the Theory of Planned Behavior, and ended with a discussion of recommendations to improve the program in the future. The responses yielded the themes summarized below. Included with each
theme are quotes that best represent the theme being discussed; whether the quote came from a program participant, volunteer mentor or staff member is indicated.

**Question 1: What are the benefits of participating in the mentor walking program?**

**Theme 1: Participants have a trustworthy adult with whom they can talk.** The most frequently mentioned benefit of participating in the mentor walking program was having a trustworthy adult with whom to talk or vent. All of the participants live in the same small neighborhood, and most are single mothers. While participants indicated that they all get along with their neighbors, they appreciated having someone to talk to who was not in a homeless situation. All participants heavily valued this benefit of the program. Moreover, every key informant viewed this as the most valued benefit for program participants. Key informants mentioned that many of the women who participated in this program do not have a trustworthy friend or confidant as many of their social relationships have been eroded by the situations that led to their homelessness or homelessness itself. It was noted how important it is for healing and coping for the participants to have someone with whom they can open up.

“*Kind of like an outside party to talk to, you know, it’s not somebody that you have to see every day, I mean not to say I wouldn’t want to see her every day, she’s wonderful, but you know, someone you can talk to and don’t have to worry about this that or the other. You say it, it’s out, and it’s done. You’re probably never going to hear anything regarding it again. It’s kind of like a good place to vent.”* – Participant

“I know with my mentor, especially with the situation I’m in, it’s like she values my feelings.” – Participant
“Well I think that having a mentor to walk with and feel safe, they’re getting the ability to trust again with another person whereas in the past they’ve gone into a survival mode so to speak where they could only trust themselves.” – Staff

“[My mentee] felt like there was a disconnect and that she couldn’t talk to the [residents] here so I think it was important to have somebody who was more objective and on the outside of it to be able to kind of release everything that had been building up during the week.” – Mentor

“It’s a pretty small community here [at the transitional housing facility] and some people try and keep to themselves but things travel like wildfire, so it’s really nice to be able to talk to somebody…and you’re guaranteed that what you’re going to say is not going to get back to anyone else.” – Staff

**Theme 2: Participants develop an increased appreciation for physical activity.** The participants and key informants recognized that another benefit of the program was an increased appreciation for physical activity. There was not as much emphasis placed on this benefit as the benefit of having a trustworthy adult to talk to, however, it was mentioned several times by most participants and key informants. Some indicated that by wearing their pedometers they realized it was easier to walk a mile than they had previously anticipated; mentees also recognized that their mentors were realizing how easy it was to walk for thirty minutes. Program participants also discussed that this program held them accountable whereas before they made excuses regarding why they couldn’t or wouldn’t engage in exercise. Many key informants noted that the participants had started exercising or walking on their own outside of the program and began to participate in a wellness class offered at the transitional housing facility.

“It’s really important for me, the exercise value, but I think the thing to go with that is the realization on how easy it is to do. I find myself all the time making excuse after excuse after excuse to not go [exercise]. But then, once a week it’s like well, heck, I can bring [my daughter] to the mall. We could ride the bus to the mall and walk around the mall for a half hour.” – Participant
“The first week I remember a couple of residents said that after they went on their walk they’re like ‘Ugh, I had to go back and take a 3-hour nap,’ and I haven’t heard any of that lately so it seems like since they’ve been walking they’re getting a little better in shape and participating in that other wellness class.” – Staff

“Some definitely value it more than others, but I think they like having that opportunity to have regular exercise and they’ll be held accountable to it.” – Staff

“We’re actually shocked with the little [pedometers]. After our walk we’re like oh my gosh we’ve walked two miles in a half hour. So yeah, I mean we’re both shocked that we’ve both, okay we got our exercise in, we had great conversation, healthy conversation, we can face our day!” – Mentor

Theme 3: Participants gain an increased recognition of the importance and benefits of engaging in self-care. Lastly, the program participants mentioned that the program helped them feel better about themselves, and key informants noted that they noticed participants were beginning to see the importance of self-care. By taking time out of their day to talk with a trustworthy adult and engage in physical activity, they began to see the strong mind-body connection. Many of them are participating in a wellness class that a volunteer at the transitional housing facility is coordinating, and they expressed that through these two opportunities they are feeling better about themselves and have more energy. Moreover, it was noted by program participants and staff members that the participants would likely not be participating in the wellness class had they not begun the mentor walking program which peaked their interest in and appreciation for self-care.

“I think for me, not to discredit my mom, but having that other person there just to talk to a half an hour each week makes me feel like I’m doing something for myself instead of being a single mom, being the breadwinner, doing this, doing that. It makes me feel like I’m doing something for myself and taking care of myself.” – Participant

“I love how I feel after walks. I come down here and I’m in the office and I’m like, ‘hey, hi everyone!’ It’s almost like a drug, it’s kind of weird.” – Participant
“It makes you feel a little more worthy. That's what [the walking program] does for your body and your mind. That's what we learned in our wellness class...that all of that is connected, so if you feel good in your head, it affects your body; the next thing you know, you’re super woman!” – Participant

“I think that they value [the program] a great deal because they’re using this, the program is teaching them that self-care is not a reward, it’s something that they deserve to do for themselves. It’s not something that, ‘oh well if I have time after I take care of everyone else I can take care of myself.’ They’re learning that they can take care of themselves and do self-care in order to be better for their families.” – Staff

**Question 2: Who supports participation in the mentor walking program?**

**Theme 1: Other individuals at the transitional housing facility including neighbors, staff members, and the case manager encourage participation and a healthy lifestyle.**

Participants of the focus group most frequently mentioned others at the transitional housing facility as being supportive of and encouraging their participation in the mentor walking program. Mentors recognized that the program participants valued the positive support offered by staff members at the transitional housing facility and in some cases the program participants do not have support outside of these individuals. The staff members and case manager also mentioned that they support the participants’ participation in the mentor walking program and that they try to reward healthy lifestyles and behaviors with small incentives.

““I think we’re all positive. Anytime we really talk about the walking program everyone seems happy about it. It’s something we all like about [the transitional housing facility.]” - Participant

“Nobody is offering any negative support. Her mom and the people at the [transitional housing facility] are really supporting her...it seems that [mentee] really values the opinions of her mom and the people at her [living place].” – Mentor
“I think so, yeah, [they value our support]. Because I think if they don’t have that support it’s like, ‘why bother?’ So when they have someone cheering them [on] it’s just more motivation.” – Staff

**Theme 2: Family members offer varied support that influences program participation.**

Discussion about family members came up in interviews with participants and key informants. Whether this support was positive or non-existent, however, varied from case to case. Some participants mentioned that support from family members allowed them to continue participating in the program. These participants often used their family members as resource for transportation or childcare. Other participants expressed that the support from their family members was sometimes negative as the family members often did not understand the goal of the program. Participants who had negative support from family members indicated that it didn’t bother them nor did it negatively influence their participation in the program. Key informants echoed the responses of program participants. It was noted that when participants had the support and valued that support from their family members, they were more likely to walk on a weekly basis with their mentors. Conversely, when they did not have the support of their family members, they were often unable or chose not to participate.

“If it wasn’t for [my daughter], I wouldn’t be able to participate, I wouldn’t have done it. I might have done it once or twice then it would have been a hassle [because I have to watch my granddaughter].” – Participant

“Everyone else [besides mentors, neighbors, and office staff] I talk to and mention it to, they just think I’m doing something stupid…they say it as a joke, but I don’t think it’s a joke...” – Participant

“I think a lot of people [support participation], their family members... I think for most of them it’s their family and us saying, you know, “that’s really good that you’re doing this.” – Staff
“Except for whatever self-motivation, I don’t think that my mentee has any particular support system. I think she has family members that are very draining and I do agree that she values some support she’s getting from the staff here, but I think in general, her cloud of support is pretty non-existent. I would think so, yeah, [that this influences her participation].” – Mentor

Question 3: What skills and resources are needed in order to participate in the mentor walking program?

Theme 1: Program participants need an open mind and motivation to try new things.
While some other skills and resources were mentioned occasionally, many key informants expressed that participants simply needed to be open minded enough and willing to give the mentor walking program a try. This was the primary viewpoint of staff members at the transitional housing facility. Moreover, program participants voiced that other residents at the transitional housing facility were not walking continuously or did not join the program because they were too lazy or lacked motivation.

“One thing is just the willingness to try it and maybe not be closed-off, and it seems that everybody has been very willing, and I think they’ve all benefited a great deal from it.” – Staff

“[They need] two feet and the willingness to take an hour out of their week. Other than that, not much.” – Staff

“Motivation I think is huge when you’re in here, and willing to participate and trying something new [is definitely important]. For the most part, the group of residents we have right now are really good about that, but there’s always going to be a few.” – Staff

Theme 2: Program participants need to have time management skills and tangible resources including transportation and childcare. Most of the participants indicated that
in order to participate they needed to have time management skills and access to childcare. Mentors also briefly mentioned time management skills, transportation, and childcare as being important skills and resources that the participants needed to have in order to participate. A few mentors noted that their mentees did not have adequate childcare which sometimes meant they had to reschedule their weekly walk. In general, program participants had the time management skills and tangible resources they needed in order to participate. Most participants had school aged children and walked with their mentors while their children were in school; others arranged childcare for their younger children. Mentors and staff members noted that when participants did not have access to childcare, they had to reschedule or miss their weekly walk.

“I just actually got good with the time thing and making sure I was responsible and accountable for that appointment. Like before I’d just blow stuff off, but I value her that much that I don’t want to treat her like that. I want to respect her I guess…it’s kind of weird. It’s a new thing.” – Participant

“I don’t know what I’d do if I didn’t have my mom [for childcare].” – Participant

“Yeah, I don’t know what I would do [if kids weren’t in school].” – Participant

“I’ve heard [mentee] talking about some of the other people here and they’re not walking because they don’t have a babysitter or if they do they can’t afford it.” – Mentor

**Question 4: What are the barriers to participating in the mentor walking program?**

**Theme 1: Lack of tangible resources including transportation and childcare may keep participants from participating.** Program participants and key informants mentioned that lack of transportation and access to childcare could potentially be barriers to program participation. These tangible resources were discussed as necessary for program participation and as previously mentioned, the majority of program participants had these
resources. None of the program participants who contributed in the focus group indicated that transportation or childcare was an issue for their personal participation in the program, but they felt it may be a barrier for other participants. However, some staff members and mentors indicated that childcare was sometimes a hassle for program participants. Staff members and mentors also looked to the future and mentioned that for other women, childcare and transportation may act as larger barriers than they did for the current participants.

“Transportation to wherever they were going to walk maybe...because if you don’t have a car and the bus doesn’t conveniently go to wherever you’re trying to walk, it might be something like that [as a barrier].” – Participant

“If you didn’t have a vehicle or a way to get there planned out, it might be a little bit harder to make it happen.” – Participant

“I’ve heard [mentee] talking about some of the other people here and they’re not walking because they don’t have a babysitter or if they do they can’t afford it.” – Mentor

“If there’s some people that have small children that maybe aren’t registered in Head Start or aren’t in school currently and if it doesn’t work out [to walk] during the times that they have childcare, they wouldn’t be able to participate.” – Staff

“[My mentee] solely depends on her neighbor’s husband for her transportation every single week...if she didn’t have him, then I don’t know how she would get [to the place we walk at].” – Mentor

Theme 2: Lack of motivation or willingness to try new experiences keeps participants from walking weekly and residents from signing up for the mentor walking program. Participants in the focus group discussed a lack of motivation as being a barrier to program participation. Most discussed lack of motivation as a barrier keeping others from not participating. When one participant was baffled as to how others could lack
motivation to do something free that involves socialization and exercise, the other participants mentioned that they, too, have struggled with a lack of motivation and making excuses about why not to participate or engage in physical activity at some point in their lives. For the most part, key informants echoed the responses of the participants stating that when participants were cancelling walks it was a matter of personal choice, not a matter of lack of tangible resources. Some mentors had different responses and felt that what appeared to be lack of motivation was really about having so much other stuff going on in their lives that adding another commitment was too much.

“I was just thinking laziness…[lack of] motivation is a better way to say it.”
– Participant

“I’m just thinking of things that have ran through my mind, you know, before excuses would run through my mind.” – Participant

“For the women that don’t walk every week I’d say it’s a personal choice. I wouldn’t really say it’s a barrier, the only barrier is probably [a lack of] their own determination to do it.” – Staff

“I know for a few of them it’s [lack of] motivation once in a while to kind of get going”
- Staff

“If you can’t walk for 20 minutes right now, you can schedule time to do it later, but a lot of them… it’s just easier not to. Self-discipline, a lot of our residents [are working on that].” – Staff

“I would suspect, too, just kind of generally thinking that if everything in life is so much work then adding even an extra half hour is too much at some point.” – Mentor

**Question 5: What improvements could be made to the mentor walking program?**

**Theme 1: Offer childcare for program participants to utilize.** There were mixed responses about whether access to childcare was a current barrier to program
participation. Many participants and key informants, however, indicated that offering childcare in future generations of the mentor walking program would be an important improvement. Easy access to childcare would have made it easier for current participants to make it to their walk, and may make the program more accessible for women in the future to participate in the program. In the focus groups and interviews, respondents brainstormed and discussed three ways in which childcare could be offered by the program at minimal cost: 1) by offering vouchers to a daycare facility near walking areas, 2) by recruiting volunteers through the organization that operates the transitional housing program, or 3) by bringing in members of a high-school class or community group.

“Even if you were doing [childcare] here, doing it through this program. I don’t know if [volunteers] could watch them, but something. Because they do have volunteers here, so maybe they could?” – Participant

“Another way you could do childcare, there’s ‘Busy Hands’ and ‘Little Griz.’ Depending on where you’re at it’s like four bucks an hour...maybe you could get vouchers or something.” – Participant

“I would maybe think about childcare, or at least maybe you could contact the [transitional housing facility] and I’m sure we could get a volunteer or future practicum student to just watch kids while the group goes on. That really wouldn’t be a problem.”
– Staff

“[Have babysitters] for the program specifically. You know, say ‘hey, you want to be in the walking program but you’re having a hard time finding a babysitter?’ Maybe do it like twice a week and get high school kids that are in home-ec or in a babysitting club over at the high schools or a program in child development from the college. Bring them in here and make it a part of their school or education while they’re [at the transitional housing facility] with the children for an hour twice a week.” – Mentor

Theme 2: Offer incentives for program participants to earn. Some key informants mentioned offering incentives that participants could earn based on how much or how far
they walk would improve program participation. The suggestion was made that participants and mentors would set walking goals, and then participants could earn incentives as they reached their goals. Mentors and one staff member discussed different incentive options, most of which centered around wellness and self-care. Interestingly, offering incentives was not an improvement mentioned by program participants.

“Maybe some sort of goal setting where when they reach a goal maybe there’s some sort of [incentive], whether it is that they get together and make a dinner, a healthy dinner to kind of tie in walking program, wellness, health, taking care of yourself.” – Staff

“Add some more incentives maybe…” – Mentor

“I know about the walking shoes, I was thinking of [an incentive] for afterwards. I forgot about the ten dollars. Or adding up your time, you know, and having both the mentor and the mentee sign a piece of paper of how much they’ve walked so there’s no cheating and maybe at the end a bigger prize.” – Mentor

“I was actually thinking to do a spa day.” – Mentor

Conversely, some mentors expressed that they were unsure about offering incentives and did not know if they would make a difference in program participation.

“I’m going to be a nay-sayer on incentives because I think it’s good to have some maybe initially, but I suspect that people who are not walking are just overwhelmed by what is going on their life. And it’s not a lack of incentive, and maybe even a lack of motivation, so much as a lack of being able to organize themselves around.” – Mentor

Theme 3: Change the way in which mentors and participants communicate with each other during the program. Over the course of the program, participants and mentors were unable to have each other’s contact information due to policies at the transitional housing facility regarding volunteer-client relationships. When mentors or participants needed to cancel, they called the program coordinator who would then be in touch with the other
party to reschedule. Many of the participants expressed they would have preferred to have their mentor’s contact information in case they needed to reschedule at the last minute or if they were running a few minutes late. Participants also offered suggestions about how they could communicate with their mentor without going through the program coordinator while still adhering to the organization’s policies. Some of these ideas included having a message board online that each party could check before walking to be sure that their partner had not cancelled or rescheduled, or having beepers for each other. Other participants suggested changing the rules so that participants and mentors could exchange contact information. Conversely, changing the communication patterns was not an improvement frequently discussed among key informants. Staff members did not see a problem with the current mode of communication and expressed that needing to call the program coordinator to cancel held the participant more accountable. Some mentors expressed that it would be easier to have contact with the participants, but understood the policies surrounding volunteer-client contact and did express that it held themselves and their mentee more accountable.

“I’d leave everything the same except for improving the communication...” – Participant

“Even if we had an e-mail account or something where all the volunteers and [participants] could have access to, like a generic account or something.” – Participant

“It just makes it a little tough. We can’t be like, ‘it’s snowing today, we were going to meet downtown, but let’s maybe meet at the mall.’ Now we have to call [program coordinator] and hope that you answer, and we don’t want to leave someone waiting, you know what I mean?” – Participant

“I think that people are so comfortable talking to staff here that they might have been more apt to call and be like, ‘hey, I’m not going to make it.’ I think that having to go through [the program coordinator] was helpful, and I like the way it was set up, I really do.” – Staff
Impact Evaluation

Participants who took part in the focus group were asked about their exercise habits and social relationships and whether they’ve changed since the beginning of the mentor walking program. Key informants who took part in the focus group and interviews were also asked if they saw a change in the participants’ exercise habits since the start of the mentor walking program.

**Question 1: How have the participants’ exercise habits changed?**

Some participants mentioned they still need a mentor there to keep them accountable for walking on a weekly basis, and they were unsure about whether they would be able to continue after the end of the program. These participants admitted they were still working on their self-motivation and brainstormed ways to hold themselves accountable. One suggestion was to have a group sign-up sheet for group walks with residents at the transitional housing facility. Even if they did not feel that their exercise habits had changed, most participants felt that their attitudes toward exercise had changed in a positive manner. Others expressed they would continue walking after the end of the eight-week program, and maybe even more when the weather improved. Key informants at the transitional housing facility mentioned that they noticed a change in the motivation levels of some of the program participants; several participants decided to join a wellness class, possibly because of their involvement with the walking program, and others expressed the desire to go on walks with other residents at the transitional housing facility. This was not true for all program participants; key informants mentioned that some still lack the motivation or desire to engage in physical activity.
“I’m still working on that, the [self-motivation] thing. Could we put up a group thing here and put up like a little sign-in sheet and make it a thing for all of us? Then I might do it.” – Participant

“We realize how easy it is to walk a mile. My thing is still getting up off the couch to do it unless I’m scheduled to do it. It’s so easy and it makes you feel good, and yet I still... I think about it a lot though.” – Participant

“She’s up-ing [exercise] and stuff, even though she already had a [gym] membership she wasn’t there all the time. WE just kind of really gave her the boost and the confidence to go.” – Mentor

“Yes, I’ve noticed a lot of [increases in physical activity], several of the participants that are really excited and getting involved in other programs I think because they started walking.” – Staff

“With the exception of a few, most of our residents here don’t have that motivation to go out on their own to do it. So having the mentors gives them some accountability.” – Staff

**Question 2: How have the participants’ social relationships changed?**

When asked about changes in their social relationships, most focus group participants responded that there has been no change. A few participants were hesitant and unsure about whether their social relationships with others are changing. Many expressed that they did not have the self-confidence to form social relationships on their own; their social relationship with their mentor was easier because the mentors signed up to participate. Lastly, one participant discussed how nothing has been stable in her life. Her relationship with her mentor offered a sense of stability, and she was disappointed that it had to end after eight weeks. In general, there were mixed responses about whether this program had an impact on the participants’ ability to form and maintain social relationships.

“I think it will definitely give us the tools or the know-how on how to continue building the relationships with people.”
“I have a little different view on things and I’m going to change. I don’t know if it’s because of the program but like the way I’m handling things and dealing with things is way different. I’m not really that okay with it just yet, that’s why I’m having a hard day today. But, I think my coping skills…or my communication skills are getting a little better.”

“I’ve had a lot of losses lately, not even that it should be a big deal, I don’t know why I care, but [the program] is just another one that I realize is going to come to an end. It’s only one day a week so it’s like so what, but…”

“I think part of it for me is I have such low self-esteem and low self-confidence that I don’t feel like I can form those friendship type relationships with ‘Bobby Jo Allen’ who I meet on the bus instead of somebody that goes, ‘okay, you’re going to be walking with this person for eight weeks.’”

Outcome Evaluation

Means & Standard Deviation

Table 3 presents the means and standard deviations of each variable that was measured among women who participated in the mentor walking program. Pre-, post-, and follow-up survey data were collected from eight program participants who remained at the transitional housing facility at the end of the eight-week mentor walking program. During the program, one participant relocated and did not complete the post- and follow-up surveys. In general, outcomes were in the expected direction. Self-esteem scores increased from pre-program to post- and follow-up indicating an increase in self-esteem; depression and anxiety scores decreased from pre-program to post- and follow-up indicating a decrease and depression and anxiety symptoms. The high standard deviations indicate that the scores were spread out over a large range of values suggesting that scores varied considerably among program participants.
<table>
<thead>
<tr>
<th>Outcome (range)</th>
<th>Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem (10-40)</td>
<td>Pre</td>
<td>21.50</td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>25.25</td>
<td>5.97</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>24.50</td>
<td>5.98</td>
</tr>
<tr>
<td>Depressive symptoms (0-60)</td>
<td>Pre</td>
<td>16.57</td>
<td>6.95</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>14.29</td>
<td>9.41</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>11.14</td>
<td>16.54</td>
</tr>
<tr>
<td>Anxiety (0-21)</td>
<td>Pre</td>
<td>6.38</td>
<td>3.58</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.88</td>
<td>5.64</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>3.87</td>
<td>7.07</td>
</tr>
</tbody>
</table>

Table 3. Means and standard deviations of outcome measures collected at pre-program, post-program, and two weeks follow-up.

Figures 3, 4, and 5 illustrate individual participant scores on each of the three outcome measures: self-esteem, depression, and anxiety. Scores for one participant (Participant 6) who dropped out of the program are not reported.

Figure 3. Self-esteem scores by participant at pre-program, post-program, and two weeks follow-up. A higher self-esteem score represents a higher level of self-esteem.
The post-program depression score is omitted for one participant (Participant 7) because the survey was incomplete.

Figure 4. Depression scores by participant at pre-program, post-program, and two weeks follow-up. A lower depression score represents fewer depressive symptoms.

Figure 5. Anxiety scores by participant at pre-program, post-program, and two weeks follow-up. A lower anxiety score represents fewer anxiety symptoms. Seven points were added to each score in order to graphically represent scores of zero.
Correlation

A Pearson correlation was calculated examining the relationship between number of weeks walked and difference in self-esteem scores from pre-program to post-program. A weak correlation that was not significant was found ($r (6) = -0.018, p > .05$). Second, a Pearson correlation was calculated examining the relationship between number of weeks walked and difference in depression scores from pre-program to post-program. A weak correlation that was not significant was found ($r (5) = -0.445, p > .05$). A Pearson correlation was calculated examining the relationship between number of weeks walked and difference in anxiety scores from pre-program to post-program. A weak correlation that was not significant was found ($r (6) = -0.016, p > .05$). Number of weeks walked was not related to difference in self-esteem, depression, or anxiety scores. Figure 6 illustrates the relationship between number of weeks walked and differences from pre-program to post-program.

Figure 6. Correlation analysis examining the relationship between weeks walked and difference in self-esteem (blue diamond), depression (red square), and anxiety (green triangle) scores from pre-program to post-program.
One-Way Repeated Measures ANOVA

A one-way repeated measures ANOVA was calculated comparing the self-esteem scores of program participants at the three different times: pre-program, post-program, and program follow-up. No significant effect was found \( (F(2,14) = 31.50, \ p > .05) \). No significant difference exists among pre-program \( (m = 21.50) \), post-program \( (m = 25.25) \), and program follow-up \( (m = 24.50) \) mean self-esteem scores. Also, a one-way repeated measures ANOVA was calculated comparing the depression scores of program participants at three different times: pre-program, post-program, and program follow-up. No significant effect was found \( (F(2,12) = .63, \ p > .05) \). No significant difference exists among pre-program \( (m = 16.57) \), post-program \( (m = 14.29) \), and program follow-up \( (m = 11.14) \) mean depression scores. Lastly, a one-way repeated measures ANOVA was calculated comparing the anxiety scores of program participants. No significant effect was found \( (F(2,14) = .93, \ p > .05) \). No significant difference exists between pre-program \( (m = 6.38) \), post-program \( (m = 5.88) \), and program follow-up \( (m = 3.87) \) mean anxiety scores.

Additional Outcome Results

While the statistical analyses (correlation and one-way repeated measures ANOVA) did not demonstrate any statistical significance, in general, individual scores on most measures improved from pre-program to post-program and were maintained at follow-up two weeks later. Self-esteem scores increased for six of the eight participants who completed the program; three participants maintained or improved scores at two week follow-up. Depressive symptom scores decreased for six of the eight participants.
indicating fewer depressive symptoms; five participants maintained or further improved scores at two week follow-up. Lastly, anxiety scores decreased for five participants indicating fewer anxious feelings; four participants maintained or further improved scores at two weeks follow-up. The following charts present pre-, post-, and follow-up scores for self-esteem, depression, and anxiety for each participant. Seven points were added to each anxiety score (one point for each question) in order to graphically represent scores of zero. In other words, a score of seven represents an actual score of zero on the Generalized Anxiety Disorder-7 scale.
Participant 2 (9 Walks)

<table>
<thead>
<tr>
<th>Outcome (Range)</th>
<th>Pre</th>
<th>Post</th>
<th>Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem (10-40)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression (0-60)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety (7-28)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Participant 3 (7 Walks)

<table>
<thead>
<tr>
<th>Outcome (Range)</th>
<th>Pre</th>
<th>Post</th>
<th>Follow-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem (10-40)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression (0-60)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety (7-28)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Participant 4 (6 Walks)

- **Self-esteem (10-40)**
  - Pre: 15
  - Post: 25
  - Follow-up: 30

- **Depression (0-60)**
  - Pre: 20
  - Post: 30
  - Follow-up: 40

- **Anxiety (7-28)**
  - Pre: 10
  - Post: 20
  - Follow-up: 25

Participant 5 (8 Walks)

- **Self-esteem (10-40)**
  - Pre: 20
  - Post: 30
  - Follow-up: 40

- **Depression (0-60)**
  - Pre: 10
  - Post: 20
  - Follow-up: 25

- **Anxiety (7-28)**
  - Pre: 5
  - Post: 10
  - Follow-up: 15
Participant Perspectives on Program Outcomes

Lastly, in the post- and follow-up surveys, program participants were asked four short questions regarding their perceptions of the extent to which the mentor walking program improved their self-esteem, depression, and anxiety and whether they would recommend this program for future women in transitional housing. Questions were answered on a scale of one to ten, where 1 = no influence/not helpful and 10 = great influence/very helpful. In general, participants viewed the program as one that would be helpful in the future for women in transitional housing. Response results are summarized in Table 4.
<table>
<thead>
<tr>
<th>Item</th>
<th>Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much do you think “Walking on Sunshine” improved the way you think about yourself?</td>
<td>Post Follow-up</td>
<td>7.50</td>
<td>1.414</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>8.00</td>
<td>1.773</td>
</tr>
<tr>
<td>How much do you think “Walking on Sunshine” improved feelings of sadness and loneliness?</td>
<td>Post Follow-up</td>
<td>7.38</td>
<td>1.847</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>7.50</td>
<td>1.927</td>
</tr>
<tr>
<td>How much do you think “Walking on Sunshine” improved feelings of worry, nervousness, and fear?</td>
<td>Post Follow-up</td>
<td>6.88</td>
<td>1.727</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>6.63</td>
<td>2.504</td>
</tr>
<tr>
<td>How helpful do you think “Walking on Sunshine” would be for future women in transitional housing?</td>
<td>Post Follow-up</td>
<td>9.63</td>
<td>.744</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>9.88</td>
<td>.354</td>
</tr>
</tbody>
</table>

Table 4. Participants’ perspectives regarding the impact of the peer mentor walking program on aspects of mental health.

Participants were also asked what about “Walking on Sunshine” improved the way they think about themselves, and feelings of sadness, loneliness, worry, nervousness, or fear. Some participants did not directly answer the question, but the majority of participants that did answer the question indicated that the mentor was the part of the program that most improved aspects of mental health. Below are the responses from program participants:

**Post-program**

“Made me feel more comfortable around strangers and not that everyone is looking just at me when I walk around the mall.”

“I loved it to have someone understand and help you with things in life.”

“It’s a great program for ones that want to improve their lives.”

“It was great. I loved my mentor and everything she brought to me and this experience.”

“Awesome.”
“I had someone to talk to.”

“I felt better after each walk.”

“Family issues and couldn’t complete. I think it helped to get out. Fresh air someone to talk to and visit.”

“Better way to know if the mentor is going to show up! Mine stopped showing.”

“I enjoyed this program all in all it was very beneficial.”

**Follow-up**

“Let me be able to go out with someone who had more confidence than me.”

“It was nice to have someone that understood and listened to me.”

“Not sure but it was a great program and I looked forward to it each week”

“I had someone to talk to.”

“Helped a lot!”

“Great program. Had family issues and couldn’t complete.”
CHAPTER V
MANUSCRIPT

INTRODUCTION

There are an estimated 3.5 million men, women, and children who experience homelessness each year (National Coalition for the Homeless [NCH], 2009b), and of these, 17% are single women, and 30% are families with children (Finfgeld-Connett, 2010). Single women and families with children are rapidly growing segments of the homeless population (NCH, 2009b). Homeless women generally report a lower quality of life, and are at a greater risk for various physical and mental health issues than their housed counterparts (NCH, 2009a). Mental illness, including depression and anxiety, impacts 20 to 25% of the homeless population in the United States, compared to 6% of the general population (NCH, 2009b). Studies indicate that those with more undesirable life events, fewer social supports, and fewer coping skills are more likely to experience depressive symptoms. Furthermore, social support can serve as a mediating factor between undesirable life events and depression (La Gory, Ritchey, Mullis, 1990). Unfortunately, the social support system among homeless individuals is sometimes eroded by homelessness itself, or the circumstances leading to homelessness.

Shifting the manner in which mental health issues are approached from a treatment-focused approach to a more prevention-oriented approach has the potential to not only decrease the global burden of disease, but also be more accessible and effective for those impacted by mental health issues (President’s New Freedom Commission on Mental Health, 2004). Additionally, mental health services in rural areas are limited.
Rural families are less likely than their urban counterparts to have access to mental health services or trained mental health professionals to deliver appropriate mental health services (President’s New Freedom Commission on Mental Health).

Results from individual trials utilizing peer support in mental health interventions are varied; some have found peer based support to be effective in preventing depressive symptoms (Dennis et al., 2009; Taft, Small, Hegarty, Watson, Gold, & Lumley, 2011), while others have been inconclusive, but promising (Dennis, 2003; Murphy, Cupples, Percy, Halliday, & Stewart, 2008). Peer support interventions for depression have been used in a variety of populations including postpartum women, cancer patients, self-identified depressed women, caregivers, elderly individuals, and mothers of preschool-age children (Pfeiffer et al., 2010). Additionally, the association between physical activity and depression has been extensively researched, and it is generally accepted that increased physical activity can reduce feelings of depression. In a meta-analysis of the effectiveness of various complementary and self-help interventions for depression, exercise was one of the methods with the best evidence for effectiveness (Jorm et al., 2002). Particularly of interest is that participation in physical activity has been found to decrease feelings of depression specifically among women (Teychenne, Ball, & Salmon, 2008). Moreover, specifically among women, a low level of physical activity has been found to be associated with a greater risk of depression (Mikkelsen, Tolstrup, Flachs, Mortensen, Schnohr, & Flensborg-Madsen, 2010).

The pilot program presented herein provides a starting point for community-based mental health prevention efforts among homeless women in Missoula, Montana. Formative evaluation was conducted to determine how well the program was being
implemented and the potential for sustainability. To examine the effects of this program on specific aspects of participants’ mental health, the program was assessed by measuring self-esteem, depression, and anxiety pre-program, post-program, and at two weeks follow-up.

**Program Development**

The proposed program, *Walking on Sunshine*, was developed based on a thorough needs assessment using the PRECEDE logic model (Green & Kreuter, 2005). This assessment identified the health related needs of women who are homeless in a mid-size city in western Montana. The first phase of the PRECEDE logic model is to assess the quality of life of the target population. Program planners carried out the first phase of the model by conducting surveys with women in transitional housing, and completing interviews with local key informants. Results of the first phase of research revealed that this population had a lower than average quality of life, and that housing, poverty, and unemployment were the main negative determinants of quality of life.

In the second phase of the PRECEDE model program planners assessed the health issues of homeless women. Over half of the women surveyed reported mental health issues including depression and anxiety. Telephone interviews were conducted during the third phase of the model and allowed the program planners to assess the behavioral and environmental factors that contributed to the identified mental health issues. Lack of coping skills, lack of social support, and the lack of sunlight were the three main factors identified. In the fourth phase, program planners identified factors that influence a lack of coping skills, lack of social support, and the lack of sunlight via focus groups with the target population and with the key informants. Of the identified factors, program planners
focused on those that were the most important to the target population in contributing to overall mental health and the most changeable according to previous research. The most important and changeable factors identified were: 1) Lack of knowledge about what constitutes a trusting relationship, 2) Lack of encouragement to form and maintain relationships, 3) Lack of confidence and self-esteem, 4) Lack of support from someone trustworthy, 5) Desire to use physical activity as a coping skill, and 6) Lack of encouragement to engage in physical activity.

Interview and focus group data revealed an overarching theme of lack of self-efficacy among the target population in regard to coping with stress through physical activity and positive social relationships. Feedback from the target population and a lack of funding dictated the need for a low-cost program that could be implemented without utilizing professional mental health providers. Therefore, Walking on Sunshine was designed to use peer support to provide women in transitional housing the support they need to increase self-efficacy toward utilizing active coping strategies, such as forming social relationships and participating in physical activity. In turn, these behaviors have the potential to enhance the mental health status of the program participants.

Self-efficacy theory proposes that self-efficacy can be enhanced through four mechanisms:

1. *Vicarious Experience* occurs by observing others complete a specific behavior. In order for vicarious experience to increase self-efficacy, the person modeling the behavior must be similar to the observer. Mentors were asked to model engagement in the peer mentor walking program and a positive social relationship which the participants could observe and in
turn increase their own self-efficacy or confidence in program participation and building or maintaining social relationships.

2. *Mastery Experience* occurs by personally experiencing and being successful at a specific task or behavior. One way to gain mastery experience is to set small attainable goals and experience success with those goals before moving on to the larger behavior change. Participants started out with the goal of walking with their mentor once a week; some mastered this goal and began walking more frequently.

3. *Verbal Persuasion* is the verbal support and encouragement given by others. The peer mentors were a source of verbal persuasion for the participants of the walking program and stated their beliefs in the participant’s ability to succeed at the weekly walking program and to continue walking and building relationships after the program ends.

4. *Emotional States* refers to the emotions the body feels before or during a task or behavior. When these states are negative or discouraging, an individual is likely to terminate the attempt, and, conversely, if the emotional states are positive, then the behavior will likely continue. Peer mentors were asked to model positive emotional states related to being physically active. This program provided participants with an outlet from their daily activities, they were in the company of a motivational peer mentor, and they were given the opportunity to feel stress relief and the positive effects of physical activity. (Bandura & Adams, 1977; Hayden, 2009)
The peer mentor walking program was designed as an 8-week intervention. The CDC (2011) recommends 30 minutes of moderate-intensity aerobic physical activity five days each week in order for adults to maintain and promote wellbeing. Moderate-intensity physical activity is described as working hard enough to increase heart rate and begin to sweat. Because only one 30-minute walk each week occurred with their mentors, participants were encouraged to walk additional times throughout the week with their children, with other participants, with friends or family, or alone in order to meet the recommended guidelines. The rationale behind only one meeting each week with a mentor was that over the course of the program, participants would gain the self-efficacy and motivation through mechanisms previously described, and be able to initiate physical activity on their own.

METHODS

Recruitment of Homeless Women

To be eligible to participate in the program, potential participants had to be 18 or older and living at the local transitional housing facility in a mid-size town in western Montana in January 2012. Participants were recruited by the program planner who attended a tenant meeting to explain the program. The case manager assisted by discussing the program in weekly case management sessions with women at the transitional housing facility. Of the 16 women living in the transitional housing facility, a total of 11 women were interested in the program and returned a participant interest form to their case manager. Of these, nine women (mean age = 36.7) participated in the program; one did not participate for health reasons and the other dropped out before the
program started. The majority of the participants identified as single Caucasian women; all women had at least one child. Seven of the nine participants had at least a high school diploma or G.E.D.

Women who volunteered to participate in the program received new walking shoes and a pedometer. These incentives were obtained with funds awarded by the Shopko Foundation Community Charitable Grant program. Additionally, a small grant from the Brian Sharkey Foundation provided a stipend of $10 for participants that completed at least seven weeks of the eight week program.

**Recruitment of Mentors**

A peer mentor is defined as someone who is a nonprofessional with similar stressors or health problems to those of the target population. Utilizing peer support promotes the mutual support from an experienced peer (peer mentor) to a novice peer (program participants) (Pfeiffer et al., 2010). Mentors were recruited based on characteristics such as age, race, previous life experience, etc., that they shared with the target population when possible. Various recruitment methods were used: Western Montana Volunteer Center website, craigslist.com, Missoula Aging Services newsletter, and volunteer orientations for the Poverello Center, a local organization that provides food, shelter, clothing, and essential services for the hungry and homeless. Each interested mentor was required to complete the volunteer orientation at the Poverello Center, as well as a screening interview with the program planner. A total of eleven women were recruited and nine (mean age = 30.7) were matched with program participants. Upon recruitment, mentors received an informational booklet defining the
typical mentor process, what it means to be a mentor, aspects of effective communication, and who to contact with concerns. Lastly, a thirty minute mentor orientation was held at the local transitional facility before the welcome gathering.

Data Collection

Formative Evaluation. Formative evaluation data was collected at focus groups with the peer mentors and program participants as well as interviews with staff members at the transitional housing facility. The structured questions for each interview were developed based on established guidelines regarding how to conduct formative evaluation for health promotion programs (Simons-Morton, Greene, & Gottlieb, 1995). Formative evaluation focus group questions were divided into three sections: 1) questions regarding program procedure, 2) questions based on the major constructs from the Theory of Planned Behavior, and 3) questions about participants’ and key informants’ general impression of the program.

Program Assessment. To assess the effect of the peer mentor walking program on mental health indicators, participants completed a survey during a session with their case manager at the transitional housing facility prior to beginning the program, immediately after the program, and again two weeks after completing the program. The surveys consisted of four parts. The first part consisted of questions regarding demographics, followed by three valid and reliable scales: Rosenberg Self-Esteem Scale (RSE), Center for Epidemiological Studies Depression Scale (CES-D), and Generalized Anxiety Scale (GAD-7). The post- and follow up-surveys also consisted of six short questions regarding
the participants’ perceptions of how the program influenced aspects of their mental health.

**Data Analysis**

*Formative Evaluation.* Formative evaluation data from the interviews and focus groups were analyzed qualitatively. Audio recordings were transcribed and the transcriptions and notes from the meetings were reviewed and analyzed for common themes. Common themes identified in the interviews and focus groups were used to inform changes that needed to be made to improve future interventions.

*Program Assessment.* Data from the self-esteem, depression, and anxiety inventories were evaluated using SPSS. Descriptive statistics were used to calculate means and standard deviations of pre-, post-, and follow-up scores.

**RESULTS**

*Formative Evaluation*

In the mid-intervention focus groups and interviews, insight into the process and potential sustainability of the mentor walking program was gained. Five women attended the participant focus group, five mentors attended the mentor focus group, and four staff members were interviewed. Women in the program, participants or mentors, who could not attend the mid-intervention focus groups were followed up by telephone or e-mail; one additional program participant and three additional mentors provided feedback.

In general, respondents indicated that mentor and participant walking was going smoothly; all participants indicated they liked the mentor with whom they had been
matched. At this point in the program, some participants had perfect attendance while others were struggling to engage in weekly walks for a variety of reasons. By the end of the program, three participant-mentor pairs walked seven or more times during the eight-week program and an additional three walked at least five times. The remaining participants walked four or less times during the program, one of whom dropped out after two weeks of the program. Interview questions guided by the Theory of Planned Behavior resulted in many responses. Most responses, however, followed the general themes discussed below.

*Theme 1: Benefits of the peer mentor walking program.*

Key informants and participants almost unanimously indicated that a participant gaining a trustworthy adult with whom to talk to was one of the most important benefits to participating in the program. Many participants were without trustworthy friends or family to socially engage with, so having someone outside of the transitional housing facility was a positive benefit. One woman said, “I know with my mentor, especially with the situation I’m in, it’s like she values my feelings.” Also, key informants noticed that participants were gaining a deeper understanding about the importance of physical activity and self-care. Participants echoed this notion stating they were noticing how much better they felt after taking some time to engage in physical activity. One participant, for example, responded, “I love how I feel after walks. I come down here and I’m in the office and I’m like, ‘hey, hi everyone!’ It’s almost like a drug, it’s kind of weird.”
**Theme 2: Social support for participation in the peer mentor walking program.**

Subjective norm plays an important role in whether individuals will adopt a behavior; in this case the behavior is program participation. Overwhelmingly, participants and key informants stated that staff members and neighbors at the transitional housing facility were important and positive sources of encouragement to program participation. Participants interact with and are surrounded by these individuals on a daily basis, so their support was crucial to participation. Family members of participants were also generally supportive of program participation. When family members were not present, participants did not feel that lack of support necessarily impacted their program participation.

**Theme 3: Skills and resources necessary to participate in the peer mentor walking program.**

An individual having the skills and abilities to engage in a specific behavior greatly influences their engagement in that behavior. Interestingly, key informants and participants discussed different skills and resources needed to participate in the mentor walking program. Participants indicated that sometimes a lack of transportation or childcare detracted from other participants’ ability to meet with their mentors. Conversely, key informants indicated that a lack of motivation or willingness to try new things is what kept individuals from walking on a weekly basis or signing up for the program in the first place. However, key informants did mention that in future implementations of the program, childcare should be provided in order to increase program participation.
Theme 4: Recommendations to improve the intervention in the future.

The interviews ended with a discussion of how the program could be improved to be more accessible and to better enhance the mental health of women in transitional housing. Providing childcare, offering incentives for participants, and allowing participants and mentors to exchange contact information were the predominant suggestions mentioned. All involved believed the childcare would help make the program more accessible. Mentors felt that providing incentives for participants to earn would increase their program participation; some staff members also suggested offering healthy incentives that could be earned when goals were reached. Lastly, the transitional housing facilities policies did not allow clients to exchange contact information with volunteer mentors; some participants were frustrated by this and suggested making changes for future programs.

Program Assessment

Table 1 presents the means and standard deviations of each variable that was measured among women who participated in the mentor walking program. Pre-, post-, and follow-up survey data were collected from eight program participants who remained at the transitional housing facility at the end of the eight-week mentor walking program. During the program, one participant relocated and did not complete the post- and follow-up surveys. In general, outcomes were in the expected direction. Self-esteem scores increased from pre-program to post- and follow-up indicating an increase in self-esteem; depression and anxiety scores decreased from pre-program to post- and follow-up indicating a decrease and depression and anxiety symptoms. The high standard
deviations indicate that the scores were spread out over a large range of values suggesting that scores varied considerably among program participants.

<table>
<thead>
<tr>
<th>Outcome (range)</th>
<th>Time</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem (10-40)</td>
<td>Pre</td>
<td>21.50</td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>25.25</td>
<td>5.97</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>24.50</td>
<td>5.98</td>
</tr>
<tr>
<td>Depressive symptoms (0-60)</td>
<td>Pre</td>
<td>16.57</td>
<td>6.95</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>14.29</td>
<td>9.41</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>11.14</td>
<td>16.54</td>
</tr>
<tr>
<td>Anxiety (0-21)</td>
<td>Pre</td>
<td>6.38</td>
<td>3.58</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.88</td>
<td>5.64</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>3.87</td>
<td>7.07</td>
</tr>
</tbody>
</table>

Table 1. Means and standard deviations of outcome measures collected at pre-program, post-program, and two weeks follow-up.

Figure 1 presents the gains made by program participants in the program assessment inventories from pre- to post- to program follow-up. Scores for one participant (Participant 6) who dropped out of the program are not reported. Moreover, the post-program depression score is omitted for one participant (Participant 7) due to survey incompleteness. In general, individual scores on most measures improved from pre-program to post-program and were maintained at follow-up two weeks later.

Figure 1. Gains made by program participants with regards to self-esteem, depression, and anxiety.
The following figures (Figures 2-4) illustrate pre-, post-, and follow-up scores for self-esteem, depression, and anxiety for each participant. Seven points were added to each anxiety score (one point for each question) in order to graphically represent scores of zero. In other words, a score of seven represents an actual score of zero on the Generalized Anxiety Disorder-7 scale.

![Self-Esteem Scores by Participant](image)

*Figure 2. Self-esteem scores by participant at pre-program, post-program, and two weeks follow-up. A higher self-esteem score represents a higher level of self-esteem.*
Figure 3. Depression scores by participant at pre-program, post-program, and two weeks follow-up. A lower depression score represents fewer depressive symptoms.

Figure 4. Anxiety scores by participant at pre-program, post-program, and two weeks follow-up. A lower anxiety score represents fewer anxiety symptoms. Seven points were added to each score in order to represent scores of zero.
Questions included on the post- and follow-up surveys regarding the participants’ perceptions of how the program influenced aspects of their mental health provided additional insight into the perceived effects of participation in the mentor walking program. When rated on a scale from one to ten, with one being “no improvement” and 10 being “great improvement,” all post-program participants felt that the program improved the way they thought about themselves (mean = 7.50, SD = 1.414), improved feelings of sadness and loneliness (mean = 7.38, SD = 1.847), and improved feelings of worry, nervousness, and fear (mean = 6.88, SD = 1.727). Participants also viewed this program as extremely helpful to women in the future who reside in transitional housing (mean = 9.63, SD = .744).

DISCUSSION

This pilot program was developed as a low-cost means of addressing the physical, social, and mental health needs of homeless women living in a transitional housing facility. The program consisted of nine program participants and nine volunteer mentors who were matched based on convenience and met for weekly walks. The average number of weeks walked over the course of the eight-week program was 5.33, with some walking more than once each week. Formative evaluation of the pilot program informed changes that needed to be made to improve the intervention in the future. A preliminary assessment of the effects of the program on mental health outcomes indicated the program had the desired effect on aspects of participants’ mental health. Moreover, participants’ perceptions of the program were positive suggesting that this program may
have practical significance for rural mental health providers serving low-income or homeless women.

Analysis of focus group and interview data, as well as data provided in response to open ended questions on the post-survey revealed several benefits of the program. The most valued aspect of the program, according to participants, was having someone with whom to talk. Participants felt it enhanced aspects of their mental health. Women indicated that having a trustworthy and non-judgmental adult with whom to talk was important, in part, because prior to the program they lacked a source of positive and trustworthy social support. The social support of homeless individuals is often eroded (Fitzpatrick, La Gory, & Ritchey, 2003) which in many cases can lead to feelings of isolation and depression. Social support can serve as a mediating factor between undesirable life events such as homelessness and depression (La Gory, Ritchey, & Mullis, 1990); this warrants the use of peer or social support in future mental health promotion interventions, especially among rural individuals experiencing extreme undesirable life events. Even though many participants had case managers and support from various social service agencies around the community, the mentors offered a different source of social support. Mentors served as a non-professional and non-judgmental outsider, and participants indicated they valued their stories, opinions, and ability to listen.

A second important benefit of the program was an increase in participants’ attitudes toward physical activity and self-care. Participants indicated that engaging in physical activity and self-care was easier than they had previously believed. In addition, participants were surprised about how well they felt after engaging in a weekly walk with
their mentors. This shift in attitudes is promising as according to health behavior theory, attitudes toward a behavior greatly influence whether an individual will continue to engage in that behavior. Physical activity is important among a population that is at an increased risk for feelings of depression and anxiety. As mentioned previously, the mental health benefits from physical activity have been well-established in the literature.

Analysis of focus group responses also provided insight into potential barriers to program participation that should be addressed in future peer mentor walking programs. Participants and key informants discussed tangible resources that may inhibit a woman’s ability to fully participate in the program if unavailable. These resources included childcare and transportation. In general, when women were motivated to participate in the program, they took the steps necessary in order to acquire adequate childcare and transportation. In other words, if women wanted to participate, resources were available.

According to the Theory of Planned Behavior (Ajzen & Fishbein, 1980), intention to engage in a particular behavior is influenced by behavioral attitudes, subjective norm, and perceived behavioral control. In general, participants of this program had a positive attitude toward and highly valued the outcomes of participating in the mentor walking program. They were surrounded by individuals who supported their participation in the mentor walking program, and many believed they had the abilities and resources needed to participate in the program. It was apparent that when one of these three factors was lacking, intention was influenced, and participants often neglected their walks or dropped out of the program.

Given the small sample size of the pilot program, it is not surprising that measured gains in mental health were not statistically significant. Even though the results
were not statistically significant, the potential for practical significance should not be ignored. Post-program and follow-up surveys revealed increases in self-esteem, and reductions in depression and anxiety symptoms. Additionally, the perceptions of the participants cannot be overlooked. Participants indicated the program had a positive effect on aspects of mental health and seven of the eight women who completed the program suggested the program would be very helpful in the future for women in transitional housing as they strive to move into their own permanent housing.

**Challenges**

Several important challenges to successful completion of the program were identified by the participants and key informants. While some participants successfully met with their mentors at least seven of the eight weeks, others were not as successful for a variety of reasons. First, lack of access to childcare sometimes served as a barrier. The majority of women in the program were single mothers. If their children were not in school during their scheduled walking time, they had to find appropriate childcare. This was sometimes an obstacle as some of the participants were unemployed and could not afford childcare. Subsequent implementations of the mentor walking program should ensure the availability of childcare, either by hiring volunteer childcare providers or providing vouchers to local day care facilities.

Second, the dependability of the volunteer mentors greatly influenced whether participants and mentors would walk on a weekly basis. Those participants who walked consistently over the course of the program had highly dependable mentors who did not miss or reschedule walks; this allowed for a trustworthy relationship to develop. When
mentors had to cancel a meeting, the participant-mentor relationship suffered. In a few cases, mentors missed a meeting without notice which meant the participant was left waiting at the meeting spot. Perhaps a more rigorous mentor selection process is needed in order to verify that volunteer mentors will be dependable.

**Future Recommendations**

The assessment of this pilot program was limited by its small sample size and the lack of a comparison group. Because the pilot test study took place in a mid-size city in under populated Montana, the number of women in transitional housing that could participate in the program was restrictive. However, one of the goals of a pilot program is to explore the feasibility of an intervention on a smaller scale before spending the time and resources to implement the program on a larger scale. The promising findings of this pilot program assessment indicate the need for a larger scale program in order to fully examine the effects of a mentor walking program on aspects of mental health. Moreover, a control or comparison group should be employed in order to ensure that the positive effects on mental health are a product of the program itself and not the extensive case management, classes, and opportunities that women in transitional housing often access.

Additionally, the utilization of non-professionals in the health care arena should continue to be researched. Non-professional volunteers are a low-cost and potentially invaluable community resource. Because this program utilized non-professional volunteer mentors, it has the potential to be implemented in a cost-effective manner within a community-based setting. An important lesson learned from this pilot program is that in the future, a rigorous selection process should be utilized in order to recruit only
mentors that will be dependable throughout the entire course of the program. It is the mentors that make or break the program; when mentors are not dependable, the trustworthy relationship is not formed and participants do not see the mediating effect of social support on aspects of their mental health.

**Conclusion**

The results of this pilot study suggest a positive impact for peer mentor walking programs on the mental health of homeless women. Although further research is needed, peer mentor walking programs may enhance mental health by increasing self-efficacy with regard to coping with stress through physical activity and positive social relationships.
References


Appendix A
Mentor-Participant Agreement
Mentoring Agreement

Congratulations on your commitment to this program!

This form is designed to give both the mentor and mentee confidence in each other that confidentiality will be respected, and that both are committed to developing a trusting relationship.

This agreement between the mentor, ___________________________ and the mentee (program participant), ___________________________ will cover the time period from January through April, 2012. After the program, confidentiality will continue to be respected.

It is suggested that you meet on at least a weekly basis. Please specify when you plan to meet, and how you will communicate with each other:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Confidentiality and trust are very important to the success of your relationship. Specify how you will respect the confidentiality and trust of each other:

________________________________________________________________________

________________________________________________________________________

Both partners agree to keep confidentiality and trust during this program.

___________________________________  ________________________
Mentee’s signature  Date

___________________________________  ________________________
Mentor’s signature  Date
Appendix B
Icebreaker Activity
People Bingo! Find someone in the room who meets these characteristics:

<table>
<thead>
<tr>
<th>Favorite Color is Green</th>
<th>Likes to Go for a Walk</th>
<th>Was Born in Missoula</th>
<th>Likes Mexican Food</th>
<th>Reads the Newspaper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lived in a Different State</td>
<td>Likes to Eat Pancakes</td>
<td>Likes to Write</td>
<td>First Name Starts with a Vowel</td>
<td>Did Not Grow up in Missoula</td>
</tr>
<tr>
<td>Likes Cats Better Than Dogs</td>
<td>Favorite Food is Italian</td>
<td>Has Knit a Scarf</td>
<td>Likes Chocolate</td>
<td>Has Two Kids</td>
</tr>
<tr>
<td>Likes Mystery Novels</td>
<td>Has Brown Hair</td>
<td>Likes to Garden</td>
<td>Has a Sibling</td>
<td>Last Name Has Five or More Letters</td>
</tr>
<tr>
<td>Does Not Like Vegetables</td>
<td>Rides a Bike</td>
<td>Has a Pet</td>
<td>Likes to Cook</td>
<td>Has Seen a Bear in Missoula</td>
</tr>
</tbody>
</table>
Appendix C
Walking Log
<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Time of Day</th>
<th>Minutes Walked</th>
<th>Steps Walked</th>
<th>Notes (who did you walk with?, where did you walk?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/22-1/28</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1/29-2/4</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>3</td>
<td>2/5-2/11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2/12-2/18</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2/19-2/25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2/26-3/3</td>
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</tr>
<tr>
<td>7</td>
<td>3/4-3/10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3/11-3/17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D
Participant Handout
Walk with your mentor, children, friends, or family members to stay healthy!

Walk 1 mile a day burns 100 calories

The CDC recommends 30 minutes of moderate exercise 5 days each week. (CDC, 2011)

Regular walking can help prevent memory loss! (Gaian Inc., 2011)

Walking 1 mile a day burns 100 calories.

WALKING ON SUNSHINE

Don’t forget!
- Take weekly walks with your mentor!
- Your walking day and time is:
- Be sure to record your walks on your Walking Log!
- Remember your pedometer so you can track your progress.
- Contact Autumn at the Joseph Residence, or Emily Williams with any questions or concerns.

Walking 1 mile a day burns 100 calories.

Physical activity and support from a trusted individual has been shown to increase self-esteem, and decrease feelings of depression and worry. (Gaian Inc., 2011)

Program Coordinator: Emily Williams
Missoula, MT 59808
Emily1.williams@umontana.edu
(406) 243-4521
Appendix E
IRB Approval
Date: December 6, 2011

To: Emily Williams/C. Ann Sondag, Health and Human Performance

From: Dan Corti, IRB Chair

RE: IRB 211-11: "Evaluation of a Peer Mentor Walking Program for Homeless Women in Missoula, MT"  

Your IRB proposal cited above has been APPROVED under expedited review by the Institutional Review Board in accordance with the Code of Federal Regulations, Part 46, section 110. Expedited approval refers to research activities that (1) present no more than minimal risk to human subjects, and (2) fit within the following category for expedited review as authorized by 45 CFR 46.110 and 21 CFR 56.110:

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies. (NOTE: Some research in this category may be exempt from the HHS regulations for the protection of human subjects, 45 CFR 46.101(b)(2) and (b)(3). This listing refers only to research that is not exempt.)

University of Montana IRB policy requires you to file an annual Continuation Report (Form RA-109) for expedited studies. However, you are required to timely notify the IRB if there are any significant changes or if unanticipated or adverse events occur during the study. If you experience an increased risk to the participants, or if you have participants withdraw from the study or register complaints about the study.
At The University of Montana (UM), the Institutional Review Board (IRB) is the institutional review body responsible for oversight of all research activities involving human subjects outlined in the U.S. Department of Health and Human Services Office of Human Research Protection (OHRP) and the National Institutes of Health, Inclusion of Children Policy Implementation (http://grants.nih.gov/grants/funding/children/children.htm).

Instructions: A separate registration form must be submitted for each project. IRB proposals are approved for three years and must be continued annually. Faculty and students may email the completed form as a Word document to IRB@umontana.edu or submit a hard copy to the Office of the Vice President for Research & Development, University Hall 116. Student applications must be accompanied by email authorization from the supervising faculty member or a signed hard copy.

All fields must be completed. If an item does not apply to this project, write in: n/a.

1. Administrative Information
   - Project Title: Evaluation of a Peer Mentor Walking Program for Homeless Women in Missoula, MT
   - Principal Investigator: Emily Williams
   - Title: Graduate Student
   - Work Phone: HIP Office: 243-4211
   - Call Phone: 541-398-1548
   - Department: Health & Human Performance
   - Office location: McGill 239

2. Human Subjects Protection Training: (All researchers, including faculty supervisors for student projects, must have completed a self-paced course on protection of human research subjects with the last three years (http://www.umi.edu/research/compliance/training) and be able to supply the “Certificate of Completion” upon request. Add rows to table if needed.)

| NAME and DEPT. | PI | CO-P | Faculty Supervisor | Research Assistant | DATE COMPLETED
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Emily Williams, Health &amp; Human Performance</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>October 25, 2011</td>
</tr>
<tr>
<td>Dr. Annie Song, Health &amp; Human Performance</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>March 1, 2010</td>
</tr>
</tbody>
</table>

3. Project Funding: (If federally funded, you must submit a copy of the abstract.)

<table>
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<tr>
<th>Agency</th>
<th>Grant No.</th>
<th>Start Date</th>
<th>End Date</th>
<th>PI</th>
<th>Has grant proposal received approval and funding?</th>
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</thead>
<tbody>
<tr>
<td>Yes if:</td>
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<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Yes (if yes, cite sponsor on ICF if applicable)</td>
<td>No</td>
<td></td>
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</tr>
<tr>
<td>If yes, cite sponsor on ICF if applicable</td>
<td>No</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Is this part of a thesis or dissertation? Yes: No: Yes, whose? Emily Williams If yes, date you successfully presented your proposal to your committee: November 18, 2011

IRB Determination:
- Approved Exempt from Review, Exception # (see memo)
- Approved by Expedited Review, Category # (see *Note to PI)
- Full IRB Determination
  - Approved (see *Note to PI)
  - Conditional Approval (see memo) - IRB Chair Signature/Date:
    - Conditions Met (see *Note to PI)
    - Resubmit Proposal (see memo)
    - Disapproved (see memo)
- Risk Level: Minimal

Final Approval by IRB Chair: __________________________ Date: 12-6-11 Expires: 12-5-12

*Note to PI: Study is approved for one year. Use any attached IRB-approved forms (signed/dated) as "masters" when preparing copies. If continuing beyond the expiration date, a continuation report must be submitted. Notify the IRB if any significant changes or unexpected events occur. Notify the IRB in writing when the study is terminated.

For UM-IRB Use Only
Appendix F
Participant Recruitment Form
Participants in the program will:

- Be given a pedometer to track walking
- Complete a survey before and after the program regarding aspects of wellbeing
- Participate in a focus group regarding aspects of the walking program toward the end of the program (and receive a $5 cash incentive as a token of appreciation for your time and feedback).
- Receive $5 cash for meeting with their mentor at least 7 of the 8 weeks of the program.

If interested, fill out the information below and return it to your case manager or Emily Williams!

_____________________________________________________________
Name _____________________________________________________________

Telephone Number__________________________________________________

Length of time at the Joseph Residence ______________________________

Will you be at the Joseph Residence through April, 2012?

☐ YES  ☐ NO
Appendix G
Participant Informed Consent
PARTICIPANT INFORMED CONSENT

TITLE
Formative and Impact Evaluation of a Peer Mentor Walking Program for Transitionally Housed Women

PROJECT DIRECTOR:  
Emily Williams  
The University of Montana

FACULTY SUPERVISOR:  
Dr. Annie Sondag  
The University of Montana

Department of Health & Human Performance  
Missoula, MT 59812

Department of Health & Human Performance  
Missoula, MT 59812

(406) 243-4211  
emily1.williams@umontana.edu

(406) 243-5215  
annie.sondag@umontana.edu

SPECIAL INSTRUCTIONS
The language in this consent form may be new to you. If you read any words that are not clear to you, please ask the person who gave you this form to explain them to you.

PURPOSE
The first purpose of this project is to develop and implement a peer mentor walking program for homeless women living in a local transitional shelter. The second purpose is to conduct a pilot study to evaluate the effects of this program on specific aspects of participants' well-being.

PROCEDURES
Participation in this project is voluntary. You are asked to read and sign this consent form. If you agree to participate you will be matched with a peer mentor to walk with on a weekly basis. You will also be asked to participate in a focus group where you will be asked questions regarding your perceptions of the program. This focus group will be approximately one hour, and will be audio recorded for accuracy of responses. Additionally, you will be asked to complete a pre-test and post-test survey addressing various aspects of your well-being. Time to complete each survey will be approximately 20 minutes. Again, your participation in each aspect of this project is voluntary.

PAYMENT FOR PARTICIPATION
You will receive $5.00 cash for participating in the focus group, and additional $5.00 cash for completing at least seven weeks of the 8-week program.

RISKS/DISCOMFORTS
You may find some of the questions personal, you may feel you do not know the answer, or some of the questions may make you feel uncomfortable. You are welcome to refrain from answering any question for any reason or to discontinue your participation at any time. Contact information for organizations where you can receive confidential answers to your questions or receive more information and/or support are listed at the end of this consent form.

(continued on back)
BENEFITS
By participating in this project, your answers will help staff offer services and modify or develop programs to address the well-being of women in transitional housing. Additionally, at the start of the program you will receive new walking shoes and a pedometer to track your walking. These items are yours to keep.

CONFIDENTIALITY
All information collected during the focus group and from the surveys will be confidential. Researchers and interviewers will avoid recording any identifying information. They will not use your name or any other identifying information in reports or any other materials related to this study. Specifically:
- The identities of all interview participants will remain confidential and will not be associated with research findings in any way.
- Audio tapes will be destroyed as soon as they are transcribed.
- No information related to participants’ identities will appear in the transcription of the audiotapes.
- All the data collected during this study will be reported and examined as group data.

COMPENSATION FOR INJURY
The project team believes the risk of taking part in this study is minimal. However, the following liability statement is required in all University of Montana consent forms:

In the event that you are injured as a result of this research you should individually seek appropriate medical treatment. If the injury is caused by the negligence of the University or any of its employees, you may be entitled to reimbursement by the department of Administration under the authority of MCA, Title 2, Chapter 9. In the event of a claim of such injury, further information may be obtained from the University’s claims Representative or University Legal Counsel.

VOLUNTEER PARTICPATION/WITHDRAWAL
Your decision to take part in this program is entirely voluntary. You are free NOT to answer any question and to discontinue participation at any time. You also may withdraw from this project for any reason without loss of the incentive money or any other benefits to which you are normally entitled.

QUESTIONS
If you have any questions about the project now or later, you may contact Emily Williams at (406) 243-4211 or Emily’s faculty supervisor, Dr. Annie Sondag at (406) 243-5215. If you have any questions about your rights as a participant you may contact the Chair of the Institutional Review Board in the Research Office at The University of Montana – Phone (406) 243-6670.

CONSENT
I have read the above description of this project. I have been informed of the risks and benefits involved, and all of my questions have been answered to my satisfaction. Furthermore, I have been assured that any future questions I may have will be answered by a member of the project team. I voluntarily agree to take part in this study. I am at least 18 years old. I understand this is my copy to keep of this consent form.

____________________________  ______________________  ____________
Printed (Typed) Name of Subject                     Subject’s Signature                     Date

CONSENT TO BE AUDIO-RECORDED
By signing below, I agree to be audio-recorded during the focus group regarding the peer mentor walking program. I understand that these recordings will be deleted after transcription, and that my name will not be connected to the data.

Signature: _______________________________  Date: ______________
Appendix H
Peer Mentor Focus Group Questions
Focus Group: Peer Mentors

LOCATION
The Joseph Residence Community Center

TIME
Approximately one hour

INTRODUCTION AND WELCOME

- Introduce topic of focus group: formative evaluation of the peer mentor walking program. Looking for perceptions of the program, what works, what doesn’t work, what is liked best, what is liked least, etc.
- Honesty/no wrong answers. There are NO wrong answers to my questions. I am interested in YOUR experience. All of your thoughts and comments are important.
- Speak clearly. I am audio taping the session so that I may go back and clarify responses. Also, please remember not to use your mentee’s name in order to protect privacy.
- Confidentiality. I want to remind you that everything you say will be kept private. Please respect the privacy of others by not discussing the content of this focus group outside of this room after tonight.

ICE BREAKER

FOCUS GROUP QUESTIONS

(Use probing questions as necessary to delve deeper into a response)

Procedure Questions

1. How often have you been meeting with your mentee?
2. In what ways has the Walking on Sunshine mentor handbook been helpful? (show handbook so they know what I am referring to) What would you add to the handbook?

Theory of Planned Behavior Questions

3. What do you think the participants are getting out of participating in the walking program (what will the outcome or result be)? Probe: What are the physical, emotional, social, and spiritual benefits?
   a. How much do you think they value that result or outcome?

4. To your knowledge, does anyone support the women in their participation in the walking program? Who are the people that support their participation?
   a. How do the participants feel about these people? Do the participants care what they think?
5. What skills and resources do the participants need in order to participate in this program? Do you feel like they have those skills and resources? *Probe: What keeps them from being able to participate in the program? (Barriers)*
   a. How **important** are these skills and resources in terms of being able to participate in the walking program?

*General Impression Question*

6. In general, how satisfied have you been with the program? What could be done differently in the future to improve the program?
   a. *Probe: With regards to program planner responsibilities, mentors, communication, etc.*
Appendix I
Participant Focus Group Questions
Focus Group: Participants

LOCATION
The Joseph Residence Community Center

TIME
Approximately one hour

INTRODUCTION AND WELCOME

- Snacks available, and give each participant an envelope with $5.00 for participating.
- Introduce topic of focus group: formative evaluation of the peer mentor walking program. Looking for perceptions of the program, what works, what doesn’t work, what is liked best, what is liked least, etc.
- Honesty/no wrong answers. There are NO wrong answers to my questions. I am interested in YOUR experience. All of your thoughts and comments are important.
- Speak clearly. I am audio taping the session so that I may go back and clarify responses. Also, please remember not to use your mentee’s name in order to protect privacy.
- Confidentiality. I want to remind you that everything you say will be kept private. Please respect the privacy of others by not discussing the content of this focus group outside of this room after tonight.
- Reminder that they signed informed consent at beginning of the program. Participation is voluntary and they are free to leave at any time and keep their $5.00.

ICE BREAKER

FOCUS GROUP QUESTIONS

(Use probing questions as necessary to delve deeper into a response)

Procedure Questions

7. How often have you been meeting with your mentor? How often do you walk on your own, or with friends, family, children?
8. In what ways has the Walking on Sunshine participant handout been helpful? (show handout so they know what I am referring to) What would you add to the handout?

Theory of Planned Behavior Questions

9. What do you think you will get out of participating in the walking program (what will the outcome or result be)? Probe: What are the physical, emotional, social, and spiritual benefits?
   a. How much do you value that result or outcome?

10. Does anyone you know support your participation in the walking program? Who are the people that support your participation?
11. What skills and resources do you need to have to participate in this program? Do you feel like you have those skills and resources? *Probe: What keeps you or others from being able to participate in the program? (Barriers)*
   a. How **important** are these skills and resources in terms of being able to participate in the walking program?

**General Impression Question**

12. In general, how satisfied have you been with the program? What could be done differently in the future to improve the program? *Probe: With regards to program planner responsibilities, mentors, communication, etc.*
Appendix J
Interview & Focus Group Demographic Sheet
Interview & Focus Group Contact Sheet

1. **Age:** __________ years

2. **What is your relationship status?**
   - Single
   - Married
   - Divorced
   - Separated
   - Widowed
   - Living with partner, not married

3. **How many children do you have?**
   - 0
   - 1
   - 2
   - 3
   - 4
   - 5
   - 6
   - 7 or more

4. **What is the highest level of education you have completed?**
   - Less than high school
   - High school graduate/GED
   - Trade vocational school
   - College graduate
   - Some college
   - Graduate/Professional school

5. **Are you currently employed?**
   - Yes
   - No

6. **If you are not employed, do you have another regular source of income?**
   - Yes
   - No

7. **Which of the following represents your individual yearly income?**
   - less than $10,000
   - $10,001 – 20,000
   - $20,001 – 30,000
   - $30,001-40,000
   - $40,001-50,000
   - More than $50,000
Appendix K
Staff Interview Questions
Interview: Joseph Residence Staff Members

Interview Date __________________________ Interview Length (approx. 20 minutes) __________
Interview Number __________________________ Interview Location __________________________

INTRODUCTION AND WELCOME

- Remind staff members of the program and the purposes of this research.
- Confidentiality
- Honesty, and there are no wrong answers.

INTERVIEW QUESTIONS

Procedure Questions

13. What is your involvement with the participants of the peer mentor walking program; what are your responsibilities in the peer mentor walking program?

14. To your knowledge, are mentors and participants meeting on a weekly basis? Are they meeting more often? Is there an issue with either party not showing up at the designated time/place?

15. To your knowledge, are participants walking more (than before the start of the program) on their own or with other participants?

Theory of Planned Behavior Questions

16. What do you think the participants will get out of participating in the walking program (what will the outcome or result be)? Probe: What are the physical, emotional, social, and spiritual benefits?
   a. How much do you think they value that result or outcome?

17. To your knowledge, does anyone support the women in their participation in the walking program? Who are the people that support their participation?
   a. How do the participants feel about these people? Do the participants care what they think?
18. What skills and resources do the participants need in order to participate in this program? Do you feel like they have the needed skills and resources? **Probe:** What keeps them from participating in the program, or from being able to participate in the program? *(Barriers)*
   a. How important are these skills and resources in terms of being able to participate in the walking program?

**General Impression Question**

19. In general, how satisfied have you been with the program? What could be done differently in the future to improve the program? **Probe:** With regards to program planner responsibilities, mentors, communication, etc.
Appendix L
Survey Cover and Demographics Sheets
Instructions:

Please read each question carefully and answer to the best of your ability.

Your identity will be completely protected and the answers you provide will not be used against you in any way. Absolutely do not write your name anywhere on this survey.

If at any time you decide you are not comfortable with a question or completing the survey please do not hesitate to leave the question blank or stop filling out the survey.

Thank you very much. Your time is greatly appreciated!

Please circle the month you were born:

AND Write the first three letters of your mother’s first name: ___________
Demographic Information

1. **Age:** _________ years

2. **What is your relationship status?**
   - □ Single
   - □ Married
   - □ Divorced
   - □ Separated
   - □ Widowed
   - □ Living with a partner, not married

3. **How many children do you have?**
   - □ 0
   - □ 1
   - □ 2
   - □ 3
   - □ 4
   - □ 5
   - □ 6
   - □ 7 or more

4. **What is the highest level of education you have completed?**
   - □ Less than high school
   - □ High school graduate/GED
   - □ Trade vocational school
   - □ Some college
   - □ College graduate
   - □ Graduate school/Professional school

5. **Are you employed or do you have another regular source of income?**
   - □ Yes
   - □ No

6. **Which of the following represents your individual yearly income?**
   - □ less than $10,000
   - □ $10,001 – 20,000
   - □ $20,001 – 30,000
   - □ $30,001-40,000
   - □ More than $40,000
Appendix M
Outcome Inventories
Rosenberg's Self-Esteem Scale

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel that I am a person of worth, at least on an equal plane with others.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I feel that I have a number of good qualities..</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. All in all, I am inclined to feel that I am a failure.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I am able to do things as well as most other people.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I feel I do not have much to be proud of.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I take a positive attitude toward myself.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. On the whole, I am satisfied with myself.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. I wish I could have more respect for myself.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. I certainly feel useless at times.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. At times I think I am no good at all.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Center for Epidemiologic Studies Depression Scale (CES-D), NIMH

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

<table>
<thead>
<tr>
<th>Week</th>
<th>During the Past</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely or none of the time (less than 1 day)</td>
<td>Some or a little of the time (1-2 days)</td>
</tr>
<tr>
<td>1. I was bothered by things that usually don't bother me.</td>
<td>☐</td>
</tr>
<tr>
<td>2. I did not feel like eating, my appetite was poor.</td>
<td>☐</td>
</tr>
<tr>
<td>3. I felt that I could not shake off the blues even with help from my family or friends.</td>
<td>☐</td>
</tr>
<tr>
<td>4. I felt I was just as good as other people.</td>
<td>☐</td>
</tr>
<tr>
<td>5. I had trouble keeping my mind on what I was doing.</td>
<td>☐</td>
</tr>
<tr>
<td>6. I felt depressed.</td>
<td>☐</td>
</tr>
<tr>
<td>7. I felt that everything I did was an effort.</td>
<td>☐</td>
</tr>
<tr>
<td>8. I felt hopeful about the future.</td>
<td>☐</td>
</tr>
<tr>
<td>9. I thought my life had been a failure.</td>
<td>☐</td>
</tr>
<tr>
<td>10. I felt fearful.</td>
<td>☐</td>
</tr>
<tr>
<td>11. My sleep was restless.</td>
<td>☐</td>
</tr>
<tr>
<td>12. I was happy.</td>
<td>☐</td>
</tr>
<tr>
<td>13. I talked less than usual.</td>
<td>☐</td>
</tr>
<tr>
<td>15. People were unfriendly.</td>
<td>☐</td>
</tr>
<tr>
<td>16. I enjoyed life.</td>
<td>☐</td>
</tr>
<tr>
<td>17. I had crying spells.</td>
<td>☐</td>
</tr>
<tr>
<td>18. I felt sad.</td>
<td>☐</td>
</tr>
<tr>
<td>19. I felt that people dislike me.</td>
<td>☐</td>
</tr>
<tr>
<td>20. I could not get &quot;going.&quot;</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>Feeling nervous, anxious or on edge</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Not being able to stop or control worrying</td>
</tr>
<tr>
<td>3.</td>
<td>Worrying too much about different things</td>
</tr>
<tr>
<td>4.</td>
<td>Trouble relaxing</td>
</tr>
<tr>
<td>5.</td>
<td>Being so restless that it is hard to sit still</td>
</tr>
<tr>
<td>6.</td>
<td>Becoming easily annoyed or irritable</td>
</tr>
<tr>
<td>7.</td>
<td>Feeling afraid as if something awful might happen</td>
</tr>
</tbody>
</table>

(For office coding: Total Score T = ___ + ___ + ___)
Appendix N
Additional Post- and Follow-up Survey Questions
1. “Walking on Sunshine” was 8 weeks long. How many times did you walk with your mentor during the 8 weeks? ________

2. How much do you think “Walking on Sunshine” improved the way you think about yourself?

   1  2  3  4  5  6  7  8  9  10

   Did not help at all                        Helped a lot

3. How much do you think “Walking on Sunshine” improved feelings of sadness and loneliness?

   1  2  3  4  5  6  7  8  9  10

   Did not improve                        Improved a lot

4. How much do you think “Walking on Sunshine” improved feelings of worry, nervousness, and fear?

   1  2  3  4  5  6  7  8  9  10

   Did not improve                        Improved a lot

5. WHAT about “Walking on Sunshine” improved the way you think about yourself and feelings of sadness, loneliness, worry, nervousness, or fear?

   ___________________________________________________________________________

   ___________________________________________________________________________

   __________

6. How helpful do you think “Walking on Sunshine” would be for future women in transitional housing?

   1  2  3  4  5  6  7  8  9  10

   Not helpful at all                        Very helpful