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# Exploring the relationship between socioeconomic status and health, as it affects men and women

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Exploring the Relationship Between Socioeconomic Status and
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EXPLORING THE RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND
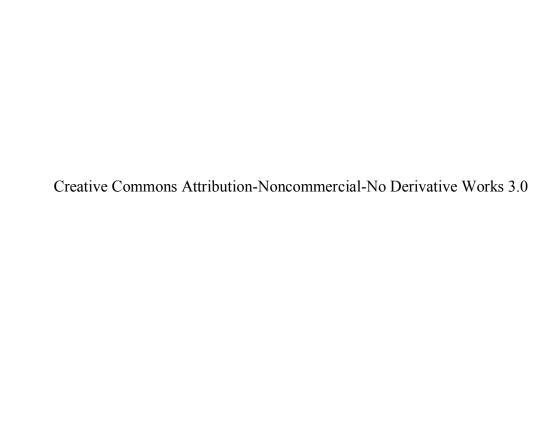
HEALTH, AS IT AFFECTS MEN AND WOMEN

By

Taylor S. Engel

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ABSTRACT

Low socioeconomic status has been found to adversely affect the physical and

mental health of men and women. While research studies have examined the relationship

between income and health, few have had special focus on gender differences, as they

concern physical and mental health outcomes for persons living in poverty. This study

explores the disparities and differences that exist between males and females in the

population, and seeks to identify any supports needed for those individuals. This study

includes a secondary data analysis, which utilized a sample of 125 adults taken from a

primary care clinic in Northern Florida that serves individuals of lower socioeconomic

status. Physical health measures used in the study included the RAND36 item general

health self-report survey and the Body Mass Index scale. The mental health measures

used included self-report surveys and questionnaires, such as the five-item Overall

Anxiety Severity and Impairment Scale, Alcohol Use Disorders Identification Test, and

the Inventory of Depressive Symptomology. Results from the analysis indicated that the

findings were not statistically significant. Implications and recommendations for future

research, policy, and clinical practice are discussed.

*Keywords*: socioeconomic status, physical health, mental health, gender, obesity,
diabetes, hypertension, alcohol use disorder, depression, anxiety

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# CHAPTER I

# INTRODUCTION

Poverty has long been a problem in the United States and it continues to impact millions of Americans each year. In 2015, the United States' Census Bureau released a report announcing the 2014 poverty rate as 14.8 percent, indicating that 46.7 million persons are currently living in impoverished conditions. The physical health of those living in poverty is adversely affected, with challenges including obesity and diabetes (Everson, Maty, Lynch, & Kaplan, 2002). Poverty presents challenges related to mental health as well, with low-income populations reported as 1.8 times more likely to experience depression than higher income populations (Druss & Walker, 2011).

Surveys conducted by the U.S. Census Bureau (2015) have noted that gender differences exist and report that 161,164 women and 154,639 men were living below the poverty line in 2014. Explanations for the gender differences in income status have been posed, such as wage inequality and type of involvement in the work force (Mykyta & Renwick, 2013). These socioeconomic disparities and their impact on health with respect to gender differences highlight the importance of this study. It also suggests that there is a need for focused strategies to combat the disparities. This study is unique in that it will examine multiple variables within this one population and identify intersections between the variables. Previous studies have focused on variables such as socioeconomic status and physical or mental health but few have examined the context and disparities that exist within gender.

# CHAPTER II

# LITERATURE REVIEW

**Socioeconomic Status**

With poverty levels increasing, researchers are making efforts to understand the causes. The history of the United States has been marked with segregation and arguments have been made that past discriminative actions have led to concentrated poverty through geographic locations of subsidized housing (Goetz, 2003). The social problems that arise from concentrated poverty are evident as rates of violent crime, teen pregnancy, and school dropout are all greater in impoverished communities (Goetz, 2003). The areas with an increased incidence of poverty are significant, as they can further impede access to health services (Goetz, 2003).

Rural areas have been found to be regions with high concentrations of poverty, as it is rampant in areas including Appalachia, the Ozarks, the Cotton Belt, and the Mississippi Delta (Gurley, 2016). In 2014, the United States Census Bureau's Annual Social and Economic Supplement (ASEC) conducted the American Community Survey, which estimated that nonmetropolitan areas had a poverty rate of 18.1%, while metropolitan areas had a poverty rate of 15.1%. These high poverty rates in nonmetropolitan regions have been consistent since the beginning of official recordings of poverty rates in the 1960s (United States Census Bureau's Annual Social and Economic Supplement, 2014). While rural areas face higher rates of poverty, urban areas are still experiencing alarmingly high rates of income inequality as well.

The measurements by which poverty is estimated have been harshly criticized. The poverty threshold, which was initiated in 1969, does not consider a family's need for

the necessary financial resources that allow economic self-sustainability (Varghese, 2016). This measurement has been described as outdated and problematic as it estimates the needs of those living in poverty without taking into account the varying cost of living across the United States (Cook & Frank, 2008). The resources provided to those living in poverty have been characterized as only meeting very basic needs for survival, needs which can vary based on the individual and the current conditions of the community that the individual is a part of (Mingione, 1996).

Solutions for alleviating poverty have been debated for some time and policies have repeatedly attempted to address this national issue. Federal assistance strategies to combat poverty include the New Deal Program, which was enacted in the 1930s, the Food Stamp Program (FSP), the Temporary Assistance for Needy Families (TANF) program, the Earned Income Tax Credit (EITC) program, and the Supplemental Nutrition Assistance Program (SNAP; Varghese, 2016). Some of these programs have had more success than others, such as the EITC and SNAP. Both EITC and SNAP have demonstrated success in assisting individuals accomplish self-sufficiency through work programs and vouchers (Varghese, 2016). The anti-poverty solutions listed have been supported by some and criticized by others. Regardless of opinion on the benefits of the policies and programs implemented, poverty levels have continued to rise.

**Socioeconomic Status and Health**

Research has illustrated the impact of poverty on health, with many health risks discovered to be closely associated with socioeconomic status. Evidence has noted that higher income allows individuals to more easily access quality healthcare, afford more nutritious foods, and afford better housing, all of which are related to overall health status

(Adler & Newman, 2002). The relationship between the two variables is notable and assists in efforts to combat poverty and the illnesses that can potentially result from living in impoverished conditions.

**Gender**

The connection between socioeconomic status and health has been established, but gender differences as they relate to socioeconomic status and health have not been well researched. Gender is a significant factor as men and women have different health needs, health risks, and are faced with certain gender-specific illnesses (e.g., postpartum depression, prostate cancer, ovarian cancer). Through studying the gender differences in health outcomes between men and women living in poverty, more specific supports can be developed to meet the particular needs of females and males in this vulnerable population.

**Female and male physical health.** Females and males of lower socioeconomic status disproportionately experience obesity, a health issue which increases risk for conditions such as hypertension, diabetes, and heart disease (Rutten, Yaroch, Colon-Ramos, Johnson-Askew, & Story, 2010). Current data reflects higher rates of obesity in females rather than males, with Ogden, Lamb, Carroll, and Flegal (2010) stating that, as income decreases the prevalence for obesity among women rises. In 2010, the CDC published the National Health and Nutrition Examination Study further supporting this data, with findings that revealed 42% of women who had income below 130% of the poverty level were considered obese, whereas, 29% of women with income that is at or above 350% of the poverty level were considered obese (Ogden et al., 2010).

Unlike females, males of lower socioeconomic status experience obesity at the same rate as males with higher income (Ogden et al., 2010). In 2010 the World Health Organization published a report with data supporting the rates of obesity for women of lower socioeconomic status as higher than men of the same socioeconomic status, with 48.3% of women being estimated as obese, while 44.2% of men were estimated as obese (Desilver, 2010).

Diabetes is also more prevalent among women and men of lower socioeconomic status. Type II Diabetes, specifically, is more likely to be diagnosed for men and women living in poverty when compared to those of higher socioeconomic status (Raphael, 2010). Research has highlighted the strong association between income status and the prevalence of type II diabetes for women (Robbins, Vaccarino, Zhang, & Kasi, 2005). However, males living in similar conditions have not been found to have as high of an association between their socioeconomic status and higher incidence of type II diabetes (Robbins, Vaccarino, Zhang, & Kasi, 2005). Explanations regarding this gender difference have been posed and include differences in body size, obesity status, lifestyle, and occupational status (Robbins, Vaccarino, Zhang, & Kasi, 2005).

Hypertension is another physical health issue more regularly faced by this population, with 29.6% of low-income adults diagnosed with hypertension versus 23.8% of high-income adults (Carroll, 2011). The American Heart Association (2013) notes the presence of gender differences, with higher numbers of diagnosis shifting between genders throughout the lifespan. More men experience hypertension than women until the ages of 45-54, during which hypertension is experienced equally by both genders, and

from ages 55-onward a higher percentage of women are diagnosed (American Heart Association, 2013).

**Female and male mental health.** Evidence supports the existence of a relationship between poverty and mental health, with illnesses such as depression, anxiety, and alcohol use disorders being noted as having strong and significant associations with poverty (Mills, 2015). Females of lower socioeconomic status face mental health disorders that males of lower socioeconomic status do not face, due to biological experiences such as child birth (Abrams, Dornig, & Curran, 2009). Postpartum depression, a mood disorder faced by 1 in 8 women, has been found to be more prevalent in low-income mothers when compared to high-income mothers (Ertel, Rich-Edwards, & Koenen, 2011). In addition, depression has consistently been found to be much more common in low-income areas (Brown, 2012).

Studies have noted that females in general are twice as likely to be diagnosed with depression and 12% of all American women will experience depression during their lives (Faris & Krucik, 2012). A Gallup report published in 2012 lists depression as the illness that most disproportionately impacts those of lower socioeconomic status (Brown, 2012). The National Center for Health Statistics (2014) has published data further supporting this report, with research indicating that depression is more prevalent for males and females living in poverty. Persons of lower socioeconomic status are 2.5 times more likely to receive a diagnosis than those of higher socioeconomic status (National Center for Health Statistics, 2014).

The risk and potential for persistent depression is higher for women of lower socioeconomic status when compared to higher income men and women, as more women

live in poverty (Muntaner, Eaton, Miech, & O'Campo, 2003). Therefore, women are more frequently exposed to stressors such as inadequate living conditions, home and work stress, and financial strains (Muntaner et al., 2003). These risk-related gender specificities present the reality of mental health outcomes for women living in poverty. As noted, depression is also more prevalent for men living in poverty versus men of higher socioeconomic status (The National Center for Health Statistics, 2014). Locating research specific to depression experienced by men living in poverty was largely unsuccessful, as most research focused primarily on women as the higher risk group.

Anxiety disorders impact 3.1% of the United States population, with women being twice as likely to receive a diagnosis (CDC, 2013). The National Institute of Mental Health (2016) lists both poverty and being female as specific risk factors for all anxiety disorders. The emotional and environmental stressors that can result from living in poverty can greatly influence the onset of mood disorder. Wolff, Santiago, and Wadsworth (2009) published a study examining the risk factors that arise from poverty, with findings indicating a strong relationship between poverty-related stress and anxiety symptoms. Information regarding anxiety experienced by males of lower socioeconomic status was difficult to locate. As with depression, the research regarding the topic is concentrated on the prevalence of anxiety in females of lower socioeconomic status rather than the groups at lower risk.

In 2014, the National Institute of Alcohol Abuse and Alcoholism reported that 16.3 million adults in the United States currently had an alcohol use disorder (AUD). AUDs were found to be more prevalent for men, with 10.6 million men found to have an AUD versus 5.7 million women (National Institute of Alcohol Abuse and Alcoholism,

2014). Males and females living in poverty have been identified as having a higher risk for AUDs, with neighborhood poverty being characterized as a significant predictor for excessive alcohol consumption (Cerda, Diez-Roux, Tchetgen, Gorfan-Larsen, & Kiefe, 2010). Studies have shown a stronger link between lower socioeconomic status and AUDs for males rather than females, though information related to AUDs and males in poverty is limited (McKinney, Chartier, Caetano, & Harris, 2012). Females in poverty who have AUDs have been found to link their excessive drinking to consistent stressors in all their lives, including family, financial, as well as community and social conflicts (Mulia, Schmidt, Bond, Jacobs, & Korcha, 2008).

**Theoretical Perspective**

   **Ecological theory.** The ecological theory and social-ecological model consider all of the personal and environmental factors that impact and shape an individual's life (Siporin, 1980). This perspective assists in a deeper understanding of how economic states, such as poverty, can influence individual functioning. Research has shown that socioeconomic status impacts not only physical and mental health, but also social mobility (Kraus & Tan, 2015). A person born into poverty struggles to escape economic inequality and their financial status becomes cyclical and intergenerational (Benjamin et al., 2012). Mazumder (2004) found that economic status can be more inheritable than certain physical attributes, such as height. Education is an additional area of concern, as individuals living in low-income neighborhoods have a higher likelihood of experiencing academic problems and dropping out of school (Wyatt-Nichol & Brown, 2011). The interplay between financial stressors and a struggle for social mobility through education and the workforce, further exacerbates poor health outcomes for males and females in

this population (American Psychological Association, 2016). The context in which low-income persons live is rifled with struggle.

**Critical feminist theory.** Critical feminist theory recognizes the multiple intersecting oppressions faced by women, including those related to income and occupation (Arrigo, 2002). Gender inequality is rampant across the United States, with unequal pay being at the forefront of national conversations regarding the rights of women and minorities. Cuberes and Teignier (2013) suggest that institutional sexism makes it all the more difficult for women to contribute to the labor market and potentially pull themselves out of poverty. Additionally, income inequality between males and females has been found to correlate with the prevalence of intimate partner violence against women (Belle-Doucet, 2003). The violence faced by women in poverty can severely impact physical and mental health, as well as the victim's ability to escape abusive relationships. Employment instability often results from such abuse, as the health issues that can arise create additional obstacles for workplace productivity (Staggs & Riger, 2005). Due to this additional risk factor associated with poverty, females' opportunity for economic independence is further complicated and the feminization of poverty continues. The oppression faced by women in this population is multi-faceted and crosses several cycles where social and economic vulnerability is central.

**Purpose**

The overall purpose of this research project was to explore the disparities and differences existing between men and women of lower socioeconomic status as they relate to mental health (e.g., substance use, depression, anxiety) and physical health (i.e., general physical health, BMI) outcomes. Specific research questions included:

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1. Across multiple measures of mental health, is there a significant difference in mental health of low-income women and men?

2. Across multiple measures of physical health, is there a significant difference in physical health of low-income women and men?

Finally, this study addressed the importance of this research and critically discusses the findings to explore the implications of the results for future research, policy, and practice. This study seeks to identify ways to better support men and women in this population as they face multiple types or levels of vulnerability.

# CHAPTER III

# METHODOLOGY

**Sample**

The sample used in this study consisted of 125 adults between the ages of 18-65 from a primary care clinic that primarily serves those of low socioeconomic status in Northern Florida. Because this study will be using this secondary data set, all consent was gained prior to this study and this process is discussed in Woods (2012). Participants in the study were mainly female (65%), identifying as Black or African American (59%), with an average age of 46. The majority reported a household income of $10,000 or less, that they were without health insurance (90%), currently unemployed (71%), and held a high school degree or the equivalent of a high school degree (35%). For more information regarding the sample please see the demographic table (i.e., Table 1).

Table 1 *Demographic Characteristics of the Sample (N=125).*

| Variable | Frequency(%) | Mean(*SD*) | Range |
|---|---|---|---|
| **Gender** | | | |
| Female | 81(65%) | | |
| Male | 43(34%) | | |
| Missing | 1(1%) | | |
| **Age** | | 46(12.2) | 18-65 |
| **Race** | | | |
| Black or African American | 74(59%) | | |
| Caucasian | 42(34%) | | |
| Am. Indian or Alaska Native | 2(2%) | | |
| Asian | 1(1%) | | |
| Biracial | 5(4%) | | |
| Missing | 1(0%) | | |
| **Income** | | | |
| Less than $10,000 | 82(66%) | | |
| $10,000-$19,999 | 17(14%) | | |
| $20,000-$39,999 | 15(12%) | | |
| $40,000-$59,999 | 2(2%) | | |
| $60,000-$79,999 | 4(3%) | | |
| Missing | 3(0%) | | |

Table 1 Continued

| Variable | Frequency(%) | Mean(*SD*) | Range |
|---|---|---|---|
| **Insurance** | | | |
| Uninsured | 112(90%) | | |
| Medicaid | 9(7%) | | |
| Medicare | 2(2%) | | |
| Universal Health Care | 1(1%) | | |
| **Employment** | | | |
| Unemployed | 89(71%) | | |
| Part-time | 24(19%) | | |
| Full-time | 12(10%) | | |
| **Education** | | | |
| High school diploma/GED | 44(35%) | | |
| Did not graduate high school | 34(27%) | | |
| Some college | 24(19%) | | |
| College degree | 23(18%) | | |
| **Marital Status** | | | |
| In relationship | 76(62%) | | |
| Divorced | 41(33%) | | |
| Never married | 39(31%) | | |
| Married/living together | 24(19%) | | |
| Married but separated | 10(8%) | | |
| Widowed | 9(7%) | | |

**Instrumentation**

     **General physical health.** Perception of general physical health was assessed

using four subscales of the RAND36-item Health Survey (Hays, Sherbourne, & Mazel,

1995). The four subscales used included: Physical Functioning (10 items), Role

Limitations Due to Physical Health (4 items), Pain (2 items), and General Health (5

items). The RAND36-item Health Survey measures positive and negative states of health

through a 36 question self-report questionnaire (VanderZee, Sanderman, Heyink, & de

Haes, 1996). The RAND36-item Health Survey focuses on eight areas of health,

including: physical functioning, bodily pain, role limitations due to health problems, role

limitations due to personal or emotional problems, emotional well-being, social

functioning, energy/fatigue, and general health perceptions (RAND Health, 2016).

A five-point Likert scale is used to measure each item (e.g., 1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent) and higher scores indicate better overall health (RAND Health, 2016). The scores of the four subscales used in this study were averaged to create one physical health summary score. The reliability, construct validity, and internal consistency of the RAND36-item Health Survey has been found to be high ($\alpha$ = .71 to .93; VanderZee, Sanderman, Heyink, & de Haes, 1996). Furthermore, the correlation between the RAND36-item Health Survey and scales from different instruments that also measure health have been positive.

**Body mass index (BMI).** BMI is calculated from a person's height and weight and serves as an indicator of unhealthy weight or potential health problems (Centers for Disease Control [CDC], 2011). BMI is one of the most consistently used tools to diagnose obesity in adolescents and adults (Romero-Corral et al., 2008). BMI measures body fat by dividing an individual's weight by their height squared and then multiplies it by a conversion factor of 703 (CDC, 2016). The CDC (2016) lists adult standard weight status categories for BMI ranges as below 18.5 is underweight, between 18.5 to 24.9 as normal or healthy weight, between 25 to 29.9 as overweight, and 30 or above as obese. One important consideration, however, is that BMI has been shown to fail when differentiating between body fat and lean mass (Romero-Corral et al., 2008). The reliability and validity of BMI has been challenged and it has been found to have limited accuracy when attempting to identify persons with excess in body fat (i.e., BMI between 25 to 30 kg/m$^2$; Romero-Corral et al., 2008).

**Problematic alcohol use**. Alcohol consumption was measured using the Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993). The AUDIT is a self-report questionnaire developed by the World Health Organization (WHO) for use in by specialists in primary health care settings. AUDIT is intended to identify alcohol use disorders and advocate for treatment of the disorders before the establishment of alcohol dependency (Daeppen, Yersin, Landry, Pecoud, & Decrey, 2000). The self-report questionnaire is composed of 10 questions measured using a four-point Likert scale (e.g., 0 = never, 1 = less than monthly, 2 = monthly, 3 = weekly, 4 = daily or almost daily) that focus on hazardous and harmful alcohol use and symptoms of alcohol dependency (Lundin, Hallgren, Balliu, & Forsell, 2015). The reliability and validity of AUDIT has been well established and well documented with evidence supporting its usefulness as well as its internal consistency (e.g., α= .80; Lundin, Hallgren, Balliu, & Forsell, 2015).

**Depression.** Severity of depressive symptoms was measured using the Inventory of Depressive Symptomatology – Self Report (QIDS; Rush et al., 2003). This measure is based upon the nine diagnostic symptom domains characterized as a depressive episode in the DSM-IV-TR (American Psychiatric Association, 2000). The QIDS is a 16-item short form self-report measure that was devised by choosing items that exclusively assessed DSM-IV criterion diagnostic symptoms from the 30-item Inventory of Depressive Symptomology (IDS) scale (Rush et al., 2003). The QIDS scores the answers to the 16 items through conversion into the nine diagnostic symptom domains, as mentioned above. The nine domains include: (1) sad mood; (2) concentration; (3) self-criticism; (4) suicidal ideation; (5) interest; (6) energy/fatigue; (7) sleep disturbance (i.e.,

initial, middle, and late insomnia or hypersomnia); (8) decrease in appetite/weight; (9) psychomotor agitation (Rush et al., 2003). The total score ranges from 0 to 27.

The items included in QIDS instruct the patient completing the questionnaire to circle the response to each item that best matches the patient's behavior over the past week. The items include options that list statements such as, "I see myself equally as worthwhile and deserving as other people," or, "I think constantly about major and minor defects in myself" (Rush et al., 2003). Individuals respond on a scale that ranges from zero being the least severe to three being the most severe (i.e., 0 = I do not think of suicide or death, 1 = I feel that life is empty or wonder if it is worth living, 2 = I think of suicide or death several times a week for several minutes, 3 = I think of suicide or death several times a day in some detail, or I have made specific plans for suicide or have actually tried to take my life; Rush et al., 2003). The internal consistency of the QIDS is high ($\alpha$ = .86; Rush et al., 2003) and has been found to correlate with the results of the larger measure IDS ($\alpha$ = .96, Rush et al., 2003), further strengthening the reliability of the questionnaire.

**Anxiety.** The five-item Overall Anxiety Severity and Impairment Scale (OASIS) was used to examine how anxiety symptoms interfere with work, school, and personal relationships, and it measures the intensity and frequency of anxiety (Normal, Cissell, Means-Christensen, & Stein, 2006). The OASIS is a short measure that examines the frequency and severity of anxiety-related symptoms (Ito et al., 2015).

The five items measured on OASIS include anxiety frequency, intensity, avoidance behavior, impairment in work or school, and impairment in interpersonal relationships over the past week (Ito et al., 2015). A four-point Likert scale is used to

score the five items (i.e., 0 = no anxiety in the past week, 1 = infrequent anxiety, 2 = occasional anxiety, 3 = frequent anxiety, 4 = constant anxiety; Ito et al., 2015). The OASIS has demonstrated high reliability, convergent and discriminate validity, and generalizability ($\alpha$ = .96; Ito et al., 2015).

**Data Analysis**

To test the research questions I will be using statistical techniques such as descriptive statistics to report the scores of each measure (mean, standard deviation, range) and independent sample t-tests to test whether there are significant gender disparities in mental and physical health. These methods will allow me to examine what has been found in regards to the study as well as explore what supports may need to be offered to individuals within this population.

# RESULTS

Table 2 *Independent samples t-test comparing mean scores of the physical and mental health of males and females.*

| Variable | Mean (SD) | *t* | *p* |
|----------|-----------|-----|-----|
| Physical Health (RAND36) | 53.22 (26.51)<br>49.48 (49.48) | .743 | .957 |
| Physical Health (BMI) | 29.64 (8.056)<br>32.72 (8.289) | -1.881 | . 703 |
| Mental Health (AUDIT) | 5.171 (5.770)<br>3.078 (4.544) | 2.164 | .066 |
| Mental Health (QIDS) | 9.65 (6.241)<br>9.30 (5.501) | .322 | .384 |
| Mental Health (OASIS) | 5.425 (5.804)<br>5.519 (5.569) | -.086 | .356 |

Note. *p* < .05

**General health**

An independent samples *t*-test was conducted to compare the mean subscale health scores of a sample of 125 men and women who completed the RAND36-item general health survey. There were no statistically significant differences found (*t*(121) = 0.743, *p* > .05). The mean scores for the men who completed the survey (*M* = 53.22, *SD* = 26.5) were not significantly different than the mean scores for the women who completed the survey (*M* = 49.48, *SD* = 26.6). There are no differences in the physical well-being between females and males in this sample. However, males in the sample had slightly higher scores for general health indicating slightly better health.

**Body mass index (BMI)**

An independent-samples *t*-test was conducted to compare the mean BMI scores from a sample of 125 men and women. The analysis indicated that there were no statistically significant differences found ($t(113) = -1.881, p > .05$). The mean scores for the men who completed the survey ($M = 29.64, SD = 8.15$) were not significantly different than the mean scores for the women who completed the survey ($M = 32.72, SD = 8.29$). There are no differences in BMI between females and males in the sample, though female participants reported slightly higher scores for BMI.

**Alcohol**

An independent samples *t*-test was conducted to compare the mean scores from a sample of 125 men and women who completed the Alcohol Use Disorder Identification Test. There were no statistically significant differences found ($t(116) = 2.164, p > .05$). The mean scores for the men who completed the survey ($M = 5.171, SD = 5.77$) were not significantly different than the mean scores for the women who completed the survey ($M = 3.078, SD = 4.54$). There are no differences in alcohol use between females and males in the sample. However, males reported higher mean scores for alcohol use than females and this analysis was approaching significance.

**Depression**

An independent samples *t*-test was conducted to compare the mean scale scores from a sample of 125 men and women who completed the Quick Inventory of Depressive Symptomology. There were no statistically significant differences found ($t(121) = .322, p > .05$). The mean scores for the men who completed the survey ($M = 9.65, SD = 6.24$) were not significantly different than the mean scores for the women who completed the

survey ($M = 9.30$, $SD = 5.50$). There are no differences in depressive symptomology between females and males in the sample. However, male participants reported slightly higher mean score for depressive symptoms.

**Anxiety**

An independent samples *t*-test was conducted to compare the mean scale scores from a sample of 125 men and women who completed the OASIS self-report measure. There were no statistically significant differences found ($t(117) = -.086$, $p > .05$). The mean scores for the men who completed the survey ($M = 5.425$, $SD = 5.80$) were not significantly different than the mean scores for the women who completed the survey ($M = 5.519$, $SD = 5.57$). There are no differences in anxiety reports between females and males in the sample. However, females in the sample had slightly higher scores for anxiety.

**CHAPTER V**

**DISCUSSION AND CONCLUSION**

**Summary of Findings**

This research sought to explore the relationship between lower socioeconomic status and the physical and mental health differences between females and males. The purpose of this study was to identify any differences between genders and consider specific supports based on those differences. The study examined past research related to health differences between females and males in the population and proceeded with an analysis of a secondary data set. This analysis of the secondary data set indicated a lack of significant differences or variability between the mean physical and mental health measure scores for the participants. These findings contradict past research on the topic, with physical and mental health differences between females and males in this population being noted (Center on Society and Health, 2015). The lack of significance in the findings could highlight that socioeconomic status has more of an impact on physical and mental health, rather than gender.

**Physical health**

The physical health disparities lower-income individuals face are supported by the Center on Society and Health (2015), as those living in poverty have consistently been found to have higher rates of diabetes, obesity, and heart disease, when compared to those of higher socioeconomic status. In 2014, the Centers for Disease Control reported on the prevalence of health issues for individuals below 100% of the poverty level, and 19.8% were found to have an overall poor health status. Males in this sample had higher mean scores for the RAND36, while females had higher mean scores for the BMI scale.

The BMI scores reflect research that has found low-income females to have higher rates of obesity than low-income males (Desilver, 2010). Though the overall scores for males and females in the sample is not significant, males did report better physical health.

**Alcohol Use**

As previously mentioned, past research on the prevalence of alcohol use for low-income persons has highlighted a difference between female and male alcohol use, though information regarding males in this population and the reported factors for alcohol use is not extensive (Cerda, Diez-Roux, Tchetgen, Gorfan-Larsen, & Kiefe, 2010). High-income persons have been found to consume alcohol more frequently than low-income persons, with males of higher socioeconomic status reported to drink the most nationally (CDC, 2010). The CDC (2010) reported that 45.2% of adults below the poverty line had at least one alcoholic beverage within a thirty-day period, while 72.6% of individuals with incomes that were four times above the poverty line had at least a single drink within the same period of time.

One consideration for the findings lacking significance for this variable could be that, one gender may report less than the other. Additionally, the medical setting for the data collection may have impacted responses, as participants could have had concern that their answers could impact the health services they were seeking. Though the results were not significant, males did have a higher mean score than females, which is consistent with past research concerning gender and alcohol use (National Institute of Alcohol Abuse and Alcoholism, 2014).

**Depression**

There were moderate mean scores for levels of depression for women and men in the sample, with the Quick Inventory of Depressive Symptomology assigning scores between 6-10 to mild depression. Female participants had a mean score of 9.30, while male participants had a mean score of 9.65. Males in the sample had higher mean scores than females, a finding that is directly contradictory to past research concerning the prevalence of depression for women in general and women of lower socioeconomic status (Muntaner, Eaton, Miech, & O'Campo, 2003). These contradictory findings could indicate that males may experience depression at a higher rate than assumed. Stigma surrounding males and mental illness has the potential to impact males reporting depressive symptoms and seeking treatment for depression (Kersting, 2005).

It is noted that there was no significant differences between genders, though the moderate mean scores for both females and males of lower income were reflective of mild depressive symptoms. Depression is prevalent in this population, with lower income persons being over twice as likely to receive a diagnosis, though the findings from this study do not fully represent these statistics (Brown, 2012). As previously noted, the medical setting for the data collection may have influenced comfort with disclosing certain behaviors or depressive symptoms, as participants were actively seeking health services at the time of participation.

**Anxiety**

The mean scores for anxiety were not significant, also contradicting prior research findings regarding the population and anxiety diagnoses (The National Institute of Mental Health, 2016). Prior research has identified a correlation between poverty and anxiety,

with environmental and social factors cited as influencing symptoms of anxiety (Baer, Kim, & Wilkenfield, 2012). Reductions in income have also been found to increase the risk of mood disorder incidence (Sareen, Afifi, McMillian, & Asmundson, 2011). Females in the sample had slightly higher mean scores for anxiety than males, which correlates with past findings indicating higher anxiety diagnoses for females (CDC, 2013). Clinically significant OASIS scores range from 8 to 15. Male participants had a mean score of 5.425 and female participants had a mean score of 5.519, indicating a lack of clinically significant score.

**Limitations**

The most prominent limitation in this study is the small sample size, with only 125 low income women and men participating. This limitation can impact the findings, as a higher number of participants increases the likelihood of significant results. Appropriate sample size selection is important, as samples that are too small can present challenges to internal and external validity of studies (Faber, & Fonseca, 2014). With over 46 million Americans living in poverty, the absence of a larger sample size has the potential to influence the generalizability of the study.

The self-reported data can be a considered limitation, as research has noted issues with validity for such instrumentation measures (Prince et al., 2008). As the instrumentation utilized were self-report measures, the stigma associated with mental illness may have impacted the participants' responses to the mental health surveys. Research has indicated that questions concerning alcohol use are often answered less truthfully, leading to results with incorrect estimations (Devaux & Sassi, 2015). Response bias, or social desirability bias, to surveys regarding other mental health problems has

also been identified, with evidence reflecting respondents misreporting information due to embarrassment (Tourangeau, &Yan, 2007). Additionally, individuals interpret and respond to scale measures differently. An individual's current mental health state may impact their responses to surveys such as QIDS or OASIS, which have questions that lead to reflection on past incidents of mental health problems.

**Recommendations**

**Research implications**. This study's review of literature and data analysis have contradictory findings, highlighting the need for additional research on the topic. More extensive research related to this topic needs to be conducted to increase the understanding of the physical and mental health problems faced by men and women in this vulnerable population. This research should include a larger sample size, to increase significance and generalizability, and to better represent low-income persons and their experiences with physical and mental illness. The majority of the participants were low-income, which could potentially be a reason for the lack of significant differences between genders. Future researchers should study the health differences within low-income populations, as socioeconomic status, rather than gender, may be a more significant indicator for poor health outcomes. Future researchers should also consider the impact of direct and indirect respondent bias and its relationship to physical and mental health measures.

**Policy implications**. Throughout history poverty reduction has consistently been a policy issue. Poverty places women and men at risk for several health issues, many chronic and fatal (Sing, & Singh, 2008). Policymakers should look at the full scope of poverty and how it influences the risk for several mental and physical illnesses. Informed

policies that cover the multitude of risk factors associated with low income, will offer better support and assist in improving health outcomes and quality of life for millions. In addition, prioritizing policies related to poverty and its health impact would lessen national spending, as better health outcomes could result from the increased support and cause less reliance on health care systems. Health inequality can be combated through policies that are evidence-based and focused on disparity reduction.

**Clinical implications.** In practice sensitive and appropriate interventions are of utmost importance. This study focused on the gender and health differences for low income persons and what those differences could mean for treatment methods. Individuals practicing in mental and physical healthcare settings should consider the impact poverty has on physical and mental health. The mean scores for depression highlighted the presence of mild depressive symptoms for men in the sample. This finding supports that men, just like women, in this population are at increased risk for depression. There is stigma associated with males having mental illness and research has shown that men are more reluctant to seek care for disorders such as depression (Winerman, 2005). Studies have indicated that men experience and cope with depression differently than women, due to this more specific treatment methods must be developed (Mayo Clinic, 2016). Practitioners should be cognizant of any potential biases towards males and work to find more effective ways for males to disclose mental health struggles and receive treatment.

## Conclusion

Poverty adversely affects the well-being of women and men across the nation. Evidence supporting the existence of a relationship between socioeconomic status,

gender, and health outcomes exists (CDC, 2014). Women and men living in poverty have higher rates of chronic illnesses such as diabetes, heart disease, and cancer (Center on Society and Health, 2015). Mental illnesses are also faced by this population at a higher rate, with socioeconomic status found to be a direct risk factor for mood disorders (Sareen, Afifi, McMillian, & Asmundson, 2011). Though the findings in this study were not significant, the need for focused strategies to combat the issue persists, as millions of individuals are faced with these health disparities.

Strategies for moving forward with research and policy should be evidence-based and directly focused on poverty reduction and accessible health services for those living in poverty. Researchers and policymakers can work together to ensure that policies are well-informed and meet the needs of low-income persons. Reports have shown that policies based on evidence and research are the most responsible and effective method for achieving positive outcomes for constituents (Pew Charitable Trusts, 2014). In practice, macro-level interventions for assisting males with mental illness include public education and awareness. Kersting (2005) suggests campaigns as an effective intervention, citing "Real Men. Real Depression," led by The National Institute for Mental Health, a campaign aimed at reducing stigma and educating males about the symptoms of depression. Researchers, policymakers, and practitioners have a shared responsibility to find and utilize information that will best serve those living in poverty. For change to occur, all must work collectively to address this serious social problem.

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