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The Effects of a Poverty Simulation on Immediate and Sustained Participant Empathy

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The Effects of a Poverty Simulation on Immediate and Sustained Participant Empathy

Doris D. Mann

In partial fulfillment of degree requirements

Ph.D. Education and Social Change

Ansley Frazier Thornton School of Education

Bellarmine University

November 30, 2017
RESULTS OF DISSERTATION DEFENSE

IMPORTANT: Following the oral defense, this form with signatures of committee members should be delivered to the department or program office. The form is to be signed by the Dean of the Avessley Funder Thompson School of Education, and scanned into the student's NijiWeb folder.

This is notice that:

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Department/Program: Education and Social Change

Members of the Committee

Title: The Effects of a Poverty Simulation on Immediate and Sustained Participant Empathy
Abstract

Using the Attribution and the Experiential Learning Theory seated within Constructivism, this study examined the effect of the poverty simulation, Community Action Poverty Simulation (CAPS), on empathetic attitude toward those who experience poverty. 778 participants represented the fields of education, health care, and social work. Measures of immediate and sustained empathetic attitude were conducted using the Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006). Findings indicate that there is immediate empathetic attitude change for the participants, but no sustained empathetic attitude change. Some of the variables considered included gender, race, age, income, voluntary/in-voluntary and others. This study supports the need for further research related to the potential of a poverty simulation to create sustained empathy.

Key words: attribution, empathy, constructivism, experiential learning, poverty, poverty simulation
Dedication

To my three beautiful children, Beth, Paul, and Jillian, who have each walked with me on our journey of life. Also, my two wonderful baby granddaughters who make me laugh when I am with them and cause me to be in awe at the gift of innocence little ones give to the world.

To a special little guy, named Daniel, who many years ago helped me know I had to give back to the world and try to make a difference for kids who are up against unthinkable odds and challenges, such as poverty, everyday of their lives.

To all the at-risk children I had the privilege of teaching for 31 years. They helped me truly realize how important it was to believe in them. They taught me more than I ever taught them. It is my dream that all these young people knew that I was for humbled for having walked down the path of life with them as I was allowed to share their journey.

To Pat Driskell who I worked with at Southern Middle School for 22 years. She was the school’s mother hen. When life was hard and I did not know if I could make it, Pat always helped me believe in myself and know that I was tougher than what I was facing and that I could make it through any challenge life threw at me and could do anything I set my heart on. I set my heart on this Ph.D. and I made it. Thank you “Miss Pat.”

To all the wonderful teachers I worked with for 22 years at Southern Middle School. I admire you all for you dedication to and your love for the students we taught every single day. There were times that were tough, but we made it through those tough times together. I feel honored to have worked with you for 22 years.

To my Mom who many years ago taught me the value of hard work, grit, resilience, and perseverance. For that I am forever grateful.
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Dr. Kathy Cooter was the Chair of my Dissertation Committee as well as my rock through this six-year journey. She was always there for me whether it was saying good job or get this done now. When I struggled with making a decision about my dissertation topic, she suggested I study empathy and poverty simulations because we were already working on the poverty simulation together. I am so grateful for her passion to give voice to those who have no voice because of poverty. Dr. Cooter retired May 2017, but what an incredible legacy she has left for us all to follow in our effort to make the world a better place. You are phenomenal Dr. Cooter, and an inspiration to us all. What a privilege it has been to work with you and learn from you. I am a better person for the time I spent with Dr. Cooter, and I hope to continue to help make the world a better place one starfish at a time.

Dr. Deborah Thompson had to suffer through many changes in Chapter 4 that was very long and full of statistics. She hung in there with me every step of the way.

Dr. Elizabeth Hinson-Hasty taught my ethics class. I learned so much from her and the value of making a difference to the world. My conversations with her were always so enlightening.

Tim Landrum was my advisor while I was in the Ph.D. program at the University of Louisville. I am so grateful that after the first year of my being at the University of Louisville he supported my moving to the Ph.D. program at Bellarmine. I made the choice to move to Bellarmine because of the focus of Bellarmine's program on issues of social justice. I was blessed that Tim wanted what was best for me.

The library staff at Bellarmine University is incredible. Whether I needed a book, an article, could not make the computer do what I wanted it to, or needed a reminder that I had an
overdue book, they were there. Kevin Peers, one of the reference librarians, was a lifesaver, saving me many times. If I could not find something I needed, he always seemed able to make it happen or appear. However, even more important than that, when I would get to the point I thought I would cry out of frustration he would make me laugh. His humor was infectious. That was priceless.

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I want to acknowledge all the wonderful students who were a part of my co-hort at Bellarmine. We were always there for each other whether it was during class, sharing notes, working in study groups, doing presentations, or being present for each other's defense as the cheerleading section.

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# Table of Contents

RESULTS OF DISSERTATION DEFENSE ........................................................................................................... 2
ABSTRACT ...................................................................................................................................................... 4
DEDICATION .................................................................................................................................................. 5
ACKNOWLEDGEMENTS ............................................................................................................................... 6
TABLE OF CONTENTS ...................................................................................................................................... 8

CHAPTER 1: INTRODUCTION TO THE STUDY ............................................................................................... 18
   A Call to Action ............................................................................................................................................. 18
   Purpose of This Study ............................................................................................................................... 19
   Research Questions .................................................................................................................................... 21
   Conceptual/Theoretical Framework ......................................................................................................... 21
   Persistence of Poverty ............................................................................................................................. 29
   The Effect of Empathy on Attribution of Poverty .................................................................................... 30
   Simulations as an Experiential Learning Modality .................................................................................. 31
   Poverty Simulations Facilitate Understanding of Poverty ......................................................................... 33
   Methodology ............................................................................................................................................... 34
   Terms ......................................................................................................................................................... 36

CHAPTER 2: LITERATURE REVIEW ............................................................................................................... 38
   The War on Poverty .................................................................................................................................... 39
   Overview of Poverty ................................................................................................................................... 41
   Attribution of Poverty ............................................................................................................................... 48
   Empathy ...................................................................................................................................................... 56
   Empathy Gap and Race ............................................................................................................................ 58
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE

Empathetic Effect on Attribution of Poverty ..........................................................59
Simulations Linked to Experiential Learning ..........................................................63
Poverty Simulations ...............................................................................................72
Conclusion .............................................................................................................106

CHAPTER 3: METHODOLOGY .............................................................................109

Participants ............................................................................................................109
Context/Setting .......................................................................................................111
Research Design and Sampling ............................................................................114
Data Collection Instrument and Data Collection ...................................................123
Analysis Design .....................................................................................................126
Validity and Fidelity of the Implementation of the Poverty Simulation ..................134
Biases .....................................................................................................................139
Ethical Considerations ..........................................................................................139

CHAPTER 4: FINDINGS ....................................................................................140

Descriptive Data for the Independent Variables ...................................................140
Effect for Immediate and Sustained Empathetic Attitude Change .........................142
Association of Independent Variables on Empathetic Attitude Change ..................149

CHAPTER 5: IMPLICATIONS OF THE STUDY ..................................................182

Summary of This Study .........................................................................................182
Summary of Findings .............................................................................................189
Explanations ..........................................................................................................207
Limitations .............................................................................................................208
Implications and Recommendations ......................................................................212
APPENDIX P: ADDITIONAL DESCRIPTIVE DATA FOR JOB DOES/DOES NOT VOLUNTEER WITH THOSE IN POVERTY ................................................................. 324
APPENDIX Q: ADDITIONAL DESCRIPTIVE DATA FOR DID OR DID NOT EXPERIENCE SCARCITY OF NECESSARY RESOURCES GROWING UP .............................................. 327
APPENDIX R: ADDITIONAL DESCRIPTIVE DATA FOR GENDER ................................................. 330
APPENDIX S: ADDITIONAL DESCRIPTIVE DATA FOR RACE ...................................................... 333
APPENDIX T: ADDITIONAL DESCRIPTIVE DATA FOR AGE ...................................................... 336
APPENDIX U: ADDITIONAL DESCRIPTIVE DATA FOR INCOME ................................................... 339
APPENDIX V: ADDITIONAL DESCRIPTIVE DATA FOR ROLE IN THE POVERTY SIMULATION .................................................................................................................. 342
List of Tables

Table 1: Descriptive Data for Study Participants .................................................................110
Table 2: Community Organizations for the Poverty Simulation ............................................120
Table 3: Family Roles in Poverty Simulation .......................................................................120
Table 4: Descriptive Data for the Subgroups for Each Individual, Participant Data Levels ....141
Table 5: Immediate Effect of Poverty Simulation on Empathetic Attitude Change ...............147
Table 6: Sustained Effect of Poverty Simulation on Empathetic Attitude Change ..................148
Table 7: Difference in the Mean Empathetic Attitude Scores for Immediate Post-Survey – Pre-Survey Was or Was Not Mandated, Do or Do Not Work With Those in Poverty, Do or Do Not Volunteer with Those in Poverty, and Did or Did Not Experience Scarcity of Necessary Resources Growing Up ..................................................................................................................156
Table 8: Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Gender ..........................................................................................................................162
Table 9: Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Male, Female, and Other ........................................162
Table 10: Difference in the Mean Empathetic Attitude Score for Immediate Post-Survey – Pre-Survey for Race ......................................................................................................................164
Table 11: Tukey Post Hoc for Race ............................................................................................164
Table 12: Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for African-American, Caucasian, Hispanic, and Other ..................................................................................................................165
Table 13: Difference in the Mean Empathetic Attitude Score for Immediate Post-Survey – Pre-Survey for Age ..........................................................................................................................166
Table 14: Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for 18-25 Years, 25-35 Years, 35-45 Years, 45-55 Years, and Older................................................................................................................................................167

Table 15: Difference in the Mean Empathetic Attitude Score for Immediate Post-Survey – Pre-Survey for Income................................................................................................................................................168

Table 16: Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Student, Low/Middle, Middle/Upper, and Upper Incomes................................................................................................................................................169

Table 17: Difference in the Mean Empathetic Attitude Score for Immediate Post-Survey – Pre-Survey for Role in the Poverty Simulation................................................................................................................................................170

Table 18: Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Organization, Family Adult, Family Child 1-3, and Family Child 4-18................................................................................................................................................171

Table 19: The Main Effect and the Interaction of Gender, Race, and Scarcity of Necessary Resources Growing Up on the Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey ................................................................................................................................................174

Table 20: Descriptive Data for the Main Effect of Gender ................................................................................................................................................174

Table 21: Descriptive Data for the Main Effect of Race ................................................................................................................................................175

Table 22: Descriptive Data for the Main Effect of Scarcity of Necessary Resources Growing Up................................................................................................................................................175

Table 23: Descriptive Data for the Effect of the Interaction of Gender and Race, and Scarcity of Necessary Resources Growing Up on the Difference in Mean Empathetic Attitude Scores the Immediate Post-Survey – Pre-Survey ................................................................................................................................................177
Table 24: Descriptive Data for the Effect of the Interaction of Gender and Did or Did Not Experience Scarcity of Necessary Resources Growing Up on the Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey
List of Figures

Figure 1: Kolb's Learning Styles Model ................................................................. 27
Figure 2: Overview of Research Study ................................................................. 29
Figure 3: Number in Poverty and Poverty Rate: 1959 to 2015 .......................... 44
Figure 4: Income Difference Between Top 1 Percentile and Bottom 90 Percentile of Wage Earners ................................................................. 45
Figure 5: Holdings of Family Wealth in Trillions ............................................... 46
Figure 6: Time Series Research Design .............................................................. 115
Figure 7: Distribution for Pre-Survey Scores ..................................................... 143
Figure 8: Distribution for Immediate Post-Survey Scores .................................. 144
Figure 9: Distribution for Delayed Post-Survey Scores ..................................... 145
Figure 10: Estimated Marginal Means for Pre-Surveys, Immediate Post-Surveys, and Delayed Post-Surveys ................................................................. 149
Figure 11: Distribution for Was or Was Not Mandated to Attend the Poverty Simulation...... 151
Figure 12: Distribution for Do or Do Not Work With Those in Poverty .................. 152
Figure 13: Distribution for Do or Do Not Volunteer to Work With Those in Poverty .............. 153
Figure 14: Distribution for Did or Did Not Experience Scarcity of Necessary Resources Growing Up ................................................................. 154
Figure 15: Effect of the Interaction of Gender and Race on the Difference in the Mean Empathetic Attitude Scores for the Immediate Post- Survey – Pre-Survey ......................... 178
Figure 16: Effect of the Interaction of Interaction of Gender and Did or Did Not Experience Scarcity of Necessary Resources Growing Up on Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey ................................................................. 181
Figure 17: The Intended Goal of Participation in a Poverty Simulation ........................................236

Figure N1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between
the Immediate Post-Survey and the Pre-survey for Participation Was
Voluntary/In-voluntary ..................................................................................................................319

Figure N2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the
Immediate Post-Survey for Participation was Voluntary or In-voluntary ..................................320

Figure O1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between
the Immediate Post-Survey and the Pre-survey for Job Does/Does Not Entail Working With
Those in Poverty .........................................................................................................................322

Figure O2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the
Immediate Post-Survey for Job Does/Does Not Entail Working With Those in Poverty ..........323

Figure P1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between
the Immediate Post-Survey and the Pre-survey for Does/Does Not Volunteer With Those in
Poverty .........................................................................................................................................325

Figure P2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the
Immediate Post-Survey for Job Does/Does Not Volunteer With Those in Poverty .................326

Figure Q1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between
the Immediate Post-Survey and the Pre-survey for Did/Did Experience Scarcity
Growing Up ....................................................................................................................................328

Figure Q2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the
Immediate Post-Survey for Did/Did Not Experience Scarcity Growing Up .............................329

Figure R1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between
the Immediate Post-Survey and the Pre-survey for Gender .......................................................331
Figure R2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Gender ................................................................. 332

Figure S1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Race ................................. 334

Figure S2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Race ................................................................. 335

Figure T1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Age ........................................... 337

Figure T2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Age ................................................................. 338

Figure U1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Income ................................... 340

Figure U2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post Survey for Income ................................................................. 341

Figure V1: Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Role in the Poverty Simulation .......... 343

Figure V2: Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Role in the Poverty Simulation ............................................. 344
The Effects of a Poverty Simulation on Immediate and Sustained Participant Empathy

America has celebrated the 50\textsuperscript{th} anniversary of President Johnson’s “War on Poverty” (Zosky, Avant, & Thompson, 2014; Modarres, 2003) yet the war is still waging (Piven, 2014; Stricker, 2007). In spite of the anti-poverty programs dotting the urban policymaking landscape (Modarres, 2003), economic inequalities continue to be pervasive (Godfrey, 2016) causing chronic poverty to plague the country (Israeli & Weber, 2014). Godfrey (2016) and Rank, Yonn, and Hirschel (2003) suggest that one of the reasons the “War on Poverty” failed is because some Americans continue to attribute poverty to individual causes rather than to structural causes? Galper (1976) and Stickler (2007) posit that having an empathetic attitude toward those who experience poverty can cause the observer to view poverty from the perspective of structural causes rather than individual causes. This is important considering "beliefs about the causes of poverty shape attitudes toward the poor" (Davidson, 2009, p. 136), and the decisions made about those who experience poverty reflect those attitudes (Trout, 2009). These beliefs about poverty, also, often reflect the tensions with which our legislatures struggle in creating anti-poverty programs and policies (Davidson, 2009; Shaw, 2009-10; Zosky et al., 2014).

A Call to Action

Advocates promoting social justice assert inequalities resulting from chronic poverty be addressed by society (Jackson, 2014). To overcome the inequalities of poverty it is important to "challenge the idea that individual talents or aspirations are enough to overcome structural barriers" (Coghlan & Huggins, 2004, p. 177) faced by those in poverty. "Only empathy can turn the tide enough to create long-term solutions to the problems of the world" (Dolby, 2012, p. 107), by helping society to see the structural barriers encountered by those in poverty (Galper, 1976; Stricker, 2007). Dolby (2012) argues that empathy is becoming more scarce (Ullucci &
Howard, 2015). This argument is based on a meta-analysis on empathetic attitude studies conducted between 1972 to 2009 by Konrath, O’Brien, and Hsing (2011) highlighting the reality of a 40% decline in empathy among college students (Konrath et al., 2011).

Studies assert that knowledge and understanding of poverty are necessary in the effort to help resolve the adversities that plague those who experience poverty (Browne & Roll, 2016; Davidson, 2009; Stricker, 2007; Vandsburger, Duncan-Daston, Akerson, & Dillon, 2010; Yang, Wommer, Agbemenu, & Williams, 2014). Some researchers posit there is a lack of or gap in the knowledge and understanding of poverty (Benjamin, 2010; Niemela, 2008; Ogujiuba, Obi, & Dike, 2011; Ullucci & Howard, 2015). "One way to address this knowledge, experience, and belief gap is through experiential poverty simulations, which have shown promise in changing attitudes about those living in poverty" (Menzel, Wilson, & Doolen, 2014, p. 1). The experiential learning modality of a poverty simulation can open the door, helping a participant think more critically about the structural barriers of poverty through the creation of an empathetic mindset (Vandsburger, Duncan-Daston, Akerson, & Dillon, 2010).

**Purpose of This Study**

Wealth inequality and poverty are not new to America; they have plagued this country for five centuries (Kilty & Segal, 2003). This gap is now threatening the basic structure of America’s democracy because often those in power suffer from “historical amnesia” about the issues surrounding poverty (Kilty & Segal, 2003, p. 1). Kilty and Segal (2003) stressed the need to rediscover the critical issues of poverty. The need for rediscovering poverty presents itself based on Americans’ new desensitization to poverty (Feagin, 1972; Kihm & Knapp, 2015; Yang et al., 2014), which has created pre-conceived ideas of the adversities faced by those who experience poverty (Benjamin, 2010; Hudson, 2016; Rich, 2017; Williams & Mickelson,
Those desensitized to the struggles of poverty (Feagin, 1972; Kihm & Knapp, 2015) have often never been without the necessities of life, and as a result view the needs of those in poverty as insignificant (Castillo & Becerra, 2012; Kihm & Knapp, 2015). Studies indicated that having empathy for those who struggle with the adversities of poverty helped to create greater insight of those struggling with poverty (Fialova, 2014; Kihm & Knapp, 2015; Steck, Engler, Ligon, Druen, & Cosgrove, 2011). This empathy "provides a framework for addressing the key social inequality of poverty" (Segal, 2007, p. 66) which can help create a greater awareness of the “other,” the one experiencing the inequality of poverty (Bramesfeld & Good, 2015; Davidson, Preez, Gibb, & Nel, 2009; Trout, 2009).

It is more difficult to comprehend the struggles of those in poverty if there is social detachment from those who are poor (Trout, 2009). Familiarity with those who are different helps to foster empathy. Feeling empathy for populations who experience poverty helps to open communication through the creation of trust and predictability (Bruneau, 2009). Research indicates that the development of empathy toward those experiencing poverty can lead to "greater understanding and acceptance of diverse groups, greater openness to different ways of thinking, greater awareness of social inequities, and it is hoped, greater social activism" (Brown, 2006, p. 372).

The objective of this study was to investigate the efficacy of using a poverty simulation as an experiential learning modality to create empathetic attitude change. Participants in this study engaged in a poverty simulation to help the participants more easily step into the shoes of those experiencing poverty (Kihm & Knapp, 2015). Research indicates that participation in poverty simulations can create empathetic attitude change (Ajello, 2014; Johnson, Guillet, Murphy, Horton, & Todd, 2015; Steck, Engler, Ligon, Druen, & Cosgrove, 2011).
This study examined the effects of participation in the poverty simulation on the potential to create both immediate and sustained empathetic attitude change. The possible effect of some independent variables on immediate and sustained empathetic attitude change was analyzed as well. The findings from this study added to the research that addresses the effect of participation in a poverty simulation on empathetic attitudes toward those who experience poverty. Currently there is a gap in research regarding the effects of participation in a poverty simulation affects sustained empathetic attitude change, with only two studies addressing sustained empathetic attitude change (Browne & Roll, 2016; Fialova, 2014). Research findings from this study also addressed this gap.

Research Questions

1. Research Question - Does participation in a poverty simulation affect immediate empathetic attitude?

2. Research Question - Does participation in a poverty simulation affect sustained empathetic attitudes?

3. Research Question - Do individual, participant characteristics affect the immediate empathetic attitude of poverty stimulation participants?

Conceptual/Theoretical Framework

Poverty is multi-dimensional (Ansoms, 2012; Tiwari, 2007; Zosky et al., 2014) meaning the concept of poverty has been highly contested (Misturelli & Heffernan, 2010). The multi-dimensional aspect of poverty is evidenced by the 159 definitions that have been created from the 1970's to 2000's as posited by Misturelli and Heffernan (2010). Some examples of the multidimensional qualities of poverty include a stigmatized identity leaving psychological scars (Hudson, 2016), institutional discrimination, negative stereotypes placed on those in poverty
(Feagin, 1972; Lee & Priester, 2016; Williams & Mickelson, 2008), economic interdependencies, gender relations (Ansoms, 2012) and differences (Robb, 2000). Robb (2000) addresses vulnerability, isolation (both physical and social), little self-respect, poor access to information, restricted access to the labor market, and a feeling of powerlessness often associated with government policies. These multi-dimensional qualities of poverty are more difficult to measure thus; a reason the meaning of poverty is often contested (Vu, 2010).

Economists continue to use income-based measures (Akindola, 2009) as the measurement of poverty and refer to these measurements as poverty lines (Rank, 2014). The dimensions of poverty "transcend [the] simplistic and prescriptive definitions" bound by numbers or only economic deprivation (Akindola, 2009, p. 123). Van Praag and Ferre-i-Carbonell (2007) refers to these dimensions of poverty as having subjective dimension; the subjective dimension often depends on one's agency freedom (Ansoms, 2012). Agency freedom consigns "what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important" (Sen, 1984, p. 203). The social status, identity, hierarchies, and roles of individuals determine agency (Long, 2001). These agency determinants may derail the ability of those in poverty to progress their own values and goals (Ajello, 2014). The self-perception of those in poverty can also decrease agency as well (Lee & Priester, 2016). To understand personal agency, it is necessary to assimilate the significance of power relations and the bargaining positions held by those experiencing wealth inequality (Ansom & Greenen, 2012). Personal agency is important bearing in mind access to necessary resources are determined by agency (Long, 2001), and those in poverty are often on the losing end of available resources (Bastiaensen, Herdt, & D’Exelle, 2005).
The multi-dimensional nature of poverty, often times rooted in the discipline examining poverty and the interpreted causes of poverty, produces continued debate on the topic of poverty in the United States (Vu, 2010). The primary disciplines having studied poverty and its ramifications include anthropology, economics, political science, sociology (Vu, 2010), education, medical, and social welfare. Vu (2010) argues there is no definitive, common theory of poverty resulting in the many definitions of poverty generated since the 1970’s (Misturelli & Heffernan, 2010). A variety of these theories have provided different frames through which to examine poverty including the Feminist and Critical Race Theory (Rich, 2017), Critical Race Theory (Bryant, Moss, & Bordreau, 2015), Prospect Theory (Jantti, Kanbur, Nyyssola, & Pirrtila, 2014), Structural Theory (Brady, 2006), A Theory of Poverty Aversion (Azam, 2003), Structural Theory (Brady, 2006), Entitlement Theory (Tiwari, 2007), and Attribution Theory (Davidson, 2007). Researchers assert that "different theories and concepts tend to shape the determination of predictors as well as the operationalizations and measurements of poverty types” (Sameti, Esfahani, & Haghighi, 2012, p. 53).

**Causal Attribution Theory, Constructivism, Experiential Learning Theory.**

Attribution is a person's motivation pertaining to the causal explanations for success or failure of an individual (Yough & Cho, 2014). The attribution theory "represents an attempt to determine the antecedents and consequences of some of man's causal beliefs," (McArthur, 1972, p. 171). Meaning is given to an event when the cause for the event is identified, producing a world that is more stable and predictable for an individual (McArthur, 1972). Attribution also takes into account the process an individual takes in determining cause to responses made or observed, and the outcomes of the individual's beliefs about causality (McArthur, 1972).
Perceptions and beliefs play an important role in the thinking of attributions; the realities of a situation are not necessarily a part of the perceptions and beliefs. There is a tendency to attribute another's failure to their personal characteristics, whereas the failure of oneself is often attributed to external causes that cannot be controlled (Yough & Cho, 2014). An individual's belief about the cause of an event shape the action that will be taken regarding the event (Davidson, 2009; Shaw, 2009-10). Bradshaw (2006) argues that studies in contemporary literature incorporate theories of poverty that are rooted in either individual deficiencies or structural deficiencies, each theory leaning toward different types of intervention strategies. The attribution theory was used for this study as it incorporates thinking of both the individual and structural causes of poverty, because these beliefs about the attribution of poverty shapes beliefs about those in poverty (Davidson, 2009).

The attribution theory supports parsing poverty through both the eyes of the actor, the person experiencing poverty, and the observer, the person looking into the world of poverty (Harvey, Arkin, Gleason, & Johnston, 1974). The attribution theory underpins the meaning of poverty from the perspective of both the actor and observer. Moving between the roles of actor and observer is in line with the constructivist tenets of creating new meaning through new experiences (Costantino, 2008; Rutherford-Hemine, 2012). Perceiving the thinking on poverty from both the individual and structural deficiencies is important, in that beliefs about poverty (Davidson, 2009) drive policy that creates anti-poverty programs addressing the needs of those in poverty (Davis & Weber, 1998; Stasser, Smith, Denney, Jackson, & Buckmaster, 2013). Rank (2003) posits discerning the framework of the structural factors associated with poverty help to recognize that "human capital and other labor market attributes are associated with who loses out
at the economic game [and hence will be more likely to experience poverty], and that structural factors predominately ensure that there will be losers in the first place" (p. 25).

Constructivism is the paradigm used to examine the attributes of poverty because constructivism stresses the value of individual perceptions (Blatter, 2008) by seeking to understand the world of study participants (Creswell, 2013; Rutherford-Hemine, 2012). Some of the goals for using this theoretical paradigm included understanding the meaning the participants have for the phenomenon being studied, realizing that these meanings can be multiple and varied, understanding the context within which the phenomenon occurs and the influence of that context, and dissecting and acknowledging the process within which the phenomenon occurs (Maxwell, 2013). "The idea that all reality and interpretations are socially constructed is core to the social constructivist paradigm" (Bhattacharya, 2008, p. 4). As a result, the participant's views of the situation will be the focal point because participant meaning happens within the context of the participant's cultural and historical norms (Creswell, 2013), resulting in biases that each participant brings to the poverty simulation (Ajello, 2014; Browne, Clark, Jones & Nisbett, 1971; Stasser, Steck et al., 2011).

Experiential learning, one of the tenets of constructivism, was the learning theory used to investigate the effect of a poverty simulation in creating new knowledge and understanding of poverty, and attitude change toward those experiencing poverty. John Dewey (1938), considered to be the father of experiential learning, posits "all genuine education comes about through experience" (p. 25). Simulations are one type of experiential learning and can create an environment in which internal and external processes of the experience are acknowledged through debriefing and reflective thinking pertaining to real world settings and events (Clapper, 2015; Dorn, 1989; Livingston & Stoll, 1973; Wenzler & Chartier, 1999).
David Kolb (2013) created a framework around experiential learning that brings together the common perspective of the scholars in the field of experiential learning. This framework consists of six propositions shared by these scholars:

1. Learning is best conceived as a process, not in terms of outcomes.
2. All learning is relearning.
3. Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.
4. Learning is a holistic process of adaptation.
5. Learning results from synergetic transactions between the person and the environment.
6. Learning is the process of creating knowledge.

(Kolb, 2013, p. 277)

The experiential learning theory can also be explained using Kolb's Learning Styles Model (see Figure 1) (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). Each stage of Kolb's model correlates to the implementation of the poverty simulation:

- Concrete Experience - Participating in the simulation
- Reflective Observation - Debriefing, describing what happened both internally and externally
- Abstract Conceptualization - Generalizations making broad statements from reflection about real world beyond experience
- Active Experimentation - The act of applying the generalized statement to a new concrete experience

The practice for the social constructivist paradigm dictates that questions about a phenomenon be broad, "open-ended, evolving, and non-directional" (Creswell, 2013, p. 138), which supports the strategies and learning of poverty simulations. This tenet of the social constructivist paradigm was implemented during the oral debriefings for the poverty stimulations. These types of questions, grounded in the constructivist paradigm, often begin with words such as what and how and make it possible to explore the phenomenon being studied, which is based on each participant's perspective rooted in the biases and knowledge brought to the experiential learning experience (Ajello, 2014; Browne, Clark, Jones & Nisbett, 1971; Stasser, Steck et al., 2011). Though biases and prior knowledge can cause the participant's
Constructivism not to be a reflection of the objective external world (Costantino, 2008), constructivism stresses the value of individual perceptions (Blatter, 2008) as this is how the participant understands the world (Creswell, 2013; Rutherford-Hemine, 2012).

Constructivism links the causal attribution theory to the experiential learning theory. The constructivist paradigm supports the rational for using a poverty simulation to create new awareness and understanding of poverty through the experience of a real world setting (Rutherford-Hemine, 2012). The new learning and understanding have the potential to change an individual's beliefs about poverty (Galper, 1976; Skiffington et al., 1984) which has the potential to drive an individual's actions towards those in poverty (Davidson, Preez, Gibb, & Nel, 2009). The foundation of learning is the constructivist learning theory, which supports learning by doing through the experiential learning experience of a poverty simulation. The association of the causal attribution theory, constructivism, experiential learning theory, and their relationship to the purpose of this quasi-experimental study are summarized in Figure 2.
Persistence of Poverty

The United States Federal Government began collecting data on poverty in 1959 and estimated the poverty rate to be 22.4 percent ("What is the Current Poverty Rate," 2017). The onset of President Jonson’s War on Poverty, in 1964, generated reforms to address the high poverty rate looming over the country. The federal government took a more active role in
providing safety nets in an effort to improve the lives of Americans experiencing poverty (Kte’pi, 2014). The initial effort of the War on Poverty helped reduce the poverty rate in 1973 to a new low of 11 percent. From 1973 to 2016 the rate of poverty in the United States has fluctuated between approximately 11 to 15 percent, this fluctuation belies the statement remaining stagnant ("What is the Current Poverty Rate," 2017; "Poverty Gap," 2016; "Number in Poverty,” 2016).

The stagnant poverty rate indicates poverty has become persistent and commonplace, a part of the American economic landscape ("What is the Current Poverty Rate," 2017). Persistent poverty can lead to deep poverty which is indicative of families who live on an income that is less than one-half of the line of poverty ("What is the Current Poverty Rate," 2017), and the rate of those living in deep poverty is on the rise (Haveman, Blank, Moffitt, Smeedling, & Wallace, 2014). Between 2009 and 2014, there was an increase of almost ten percent in the number of those living in deep poverty (Clyburn, 2014). This increasing rate of persistent and deep poverty "correlates [with] hopelessness and polarisation" (Carter & Barrett, 2006, p. 195) generating an imperative need to continue to create programs that provide safety nets for those who experience poverty (Carter & Barrett, 2006). To help create appropriate safety nets through the development of policy, the causes of poverty must be understood (Davidson, 2009).

**The Effect of Empathy on Attribution of Poverty**

Measuring empathetic attitude is one method for quantifying understanding of another's situation. Bruneau (2009) defines empathy as feeling "into another person's biological processes, perceptions, emotional states, and their kinds and forms of consciousness in order to assess their feelings" (p. 337). Improving communication between people is central to empathy (Bruneau, 2009; Trout, 2009) in addition to relating to other people's feelings (Cuff, Brown, Taylor,
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE

Howat, 2016), with a purpose to help others with life adversities (Bruneau, 2009; Cuff et al., 2016). Self is no longer the focus as one feels empathy, and the other now becomes important (Cuff et al., 2016; Hedican, 2008). Nightingale, Yarnold, & Greenberg (1991) provided the simple definition of empathy to be "I understand how you feel" (p. 420). There is prevalence for sympathy not to be confused with empathy. To help differentiate between the meaning of sympathy and empathy, Nightingale et al. (1991) expressed sympathy very simply as "I feel sorry for you" (p. 420).

An empathetic mindset plays a role in the insight of the attributes of poverty (Galper, 1976; Skiffington et al., 1984). In an actor/observer scenario pertaining to marginalized groups, the actor belongs to the marginalized group and has a tendency to attribute the cause for marginalization to structural factors, whereas the observer attributes the cause of marginalization to the individual characteristics of the actor (Onder & Oner-Ozkan, 2003). Studies suggest that those observers who have empathetic mindsets towards the actors are more likely to attribute the cause of the situation to structural factors rather than personal factors (Galper, 1976; Regan & Totten, 1975; Skiffington et al., 1984). The creation of empathy toward the marginalized group of those in poverty is important because the attitude of the observers toward the poor often are shaped by the observer's views as to what the causes of poverty are (Davidson, 2009). Recognizing the structural causes of poverty creates insight of the adversities faced by those who experience poverty, and as a result may affect the manner in which the observer reacts to those who experience poverty (Batson, Chang, Orr, & Rowland, 2002; Zosky et al., 2014).

Simulations as an Experiential Learning Modality

"Simulation is commonly described as a process of replication that produces a copy without an original: it is a duplication of an object or concept that lacks the exact corresponding
realities" (Dickinson, 2009, p. 886). Simulations tie to constructivism through the creation of active rather than passive environments, with constructivism manifested through experiential learning (Rutherford-Hemine, 2012). The many fields implementing simulations use different types of simulations. Some of the fields include medical (Unsworth, McKeever, & Kelleher, 2012), education (Wright-Maley & Green, 2015), social services (Reeves, Drew, Shemmings, & Ferguson, 2015), and economics (Diaz, 2011).

Many types of simulation are available. Social services (Raymond, Jacques, & Medeiros, 2016), education (Tomczak, Pizzanello, & Schneider, 2014), and the medical fields (Drevdahl, 2013) often times replicate real-life models in an effort to bring about change. The economic field uses numeric variables representing real-life economic situations. This type of simulation is used in an endeavor to determine if a different economic outcome, based on different numerical variables, may influence an economic situation (Skvoretz, 2005).

Simulations are now also incorporating technological methods in addition to real world simulations (Aqel & Ahmad, 2014; Cuhadar & Kampf, 2014; Johnson, 2007). Aqel and Ahmad (2014) studied the use of a LFS CPR manikin to determine the effectiveness of using a computerized manikin versus traditional classroom training, and the findings from this study do support the effectiveness of the use of this type of technology over traditional classroom learning. The medical field uses surgical simulators based on the assumption that knowledge comes out of clinical practice as well as the acquisition of discrete skills (Johnson, 2007). The Case of the Peace Maker is a complex and realistic game that simulates the conflict between Israeli and Palestine. The findings from the study of The Case of the Peace Maker indicate an increased level of knowledge surrounding this conflict (Cuhadar & Kampf, 2014). All forms of simulations, whether real-life models, numeric representations, or digital simulations, created an
environment similar to the original in an effort to create new knowledge and understanding, in addition to attitude change (Dickinson, 2009).

The literature review examines simulations using the tenets of the experiential learning theory. This theory predicts behavioral or attitudinal change through action, therefore fostering new, meaningful learning (Rutherford-Hemine, 2012). The type of learning environment created by simulations using experiential learning should be able to produce optimal, quality training (Cumming & Williams, 2014) with new learning taking on three forms: creation of new knowledge (Ungar, Hart, Whitman, & Phipps, 2015), new understanding (Stave, Beck, & Galvan, 2015), and attitude change (Latshaw, 2015).

**Poverty Simulations Facilitate Understanding of Poverty**

A poverty simulation is an example of a simulation that fits the parameters of an experiential learning modality organizations use to generate attitude change regarding the hardships faced by those in poverty (Vandsburger et al., 2010). Participants walk in the shoes of those in poverty fostering attitude change for the participants toward poverty (Trout, 2009). Poverty simulation experiences can generate a greater awareness and understanding and of the adversities encountered by those who experience poverty along with attitude change toward those in poverty (Todd, DeGuzman, & Zhang, 2011).

Poverty simulations are used primarily by the fields associated with the social services: education (Zygmun-Fillwalk & Clark, 2007), medical (Aspden, Sheridan, & Harrison, 2016), and social work (Bramesfeld & Good, 2015). Each of these fields addresses the consequences of poverty in an effort to overcome the consequences of poverty within the field. The three fields individually address the necessity for implementing poverty simulations for those serving in their field as they take on the task to meet the needs of those they serve more efficiently (Aspden et
al., 2016; Bramesfeld & Good, 2015; Zygmunt-Fillwalk & Clark, 2007). It is the goal of those in education to develop knowledge of the need for multicultural understanding and the relationship of culture and poverty (Zygmunt-Fillwalk & Clark, 2007). The aim in the medical field is that practitioners realize the repercussions poverty can have on social mobility and the health of their patients (Johnson, Guillet, Murphy, Horton, & Todd, 2015). The field of social work promotes social justice using poverty simulations (Vandsburger et al., 2010). The methodologies used to study poverty simulations include quantitative, qualitative, and mixed-methods research.

Findings reported in the poverty simulations reviewed indicate both an increase of knowledge and understanding the complex nature of poverty as well as attitude change toward those experiencing poverty, which in turn helps the participants relate to the adversities faced by those struggling with poverty (Dolby, 2012). These changes in the participants result from the participants encountering a glimpse into the daily adversities faced by those in poverty (Ansoms, 2012).

**Methodology**

This study examined the effect of participation in a poverty simulation on the differences of immediate and sustained empathetic attitude through the implementation of a quasi-experimental study using non-probability purposive sampling (Creswell, 2009). The organizations participating in this study contacted the primary investigator and made a request to participate in the poverty simulation. The organizations participating included public school systems K - 12th grade, universities, non-profit organizations, a large medical corporation, and government agencies. This study consisted of 773 participants who belonged to, worked for, or had a functioning capacity with the organization participating in the poverty simulation. Participant information was collected on each individual and included data on the following:
gender (male, female, other), race (African-American, Asian, Caucasian, Hispanic, Other), age (18-25 years, 25-35 years, 45-55 years, 55 years older), income (student, low/middle, middle, upper/middle, upper), participation in the simulation (voluntary, in-voluntary), work with those in poverty (yes, no), volunteer with those in poverty (yes, no), experienced scarcity of life resources growing up (yes, no), and role in simulation (staff, family adult, family child 1-3, family child 4-18).

The Basic Empathy Scale in Adults (BES-A) was used to collect data for this study using pre- and immediate post-surveys and a delayed post-survey (Carre, Stefaniak, D’Ambrosio, Bensalah, & Besche-Richard, 2013). Each participant took a pre-survey and immediate post-survey at the time of the poverty simulation. The delayed post-surveys were emailed to study participants 90-120 days after the simulation using SurveyMonkey®. The data collected was analyzed using paired sample t tests, independent sample t tests, one-way between subjects ANOVAs, and a three way between subjects ANOVA. The purpose of this study was to investigate the effect of participating in a poverty simulation regarding empathetic attitude change by analyzing the differences in mean empathetic attitude scores for pre-surveys, immediate post-surveys, and delayed post-surveys of all participants. An analysis was also conducted on the effect of the independent variables on empathetic attitude change toward those experiencing poverty.

There are several limitations to note in this study. These limitations dealt with research design, implementation of the simulation, data collection, and the level of participation by those involved in the simulations. Though there were limitations for this study, based on the data collected, this study added to prior empirical research regarding the immediate and sustained
effect of the poverty simulation on empathetic attitude change. This study also generated new research pertaining to the effect of individual, participant data on empathetic attitude change.

**Terms**

Affective empathy - Affective empathy is the "perceived sharing of feelings... a vicarious emotional response to the perceived emotional experiences of others" (Bryant, 1982, p. 414-415; Einolf, 2012). This type of empathy is seen as the ability to experience the emotions of another individual (Bryant, 1982; Jolliffe & Farrington, 2006) or emotional sharing (Decety & Yoder, 2016).

Attribution - The attribution theory “concerns the process through which an individual assigns causes to various responses he makes or observes and the consequences of his resulting beliefs.” It “represents an attempt to determine the antecedents and consequences of some of man’s causal beliefs” (McArthur, 1972, p. 171).


Constructivism - Constructivism posits new meaning is constructed through social interaction (Costantino, 2008) around an active learning process (Canipe, 2016) such as collaboration, discussions, cooperative learning, reflection of an experience, and experiential learning (Rutherford-Hemine, 2012).

Dominant ideology - An individual's dominant beliefs of a construct. Dominant ideology is referenced in terms of an individual’s beliefs on poverty. The American society argues...
for either capitalism and a strong work ethic versus the humanitarian commitment and obligation to assist the poor among us (Shaw, 2010-09).

Empathy - Empathy is a feeling toward others in which there is understanding of what another is feeling by placing self in another's situation or taking their perspective (Trout, 2009), and sharing in another's emotional state or context (Cohen & Strayer, 1996). Brown (2011) contends that any individual can have empathy toward another even though we are not experiencing their exact situation. This thinking is based on the idea that we each feel pain resulting in the ability to feel another's pain. The simple definition of empathy is "I understand how you feel" (Nightingale et al., 1991, p. 420).

Experiential Learning - Experiential learning is learner centered and experience based, resulting in the development of new knowledge (Emerson, 2016). The process for learning involves experience, reflection, thinking, and action (Kolb, 2013).

Multicultural - Multicultural is "a process whereby an individual develops competencies of perceiving, evaluating, believing, and doing in multiple ways" (Zygmun-Fillwalk & Clark, 2007, p. 288).

Poverty – Poverty represents more than an income level. Poverty is an identity socially constructed having the ability to leave behind remnants of psychological impoverishment (Hudson, 2016). Those experiencing poverty are “essentially those human beings who, for one reason or another, almost systematically end up at the losing end of the multiple bargains that are struck around available resources and opportunities” (Bastiaensen, Herdt, & D’Exelle, 2005, p. 981).

Poverty Line - Poverty line is "the official measure used in the United States to determine how many individuals and families fall into poverty each year" (Rank, 2014, p. 1062). The
federal poverty line in the United States is $12,060 for an individual and $24,600 for a family of four ("Federal Poverty," 2017).

Poverty Simulation - Poverty simulation is a simulation of real life the purpose being to understand the world from the perspective of those who experience poverty. Participants take on the roles of real-life families who have to navigate survival on a limited amount of resources necessary for survival (Patterson & Hulton, 2011). A simulation is often "described as the process of replication that produces a copy without an original, it is a duplication of an object or concept that lacks an exact corresponding reality" (Dickinson, 2009, p. 886). Learning takes place through direct experience (Chatav & Stuart, 2009) providing the opportunity to assimilate how others explore issues cognate to their situation (Dickinson, 2009).

Chapter 2 - Literature Review

"Our inability to feel what others feel makes it more difficult to understand how they think” (Ditto, p. 331). As a result, those who experience poverty are often misunderstood and stigmatized (Hudson, 2016; Williams, 2009). Kihm and Knapp, (2015) argue that Americans have become desensitized to the needs of those who experience poverty. The experiential learning resulting from participation in a poverty simulation provides a new perspective of those in poverty (Zygmont-Fillwalk & Clark, 2007) and has the potential to sensitize participants to the structural barriers faced by those in poverty. It is important to apprehend these structural barriers; these structural barriers can often make those in poverty feel isolated and marginalized (Robb, 2000; Williams, 2009).

Poverty simulations have been used in an effort to create attitude change, including empathetic attitude change toward those in poverty. Poverty simulation studies measure attitude
change to determine if there is a greater understanding of those who experience poverty (Ansoms & Geenen, 2012; Stasser, Smith, Denney, Jackson, & Buckmaster, 2013). Empathy toward those who experience poverty can help one to see beyond the individual causes of poverty through the creation of knowledge of the structural causes of poverty (Galper, 1976; Skiffington et al., 1984). The experiential learning modality of a poverty simulation can help to facilitate narrowing the gap between the rich and the poor by directing “attention away from ‘the poor’ themselves, and toward the institutions that shape their environment" (Bastiaensen et al., 2005, p. 979).

**The War on Poverty**

President Johnson initiated The War on Poverty in 1964 through the introduction of a series of reforms that were part of his Great Society legislative acts (Kte’pi, 2014). The moral justification supporting President Johnson's action was ascribed to the rate of impoverishment in the United States in spite of the prosperity of our nation (Rank, 2011), as well as the "detrimental outcomes associated with poverty" (Portes & Simmons, 2014; Rank, 2001, p. 882). At that time, the rate of poverty in America was higher proportionately than any other rich nation (Piven, 2014).

The goal of the War on Poverty was to mitigate poverty through the creation of programs that dealt with inequality in the medical field and racial injustice as well as reforming transportation, education, and the urban infrastructure. The role of the federal government grew in the effort to create safety nets aimed at ameliorating the consequences of poverty (Kte’pi, 2014), funded by a progressive tax system (Piven, 2014). The goal of the social safety nets was to address issues related to poverty including education, urban problems, transportation, health care, and rural poverty (Reifman, 2014; "Great Society," 2017). Some of the programs used as safety nets were the Food Stamp Act, Department of Housing, Housing and Urban Development

Stickler (2014) asserts the War on Poverty was lost, but Cazenave (2007) counters this belief based on two program case studies conducted by the New York City Community Action Initiatives which started in 1960 (Stickler, 2014). Cazenave (2007) contends that these Community Action Initiatives left a legacy that assisted in the expansion for all Americans to have the right to participate in the democratic process. Piven (2014) supports Cazenvae’s thinking regarding the success of the programs and policies put in place and contends “the war on poverty actually scored big gains for the poor, especially for poor children and the elderly. Moreover, the programs helped shrink racial disparities in poverty” (p. 21).

During the early years of the War on Poverty programs were funded by a progressive tax system, but over time that burden of support was placed primarily on the working and middle class people (Piven, 2014). Feagin (1972) maintains this burden on the working and middle class has caused more Americans to place blame on the individual for their poverty, which in turn led to America’s stereotypes of those on welfare (Benjamin, 2010; Cazenave, 2007; Hudson, 2016; Rich, 2017; Williams & Mickelson, 2008). Two stereotypical terms used to describe women on welfare it either welfare mother or welfare queen (Cazenave, 2007; Rich, 2017). The less racially charged stereotypical welfare term is welfare mother, with welfare queen often applied to African American females (Neubeck & Cazenave, 2001). This stigmatized nature is throughout current welfare provisions and policies (Cazenave, 2007).

There are still poor Americans, proportionally more living in poverty than any other rich nation (Piven, 2014). For America to view the War on Poverty from Cazenvae’s (2007) and
Piven’s (2014) perspective, insight of the appropriate structural initiatives and policies addressing poverty is needed (Piven, 2014; Strickler, 2007). Strickler (2007) asserts the need to acknowledge politics to win the War on Poverty, because the beliefs pertaining to the attributions of poverty of those creating policy drive the creation of poverty policies (Davidson, 2009; Shaw, 2009-10).

**Overview of Poverty**

**Definition of Poverty.** Poverty, for decades, was mostly associated with economic deprivation (Akindola, 2009). A more recent view alleges that "poverty is more than an income level; it is a socially constructed identity that leaves scars of psychological impoverishment" (Hudson, 2016, p. 111). Those in poverty often times experience the losing end of available resources (Bastiaensen et al., 2005), inhibited by their agency freedom which is a person's right to “do and achieve in pursuit of whatever goals or values he or she regards as important" (Sen, 1984, p. 203). Those in poverty can experience severe FORMS of coercion as they deal with their own agency or the ability to assimilate social experiences and develop coping mechanisms in life (Long, 2001).

Poverty often leaves behind a stigmatized identity (Hudson, 2016; Williams & Mickelson, 2008) resulting from both personal and institutional discrimination, negative stereotypes (Feagin, 1972; Williams, 2009), as well as severe forms of coercion (Long, 2001). Bastiaensen et al. (2005) argue that to achieve poverty reduction it is necessary to deal with the underlying structural causes of the immediate indicators of poverty as well as support the concept of agency for those in poverty (Sen, 1984).

**Poverty Data.** The United States has a high level of impoverishment (Rank, 2011), and proportionately more people living in poverty than any other rich nation (Piven, 2014; "Wealth
The effects of a poverty simulation on immediate inequality in the United States," 2017). The United States most often makes use of the poverty line to calculate poverty (Portes & Simmons, 2014; Rank, 2011). The poverty line controls for family size as well as inflation. The federal poverty line in the United States is $12,060 for a single person and $24,600 for a family of four ("Federal Poverty," 2017).

As of 2015, 43.1 million people were living in poverty in the United States, a poverty rate of 13.5% (Proctor, Semega, & Kollar, 2016). The poverty rate for minorities (African-American – 22.0, Hispanic – 19.4%, Native American – 26.2%) is higher than the poverty rate for non-minorities (8.8%). Women experience poverty at a rate of 14.0% ("Center for American Progress," 2017). Currently, more children in the United States live in poverty than ever before ("Child Hunger," 2017; Haveman et al., 2014; "Hunger in America," 2016).

The poverty rate for children under 18 is 19.7%, and in 7.8% of American households children were food insecure during the year ("Child Hunger," 2017; "Hunger in America," 2016) meaning they did not have “access to sufficient, safe, and nutritious food" (Alkon, 2015, p. 574). Food insecurity can be equated to hunger (Alkon, 2015). Half of America's children live in a household that uses food stamps at some point in their childhood (Rank, 2011).

Childhood poverty can be associated with adult struggles (Kominski, Jamieson, & Martinez, 2001). It is important to note these struggles taking into account these are the adults society may blame for their own poverty (Godfrey, 2016; Peck, 2007; Zosky et al., 2014). Childhood poverty can predict and determine the quality of people's lives as adults ("11 Facts about Poverty," 2011; "Causes and Effects of Poverty," 2012; Kominski et al., 2001; Pallas, 1989; Rand Corporation, 2005) increasing the chance of poor life outcomes of young adults (Federal Interagency Forum on Child and Family Statistics [Child and Family Statistics], 2012).

Children who grew up in poverty risk earning less income as adults and become
unemployed more frequently (Kominski et al., 2001). Twenty-nine percent of American adults 25 and older living in poverty have no high school diploma, often times resulting in lower paying jobs because they lack the required level of education needed for a higher paying job ("Causes and Effects of Poverty," 2012; "How Does Level of Education," 2015). Women who experienced childhood poverty are more likely to be more impoverished than men are, and women of color are most at risk ("The Real Face of Low-Wage Work," 2016). Whether single and married, one in five of these women struggle to feed themselves and their families ("11 Facts about Poverty," 2011).

Over time the government intervened after the Great Depression and developed various safety nets and protective factors to address the adversities of poverty and the gap created between the rich and the poor (Beier, Rosenfeld, Spitalny, Zansky, & Bontempo, 2000; Johnson, K. C, & Lampley, J. H., Summer 2010). Some of these government safety nets created to help diminish the gap between the rich and poor include the Social Security program, and regulations on the stock market, as well as federally insured banks (Segal, 2007). The structures within which poverty rests are no longer helping to decrease the poverty rate taking into account poverty has remained flat for the last thirty years, consistently fluctuating between 11 to 15 percent ("What is the Current Poverty Rate," 2017). In 1986, the poverty rate was 13.6%, and over those last thirty years the poverty rate has averaged 13.5% (see Figure 3) ("U.S. Poverty Statistics," 2016).
Income inequality has played a role in the poverty rate remaining somewhat stagnant over the last thirty years, resulting in rising wealth inequality ("Nine Charts about Wealth," 2015). Between 1979 and 2015 the top 1 percentile of earners saw a 90% increase in earnings, while the bottom 90 percentile saw only a 20% increase during the same period (see Figure 4) ("Income Inequality in the United States," 2017). The income for those in the bottom 50 percentile has remained the same for the last 30 years, remaining at $16,000 (Long, 2016).
Wealth is equated to assets such as personal homes minus liabilities or net worth including loans and outstanding bills ("Wealth Inequality in the United States," 2017). Income inequality has created wealth inequality ("Wealth Inequality in the United States," 2017; Peters & Hinson-Hasty, 2008). The distribution of wealth among American families has become more unequal than it was in 1989, creating a burgeoning wealth gap between the top 10 percentile and the remainder of the 90 percentile of those living in America (see Figure 5) (Congressional Budget Office, 2016). As a result, it is necessary to address the structural causes of poverty in an effort to lower the rate of poverty (Jackson, 2014). Bastiaensen et al. (2005) argues for the need
to deal with the underlying structural causes of the immediate indicators of poverty in an effort to achieve poverty reduction.

Chronic/Persistent Poverty. Haveman et al. (2014) asserts that the segment of the American population that poverty has increased the most includes children, heads of families with low-skills, and those with low educational levels. This segment of the American population often makes up the portion of those considered chronically poor; their income over time remains below the poverty line (Israeli & Weber, 2014). Carter and Barrett (2006) refer to this segment of the American population as being structurally poor. They contend that this segment of the population needs pathways out of poverty created, pathways designed to address the structural issues that bind those in poverty (Carter & Barrett, 2006).
"Poverty is more than a lack of adequate income but a combination of many forms of deprivation that together allow human capabilities to go unrealized" (Akindola, 2009, p. 121).

Over the last two decades, the gap between those who are at the top and those who are at the bottom has grown in spite of the safety nets developed by the government to help all realize their human capacity. This gap between the top and bottom remains a persistent problem (Akindola, 2009; Reid & Evanson, 2016). Segal (2007) refers to this gap between those at the top and those at the bottom as a "crisis of imbedded poverty" and argued "this divide is an economic, social, cultural, and moral crisis." (p. 66). Those areas in America with the largest concentrations of imbedded poverty have two conditions in common: “historic neglect and a disparate allocation of resources,” (Clyburn, 2014, p. 5). Clyburn (2014) argues that the safety nets created for those in persistent poverty, poverty prevailing over time ("What is the Current Poverty Rate," 2017) and is lingering, do not address these two, real, underlying causes, but only address the basic necessary resources for survival (Clyburn, 2014).

Representative James E. Clyburn (2014), in 2014 reported that 20 percent of the population from 488 American counties have lived below the poverty line for the last 30 or more years and referred to this as persistent poverty ("What is the Current Poverty Rate," 2017). The 113th American Congress termed these 488 counties as “persistent poverty counties” (Clyburn, 2014, p. 1). Clyburn (2014) is troubled by the degree of persistent poverty, poverty lasting more than 30 years, in America and argued “we know the issues and obstacles that cause persistent poverty to thrive. We know where poverty is concentrated, and we have the tools to address this chronic problem. The question is can we develop the will to overcome persistent poverty” (Clyburn, 2014, p. 1)?
Prior development of safety nets for those in poverty has not overcome the quagmire of persistent poverty, but Representative Clyburn (2014) maintained that bipartisan Congressional support could be a key to solving poverty that continues to threaten and plague America. The American Recovery and Reinvestment Act (ARRA) passed in 2009 in an effort to counter the Great Recession of 2008 and was designed to serve as a possible pathway out of persistent poverty (Clyburn, 2014). In 2009, 444 counties were persistent poverty counties and as of 2014, there were 488, an increase of almost ten percent (Clyburn, 2014). This increase of persistent poverty supports the need for the American society to continue to address the gap of knowledge and understanding of poverty (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011). Knowledge and understanding of poverty are necessary as the American legislature develops anti-poverty policies and programs in a bipartisan effort (Clyburn, 2014; Davidson, 2009; Shaw, 2009-10; Zosky et al., 2014).

Attribution of Poverty

The attribution theory is one lenses through which persistent poverty can be viewed, having the potential to lead to an increased awareness and understanding of the causes of poverty in an effort to develop the will to overcome poverty (Castillo & Becerra, 2012; Clyburn, 2014; Davidson, 2009; Godfrey, 2016; McArthur, 1972). Attribution is one’s motivation pertaining to the causal explanations for success or failure of an individual. Perceptions and beliefs play an important role in the thinking of attributions; the realities of a situation are not necessarily a part of the perceptions and beliefs of the individual looking into the life of one in poverty. There is a tendency to attribute another's failure to the personal characteristics of the other or the actor, the one being marginalized (Dolby, 2012), whereas uncontrolled external causes are what one often attributes their own failure to (Yough & Cho, 2014). The attribution theory focuses on "the
processes through which an individual assigns causes to various responses he makes or observes and the consequences of his resulting beliefs about causality" (McArthur, 1972, p. 171). Meaning comes from identifying the cause of an event, which in turn helps the world feel more predictable, stable and controllable to an individual (McArthur, 1972). This theory provides a view of both the individual and structural attributes of a construct (Castillo & Becerra, 2012; Davidson, 2009; Godfrey, 2016; McArthur, 1972). Beliefs about causes of world constructs shape attitudes toward those world constructs (Davidson, 2009; McArthur, 1972).

**Poverty attributed to individual and structural deficiencies.** To comprehend the causes of one's behavior toward those experiencing poverty, one must consider whether the basis for the belief regarding the attribution of poverty are individual or structural deficiencies (Davidson, 2009; McArthur, 1972). Knowledge and understanding of poverty from both individualistic and structural deficiencies is important considering the failure of current government policies to ameliorate the struggles of the 11 - 15% Americans currently living in poverty ("What is the Current Poverty Rate," 2017). The beliefs of Americans pertaining to the attribution of poverty shape the efforts to decrease poverty in America (Bradshaw, 2006; Rank et al., 2003).

**Poverty attributed to individual deficiencies.** Research indicates that Americans are more likely to attribute poverty to individual deficiencies rather than structural deficiencies (Godfrey, 2016; Loix & Pepermans, 2009; Peck, 2007; Rank et al., 2003; Rank, 2011; Zosky & Thompson, 2003). Some examples of individual attributes of poverty are poor money management (Loix & Pepermans, 2009), lack of effort (Castillo & Becerra, 2012; Loix & Pepermans, 2009; Mead, 1994; Weiss-Gal, Benyamini, Ginzburg, Savaya, & Peled, 2009), and personality and behavior of those who are poor (Weiss-Gal et al., 2009). Other individual
deficiencies include lack of motivation and initiative, passivity, lack of job training, dependency, poor work habits (Mead, 1994; Weiss-Gal et al., 2009), no self-reliance (Weiss-Gal et al., 2009), being lazy, low intelligence, being on drugs (Castillo & Becerra, 2012), character flaws, lack of hard work, and understanding of external constraints that hinder finding and holding a job (Mead, 1994).

Those who consider poverty a result of individual deficiencies are often the observers, the person not experiencing poverty (Onder & Oner-Ozkan, 2003). The observer directs their main attention toward the actor's presence, the person experiencing poverty, and the behavior and dispositional traits of the actor become more important than any structural factors at play (Onder & Oner-Ozkan, 2003; Storms, 1973). Americans who attribute poverty to individual deficiencies often describe those in poverty using negative attributes, which can evoke feelings of anger and blame toward people experiencing poverty (Zosky & Thompson, 2013). Assigning individual attributes to poverty also brings forth negative feelings toward social welfare policies as well as an unwillingness to fund these policies (Bullock, Williams, & Limbert, 2003).

**Poverty attributed to structural deficiencies.** Rank et al. (2003) argue that poverty is structural in nature and associates these structural deficiencies with poverty referring to those in poverty as being structurally poor. Three lines of evidence were posited to support the argument of the structural failings of America's welfare system in its present state (Rank et al., 2003). The three lines of evidence supporting the structural failing of poverty are:

1. the inability of the U.S. labor market to provide enough decent paying jobs for all families to avoid poverty;
2. the ineffectiveness of America social policy to reduce levels of poverty through governmental social safety net programs; and
3. the fact that the majority of the population will experience poverty during their adult lifetimes, indicative of the systemic nature of U.S. poverty (Rank et al., 2003, p. 8)
These structural failings are the outcome of the complex government operations at the local, state, and national level, which have economic ties to globalization and international levels, based on a capitalist economic market (Weiss-Gal et al., 2009).

Examples of structural attributes of poverty are low wages in some professions and businesses (Loix & Pepermans, 2009; Weiss-Gal et al., 2009), race, gender (Sameti et al., 2012; Vandsburger et al., 2010; Weiss-Gal et al., 2009), and ethnicity (Weiss-Gal et al., 2009). Other structural attributes include an individual being taken advantage of by the wealthy (Loix & Pepermans, 2009), limited demand for under-skilled workers, limited unemployment, insufficient social protection, lack of political power, and systemic discrimination based on race, class, gender, or ethnicity (Weiss-Gal et al., 2009). Additional structural attributes are the economy, politics, culture, social justice (Zosky et al., 2014), low education, occupation, number of working members in a family (Vandsburger et al., 2010), work disability, family size and structure, residence, age (Sameti et al., 2012), and social constraints surrounding those in poverty (Mead, 1994).

Brady (2006) sums up the structural attributes of poverty as the “set of labor market opportunities and/or demographic propensities that characterize the population's likelihood of being poor” (p. 154). Those who consider poverty a result of structural deficiencies are often the actors, the person experiencing poverty. The person experiencing poverty cannot see self while acting, and as a result direct more attention toward the structural deficiencies that become the dominant factors when experiencing poverty (Onder & Oner-Ozkan, 2003). Attribution of an event to circumstances beyond one's individual control or responsibility often evokes an emotional response to help (Zosky & Thompson, 2013). Therefore, it is important to challenge
the observers to grasp that often times an individual's aspirations are not sufficient to overcome the structural barriers that accompany poverty (Coghlan & Huggins, 2004).

**Individual participant data correlate to causal attribution of poverty.** Data indicates that participant data have been utilized to predict individuals’ attitudes toward poverty welfare reform and policies (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004; Pellegrini, Queirolo, Monarrez, & Valenzuela, 1997; Weiss-Gal et al., 2009). Individuals are often drawn to groups with whom the individual has common factors (Trout, 2009), and studies indicate that similar attributions and beliefs about inequality can be found in like-minded groups based on individual participant data (Bullock, Williams, & Limbert, 2003). The beliefs about social inequality often center on individual failings as opposed to structural factors (Shaw, 2009-10).

The beliefs about societal inequalities, such as those in poverty, are often arguable views held by the American society (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004; Pellegrini, Queirolo, Monarrez, & Valenzuela, 1997; Weiss-Gal et al., 2009). The dominant ideological beliefs of individuals influence the American societal views of poverty (Huber & Form, 1973; Shaw, 2009-10). Shaw (2010-09) contents these views of poverty are shaped by the tensions that play out between the dominant ideological beliefs of those who argue for capitalism and a strong work ethic versus the humanitarian commitment and obligation to assist the poor among us. Polarization is taking place for factions of the American society regarding their reasoning for the attribution of poverty (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004; Pellegrini, Queirolo, Monarrez, & Valenzuela, 1997; Weiss-Gal et al., 2009). Knowledge and understanding of the two extremes of the attributions of poverty are necessary, as views on attribution of poverty are associated with how the American society moves forward in overcoming poverty (Weiss-Gal et al., 2009).
Individual participant data attributing poverty to individual deficiencies. Welfare reforms and policies tend to be restrictive or progressive, depending on the beliefs pertaining to the attributions of poverty. Restrictive welfare reforms and policies hold the individual responsible for marginalization (Bullock et al., 2003). Policies that are more restrictive are associated with conservative thinking (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004) and usually linked with Republican, political ideology (Pellegrini, Queirolo, Monarrez, & Valenzuela, 1997). Those who are Caucasian (Hunt, 1996; Hunt, 2004; Klemme & Rommel, 2004; Kluegel & Smith, 1986), males (Hunt, 1996), have higher incomes levels, older individuals, and social service providers in the field of social work (Weiss-Gal, Benyamini, Ginzburg, Savaya, & Peled, 2009) often attribute poverty to the fault of the individual (Hunt, 2004).

Individual participant data attributing poverty to structural deficiencies. Progressive welfare reforms and policies oppose beliefs of restrictive policies (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004). Progressive welfare reforms and policies regard structural problems associated with poverty as most important in overcoming poverty. Progressive are of the belief that income inequality is unreasonable and view wealth as associated with privilege (Bullock et al., 2003). Policies that are more progressive are often associated with structural attributes of poverty, which are outside of the realm of control of the individual (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004). Democratic political ideology is commonly linked with progressive (Pellegrini et al., 1997) or liberal viewpoints (Bradshaw, 2006; Bullock et al., 2003; Hunt, 2004). Those who are African American (Hunt, 1996), other racial minorities, ethnic minorities (Hunt, 2004), females (Hunt, 1996, 2004), those experiencing poverty, people with a higher level of
education (Morcol, 1997; Nasser, 2001), and social service users (Weiss-Gal et al., 2009) have a greater tendency to attribute poverty to structural deficiencies.

**Individual participant data attributing poverty to both individual and structural deficiencies.** Hunt (1996, 2004) argued that most minority groups attribute poverty to structural deficiencies, but it is not uncommon for some minority groups to attribute poverty to individual deficiencies as well. In a study that utilized three questions to determine an individual’s beliefs pertaining to the causes of poverty, Hunt (1996, 2004) maintained that this phenomenon of attributing poverty to both structural and individual attributes applies to some African Americans and Latinos. As these two minority groups place more weight on the individual explanation for poverty, they still acknowledge a significant structural explanation of poverty.

In examining beliefs surrounding economic inequality, it is necessary to keep in mind that attribution biases based on Caucasian experiences of the world have created a dominant ideology about those in poverty (Huber & Form, 1973; Hunt, 1996). Kluegel and Smith (2009-10) argued that the beliefs of the dominant ideology in America are based on the perception that economic gain is available to everyone, the individual is held accountable for their own social status, and there is a fair sharing of economic rewards in America. They contend the basis for the dominant ideology creates a greater acceptance of the individualism of poverty and is evidence of the mainstay of a dominant ideology about poverty in America (Huber & Form, 1973; Kluegel & Smith, 1986). Hunt (2004) regarded this ideology as a "general cultural trait, having broad, 'universalistic' effects on all Americans" (p. 830). Minority groups often have the weakest political voice and as a result struggle with fighting the dominant ideology of attribution of poverty (Hunt, 1996). The structural positions and experiences of minorities should be a
factor in the endeavor to create solutions to ameliorate the consequences of poverty (Hunt, 1996).

Government welfare reform and policy affecting poverty reduction are rooted in beliefs toward the attributes of poverty, and over the years influenced by different perspectives (Rank, 2001). Some of these perspectives have been based on misconceptions and misunderstanding of the causes of poverty (Klemme & Rommel, 2004; Ullucci & Howard, 2015). Knowledge of the structural attributes of poverty is paramount for assessing the real causes of poverty (Rank, 2001), because beliefs related to the attributes of poverty, individual or structural, can influence government welfare policies and programs designed to reduce poverty (Sameti et al., 2012).

Based on research that suggested Americans have a greater tendency to attribute poverty to individual deficiencies (Godfrey, 2016; Loix & Pepermans, 2009; Peck, 2007; Rank et al., 2003; Rank, 2011; Zosky & Thompson, 2003), Bastiaensen et al (2005) and others assert it is important to gain greater knowledge and understanding of the structural deficiencies of poverty (Benjamin, 2010; Niemela, 2008). To apprehend the structural failings of poverty the prime target becomes the institutions that mold the environment of those in poverty; attending to these institutions helps direct attention away from blaming the individuals experiencing poverty (Bastiaensen et al., 2005). Harper (1991, 1996) argued it is important to scrutinize the government systems that are in play perpetuating poverty in an effort to determine and comprehend the structural failings of poverty (Rank et al., 2003). The increase of an empathetic attitude toward those experiencing poverty can build greater knowledge and understanding of the structural power of the systems (Galper, 1976; Skiffington et al., 1984) that continue to ensnare a segment of the American population who experience poverty ("Hunger in America," 2016.; Piven, 2014; "What is the Current Poverty Rate," 2017; Rank, 2011). Discerning the structural
power of poverty through empathy can result in a change of the "existing structure of power" which is the key to poverty reduction (Bastiaensen et al., 2005, p. 3), resulting in the redistributive reform of wealth (Harper, 1991; Shaw, 2009-10).

**Empathy**

Empathy is a feeling toward others in which there is understanding of what another is feeling by placing self in another's situation or taking their perspective (Trout, 2009), and sharing in another's emotional state or context (Cohen & Strayer, 1996; Cuff, 2016). The term “feeling with” can be used to describe empathy (Borchert, 2006, p. 344). The simple definition of empathy is "I understand how you feel" (Nightingale et al., 1991, p. 420). Brown (2011) contends that any individual can have empathy toward another even though the individual is not experiencing other’s exact situation. This thinking is based on the idea that we all have the ability to feel pain resulting in the ability to feel another's pain. Borchert (2006) considers empathy not to be an emotion, but instead defines empathy as a phenomenon that addresses the manner in which an individual relates to another’s emotions.

Empathy was the construct used for measuring attitude change toward those in poverty based on Dolby’s (2012) argument that empathy is needed to solve the problems of the world. Research also suggests that developing empathy toward an individual marginalized helps to generate an understanding of the structural causes of marginalization (Galper, 1976; Skiffington et al., 1984). Empathy will have the greatest impact if it is informed and linked to social justice (Dolby, 2012; Segal, 2007). Empathy can lead to an individual taking action on behalf of another person or group who is marginalized or stigmatized (Batson, 2012), the primary purpose being to help others face life adversities (Bruneau, 2009, Cuff, 2016). Empathy allows self to not be the focus making the other important (Cuff, 2016). Segal (2007) refers to this type of
empathy as social empathy because it provides the basis address the social inequalities and injustices that surround poverty.

Some confuse empathy with sympathy. Sympathy is a normal human or animal feedback to suffering and pain (Dobly, 2012). Sympathy presents itself in the form of concern or pity (Trout, 2009), and is associated with “feeling for” (Borchert, 2006, p. 344) of "I feel sorry for you" (Nightingale et al., 1991, p. 420). Dolby (2012) asserts that to lead an individual to take action against a social injustice, sympathy cannot take an individual far enough.

Feeling "into another person's biological processes, perceptions, emotional states, and their kinds and forms of consciousness in order to assess their feelings" (Bruneau, 2009, p. 337) is more difficult to achieve if there is no perceived familiarity or similarity (Azevedo et al., 2013; Banks, 1972; Chiao & Mathur, 2010; Dobly, 2012; Trout, 2009). The local reach of empathy no longer serves us well taking into the account the diversity and global reach of the world, and that diversity of “other” makes it more difficult to feel empathy toward “other” (Trout, 2009). Dolby (2012) supports this belief about empathy and argues that it is more challenging to feel empathy for those who are “far” (p. 96).

Several researchers allege that empathy toward others is dropping among college students (Konrath et. al., 2011; Dobly, 2012). This assertion about the decrease in empathetic attitude was supported in the commencement speech then Senator Barrack Obama (2006) gave at Northwestern University in 2006. Senator Obama (2006) referred this lack of empathy as an “empathy deficit” in America (n.p.). Though an individual is often less empathetic toward those they are not familiar with both biologically and culturally (Azavedo; Dobly, 2012; Trout, 2009), Senator Obama (2006) challenged the young people at Northwestern University to walk in the shoes of another and to see the world from the perspective of all, even those who are different
from them. Growing evidence suggests that empathetic prejudices are not fixed, but are a result of culturally acquired biases (Chiao & Mathur, 2010). Brueneau (2009) contends that to walk in the shoes of another, improving communication and understanding between people is central to empathy.

**Empathy Gap and Race**

The challenge of feeling empathy toward those who are different is evidenced in the empathy gap toward minorities in America (Vega, 2017). Sociologist W. E. B. DuBois addressed this empathy gap toward those of color in the 1890’s and discussed the deplorable living conditions of blacks in Philadelphia, as well as the very difficult labor conditions blacks were subjected to. The health problems caused by the living conditions of blacks during that time was a social problem for America was addressed with indifference (Vega, 2017). DuBois (1899/2007) wrote, “There have, for instance, been few other cases in the history of a civilized peoples where human suffering has been viewed with such peculiar indifference” (p. 116).

The lack of empathy toward blacks, referenced by DuBois (1899/2007), continues to be a symptomatic problem for blacks in America (Vega, 2017). In 1959 Griffin (1960/2011), used drugs to alter his skin color from white to black. He then traveled through the south, a very racially segregated part of America, as a black man. His goal was to understand, to a greater extent, the perspective of a black person during that time in American history. Griffin (1960/2011) chronicled his journey in a memoir called Black Like Me and shared that he had never realized what blacks experienced, and talked about crying himself to sleep at night. The attitude toward Griffin (1960/2011) and the lack of empathy toward a black man replicated the continued indifference toward blacks that DuBois (1899/2007) discussed.
Another example of the empathy gap toward those of color is the fact African-Americans are more likely to receive a harsher penalty for a crime that a non-minority (Wade, 2013). Another empathy gap appears in the attitude of America toward the present opioid epidemic (Vega, 2017). The opioid addiction crisis gripped primarily white males. It is now being called a national epidemic. However, when black communities were being destroyed because of the heroin and crack epidemic in America, this epidemic was considered a crime that had to be obliterated rather than a public health crisis (Vega, 2017). Based on the desensitization of the general American population (Feagin, 1972; Kihm & Knapp, 2015), resulting in blaming those who are marginalized (Feagin, 1972), those who live in poverty are often times not seem as deserving of empathy (Vega, 2017). The empathy gap addressed by DuBois (1899/2007) in the late eighteenth century still plagues America today. Taking the continued empathy gap toward African-Americans into account, the need to address empathy and attribution of poverty is necessary (Clyburn, 2014; Galper, 1976; Skiffington et al., 1984).

**Empathic Effect on Attribution of Poverty**

There is a growing concern regarding the economic inequality in the United States (Godfrey, 2016) and being knowledgeable of the beliefs about the attributes of poverty can help address the wealth and social inequalities some Americans face (Zosky et al., 2014). To better understand the causes of behavior toward those in poverty, beliefs about causality of poverty should be considered (Davidson, 2009; McArthur, 1972). Beliefs surrounding the attribution of poverty shape the attitudes toward the poor (Davidson, 2009), supporting the need to assimilate the association between empathy and the structural causes of poverty (Zosky et al., 2014). An awareness and understanding of this association is necessary (Thakkar & Kanekar, 1989),
because "empathy and causal attributions, additively," can be determinants in creating a helping behavior toward others (Betancourt, 1990, p. 587).

The role played by an individual in a situation often determines one’s attribution of poverty. Actors, those experiencing poverty, are more likely to attribute poverty to structural or situational causes, whereas observers, those not in poverty, attribute poverty to personal dispositions or attributes of the actor (Jones & Nisbett, 1971; Regan & Totten, 1975; Zosky et al., 2014). Onder and Ozkan (2003) refer to this phenomenon as “actor-observer” bias. This bias is based on the actor and observer examining the causes of poverty based on different information platforms (Jones & Nisbett, 1971). The actor is more knowledgeable of the circumstances surrounding poverty and is often the one experiencing poverty, while the observer is deficient in background data pertaining to poverty, bringing different background knowledge (Jones & Nisbett, 1971; Harvey, Arkin, Gleason, & Johnston, 1974; Onder & Ozkan, 2003). As a result, the observer focuses only on the presumed personality dispositions or attributes (Harvey et al., 1974). The differences between the actor and observer can result “from the difference between the observer’s inferred history of everyman and the concrete individualized history of the actor himself” (Jones & Nisbett, 1971, p. 84). The actor has been exposed to experiences that are unique, whereas the observer comes from the perspective of normative experiences (Jones & Nisbett, 1971). It is believed that these differences are rooted in the biases, misconceptions, prior assumptions, and the lack of ability to move beyond self that both the observer and the actor bring to a situation (Ajello, 2014; Jones & Nisbett, 1971; Steck et al., 2011).

Guiding observers to have more empathy can help the observer become more aware of the circumstances of poverty from the actor’s perspective thus altering the thinking of the
observer relating to the attributes of poverty (Skiffington et al., 1984). Harvey et al. (1974) and Jones and Nisbett (1971) assert that empathy can create a new insight for the observer which is a result of the observer becoming aware of a perspective that had never been considered in the past. This new perspective can create a change in the observers’ thinking pertaining to the attribution of poverty allows the observer to see the structural or situational causes of poverty (Regan & Totten, 1975). Research indicates that an empathetic mindset can support an individual to perceive, more accurately, the structural causes of poverty (Galper, 1976; Skiffington et al., 1984). In turn, more empathy can make one more willing to attribute poverty less to individual causes (Betancourt, 1990; Skiffington et al., 1984). The empathetic mindset creates a new perspective allowing an individual to view another’s behavior through the perspective of either the actor or observer (Dolby, 2012; Galper, 1976; Jones & Nisbett, 1971; Skiffington et al., 1984). New thinking pertaining to attribution of poverty can result from a new apprehending of the actor’s perspective based on an empathetic mindset; the observer looks beyond self to the other (Harvey, Arkin, Gleason, & Johnston, 1974; Trout, 2009).

As an observer, one is not a member of the group of actors. The observer, per the tenets of the attribution theory, sees the cause of poverty to be individual choices and often explain poverty from their own group perspective (Hewstone, 1990), whereas the actor is more likely to see the structural causes that bind those in poverty (Jones & Nisbett, 1971; Harvey, Arkin, Gleason, & Johnston, 1974; Onder & Ozkan, 2003). The attribution of poverty for actors and observers is at variance with each other (Jones & Nisbett, 1971). Studies support the effect of empathy on perceiving the causal attribution of poverty in relation to structural barriers and the change that can result in the thinking of the observer regarding the attribution of poverty (Galper, 1976; Regan & Totten, 1975; Skiffington et al., 1984; Storms, 1973).
Skiffington et al. (1984) conducted a study in which the observer was instructed to be more empathetic and make an effort to see the situation from the perspective of the actor. The research findings indicated that having empathy toward the actor helped the observer discern the situation from the structural or environmental perspective rather than blaming the individual. The study conducted by Galper (1976) supports the findings of Skiffington et al. (1984). Galper (1976) used a video made from the perspective of both the actor and observer. Those who viewed the video from the perspective of the actor had a greater tendency to have empathy toward the actors and placed more emphasis on attributions of structure; those who viewed the video from the perspective of the observer had a greater tendency to blame the individual (Galper, 1976). Storms (1973) also conducted a study in which he showed the study participants a video from the perspectives of both the actor and observer. He found that the role, actor or observer, determined the thinking of the participant regarding the attribution of poverty and found that depending on the video seen could change the viewpoints of the participants. Each of these findings suggests that the actor knows more about their own situation than does the observer, and that new knowledge presented to the observer gives insight creating a more empathetic mindset, influencing the observer to view the attribution of poverty differently (Jones and Nisbett, 1971).

Some research indicated that an empathetic mindset does not always bring about a shift in thinking regarding causal attribution of poverty (Browne and Roll, 2016; Schwittay & Boocock, 2015). The observer may be able to have an empathetic engagement around poverty, but because the observer may project "their own physical and emotional sensations onto imagined poor others" participation in a poverty simulation may reinforce the stereotypes about those living in poverty rather than challenge the stereotypes about poverty (Schwittay & Boocock,
Browne and Roll (2016) contend that an empathetic mindset may not always have
the desired effect on the attribution of poverty if the implementation of the strategy used for
creating empathy does not take into account critical consideration of the prior experience of the
participants (Zucker, Worthington, & Forsyth, 1985). The use of some strategies used for
creating empathy “might actually perpetuate inequality rather than empower students to address
poverty through civic action” (Browne & Roll, 2016, p. 254).

**Simulations Linked to Experiential Learning**

A simulation is a close representation of an authentic life event (Billings & Halstead, 2005) and can be "described as a process of replication that produces a copy with an actual
original" (Dickinson, 2009, p. 886) through the total loss of reality (Cubitt, 2005). Simulations
are encountered through technology, role-play, real case studies, or games that replicate reality.
Participants are actively involved in learning through the application of the content of the lesson
to real-life situations (Billings & Halstead, 2005) promoting understanding through “doing”
(Clapper, 2015; Emerson, 2016; Prescott & Garside, 2009, p. 35) or direct experience (Chatav &
Stuart, 2009). Simulations follow an experiential learning model and enhance the opportunity
for participants to begin to learn to ask the right questions (Livingston & Stoll, 1973) which is a
result of critical thinking (Vandsburger et al., 2010).

The “doing” Prescott and Garside (2009, p. 35) referenced takes the form of role-playing.
For maximum learning to take place in an effective simulation, the participants must mentally
accept and become the role they are playing (Prescott & Garside, 2009). Participation in a
simulation, as compared to the routine of daily life, can result in a greater development of
understanding the barriers those who live in poverty face on a daily basis (Ajello, 2014).
Pankow (2006, p. 2) refers to this as "reality of function." In spite of certain limitations,
Simulations do create a safe environment in which participants assume alternate identities interacting with others safely as they experience an unfamiliar environment, resulting in the gain of new knowledge (Costantino, 2008; Rutherford-Hemine, 2012). Mullen, Beilke, and Brooks (2007) "suggest that, ultimately, the ability to be the principal creators of themselves in virtual environments can increase their ability to do the same in the real world" (p. 22).

Constructivism postulates that simulations have the ability to create knowledge by affixing meaning to an individual’s action or the experience resulting from social interaction; the new knowledge can have a "personal constructive orientation or a social constructive orientation" (Rutherford-Hemine, 2012, p. 134; Costantino, 2008). From a constructivist perspective, Rutherford-Hemine (2012) asserted that simulations follow the tenets of the experiential learning theory by providing a new environment that promotes learning, critical thinking, and challenging the participant to envisage how they might think differently if they were in a similar real-world situation. This type of experience can lead to new knowledge, understanding, and attitude change moving closer to taking action in the real world per Kolb's model of learning (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

In the early 1970’s, there was an increase in the use of simulations as an instructional tool (DeNike, 1976) based on the tenets of the experiential learning model (Costantino, 2008; Emerson, 2016; Livingston & Stoll, 1973; Rutherford-Hemine, 2012). The present use of simulations is similar to the use of simulations in the 1970’s (Livingston & Stoll, 1973). The overarching goal of simulations, as an instructional tool, is to enhance the ability of the participant to perform in real-life situations resulting from an increase in knowledge (Yang et al., 2014), understanding (Vandsburger et al., 2010), and a more positive attitude (Livingston & Stoll, 1973; Patterson & Hulton, 2011).
One difference in modern simulations is the role of technology. Studies have been conducted to determine the efficacy of the implementation of computer simulations (Cuhadar & Kampf, 2014; Franciosi & Mehring, 2015; Johnson, 2007; Lin & Sun, 2003; Yuen, 2006). One such example of a technology driven simulation is the use of surgical simulators and simulated surgeons. A study in the health care field examined the practice and the effect of these types of simulations based on the perspective of the creation design of the simulations and the need for correct implementation of the computer simulation (Johnson, 2007).

Lin and Sun (2003) discussed the limitations of computer simulations in the field of social reality and presented three findings. The three findings of the research of computer simulations suggest computer simulations have to be fun because participants can walk away at any time, game players often do not have the patience needed to play through a simulation addressing issues in a social system, and the biases of the technicians creating the simulation can influence the final product. The field of social reality has had to deal with the problem of a simulation becoming too much fun; if a game becomes too much fun the social issues may no longer be the focus and as a result not be dealt with (Lin & Sun, 2003).

The following are some examples of studies of online simulation experiential learning models. Cuhadar and Kampf (2014) studied a computer simulation that examined the effect of a game called "Peace Maker." The students learned about conflict and negotiations surrounding the complex issues of the Israeli-Palestinian conflict. Findings indicated the knowledge level of the participants did increase (Cuhadar & Kampf, 2014). Yuen (2006) researched the effect of a computer simulation as the learning tool for apprehending the creation of computer programming. Findings indicated that a dynamic learning environment was generated and simulated attitude change. Franciosi and Mehring (2015) investigated knowledge of energy
supply and its environmental relationship in Japan. The findings based on the computer simulation did indicate the simulation influenced participants' attitudes toward nuclear power and responsible personal behavior. The studies of the online simulation models indicated the need to develop an instrument to measure attitude and behavior change based on statistical significance (Franciosi & Mehring, 2015).

The debriefing phase of a simulation is an important component of a simulation because debriefing helps to ensure an increase of knowledge, understanding, and attitude change (Clapper, 2015; Dorn, 1989). This debriefing allows the participants to reflect on the structures and relationships of the situation creating insight into cause-and-effect (Livingston & Stoll, 1973). Dorn (1989) contends debriefing is a means to let emotions out as well as allowing for acknowledgement of what others are thinking about the issue at hand. As with Dorn (1989), Clapper (2015) asserts that the process of debriefing provides a safe environment for the participants to discuss their beliefs, biases, assimilation, and possible acquisition of new knowledge (Clapper, 2015; Dorn, 1989; Wenzler & Chartier, 1999). Livingston and Stoll (1973) argue this is the phase in which the greatest learning takes place.

In 1976, DeNike questioned the use of simulations as an effective experiential learning model, and later researchers asked the same question (Anderson & Lawton, 2009). The growth in the use of simulations as an instructional tool brings with it the continued need to study this learning strategy (Anderson & Lawton, 2009; Bramesfeld & Good, 2015; Krain & Shadle, 2006; Vandsburger et al., 2010), because the same problems present themselves today (Stasser et al., 2013) that existed almost 50 years ago (Dorn, 1989). It is necessary to address the possible effect of external variables in the use of a simulation (DeNike, 1976). Some of these external variables include the type of learner participating, personal biases (Browne & Roll, 2016), and
other independent moderating variables such as race and gender (Hunt, 2004; Peck, 2007). Anderson and Lawton (2009) addresses the need to explain the effect of a simulation on sustained retention of knowledge, understanding, and attitude change. For a simulation to produce real change there is a need for sustained retention of the effect of a simulation (Anderson & Lawton, 2009). Sustaining the effects of a simulation supports participants addressing Kolb's final stage of learning, taking action in real life (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

**Knowledge.** New knowledge can be one of the outcomes of a simulation (Yang et al., 2014). Wenzler and Chartier’s (1999) study is an example of the successful use of a simulation to generate new knowledge in the business field. The researchers conducted a study in 1999 in which a game created focusing on the electric power industry would help the executive branch of utility companies discern what their business would entail in the year 2000. The goal was for the participants to create the knowledge needed to maintain a stable and affordable market-oriented electric power industry during the simulation. The findings indicated the simulation was successful in meeting the goals set forth. Debriefing provided the opportunity to create shared intelligence supporting a group’s higher capacity to learn. This real world simulation created a safe space to learn new knowledge thus generating a sense of confidence in being successful. This experiential learning model provided for continuous learning as well as the knowledge needed to adapt to the changes and growth in the industry of public utilities.

**Understanding.** Simulations can generate increased understanding of a topic or situation (Vandsburger et al., 2010). Bryne and O’Gorman (2016) studied the understanding of the relationship of global warming in relation to decreases in land relative humidity. A box model of the scenario was created which allowed for the introduction of additional variables to the model.
environment enabling the study of the relationships between the variables. Comprehending these relationships supported the researchers' ability to make predictions pertaining to global warming and near-surface relative humidity of land. The assimilation of the relationships studied provided increased opportunities to know the direction for future research (Bryne & O’Gorman, 2016).

**Attitude change.** The use of simulations has been shown to create attitude change (Galper, 1976; Skiffington et al., 1984). The use of simulations for creating attitude change was demonstrated in the study of one public health long-term goal in the United States. This long-term goal was aimed at reducing pregnancy for high school students and increasing knowledge around responsible sexual activity (McCowan, Roberts, & Slaughter, 2009). McCowan et al. (2009) conducted a study to determine the effect of the utilization of the Realityworks infant simulator on attitudes toward responsible sexual behavior. The study employed a comparison group and analyzed attitudinal responses through analysis of variance. Past research indicated that verbally discussing the consequences of unsafe sex had little effect, but that the infant simulator provided a tangible, real-life, learning experience. Not only did the treatment group surpass the comparison group in scores representing attitude change toward safe sex, findings indicated sustained effects from the simulation.

**Simulations create empathy.** Barratt (2006) questions why we can respond emotionally to situations that involve others experiences and not our own. Participation in simulations allows the participants to walk a mile in the other's shoes (Panosky & Diaz, 2009) through the casting of self into the other’s environment (Zahavi, 2008). The environment of other can challenge one's reference of mindset and alter that reference (Panosky & Diaz, 2009). Ravenscroft (1998) refers to walking in another's shoes as an imaginative identification with the other that allows for the
participants in a simulation to "vividly experience" what it feels like to be the other (p. 171). Simulations can be the route to the development of empathy (Barratt, 2006; Ravenscroft, 1998), and some researchers argue for the use of simulation implementation to gauge the participant's empathetic behavior toward those marginalized (Teherani, Hauer and O’Sullivan, 2008). Having insight regarding the effect simulations can have on empathetic mindset is necessary seeing as empathy can increase awareness and understanding of those who are marginalized (Batson, Chang, Orr, & Rowland, 2002).

The effect of debriefing at the end of a simulation is important when studying empathetic attitude change (Cruz & Patterson, 2005), because this opportunity is needed to "discuss and 'process' the experience following the simulation" (Pankow, 2006, p. 3). Ajjello (2014) asserts that debriefing has the potential to create a more extensive level of empathy toward those marginalized. Richards and Camuso (2015) contends facilitating a written debriefing at the end of a simulation has a more powerful effect on the creation of empathy than simply using a verbal debriefing. Debriefing offers the opportunity to confront one's biases and guilt, and the resulting defensiveness, that may come with the privilege the participant brings to the simulation, as well as "confirm and challenge the thoughts of the group" (Richards & Camuso, 2015, p. 100). This collective nature of oral debriefing is important (Richards & Camuso, 2015). The debriefing helps to "deepen and concretize the [participants'] own understanding" (Richards & Camuso, 2015, p. 101) creating a more empathetic mindset surrounding the issues at hand. Debriefing supports the participants taking action on critical social issues that address Kolb's final stage of learning, taking action in real life (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).
Several studies were examined that studied empathetic attitude change resulting from participating in a simulation. Panosky and Diaz (2009) studied nurses who were experiencing the simulation of patient incontinence. The student nurses were required to wear either a colostomy bag or an adult diaper. Patients had reported that nurses often did not comprehend the trauma associated with this type of medical situation. Finds indicated that empathy was evident as the output of the study was measured (Panosky & Diaz, 2009).

Cruz and Patterson (2005) conducted a simulation for teachers, addressing perceiving and developing empathy based on cross-cultural awareness. The research considers simulations to be powerful learning tools, because they recreate some aspect of reality (Chambers, 1983; Gair, 2010; Livingston, 1970; Rutherford-Hemine, 2012; Vandsburger et al., 2010; Yang et al., 2014). Cruz and Patterson (2005) also addressed the fact this experiential learning experience was beneficial in providing a model for teachers to use in their own classrooms in the future.

Research findings indicate that some struggle with developing empathy if they have not experienced the situation at hand (Chambers, 1983; Johnson et al., 2015). Gair (2010) expresses concern that a "similar lived experience" can determine the level of empathy some are capable of expressing (p. 46), and many have not and will never experience the extreme circumstances that bear upon another's life, especially those who are disadvantaged (Chambers, 1983). Simulations can bring to the participants the struggles others may experience to life (Gair, 2010; Panosky & Diaz, 2009), and can result in attitudes becoming more positive toward marginalized groups (Batson et al., 2002) if they are viewed through the lens of empathy (Ajello, 2014; Bramesfeld & Good, 2015; Yang, Wommer, Agbemenu, & Williams, 2014).

Those living in poverty constitute one of the marginalized segments of American society and developing an empathetic mindset toward those experiencing poverty is relevant to
understanding the challenges and barriers in poverty (Galper, 1976; Skiffington et al., 1984; "What is the Current Poverty Rate," 2017). Having empathy for those in poverty can lead to being knowledgeable of the structural attributes of poverty to move beyond blaming the individual (Galper, 1976; Skiffington et al., 1984). Simulations provide the opportunity to experience a near representation of real life addressing socially relevant problems (Chambers, 1983; Davidson, 2009). Because of this experiential learning experience, solutions for these societal problems surrounding poverty can move beyond theory to become practice addressing Kolb's final stage of learning, taking action in real life (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). Simulations have been created that are focused on critical social issues of poverty (Ajello, 2014), and these simulations address the multi-dimensionality surrounding poverty (Ansoms, 2012). Participation in an experiential learning experience, created through a poverty simulation (Costantino, 2008; Rutherford-Hemine, 2012), can lead the participants to look beyond their personal biases to develop a deeper understanding of those who are marginalized (Steck et al., 2011; Yang, Wommer, Agbemenu, & Williams, 2014). This deeper insight of the issues surrounding poverty transpires from a "more in-depth, ongoing cultivation of poverty" (Gair, 2010, p. 47).

**Poverty Simulations**

Economic inequalities continue to be pervasive in our country ("Number in Poverty," 2016; "Poverty Gap," 2016; "What is the Current Poverty Rate," 2017) resulting in social justice advocates to call for the need to address the critical social issue of poverty (Browne & Roll, 2016). The gap between the poor and rich is widening (Segal, 2007) indicating the need for new approaches to ameliorate the adversities of poverty (Brown, 2006). The general population of Americans who do not experience poverty are more likely to attribute poverty to individual
causes rather than to structural causes (Godfrey, 2016). A new experience with poverty (Brown, 2006) can bring about new understanding of the structural causes of poverty (Johnson et al., 2015; Vandsburger et al., 2010; Yang et al., 2014).

Experiential learning activities, such as poverty simulations, have become valuable teaching tools, used by various fields, moving beyond the sterile environment of abstract concepts to real-life experiences (Stasser et al., 2013). Poverty simulations have the potential to provide new learning experiences, centered on the tenets of constructivism, resulting in a greater understanding for other as it relates to those experiencing poverty (Dolby, 2012; Trout, 2009). Mullen et al. (2007) supports this constructivist thinking as a means of providing and shaping new experiences thus generating new learning. Research indicates this type of learning exercise advances three key goals of education and learning, "(1) the transfer of knowledge, (2) skill development, and (3) the application of both knowledge and skills" (Stasser et al., 2013, p. 264) as well as providing dialogue about real-life situations that may have never taken place (Bramesfeld & Good, 2015).

To understand how others think it is necessary to understand how they feel (Ditto & Koleva, 2011). Research indicates that experiential learning models be utilized to help participants gain greater insight and understanding of issues at hand through the generation of new knowledge (Ansoms & Greenen, 2012; Garoutte & Bobbit-Zeher, 2011; Nickols & Nielsen, 2011). Because our lives intersect with those who experience poverty, a phenomenon many are not familiar with, there is a need to understand the complex structural issues and principles of poverty (Patterson & Hulton, 2011). Poverty simulations based on an experiential learning model are a valuable tool for understanding the issues surrounding poverty (Davidson, 2009; Johnson et al., 2015; Vandsburger et al., 2010). A key advantage to this learning experience is
the opportunity it accords to discuss ideas and consider the different perspective of others for any given situation (Bramesfeld & Good, 2015; Dorn, 1989). Discussing ideas and different perspectives may result in new meaning, purpose, context to an issue, and can empower to develop insights into critical social issues surrounding poverty (Bramesfeld & Good, 2015; Gupta, 2006; Patterson & Hulton, 2011).

Experiential learning is the focus during poverty simulation providing participants the opportunity to acquire new knowledge and understanding, leading the adaptation of new practices and polices (Patterson & Hulton, 2011, p. 144). Participation in poverty simulations supports the need to learn about poverty in a meaningful way (Browne & Roll, 2016) by providing a look at poverty from the perspective of the actor or person experiencing poverty (Galper, 1976).

[Poverty simulations] can enable participants to feel powerlessness and vulnerability, and to feel ratchets of impoverishment. They can show those who provide services what it is like to be poor clients. . . Simulations such as these have a key part in training staff and changing bureaucracies. (Chambers, 1983, p. 209)

Poverty simulations offer participants the opportunity to relate to real-life situations that they may have never encountered (Galper, 1976), producing an experience more directly related to the critical social issue of poverty (Browne & Roll, 2016). "A part of the goal of poverty simulations is to have an equalizing effect” because it is a reflection of the deficiencies in the social and political life in America (Ajello, 2014, p. 144).

Relying only on facts pertaining to poverty does not address or challenge the participants' prior assumptions and underlying biases or the stereotypes about the attributes of poverty (Steck et al., 2011). Steck et al. (2011) argue that poverty simulations are more than simply facts, often including reflective thinking through debriefing, presenting the opportunity for the defensive thinking of the participant about poverty to be challenged. This type of simulation has value in
the ability to present participants the opportunity to experience poverty before scrutinizing the underlying explanations (Bramesfeld & Good, 2015). The poverty simulation provides a safe environment in which to question ones' beliefs and underlying explanations of poverty, but at the same time removes the participants from their comfort zone while challenging the belief systems of the participants (Gupta, 2006). If a participant is a service provider for those in poverty, it allows the service provider the time to become comfortable before they begin their work with those in poverty in addition to feeling more confident as a service provider in addressing the barriers and challenges of those facing poverty (Gupta, 2006; Wenzler & Chartier, 1999).

Poverty simulations support reflection on issues of poverty, and as a result challenge the participants underlying biases, assumptions, and beliefs that shape the worldviews on many of the issues surrounding poverty; race, homelessness, gender, teenage pregnancy, and other social issues related to poverty (Gupta, 2006). This experiential learning model allows for dialogue around the causes and repercussions of socially relevant problems, and becomes a "means of exploring the translation of theory to practice" (Davidson, 2009, p. 153). When implemented with critical consideration regarding the reason for the choice of the poverty simulation (Dorn, 1989) and knowing that the simulation meets the needs of both the researchers and participants in relation to experience, reflection and assessment (Chambers, 1983), this type of experiential leaning modality allows for lasting learning about poverty (Browne & Roll, 2016). Lasting learning about poverty has the potential to bring about civic engagement and promote collective action in addressing critical social issues faced by those experiencing poverty in America (Gupta, 2006).
Almost 35 years ago, Chambers (1983) discussed experiencing the world of poverty through participation in a simulation and professions continue to employ this experiential learning model to help fill the gap in understanding the real causes of poverty. Chambers wrote:

The most effective way of experiencing the world as a poor person is to go and be that poor person in as complete a manner as possible. But for that most outsiders have neither the time, courage nor opportunity. This being so, simulations .... are one of the most promising methods for enabling outsiders to understand the life and problems of the poor . . . . To be effective, such simulations need participants who enter into the spirit of the thing, and plenty of time for discussion afterwards to allow participants to remember, describe and analyze what happened and what they felt. Given these, they can be a remarkable way into the experience of others and a powerful source of learning. They can contribute to changes in understanding and in feeling and to a new empathy with poor . . . people. (Chambers 1983, p. 207-8)

Poverty simulations and empathy. Research suggests that simulations, including poverty simulations, have the potential to alter attitudes (Fialova, 2014; Livingston & Stoll, 1973) based on the new knowledge and understanding as a result of the experiential learning experience which can result in more positive attitudes toward a situation (Davidson, Preez, Gibb, & Nel, 2009; Garoutte & Bobbit-Zeher, 2011; Yang et al., 2014). Poverty simulations can create empathy toward those in poverty (Ajello, 2014; Bramesfeld & Good, 2015; Johnson et al., 2015), and research points to the ability of an empathetic mindset generating an understanding of the structural causes attributed to poverty (Galper, 1976; Skiffington et al., 1984). This stage of understanding supports participant growth in learning and enhances the ability to apply principles in real-life settings resulting from understanding the need for action pertaining to the structural issues surrounding poverty (Kihm & Knapp, 2015).

Generating greater understanding of the adversities of poverty, through attitude change toward those in poverty, is one of the goals of poverty simulations (Browne & Roll, 2016; Yang et al., 2014). Understanding the relationship of poverty simulations and empathy is crucial because change in empathetic attitude can generate different thinking about the attributes of
poverty (Galper, 1976; Skiffington et al., 1984). Understanding the issues faced by those who experience poverty, based on an empathetic mindset, is essential for three reasons. Populations who experience poverty often struggle with developing trust for those who work with or around them. Empathy helps one move closer to understanding the emotions others are feeling (Borchert, 2006) and comes more easily for populations we are more familiar with and have a greater understanding of (Dolby, 2012). Participation in a poverty simulation can help the participants more easily step into the shoes of those populations experiencing poverty (Kihm & Knapp, 2015). Developing empathy for populations who experience poverty helps open communication through the creation of trust and predictability between the actor and other (Littlejohn & Foss, 2009). An empathetic mindset often supports a greater willingness to acknowledge the structural causes of poverty and as a result take action against the structural causes attributed to poverty (Galper, 1976; Skiffington et al., 1984). Providing services based on beliefs rooted in the structural causes of poverty, not individual causes, can result in a more focused, positive, and intentional process for meeting the needs of those facing the challenges of poverty (Kihm & Knapp, 2015; Yang et al., 2014).

**Profession fields use of poverty simulations.** Findings of previous poverty simulations indicate a variety of professions, primarily in fields of social services, implementing poverty simulations (Nielsen, Noone, Voss, & Mathews, 2013; Ullucci & Howard, 2015; Weiss-Gal et al., 2009). The principal fields incorporating the use of poverty simulations as a teaching strategy are education (Mullen et al., 2007), health care (Zenni et al., 2006), and social work (Zosky et al., 2014). The purpose for each social service field supporting the use of this type of experiential learning model and the effect this new experience provided pertaining to the individual field were explored. Reviewing studies of poverty simulations implemented in the
professional fields of education, health care, and social work was important to this literature review taking into account participants for this study came from these three professional fields.

**Education K-12.** Poverty continues to be a social dilemma (Ullucci & Howard, 2015) increasing at an unprecedented rate for children ("Hunger in America," 2016; "What is the Current Poverty Rate," 2017). Poverty can potentially affect a child's educational opportunities (Zosky et al., 2014). Zosky et al. (2014) assert "the manner in which schools respond to educating children living in poverty can make lasting impressions on their future" ("Causes and Effects of Poverty," 2012; Kominski et al., 2001; Pallas, 1989; Zosky et al., 2014, p. 89). It is necessary to prepare pre-service teachers by helping them understand the significance of poverty as it pertains to the child’s education (Ullucci & Howard, 2015). This knowledge is important bearing in mind a teacher's beliefs and attitudes about poverty can unintentionally affect the manner in which a teacher interacts with both the families and children of those in poverty (Zosky et al., 2014).

Pre-service teachers need to be class-conscious teachers having an "understanding of how poverty does and does not impact students, a nuanced reading of how race and poverty overlap and does not, and a keen eye to how stereotypes about poverty bias our interactions with poor students" (Ullucci and Howard, 2015, p.174). The lack of knowledge about students in poverty can create a lack of empathy for students (Ullucci & Howard, 2015), causing the pre-service teacher to, possibly, attribute the individual behavior of the student to issues associated with poverty (Ullucci & Howard, 2015). To help pre-service teachers amend their attribution of poverty from individual to structural causes, it is necessary for teacher educators at universities to take the lead and provide experiences that support opportunities for reflection and critical thinking of new experiences (Zosky et al., 2014). Poverty simulations provide this experiential
learning. Within the limits of a replication of poverty, poverty simulations are able to provide a safe place to encounter the roles of actor and observer and safely interact within these roles (Mullen, Beilke, & Brooks, 2007).

**Health Care.** The public health field often needs to assist people facing health care barriers resulting from poverty (Patterson & Hulton, 2011) making social justice an integral piece of public health (Stasser et al., 2013). There is a link between poor health outcomes and poverty over a person’s life span, which entails the need for those in the public health profession to understand how poverty can affect health of an individual and the individual’s adeptness to gain social mobility (Johnson et al., 2015). Experiential learning resulting from poverty simulations can address the lack of knowledge pertaining to poverty and health care barriers they face (Menzel et al., 2014; Patterson & Hulton, 2011). Studies have indicated poverty simulations implemented in the health care field can alter a participant’s attitude toward those in poverty (Menzel et al., 2014; Patterson & Hulton, 2011).

The beliefs and attitudes of public health care professionals have toward those in poverty often determine the treatment of impoverished patients regarding both the delivery and outcomes of the services provided (Aspden et al., 2016). Taking into account the observer’s "limited experience of being poor" (Menzel et al., 2014, p. 1), unfounded biases against those in poverty can result (Aspden et al., 2016). Health care professionals can attribute poverty to individual factors rather than to structural factors (Vandsburger et al., 2010; Cozzarelli, Wilkinson, & Tagler, 2001) perhaps impeding the quality of care and civic engagement toward those they serve (Menzel et al., 2014). It is imperative those in the public health profession understand the structural barriers faced by those with limited resources of any kind (Yang, Wommer, Agbemenu, & Williams, 2014). The core value of the health profession is rooted in compassion,
respect, and care, built upon a deep empathy for the patients (Menzel et al., 2014; Reid & Evanson, 2016). Learning resulting from poverty simulations supports this core value (Yang et al., 2014). The empathy that results can help build social competence in the health care profession as it pertains to the barriers faced by those in poverty (Yang et al., 2014; Zenni et al., 2006).

The health care profession is responsible for providing opportunities within their professional that increase the understanding of the ramifications of their own attitudes toward those in poverty (Patterson & Hulton, 2011). Zenni (2006) asserts the need for active rather than passive learning, and a poverty simulation can be an integral component of active learning for training health care professionals (2006). A poverty simulation provides the opportunity of real-life experience for health care professionals as they attempt to meet the needs of those they serve. This type of experience is in lieu of simply sitting in a classroom talking about how to go about this process (Zenni et al., 2006). A brief simulation can never replace the experience of poverty; however, when combined with continued learning about the health care barriers faced by those in poverty, the health care professionals will be more effective in meeting the health care needs of their patients experiencing poverty (Menzel et al., 2014). Meeting the patients’ needs results from a gained "appreciation of the relevance of the social determinants of health" (Zenni et al., 2006, p. 56).

Social Work. The primary goal in the social work field is to serve as an advocate of social justice for their clients (Vandsburger et al., 2010). Promoting social justice is part of the "Code of Ethics of the National Association of Social Workers" supporting the elimination of poverty as stated in the preamble:

The primary mission of the social work profession is to enhance human wellbeing and help meet the basic human needs of all people, with particular attention to the needs and
empowerment of people who are vulnerable, oppressed, and living in poverty (Workers, 2008, p. 1).

Social justice is also one of six topics addressed in the "Code of Ethics of the National Association of Social Workers" (Workers, 2008). The “Council on Social Work Education Educational Policy and Accreditation Standards” manual calls for the engagement of social workers in social change, with the primary focus on the elimination of poverty (CSWE Commission on Accreditation, 2015). The goal of the social work profession is to help those they serve more efficiently meet their own needs by virtue of addressing discrimination, poverty, and other manifestations of social justice their clients faced (Workers, 2008).

The choices a social work student makes pertaining to attribution of poverty may be predisposed based on the attitudes they bring to their educational experience. Social work student's learning experience, while in school, is important because of the possible biases the social work students have towards those in poverty (Hill, Toft, Garrett, Ferguson, & Kuechler, 2016). Some findings indicate social work students prefer to attribute poverty to structural causes rather than individual causes (Hill et al., 2016). Other findings indicated that education in this field leans toward blaming the system for critical issues associated with poverty (Guimond & Palmer, 1990). Research supports the reasoning that academic experience can influence the social work student’s attribution of poverty supporting the need for schools to promote learning that supports all facets of poverty, both structural and individual (Guimond & Palmer, 1990; Hill et al., 2016).

Schools of higher education are responsible for helping their social work students meet the professional mandates of social workers. The Council on Social Work Education's Educational Policy and Accreditation Standards National Association of Social Worker (CSWE) asserts to accomplish this it is necessary for schools to help students understand the systemic
nature of poverty as the students develop the necessary skills needed to address the systemic issues of poverty. Understanding the systemic issues of poverty, within all domains of social work practice, is necessary (Hill et al., 2016). These mandates include the significance of diversity and differentiation in practice models of service (Educational Policy 2.1.5), advancing human rights and social economic justice (CSWE Educational Policy 2.1.5), and the advancement of economic and social well-being through policy practice directing the delivery of services based on high standards for social work clients (Educational Policy 2.1.8) (CSWE Commission on Accreditation, 2015).

In the field of social work, social workers and service users differed in explanation of poverty (Weiss-Gal, Benyamini, Ginzburg, Savaya, & Peled, 2009). Service users were more likely to attribute poverty to social-structural attributions where as social workers were more likely to attribute poverty to the individual (Weiss-Gal et al., 2009). The attributes of poverty have been linked to thinking regarding combating poverty, resulting in the need for social workers to understand the structural attributes of poverty (Zucker et al., 1985). This understanding helps to support the overall goals of the social work field as stated in the "Code of Ethics" owing to the fact insight can influence what the social worker considers appropriate intervention models (Workers, 2008; Zosky & Thompson, 2013). Understanding the structural attributes of poverty is essential taking into account findings indicate the connection between attributes of poverty and preferred responses can lead to the social worker being "less likely to endorse minimizing state assistance and more likely to endorse a structural response through extending state social assistance" (Hill et al., 2016, p. 409). Dialogue about the structural and individual causes of poverty can in turn determine the response toward those in poverty (Hill et
al., 2016). One source for creating this dialogue is the use of poverty simulations (Menzel et al., 2014).

**Review of poverty simulations.** This study examined 20 poverty simulation studies in an effort to become more informed about the findings of prior research related to poverty simulations (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bamesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck, Barnes, & Harrison, 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006); Livingston, 1970; Patterson & Hulton, 2011; Rutherford-Hemine, 2012 Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). All the poverty simulations studies reviewed followed a similar format based on the tenets of the experiential learning theory supporting the constructivist perspective of new experience results in new understanding (see Appendix A for 20 Reviewed Poverty Simulations Chart #1 and Appendix B for 20 Reviewed Poverty Simulations Chart #2). Each simulation highlighted role-playing to support the experiential learning experience producing new knowledge for the participants resulting from the social interaction taking place during the poverty simulation (Costantino, 2008). This literature review investigated similarities, differences, strengths, weaknesses, poverty simulations used, research methods, data collection and reliability of instruments, findings, statistical significance of quantitative findings, immediate or sustained attitude change, and suggestions for future research regarding simulations. A discussion follows as to the effect the poverty simulations had on beliefs about poverty based on attitudes toward those in poverty are shaped by beliefs about the attributes of poverty (Davidson, Preez, Gibb, & Nel, 2009).
Reviewed poverty simulations and simulation participants. Several different poverty simulations were reviewed for the literature review, each study with intentional purposes and goals. The poverty simulation used most often for the poverty simulation review was "Life in the State of Poverty," produced by the Missouri Community Action Organization (Ajello, 2014; Franck et al., 2016; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). This poverty simulation’s design simulated the day-to-day experiences of those who live in poverty (Steck et al., 2011). The goal of this simulation created an equalizing effect for those participating, leveling the playing field between the actor and observer aiming to help enhance awareness and understanding of poverty (Missouri Community Action Network Website, 2017). "It reflects what is lacking in social and political life [today]" (Ajello, 2014, p. 144). This simulation addressed the multi-dimensional aspects of poverty in addition to the wealth inequalities faced by those experiencing poverty (Missouri Community Action Network Website, 2017).

Several other simulations reviewed had very specific purposes as well. Browne & Roll (2016) facilitated the use of "Welcome to the State of Poverty" for learning about poverty as a social issue. "The Game of Social Life" introduced social stratification (Bramesfeld & Good, 2015). "That's Not Fair!" also emphasized the issue of social stratification, with the intent of helping participants "experience social stratification and to challenge the idea that individual talents or aspirations are enough to overcome structural barriers" (Coghlan & Huggins, 2004, p. 177). The "Hunger Basket" educated participants regarding the scope and magnitude of world hunger (Krains & Shadle, 2006). Livingston's (1970) "Ghetto" generated knowledge about the urban poor, the goal producing a positive attitude toward poverty. Increasing the awareness of the multiple dimensions of poverty was the focus of "Negotiating on Poverty" was (Ansoms,
"Budget Exercise" facilitated an understanding of income inequality (Garoutte & Bobbit-Zeher, 2011). The goal of "Development Monopoly" addressed agency as a component of poverty and the significance it can have on access to life resources (Ansoms & Greenen, 2012). The objective of "Pennies: Scrambled for Wealth" aimed at altering attitudes toward those in poverty (Fialova, 2014). "The Paper Bag Game" addressed the social perspective of the causes and effects germane to poverty moving beyond theory of poverty to action (Davidson et al., 2009). "The Paper Bag Game" supported participants addressing Kolb's final stage of learning, taking action in real life (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

The most real-life poverty simulation was "In Their Shoes" (Johnson et al., 2015). This simulation was implemented for nursing students with the intent that students completed the simulation having a greater understanding of "social determinants of health, social justice, and challenges faced by underserved population in accessing health and social services" (Johnson et al., 2015, p. S117). Nursing students boarded city buses and followed a scenario that took them around the city as a service user of social, health services. The students expressed having experienced high levels of frustration as they tried accessing needed health services as a person living in poverty (Johnson et al., 2015).

Most of the studies reviewed used participants from either high schools or colleges. Studies conducted by Ajello (2014) and Franck et al. (2016) used adult public professionals as study participants. Ajello (2014) worked with the Community Action Agencies facilitating poverty simulations and contended the need for social workers, administrators, and politicians understand the multi-faceted dynamics of poverty. High school students were participants in two of the studies reviewed (Fialova, 2014; Livingston, 1970). The remainder of the studies selected college students as study participants. The institution of higher education used poverty
simulations to assist their students, from specific fields of study, to both understand poverty as well as be more knowledgeable about those in poverty (Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). The majority of the participants for the studies reviewed were from the health care profession because the health care field employees the use of the poverty simulations most frequently (Johnson et al., 2015; Patterson & Hulton, 2011; Stasser et al., 2013; Vandsburger et al., 2010; Yang et al., 2014).

**Overview of methodology.** Four poverty simulations studied employed a quantitative research design (Browne & Roll, 2016; Krain & Shadle, 2006; Livingston, 1970; Vandsburger et al., 2010). Several studies of poverty simulation used qualitative research design (Ansoms, 2012; Bramesfeld & Good, 2015; Davidson et al., 2009; Franck et al., 2016; Johnson et al., 2015; Kihm & Knapp, 2015; Steck et al., 2011). The poverty simulation studies utilized the mixed method research design the most often (Ansoms & Greenen, 2012; Coghlan & Huggins, 2004; Fialova, 2014; Garoutte & Bobbit-Zeher, 2011; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014). All the studies were quasi-experimental implementing non-random purposive sampling in selecting participants (Fialova, 2014). Those studies using mixed method research added qualitative research to their study both supporting and corroborating the quantitative findings of their studies (Creswell, 2009; Todd et al., 2011). Two of the 20 reviewed studies utilized control groups for the studies (Fialova, 2014; Krain & Shadle, 2006). Krain and Shadle (2006) made use of a control group comparing the effects of traditional classroom learning to active learning a poverty simulation can afford. The use of control groups
supported a stronger research design, which provided a greater possibility for the findings to be generalizable (Creswell, 2009).

**Researchers defined understanding of poverty.** The reviewed studies discussed understanding of poverty from several perspectives; some more detailed and complicated than others. Several of the studies expressed greater understanding of the inequality of poverty through the measurement of the construct of empathy or empathetic mindset (Ajello, 2014; Bramesfeld & Good, 2015; Browne & Roll, 2016; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Johnson et al., 2015; Stasser et al., 2013; Yang et al., 2014). The increase of overall understanding of poverty was discussed by Davidson et al. (2009) and Vandsburger et al. (2010), addressing understanding of other. A more positive attitude toward those in poverty was measured for several of the studies (Fialova, 2014; Livingston, 1970; Patterson & Hulton, 2011; Todd et al., 2011; Yang et al., 2014). An understanding of the day-to-day barriers and challenges faced by those in poverty was the terminology used by one of the studies to indicate understanding of poverty (Kihm & Knapp, 2015; Stasser et al., 2013; Steck et al., 2011; Yang et al., 2014). Yet others measured the grasp of poverty from a new perspective of income inequality (Bramesfeld & Good, 2015; Garoutte & Bobbit-Zeher, 2011).

Some of the poverty simulation studies measured understanding of poverty based on the multi-dimensional aspects of poverty (Ansoms, 2012). One study examined the role of social stratification from the perspective of class mobility (Coghlan & Huggins, 2004). Another study investigated a greater awareness of the community health resources available for those in poverty, as well as the reverberations of the limited availability of resources for meeting the health needs for those in poverty. Steck et al. (2011) discussed understanding from as an increased recognition of the material conditions of everyday life for those in poverty. Kihm and
Knapp (2015) evaluated an increase in knowledge of the social programs for those who experience poverty (i.e. Women, Infants, and Children and Supplemental Nutrition Assistance Program) (Kihm & Knapp, 2015). The understanding of poverty was also approached from the multi-dimensional construct of poverty examining poverty from the perspective of the relevance of power (Ansoms & Greenen, 2012; Pankow, 2006; Robb, 2000). These three studies also investigated understanding the effect of power and its relation to the bargaining position as it affects poverty and inequality. The perception of the relationships between socioeconomic categories was studied, and participants were surveyed an awareness of poverty and inequality in developing countries. The studies reviewed the role of the social actors and their interactions within the institutional context in relation to an understanding of poverty (Ansoms & Greenen, 2012; Pankow, 2006; Robb, 2000).

**Data, data collection instruments, and findings.** The poverty simulation studies reviewed collected a variety of data using different measurement instruments producing a broad range of findings for the poverty simulation studies reviewed. The common theme in all of these studies reviewed was a greater understanding of poverty (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). This increased understanding of poverty was measured many ways, one being the development of a greater empathetic attitude toward poverty (Ajello, 2014; Bramesfeld & Good, 2015; Browne & Roll, 2016; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Johnson et al., 2015; Yang et al., 2014). Though an increase in the understanding of poverty, such as
developing an empathetic mindset, was used to express the findings in the studies, none of reviewed studies used instruments that measured the exact constructs of understanding poverty or empathy (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014).

Both analytical and anecdotal data were collected for the poverty simulations studies reviewed. The analytical data were collected using pre-surveys and immediate post-surveys using the Likert scale to measure constructs studied (Ansoms & Greenen, 2012; Browne & Roll, 2016; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014). Some researchers designed their own scales of measure (Coghlan & Huggins, 2004). The use of analytical data provided the opportunity for measuring understanding of poverty using quantitative tests of statistical significance (Browne & Roll, 2016; Fialova, 2014; Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Some of the studies procured anecdotal data using open ended questions (Ansoms, 2012; Bramesfeld & Good, 2015; Davidson et al., 2009; Franck et al. 2016; Garoutte & Bobbit-Zeher, 2011; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014). Fialova (2014) implemented focus groups for collecting anecdotal data, and other researchers used oral discussions (Ansoms & Greenen, 2012, Johnson et al., 2015). Written debriefings were made use of by only one of the studies (Ansoms & Greenen, 2012). Todd et al.
(2011) discussed supporting or corroborating the findings of the analytical data using the collection of anecdotal data.

_data collection instruments and findings of analytical studies_. The analytical studies reviewed used a wide range of measurement instruments as well as quantitative tests of statistical significance for collecting data and analyzing the findings. Vandsburger et al. (2010) created data collection instruments for their study. They constructed scales for their study based on literature for teaching diversity. The three scales were the Critical Thinking Scale, Understanding of Other Scale, and the Active Learning Scale. A factor analysis was conducted supporting reliability of the scale (Vandsburger et al., 2010). Findings indicated statistical significance in the increase of immediate understanding of poverty, based on analysis of the data using a paired sample _t-test_.

Browne and Roll (2016) studied "Welcome to the State of Poverty" using The Civic Attitudes Skills Questionnaire administering the measurement instrument on-line. Browne and Roll (2016) reported giving only part of the questionnaire to participants, and noted that reliability of the questionnaire applied only when used in its entirety. The questionnaire for this study was a retrospective instrument administered two times at the end of the research study activity. The pre-test was administered at the end of the simulation asking the participants for their perspective as if they had answered this survey at the beginning of the simulation (Browne & Roll, 2016). Browne and Roll (2016) explained that the purpose for administering the measurement instrument at the end of the intervention was to prevent tests affects. Findings indicated statistical significance in the increase of immediate awareness and empathy for those in poverty, based on analysis of the data using a paired sample _t-test_. This scale also examined
sustained attitude change, but failed to produce sufficient responses for conducting an analysis of sustained attitude change (Browne & Roll, 2016).

Yang et al. (2014) studied "Welcome to the State of Poverty" creating a semi-structured Poverty Simulation Reaction Questionnaire in addition to another scale called the Attitude Toward Poverty Scale measuring immediate increased understanding of poverty. The reliability of the two measures was analyzed through the administration of the two measurement instruments to two undergraduate groups of students. This step was taken before using the questionnaire and scale for the study (Yang et al., 2014). The findings indicated statistical significance in the increase of immediate understanding of the effects of poverty on health, based on analysis of the data using a paired sample t-test (Yang et al., 2014).

Patterson and Hulton (2011) collected data for "Life in the State of Poverty" using a short form of the Attitudes About Poverty and Poor Populations and based the use of this instrument on its reliability and high levels of internal consistency and convergent validity. Analysis of the data using the paired sample t-test indicated a more favorable immediate attitude toward those in poverty. Findings in this study demonstrated that attitudes about those in poverty could change. The attitude change factor exhibited an increase in the mean score of the participants, but the personal deficiency factor had no statistically significant increase (Patterson & Hulton, 2011).

"Welcome to the State of Poverty" made use of The Rowell Questionnaire for the collection of data (Stasser et al., 2013). Before the Missouri Community bought the rights for this poverty simulation in 2002, the previous copyright holders called the simulation "The Rowell Poverty Simulation" and made use of The Rowell Questionnaire as well. Stasser et al., (2013) discussed the lack of reliability of the measurement instrument. The findings of a paired
sample \( t\)-test indicated statistically significant change in the participants’ view of the barriers and challenges faced by those experiencing poverty (Stasser et al., 2013).

"Pennies: Scramble for Wealth" utilized an adapted version of The Attitudes Toward the Poverty Scale (Fialova (2014). The developers of The Attitudes Toward the Poverty Scale analyzed the instrument using Cronbach's Alpha of 0.83. There was no statistical significance between the means of the pre- and post-scales used for measuring immediate attitude change toward those in poverty based on an analysis using a paired sample \( t\)-test (Fialova, 2014). Neither the study’s control group nor the experimental group showed a difference of statistical significance, but the experimental group was closer to statistical significance than the control group, with \( \rho = .073 \). This study examined sustained attitude change as well and reported no change for that measure (Fialova, 2014).

Some of the studies reviewed did not discuss the instruments used for reporting change toward those in poverty, and as a result reported no reliability for the data collection instruments used for the studies (Garoutte & Bobbit-Zeher, 2011; Krain and Shadle, 2006; Livingston 1970; Todd et al., 2011). Though the data collection instruments were not discussed for these four studies, all the studies reported immediate statistically significant change in either some or all of their findings using the paired sample \( t\)-test (Garoutte & Bobbit-Zeher, 2011; Krain and Shadle, 2006); Livingston, 1970). Garoutte and Bobbit-Zeher (2011) indicated overall statistical significance "in achieving a more sociological understanding of social class inequality," albeit small (p. 228).

Krain and Shadle, (2006) indicated both the control group and experimental groups saw a statistically significant increase in knowledge as well as understanding of poverty and linked this increase to the active learning happening during the poverty simulation. Livingston (1970)
measured attitude change and knowledge and stated statistical significance on immediate attitude change toward those in poverty, but no statistical significance in the level of knowledge toward those in poverty. Todd et al. (2011) analyzed statistical significance of immediate attitude change toward those in poverty using repeated measures ANOVA. Findings indicated a statistical significance in change of attitude toward those in poverty regarding severity of power, self-responsibility, and bad habits. Todd et al. (2011) indicated no statistical significance of the difference in understanding the toll poverty takes.

Data collection instruments and findings of qualitative studies. A wide range of measurement instruments were used for collecting data and analyzing findings for the reviewed qualitative studies. Open-ended questions were one of the measurement instruments used for collecting anecdotal data on the understanding of poverty (Ansoms, 2012; Bramesfeld & Good, 2015; Davidson et al., 2009; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014). One researcher indicated the lack of greater understanding of poverty stating no findings to report owing to poverty being too multi-dimensional and subjective to report valid findings (Ansom, 2012). Several studies reported a greater understanding of poverty as a change in view of the barriers and challenged faced by those in poverty (Kihm & Knapp, 2015; Stasser et al., 2013). Todd et al. (2011) made use of the open-ended questions, as well, to corroborate quantitative findings for this study.

The need to achieve a more concrete level of action for the participants was addressed by some of the studies, and findings indicated there was movement in this direction (Franck et al., 2016). Krain and Shadle (2006) referred to an increased understanding of the issues of poverty as increased knowledge and understanding of poverty based on more than poverty data. The
purpose of the open-ended questions for this study was to collect anecdotal data that measured an increase in the knowledge of poverty, the multi-dimensional levels of poverty, and an understanding of the scope and severity of world hunger. Prior research has confronted this lack of knowledge of the multi-dimensional layers of poverty as a gap in knowledge of poverty (Benjamin, 2010; Johnson et al., 2015; Ogujiuba, Obi, & Dike, 2011; Reid & Evanson, 2016; Sameti et al., 2012; Ullucci & Howard, 2015). These anecdotal studies collected data with the intent to study the gap in the understanding of multi-dimensional layers of poverty. Findings from the studies indicated growth in the knowledge and understanding of the subjective nature of poverty (Ansoms, 2012; Bramesfeld & Good, 2015; Davidson et al., 2009; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014).

Fialova (2014) discussed focus groups conducted at the close of the poverty simulation. The focus groups were intentional in their direction of discussion, with an effort to use this means of analysis to support findings from the analytical data collected for the study. Discussion during the focus groups did support some level of change in the participants' attitudes toward those in poverty, although the prior analysis of analytical data did not show a statistical significant increase in the understanding of poverty.

Some of the studies implemented oral debriefings at the close of the simulations (Ansoms & Greenen, 2012; Johnson et al., 2015). The oral debriefings used by Ansoms and Greenen (2012) and Johnson et al. (2015) were unique in the fact that two oral debriefings were held to collect anecdotal data. One of the oral debriefings immediately followed the simulation, and the second debriefing took place later in the semester during a class. Anecdotal data suggested that there was an increase in understanding of poverty in both studies.
Johnson et al. (2015) reported, as well, that the participants became more aware of their underserved clients, bringing more compassion to their work environment as measured by the anecdotal data collected during the second oral debriefing held during class.

Written debriefings in addition to the oral debriefings to measure understanding of poverty were used in one of the studies (Ansoms & Greenen (2012). The written debriefing, conducted the following day, allowed more time to move from reflection to generalization based on Kolb's model of experiential learning. Generalization is the Kolb's stage of learning that involves making broad statements from reflection about the real world, moving beyond the experience of the poverty simulation (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

**Immediate effect of understanding poverty.** Most of the reviewed poverty simulation studies examining immediate understanding of the challenges and barriers faced by those in poverty reported a growth in understanding of poverty (Ajello, 2014; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Studies showing growth used both analytical data (Ansoms & Greenen, 2012; Browne & Roll, 2016; Coghlan & Huggins, 2004; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014) as well as anecdotal data (Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Patterson & Hulton, 2011;
Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014). The studies using analytical data had a tendency to use either paired sample t-tests or ANOVAs to analyze their findings (Ansoms & Greenen, 2012; Browne & Roll, 2016; Fialova, 2014; Franck et al., 2016; Garoute & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Yang et al., 2014). Studies reporting immediate effect on understanding of poverty represented the early stages of learning on Kolb's model of learning representing the simulation as the concrete experience. Debriefings describing what happened both internally and externally to the participants represented Kolb's learning stage of reflective observation (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

Some of the reviewed poverty simulation studies indicated no statistical significance for gain in the understanding of poverty. One qualitative study reported no findings for the study (Ansoms, 2012). Ansoms (2012) posited that poverty is multi-dimensional and difficult to study in terms that are subjective, even when a study is qualitative. A quantitative study using a pre- and immediate post-survey reported no statistical significance for immediate attitude change, ($\rho = .078$) (Fialova, 2014). However, Fialova (2014) conducted a focus group at the end of the poverty reporting limited growth in understanding (Fialova, 2014).

*Sustained effect of understanding poverty.* Three of the 20 poverty simulations reviewed measured sustained understanding of the challenges and barriers facing those in poverty (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014). Time was a factor in reporting the findings of the studies on the sustained understanding of poverty, as well as the choice of some of the data collection instruments (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014). There was no consistent length of time between the poverty simulation and the collection of data to measure sustained effect of the poverty simulation. Each
one of the studies that collected longitudinal data used different lengths of wait time to collect the sustained data (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014).

Browne and Roll (2016) used the shortest length of time for collecting data showing sustained effect of the poverty simulation. Data were collected two times, the first set of data at five weeks and again at 13 weeks for the first collection round. Findings reported that the farther out the data was collected the lower the response rate was. Due to the low response rate for the online survey, Browne and Roll (2016) did not measure sustained impact on understanding of poverty. Other wait times for sustained data collection were six weeks (Yang et al., 2014) and 60 days (Fialova, 2014). Fialova (2014) used the same survey for collecting data at 60 days that had been used for the initial pre- and post-surveys. As with the initial pre-survey and immediate post-surveys, neither the control nor experimental groups made a gain of statistical significance in sustained effect of understanding. Yang et al. (2014) incorporated the use of a follow-up survey to examine sustained effect on understanding that simply asked the participants "how the simulation influenced their clinical experience for the term" (p. 682). The anecdotal data was positive indicating the students made an intentional effort to help their underserved clients seek the referrals they needed for their health issues (Browne & Roll, 2016; Fialova, 2014; Yang et al., 2014). The goal of these three studies was to move beyond Kolb’s first two levels of learning, the concrete and reflective stages, in an effort to reach Kolb’s third and fourth stages of learning (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). Kolb’s last two stages are abstract conceptualization, generalizations making broad statements from reflection about real world beyond the experience of the simulation, and active experimentation, the act of
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE

applying the generalized statement to a new concrete experience (Browne & Roll, 2016; Fialova, 2014; Kolb, 2013; McLeod, 2013; Sugarman, 1985; Yang et al., 2014).

Debriefing. Of the 20 reviewed poverty simulation studies, nineteen incorporated some type of debriefing at the end of the simulations (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). "Ghetto" was the only study that did not incorporate some type of debriefing that may have been a result of this study being the oldest poverty simulation study examined, conducted almost 46 years ago. The use of debriefings may not have been the protocol at that time (Livingston, 1970). Some of the studies used only oral debriefings (Ajello, 2014; Fialova, 2014; Davidson et al., 2009; Franck et al., 2016; Johnson et al., 2015; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Steck et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Some researchers utilized only written debriefings (Browne & Roll, 2016; Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Stasser et al., 2013; Steck et al., 2011). Other studies used both oral and written debriefings (Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009).

Debriefings used by the 20 reviewed poverty simulations implemented debriefings for many reasons regardless of the form of the debriefing. Debriefing encourages active participation for the learner (Weast, 1996) and involves critical thinking resulting in ethical behavior (Teixeira-Poit, Cameron, & Schulman, 2011). Critical thinking involves identifying and evaluating assumptions, examining cause and effect arguments, asking questions, parsing a
topic from multiple perspectives, and challenging the status quo (Weast, 1996). Critical thinking helps participants to "become better social scientists; they are more competent in assessing the logical and empirical adequacy of arguments about controversial social issues" (Weast, 1996, p. 189). These tenets of critical thinking support the learner in reaching Kolb's stage of active learning, active experimentation, which includes generalized statements that become new concrete experience (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

*Oral debriefing.* Oral debriefing provided dialogue in a safe place imparting the opportunity for poverty simulation participants to not only reflect on self but also on the multi-dimensional nature of poverty (Ajello, 2014). One study conducted two oral debriefings, one held immediately following the poverty simulation, and the second oral debriefing was conducted a week later (Ansoms & Greenen, 2012). The second oral debriefing was a collective oral debriefing and provided a chance to look at the participant's own actions pertaining to poverty. The poverty simulation "In Their Shoes" included the participants using public transit to obtain services from social service agencies (Johnson et al., 2015). This caused a high level of frustration for the poverty simulation participants in trying to navigate from one agency to another for services. The debriefing became the avenue by which the participants were able to share their frustrations as they worked toward resolution in an effort to more efficiently meet the needs of their patients (Johnson et al., 2015). Implementation of oral debriefings took place in an effort to help the nursing students in the poverty simulation to become more aware of the need to be culturally competent in the level of care they provide their clients (Yang et al., 2014). Another study conducted small group oral debriefings, in addition to providing the opportunity to take part in an on-line discussion providing more information about current policy (Patterson & Hulton, 2011).
The aim of oral debriefing for some of the studies was to provide an avenue that had the potential to lead the participants to take concrete action for change (Franck et al., 2016), while others used oral briefings as a means to bring greater awareness of the causes and effects of poverty (Davidson et al., 2009). These types of debriefing can lead to encouraging dialogue across all spectrums that can address the structural inequalities of poverty and open the floor to debate the issues to help lead participants from theory to practice (Davidson, 2009).

*Written debriefing.* The simplest debriefings were added consisting of open response questions at the end of the immediate post-surveys, with little explanation as to the purpose for asking the questions (Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Stasser et al., 2013). The responses to these questions provided very little knowledge about the effect on attitude change toward those experiencing poverty (Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Stasser et al., 2013). Other written debriefings entailed a written class assignment requesting the participants reflect and generalize on their thinking as the participants applied their new learning to prior assumptions (Steck et al., 2011). This type of debriefing moved one step closer to Kolb's stage of active learning, active experimentation, which includes generalized statements that become new concrete experience (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). Browne and Roll's (2016) goal for the written debriefing was to inspire personal awareness that led the participant to seeing a more internal process to bring about critical thinking on the social issue of poverty.

*Oral and written debriefing.* Some of the studies employed both oral and written debriefings (Coghlan & Huggins, 2004). The goal was to provide a real-life experience dealing with the sociological concepts the simulation represented (Coghlan & Huggins, 2004) with the aim to be to take action in the concrete world (Bramesfeld & Good, 2015). Various studies used
both oral and written debriefing but for different purposes. "The Paper Bag Game" utilized both oral debriefing and an open response type survey with the intent to encourage dialogue and debate across the political playing field and economic spectrum (Davidson et al., 2009). The debriefings for the "Development Monopoly" focused on agency and the bargaining positions in respect to the inequalities those in poverty experience (Ansoms & Greenen, 2012).

The majority of the reviewed poverty simulations were conducted using either high school students (Fialova, 2014; Livingston, 1970) or college students (Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). The use of high school and college students provided easier access to participants for the student and allowed for the utilization of a variety of debriefings. Some of the studies held a variety of debriefings that were also conducted at times other than the closing of the simulations (Ansoms & Greenen, 2012; Browne & Roll, 2016; Patterson & Hulton, 2011).

**Poverty data – a component for some poverty simulations.** Assigning a pre-simulation reading was a strategy used with some of the poverty simulations, with the intent to disseminate data that informed the poverty simulation participants about policy pertaining to those in poverty (Patterson and Hulton, 2011). Other readings provided a safety net of information to help increase the knowledge of the barriers and challenges of living in poverty (Coghlan & Huggins, 2004). Steck et al. (2011) also presented data on local and national poverty statistics by race, gender, age, and ethnicity. This type of data helped the participants providing insight about the reality of those in poverty (Patterson and Hulton, 2011). These additional strategies helped to
enhance the effect of the poverty simulations (Coghlan & Huggins, 2004; Patterson and Hulton, 2011; Patterson and Hulton, 2011).

**Experiential learning theory and poverty simulations.** The experiential learning theory was the primary lens through which the some of the reviewed studies examined the use of poverty simulations to enhance the understanding of poverty (Browne & Roll, 2016; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Kihm & Knapp, 2015; Kolb, 2013; Krain & Shadle, 2006; McLeod, 2013; Sugarman, 1985; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010). Discussions implemented during the debriefings supported experiential learning as a source of new learning and knowledge (Davidson, 2009; Garoutte & Bobbit-Zeher, 2011; Kihm & Knapp, 2015; Krain & Shadle, 2006; Todd et al., 2011). Participants procured new learning and knowledge several ways. Simulation debriefings provided and allowed time for participants to address biases and stereotypes in the event new attitudes and beliefs were discussed (Browne & Roll, 2016; Franck et al., 2016; Kihm & Knapp, 2015; Krain & Shadle, 2006; Todd et al., 2011). The poverty simulations using the experiential learning theory based their studies on the tenets of constructivism from the viewpoint of the effect of the poverty simulations on increasing the understanding of poverty (Browne & Roll, 2016; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Kihm & Knapp, 2015; Kolb, 2013; Krain & Shadle, 2006; McLeod, 2013; Sugarman, 1985; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010). The use of debriefings as one of the learning strategies helped participants reach critical thinking in respect to the critical social issue of economic inequality in America (Browne & Roll, 2016; Davidson et al., 2009; Krain & Shadle, 2006; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010).
Some questioned the use of a poverty simulation as a true experiential learning experience (Browne & Roll, 2016). This thinking was based on the fact no significant sustained attitude change was reported, so it was posited that there had been no significant effect (Browne & Roll, 2016). Others conjecture that a poverty simulation is a true experiential learning experience if support during the learning experience helps the participants understand their own biases toward those in poverty and the stereotypes they often place on those in poverty (Steck et al., 2016). This experiential learning experience drew on the tenet that old learning helped new learning, and in the process addressed personal biases and stereotypes (Garoutte & Bobbit-Zeher, 2011; Steck et al., 2016). The debriefing phase of the poverty simulation provided the opportunity for this new learning to occur (Garoutte & Bobbit-Zeher, 2011).

Browne and Roll (2016) related Kolb's model of experiential learning to poverty simulations (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). The association of the four steps of an experiential learning experience to a poverty simulation follows:

1. concrete experience - participating in the poverty simulation

2. reflective observation - Debriefing, describing what happened both internally and externally

3. abstract conceptualization - Generalizations making broad statements from reflection about real world beyond experience based on reflections about the experience of participating in a poverty simulation

4. active experimentation - the act of applying the generalized statement to a new definitive experience of poverty leading to action toward through a concrete experience (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).
Poverty simulations potential negative effect on attitude change. Not all believe that poverty simulations help to address the inequalities of poverty. One argument posits that if critical consideration is not a component of the implementation of a poverty simulation, the poverty simulation may foster inequality toward those who experience poverty rather than move participants to address the issues of poverty through civic action (Browne & Roll, 2016). In placing poverty simulations within the context of Kolb's experiential learning theory (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985), it is important to understand that the new learning may be based on a different model of poverty than the view of poverty that participants brings to the experience (Clarke, Pharm, Sedlacek, & Watson, 2016). What can be lacking in the type of learning provided from a poverty simulation is critical attention to prior biases, assumptions, and underlying stereotypes (Bruenig, 2005; Steck et al., 2011) participants bring with them regarding traditions of power (Bruenig, 2005). Critical reflection during the debriefing phase of a poverty simulation is one method to address prior knowledge and attitudes as well as biases brought to the experience (Steck et al., 2011). This critical reflection approach to underlying biases, assumptions, and stereotypes can help avert poverty simulations from "perpetuating the structural systems of inequality they are designed to address" (Browne & Roll, 2016, p. 265).

Limitations of reviewed studies. Based on the use of non-random purposive sampling, all of the studies were quasi-experimental research designs (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Creswell, 2009; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd
et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Attendance for many of the participants was mandatory (Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Lack of random selection limits generalizability (Creswell, 2009; Nickols & Nielsen; 2011). It was noted that many of the participants in these simulations were from fields that had a direct interest in issues surrounding poverty (Stasser et al., 2013). Because many of the participants were from specialized fields, this differentiated the participants from the general public limiting generalizability (Stasser et al., 2013).

Two of the reviewed studies made an effort to ameliorate the lack of random sampling by measuring attitudes toward the poor in both experimental and control groups. The goal of using a control group for "Pennies: Scramble for Wealth" (Fialova, 2014) and "The Hunger Banquet" (Krain & Shadle, 2006) was to strengthen the study (Fialova, 2014). The studies making use of control groups were conducted in environments in which a different group of students was available to be used as the control group (Fialova, 2014; Krain & Shadle, 2006).

A limitation to the studies was the multi-dimensional nature of poverty (Ansoms, 2012; Feagin, 1972; Hudson, 2016; Misturelli & Heffernan, 2010; Robb, 2000; Williams & Mickelson, 2008). Taking into account the multi-dimensional nature of poverty, the poverty simulation may have produced no real knowledge and understanding of the attributes of poverty (Benjamin, 2010; Johnson et al., 2015; Ogujiuba, Obi, & Dike, 2011; Reid & Evanson, 2016; Sameti et al.,
2012; Ullucci & Howard, 2015). Ansoms (2012) viewed this as a problem resulting in not reporting findings for the study based on the perception of poverty being too subjective to study.

Fialova (2014) also saw the need for additional forms of qualitative data. She suggests adding data collection instruments such as observations and interviews. This type of data would support validity of data through triangulation of findings (Creswell, 2009), in addition to supporting the "introduction of several control variables, such as personality type, [or] the student's learning styles" (Fialova, 2014, p. 686). These types of data collection instruments could also help to understand needs of the participants as the poverty simulations work to generate sustained attitude change toward those in poverty (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014).

There is a need to be aware of the biases, knowledge, and understanding participants bring to the poverty simulations (Klemme & Rommel, 2004; Nickols & Nielsen, 2011; Steck et al., 2011). Previous experiences with poverty have the potential to influence the responses indicating understanding of poverty. Nickols and Nielsen (2011) posit that we each bring our own perceptions of poverty to this experiential learning experience (Clarke et al., 2016). It is more common to base these perceptions of poverty on misconceptions and myths as well as knowledge (Klemme & Rommel, 2004). Simulation participants were predominantly practitioners from the social service areas of education, health care, and social work. They brought to the learning experience a higher level of knowledge and understanding as well as a greater interest in the ramifications of poverty on those they serve. Given the possibility that participants may have been more knowledgeable about their respective fields, more conservative findings toward empathetic attitude change may have been reported (Stasser et al., 2013).
**Improving implementation of poverty simulations.** The use of control groups and randomized sampling is an important component of experimental studies (Creswell, 2009). The use of both of these strategies for future studies of poverty simulation could increase the rigor for the findings of the poverty simulation (Creswell, 2009; Fialova, 2014; Krain & Shadle, 2006). Implementing new strategies to study both immediate and sustained attitude change, especially sustained attitude change, toward those in poverty is critical (Fialova, 2014; Garoutte & Bobbit-Zeher, 2011; Krain & Shadle, 2006; Livingston, 1970; Stasser et al., 2013). The need to examine the present implementation of poverty simulations is necessary taking into account the findings of the reviewed poverty simulations did not support sustained attitude change (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014). The lack of sustained attitude change may be due to a one-time experience of a poverty simulation not being sufficient to reach critical understanding of the social inequality of poverty (Garoutte & Bobbit-Zeher, 2011). New learning and thinking take time, often not happening immediately (Garoutte & Bobbit-Zeher, 2011).

**Conclusion**

President Johnson proclaimed a war on poverty in 1964 (Kte’pi, 2014) announcing the Great Society Initiative (Klemme & Rommel, 2004). This initiative expanded federal government programs serving as safety nets for those in poverty, and the country experienced a rapid decline in the poverty rate (Kte’pi, 2014). However, in 1996 the Welfare Reform Act ended the guarantee of federal support of safety nets for those in need (Klemme & Rommel, 2004), and two recessions have occurred since the year 2000 (Kim, Carvalho, & Davis, 2010). Over the last 20 years, poverty has persistently remained at 11-15% (Clyburn, 2014; "What is the Current Poverty Rate," 2017), and the complex issues associated with poverty continue to remain
a critical concern for America (Klemme & Rommel, 2004). In spite of the Welfare Reform Act ending, many of the programs were still intact as of 2013 (Reifman, 2014).

The more recent thinking of general Americans regarding the attributes of poverty has moved from that of structural attributes to individual attributes of poverty (Peck, 2007). This shift in thinking has been triggered by an American economy that has slowed down (O’Hare, 1996), and people are less likely to have a benevolent attitude if they are not experiencing economic growth in their own life (Klemme & Rommel, 2004). Some have argued that myths and misconceptions regarding poverty are the basis for the shift in thinking about attributes of poverty from the structural factors to blaming the individual for being in the state of poverty. Klemme and Rommel (2004) argue the reflection of this shift in thinking can be seen in actions toward those in poverty as well as in policy created to ameliorate the consequences of poverty.

Research indicates that an experiential learning experience of a poverty simulation can promote increased understanding of poverty. This increased understanding of poverty results from critical thinking that can lead to attitude change regarding poverty (Patterson & Hulton, 2011). New perspectives resulting from this attitude change can generate empathy toward those in poverty (Browne & Roll, 2016). The creation of empathy can lead to new views and understanding of the structural attributes of poverty (Galper, 1976; Skiffington et al., 1984). Poverty simulations, based on experiential learning, can be a powerful pedagogical tool helping to develop participants' interest and involvement in critical social issues faced by the working poor and those experiencing poverty (Browne & Roll, 2016). Poverty simulations, specifically, "humanized the plight of the 'faceless' hungry masses and helped [participants] better understand the interconnections between inequity, poverty, and hunger" (Chambers, 1983; Dorn, 1989; Krain & Shadle, 2006, p. 62). Active participation in poverty simulations that were well planned
and organized, not only provide the opportunity for reflection but also supports lifelong learning and civic engagement (Patterson & Hulton, 2011).

The service fields of education, health care, and social work continue to serve an increasingly diverse population who face the challenges of socioeconomic inequalities (Noone, Sideran, Gubred-Howe, Voss, & Mathews, 2012). Poverty simulations have the power to open the door (Vandsburger et al., 2010) to more critical thinking (Castillo & Becerra, 2012; Rutherford-Hemine, 2012) about the multi-dimensional facets of poverty (Ansoms, 2012). To understand the many facets of poverty the learning must have meaning and purpose, as well as be inclusive and empowering (Gupta, 2006). Poverty simulations, as experiential learning strategies, support the creation of new knowledge through meaning and purpose (Rutherford-Hemine, 2012) bringing awareness of the daily challenges faced by the poor and working poor and encourages the participants to see both the individual and structural attributes of poverty (Smith, Ryder, Biodeau, & Schultz, 2016). Debriefing after a poverty simulation provides the opportunity for participants to confront their own biases and misconceptions about those experiencing poverty (Steck et al., 2011).

Although poverty simulations do have limitations, this type of experiential learning modality affords a safe place for participants to interact with the various roles of actor and other as more knowledge and understanding is gained of those in poverty. This gain of knowledge and understanding can be a direct result of reflection and critical thinking (Mullen et al., 2007). Reflection and critical thinking by participants allow for reform of previous perceptions, and a new lens for viewing poverty begins to emerge. This new lens for viewing poverty provides the opportunity for participants in poverty simulations to search for alternative ways to apply their new knowledge and work toward change (Zygmunt-Fillwalk & Clark, 2007). Taking action
toward change relates to Kolb's final stage of experiential learning, which is experimentation with the real world or acting on the critical social issue of poverty (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

Chapter 3 - Methodology

This quasi-experimental research study implemented non-probability purposive sampling and examined the effect of a poverty simulation on empathetic attitude change. This study employed the measurement of empathy to determine change in understanding of poverty. Both immediate and sustained empathetic attitude change were studied using the Basic Empathy Scale (BES) survey for collecting data (Jolliffe & Farrington, 2006). Individual participant data were also collected to examine the effect of gender, race, age, income, participation, job entails working with those in poverty, volunteer working with those in poverty, and personal experience of scarcity of necessary life resources while growing up on empathetic attitude change. The effect of these independent moderating variables were analyzed to determine if some factor other than the intervention had an effect on the outcome of the poverty simulation on empathetic attitude change (Gravetter & Forzano, 2012).

Participants

There were 778 participants in this study and were selected through non-probability or non-random purposive sampling (see Table 1). Organizations interested in the poverty simulation contacted the primary investigator to conduct the facilitation of the poverty simulation for their organization. Participants represented six educational organizations, three health care organizations, and two social service organizations. Some organizations required participation in the poverty, but for other participants participation was voluntary. Guests of the organizations hosting the poverty simulations also attended the simulation in an effort to understand what the
experiential learning experience entailed. Participation in the research study was optional; only those signing consent forms participated.

Table 1

*Descriptive Data for Study Participants*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Values for the Study Participant Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>Education 6, Health Care 3, Social Work 2</td>
</tr>
<tr>
<td>Gender</td>
<td>Male 146, Female 564, Other</td>
</tr>
<tr>
<td>Race</td>
<td>African-American 111, Asian 11, Caucasian 553, Hispanic 21, Other 11</td>
</tr>
<tr>
<td>Age 18-25 years</td>
<td>94, 25-35 years 151, 35-45 years 181, 45-55 years 198, 55 years older 86</td>
</tr>
<tr>
<td>Income</td>
<td>Student 94, Low/Middle 88, Middle 318, Upper/Middle 191, Upper 14</td>
</tr>
<tr>
<td>Participation</td>
<td>Voluntary 602, In-voluntary 102</td>
</tr>
<tr>
<td>Work with those in poverty</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Volunteer with those in poverty</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Experienced scarcity of life resources growing up</td>
<td>Yes, No</td>
</tr>
<tr>
<td>Role in simulation</td>
<td>Staff 170, Family Adult 314, Family Child 1-3 years old 4, Family Child 4-18 years old 263</td>
</tr>
</tbody>
</table>

Note. The values noted in Table 1 represent the number of participants for the study in each of the subgroups for the individual, participant data.

The majority of those in attendance were Caucasian (71.1%). Females outnumbered the males (72.5%). This high percentage of females in the study can be attributed to the use of the
simulation by the three fields of Education, Health Care, and Social Work, which all have a higher percentage of females employed (Etaugh & Liss, 1992; Liss, 1992). The majority of the participants fell within the age range from 25-55 years old (68.1%). Almost ¾ of the participants have a job that entails working with those in poverty (70.1%), while 84.4% of the participants volunteer to work with those experiencing poverty. A greater percentage, 53.2 percent, did not experience personal scarcity of necessary resources growing up. Each participant played a role during the poverty simulation: service provider staffer, family adult, family child 1-3 years, or family child 4-18 years. Findings were not reported for some of the groups because an analysis of power indicated the number of participants were not sufficient.

**Context/Setting**

This study was conducted within the context of the call to action by social justice advocates who support the need to address the social inequalities of poverty (Jackson, 2014). Dobly (2012) posits the need of empathy for creating the long-term solutions needed to overcome the problems faced by the world. Research suggests that having empathy for the other may help the actor acknowledge the structural causes for marginalization, including those in poverty (Galper, 1976; Skiffington et al., 1984). The study conducted by Batson et al. (2002) proposes that having empathy toward a stigmatized group of individuals can marginally increase the other to take action to help the individual as well as the group stigmatized.

This study was also conducted within the context of prior research pertaining to the use of a poverty simulation to create understanding and knowledge of, and attitude change toward those experiencing poverty. The findings were discussed based on both immediate and sustained empathy toward poverty. Empathy was the construct used to measure understanding of poverty based on the use of empathy in prior research studies of poverty simulations (Ajello, 2014;
Bramesfeld & Good, 2015; Browne & Roll, 2016; Davidson et al., 2009; Fialova, 2014; Johnson et al., 2015; Stasser et al., 2013; Yang et al., 2014). The link of an empathetic mindset to the structural causes of poverty was discussed (Galper, 1976; Skiffington et al., 1984).

Institutions of higher education, public school districts, health care organizations, and social service organizations currently use poverty simulations to create both an immediate and a sustained empathetic attitude for both the service provider and the students. The goal of this study was to provide data that analyzed the use of a poverty simulation as an experiential learning tool within the context of using, organizing, and managing the implementation of a poverty simulation to create empathetic attitude change. The effect of empathetic attitude change was studied within the context of Kolb’s model of experiential learning (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). The findings on the effect of a poverty simulation on immediate and sustained empathetic attitude toward those in poverty were added to prior research. New findings for the effect of the independent moderating variables on empathetic attitude change were reported as well.

The primary investigator had previously conducted the poverty simulation for organizations and institutions of higher education. The goal was to help staff or students comprehend the adversities of poverty faced by those they serve. The poverty simulation was implemented within the context of the knowledge and data of poverty. There was a need to analyze data that examined the effect of this study on both immediate and sustained empathetic attitude change as well as explaining the effect other factors had on empathetic attitude.

The primary investigator had established a protocol, prior to the start of the study, regarding the implementation of the poverty simulation for organizations or institutions of higher education. The organization or institution of higher education interested in the poverty
simulation contacted the primary investigator and set up arrangements for the implementation of the poverty simulation at the organization or school. This same process for implementation of the poverty simulation was executed each time the poverty simulation was conducted for the purpose of this study. Organizations and institutions of higher education represented the fields of education, health care, and social work. The organizations used for this study represented four schools from public school districts serving students K-12th grade, one public institution of higher education, one private institution of higher education, one very large for profit health care provider of Medicaid, one very large non-profit social service agency, and one smaller public social service agency.

The 11 organizations held the poverty simulations in several locations depending on the space available to the organization or educational institution including churches, gymnasiums, and large conference room. The space had to be large enough to accommodate seating for up to 100 participants with tables and chairs to accommodate the layout of the poverty simulation. The organization hosting the poverty simulation received a room layout for either 70 participants or 100 participants and prepared the room, per the plan layout, for the poverty simulation. If one larger room was available, chairs representing the family groups were in the middle and tables representing the organizations were around the outer perimeter of the room. Some of the spaces, such as the church, had the organizations located in rooms throughout the church. This entailed the family members moving around more to find the services they were looking for. The size of the space for the poverty simulation to be set up, if the space was more limited, and the location of the service and social service providers sometimes became a source of frustration for the family members trying to navigate through the virtual week as they tried to meet the needs of
their family. The purpose of the layout of the settings was to provide a precise implementation of the poverty simulation within the context of poverty.

**Research Design and Sampling**

This research study was a quasi-experimental research design using a defined group of participants, an independent variable that was not manipulated, independent moderating variables, a dependent variable, and no control groups (Creswell, 2009; Fraenkel, Wallen, & Hyun, 2012; Gravetter & Forzano, 2012). The independent variable was an intervention, the Community Action Poverty Simulation (CAPS). Empathetic attitude was the dependent variable measured using the Basic Empathy Scale. Data were collected on the independent moderating variables including gender, race, age, income, participation, job entails working with those in poverty, volunteer working with those in poverty, personal experience of scarcity of necessary life resources while growing up, and role in the poverty simulation. Each of the independent moderating variables had more than one subgroup (Parke, 2010).

This study was a pre-post survey study because data were collected before the intervention and compared to data collected after the intervention using surveys. One of the primary purposes for utilizing surveys is to understand how the participants of a population might “distribute themselves on one or more variable” (Fraenkel et al., 2012, p. 393). This study attempted to demonstrate that there was an association between the independent and dependent variable. Cause and effect between the independent and dependent variables based on the quasi-experimental research design of the study were not analyzed. Data were analyzed to determine if the interactions of some of the independent moderating variables provided an alternative explanation for the association between CAPS and empathetic attitude change, the goal being to address the threat of internal validity (Gravetter & Forzano, 2012).
The time-series design of this study collected data before the intervention and two times after the intervention (Gravetter & Forzano, 2012). This type of design may allow for an event or outside happening to occur between the second and third collections of data. These types of events that may have taken place in the life of the participant cannot be controlled (see Figure 6).

**Figure 6. Time Series Research Design**

<table>
<thead>
<tr>
<th>O</th>
<th>X</th>
<th>O</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>First O - Pre-survey</td>
<td>X - The intervention - the poverty simulation</td>
<td>Second O - Immediate Post-Survey</td>
<td>Third O - Delayed Post-Survey</td>
</tr>
</tbody>
</table>

*Figure 6. The table represents the methodology for the study which was a time series research design. O represents the surveys given the participants, and X represents the intervention strategy used for the study which was the Community Action Poverty Simulation. The survey was given before the start of the simulation as a pre-survey, the simulation then took place, followed by the survey used as the post-survey. The survey was administered a third time as a delayed post-survey.*

The target population for this study consisted of pre-existing groups having defined characteristics representing the population of interest (Fraenkel et al., 2012). The defined group of participants were those from the social service organizations making the request for the poverty simulation and included social service agencies with focus on education, health care, and social work. Non-probability or non-random, purposive sampling provided no guarantee that the groups were equivalent resulting in a nonequivalent group design (Fraenkel et al., 2012; Gravetter & Forzano, 2012). This type of sampling runs the risk of creating a biased sample (Fraenkel et al., 2012).
Intervention

The intervention strategy used to create empathetic attitude change for this study was participation in a poverty simulation. A poverty simulation can provide the opportunity for participants to experience the daily challenges faced by those in poverty (Yang et al., 2014). It was necessary to be mindful in choosing the poverty simulation as an experiential learning tool, because the goal of participation in the poverty simulation was to help participants be sensitive to the needs of those in poverty (Patterson & Hulton, 2011; Zygmunt-Fillwalk & Clark, 2007). The poverty simulation must be well planned and organized to have the power to challenge the commonly held beliefs toward poverty (Dorn, 1989; Vandsburger et al., 2010) that are often based on misconceptions about poverty (Ullucci & Howard, 2015). The ultimate goal of participating in a poverty simulation was to support the participants’ critical thinking about the need for action, both professionally and personally, toward helping ameliorate the challenges and barriers faced by those in poverty (Vandsburger et al., 2010; Yang et al., 2014).

Community Action Poverty Simulation (CAPS). The poverty simulation chosen for this study was the Community Action Poverty Simulation (CAPS) and is manufactured and sold by the Missouri Association for Community Action Network (see Appendix C for Community Action Poverty Simulation) (Missouri Community Action Network Website, 2017). The Reform Organization of Welfare (ROWEL) was the first to create this poverty simulation in 1995 (Pankow, 2006). In 1972, ROWEL was established and advocated for the poor working to promote legislative and administrative changes to the welfare system (The State Historical Society of Missouri Website, 1998). Studies of the poverty simulation have shown increased understanding and empathy for those in the professional fields serving people in poverty (Pankow, 2006). In 2002, the Missouri Association for Community Action purchased the
copyright to the simulation and updated it, continuing the goal of promoting public awareness of the many issues and challenges surrounding poverty (Pankow, 2006).

The latest version of CAPS features ready to use materials including a Director's Manual (see Appendix D for Director's Instructions and Suggested Script for Conducting CAPS), Resource Packets Family Packets, and Compact Disc as well as recent poverty data and information (Pankow, 2006; Missouri Community Action Network Website, 2017). The Missouri Association for Community Action has sold more than 1400 kits in the United States and 43 at the international level since 2004 (Missouri Community Action Network Website, 2017). The following types of organizations have used this poverty simulation extensively: customer service groups, health care professionals, educators, clergy and congregations, social service providers, elected officials, management staff, college students, community organizations, and corporations (Missouri Community Action Network Website, 2017). Eight of the 20 poverty simulation studies reviewed for the literature review utilized CAPS for their poverty simulation (Browne & Roll, 2016; Franck et al., 2016; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). The quantitative studies all showed statistically significant gains in understanding poverty (Browne & Roll, 2016; Patterson & Hulton, 2011; Stasser et al., 2013; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014).

CAPS provides participants the opportunity to experience the realities of poverty by mimicking the daily challenges faced by those in poverty with too little money but an amplitude of stress (Missouri Community Action Network Website, 2017). The developers of CAPS modeled the families of the poverty simulation after families living in Missouri struggling with socio-economic inequalities. This poverty simulation was selected for this study because the rate
of poverty in Missouri is very similar to the rate of poverty in Kentucky, where the poverty simulation study was conducted (see Appendix E for Percent of Poverty: 2014, 2015, and 2016 and Appendix F for Poverty Rate for States for 2014: Least to Greatest). The poverty rate in Missouri is slightly lower than in Kentucky. However, it is noted that from 2014 to 2016 the rate of poverty has increased in Missouri (10.4% to 13.00%) compared to Kentucky, which has decreased (20.00% to 15.20%). See Appendix E for Percent of Poverty: 2014, 2015, and 2016 (The United States Census Bureau, 2017) and Appendix F for Poverty Rate for States for 2014: Least to Greatest (Wikipedia Poverty by State, 2017) to compare the rate of poverty for the two states.

The use of role-play in CAPS supports highlighting the participant's awareness of the challenges faced by those experiencing poverty (Ajello, 2014). CAPS afforded participants the opportunity to walk a mile in the shoes of one facing poverty, feeling the fears and frustrations those in poverty experience, often on a daily basis (Poverty Simulation Purdue Website, 2017). The goal of participating in CAPS was to increase the understanding of the multidimensional aspects of poverty (The Poverty Simulation Website, 2017). This real-life experience began to give voice to those experiencing poverty who struggle every day to survive (Poverty Simulation Purdue Website, 2017).

Approximately 100 participants can take part in each poverty simulation as indicated on the diagram for the layout of the room (see Appendix G for CAPS Room Layout for Community Resources and Families). The timeframe for the simulation consisted of four, 15-minute sessions equaling one month of virtual time with the expectation that the families accomplish tasks set forth to meet the needs of their family. The participants portrayed either a community organization or a family member (see Table 2 and Table 3). There were 26 families portrayed in
CAPS including single-parent families, two-parent families, and senior citizens living alone (see Appendix H for Family Roles). Four families began the poverty simulation homeless, some were recently unemployed relying on Temporary Assistance for Needy Families (TANF), several were using food stamps or applying for Supplemental Security Income, and two were single parents with a baby. Some of the family roles were working adults, working parents, unemployed adults, disabled adults, and elderly people. Other roles included families recently deserted by the working member of the family, young adults caring for underage siblings, senior citizens receiving either Retirement or Disability, grandparents raising grandchildren, and children ranging in age from infants to 17 years old (Missouri Community Action Network Website, 2017; Poverty Simulation Purdue Website, 2017). The task for the month was to provide shelter and basic needs for one’s family while trying to navigate the maze of community organizations such as health and social services, financial support, and transportation when needed (Missouri Community Action Network Website, 2017).
Table 2

*Community Organizations for the Poverty Simulation*

<table>
<thead>
<tr>
<th>15 Community Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>U Trust US National Bank</td>
</tr>
<tr>
<td>Quick Cash</td>
</tr>
<tr>
<td>Community Action Agency</td>
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<tr>
<td>Interfaith Services</td>
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<tr>
<td>Food-A-Rama</td>
</tr>
<tr>
<td>Sweaney's Mortgage and Realty Company</td>
</tr>
<tr>
<td>Big Dave's Pawn Shop</td>
</tr>
<tr>
<td>Realville Police Department</td>
</tr>
<tr>
<td>Friendly Utility Company</td>
</tr>
<tr>
<td>Illegal Activities Person</td>
</tr>
<tr>
<td>Department of Social Services</td>
</tr>
<tr>
<td>Realville School</td>
</tr>
<tr>
<td>Building Blocks Daycare</td>
</tr>
<tr>
<td>General Employer</td>
</tr>
<tr>
<td>Community Healthcare</td>
</tr>
</tbody>
</table>

Note. Family members had to go to community organizations for services that needed during the poverty simulation. The table contains the community organizations represented in the poverty simulation used for the study (Missouri Community Action Network, 2012; Missouri Community Action Network Website, 2017).

Table 3

*Family Roles in Poverty Simulation*

<table>
<thead>
<tr>
<th>4 Roles for the Poverty Simulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff's Community Resources</td>
</tr>
<tr>
<td>Family – Adult</td>
</tr>
<tr>
<td>Family – Child 4 – 18 years old</td>
</tr>
<tr>
<td>Family – Child 1 – 3 years old</td>
</tr>
</tbody>
</table>

Note. Each poverty simulation participant was assigned a role for the poverty simulation (Missouri Community Action Network, 2012; Missouri Community Action Network Website, 2017).

Each family faced the real, life challenges of poverty. Some of the family responsibilities entailed finding employment, paying utilities, paying rent, going to doctor visits, getting prescriptions filled, buying groceries and feeding their family. The adults also had to enroll their children in daycare or school, take care of their children, secure benefits they were eligible for
through the social service agencies, and contribute as a member to the family (Steck et al., 2011; Yang et al., 2014). If the children were of school age, they attended school three out of the four weeks, one week being spring break. Parents had to provide supervision for their children during spring break. The families always needed transportation passes to go any place, other than when a child was going to school; children rode the school bus. The first week for the families was the least stressful, but by the fourth week the families are often unable to accomplish the tasks set forth for the month, which were to feed their family and keep a roof over their heads (Missouri Community Action Network Website, 2017). Each of the poverty simulations conducted evicted some of the families, meaning the families failed to accomplish the tasks set forth for the simulation.

Oral debriefing, using two different techniques, followed the completion of the poverty simulation. First, after all participants had reassembled, the organization representatives shared their experience from the perspective of a service provider. Small groups then formed to discuss questions relating to the participants' experience from the poverty simulation. The following debriefing questions were used as discussion starters for the small group discussions:

1. As you think about the simulation you just completed, what were the surprises or the “Ahhhh” moments?”
2. In a word or a few words, what are your emotional reactions to this experience?
3. What were your family’s priorities as you moved through the four weeks of the simulation?
4. What will stick with you after this simulation?
5. What will you commit to in your thinking and actions from now on?
6. Should all teachers/community leaders go through this simulation? Why or why not?
A leader chosen from within each small group of participants facilitated the oral debriefing. During this phase of the oral debriefing, the participants were also asked to make a verbal commitment pertaining to one action they were willing to taking regarding their understanding of the attributes of poverty and to share that commitment with the small group. At the end of the small group discussion time, one person summarized the group conversation, and participants volunteered to share with the whole group the verbal commitment they had made.

The poverty simulation ended with excerpts read from Scalzi's (2005) essay "Being Poor" (see Appendix I for “Being Poor”). His statements about poverty bring to life the day to day challenges faced by those in poverty (Missouri Community Action Network Website, 2017; Robb, 2000). Scalzi, an award-winning author, traveled the country asking those in poverty what being poor meant to them. The Chicago Tribune published a compilation of those responses on September 3, 2005 in the op-ed pages (“John Scalzi,” 2017). Scalzi (2005) based his essay "Being Poor" on his own life and experiences growing up in poverty.

The goal of CAPS is to create an experiential learning experience that helps people think about the harsh realities that plague those in poverty (Missouri Community Action Network Website, 2017). One outcome of the poverty simulation is to provide participants the space and freedom to discuss issues that address their communities and acknowledge the need to address those problems. Participation in the poverty simulation can help people see the need to make a difference through their own action (Missouri Community Action Network Website, 2017); taking action encompasses the final stage of Kolb's Model of Learning. Per Kolb, the final stage of action in the real world can result from new knowledge, understanding, and attitude change resulting from participation in the poverty simulation. (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).
Data Collection Instrument and Data Collection

Data Collection Instrument. This study used the Basic Empathy Scale (BES) (Jolliffe & Farrington, 2006) for collecting data to measure immediate and sustained empathetic attitude change; empathy being the construct used to demonstrate understanding of poverty (see Appendix J for Basic Empathy Scale). The BES measures both cognitive and affective empathy and is based on Cohen and Strayer's (1996) definition of empathy, "as the understanding and sharing in another's emotional state or context" (p. 998), understanding and sharing the key words. Jolliffe and Farrington (2006) postulated that no existing empathy scale measured cognitive empathy, resulting in the development of BES. Developing a tool to measure the multidimensional components of empathy (Cavojova, Sirota, & Belovicova, 2012) adequately was important taking into account Jolliffe and Farrington (2006) believed that adequate moral development was based on "empathy and the acquisition of empathy" (Jolliffe & Farrington, 2006, p. 589). Pursuant of the fact the BES can be used to measure both cognitive and affective empathy separately, this study measured empathy only as a single construct.

The developers used a two-factor confirmatory factor analysis model of cognitive and affective empathy for all data collected from the entire sample to verify the validity of the BES (Jolliffe & Farrington, 2006). The developers corroborated the external validity of the BES through the analysis of Cronbach's alpha for the survey. Others have validated the use of the BES since its development in 2006. The following are studies that have also validated the use of this scale to measure empathy: Italy - Albiero, Matricardi, Speltri, and Toso (2009); France - Carre et al. (2013); Slovenia - Cavojova, Sirota, & Belovicova (2012); France - D’Ambrosio, Olivier, Didon, and Besche (2009); China - Geng, Xia, and Qin (2012); Portugal - Pechorro, Ray, Salas-Wright, Maroco, & Goncalves (2015); and Spain - Salas-Wright, Olate, and Vaughn
Several studies confirmed the validity of the BES as a "valid and reliable multidimensional measure of empathy" (Salas-Wright et al., 2012, p. 1394). They based their belief on a confirmatory factor analysis of BES, the correlation of other measures of empathy and the BES (Albiero et al., 2009; Cavojova et al., 2012; D’Ambrosio, Olivier, Didon, & Besche, 2009), and a criterion-related validity analysis (Salas-Wright et al., 2012).

**Data Collection.** This study was a pre-post survey study analyzing data collected from surveys administered before and after the intervention, as well as 60 – 90 days after the intervention (Fraenkel et al., 2012). To measure immediate empathetic attitude change, the participants took the BES as a pre-survey and immediate post-survey at the time of the poverty simulation. This survey consisted of 20 questions using the Likert Scale with a range of 1 to 5 for collecting data: 1 = Strongly disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree (see Appendix J for Basic Empathy Scale) (Jolliffe & Farrington, 2006). Study participants were instructed to put the simulation character name on each of the two surveys taken at the time of the poverty simulation. Simulation character names were then used to match the surveys for the pre-surveys and immediate post-surveys as data were being recorded. The pre-survey was administered after all participants had been assigned a role for the simulation, and the immediate post-survey was taken after Scalzi’s (2005) “Being Poor” was read which closed the learning experience. The pre-survey was taken by 711 participants, and 702 participants took the immediate post-survey. Counts on the number of pre-survey and immediate post-surveys do not match because some of the participants arrived late and others left early. As a result, the late arriving participants signed the consent to be in the study but failed to fill out the pre-survey because the simulation had already begun. Some of the participants left before the simulation was completed and failed to fill out the immediate post-survey. Some
participants failed to fill out the entire survey so their data were not included, some of the participants left early and failed to complete the immediate post-survey, and others did not include the character name resulting in no match of surveys for data analysis. Only the data from the 643 participants who completed both the pre- and immediate post-survey were analyzed.

Using SurveyMonkey®, the Basic Empathy Scale was emailed to the research study participants for evaluating sustained empathetic attitude (Survey Monkey Website, 2017). Participant emails were collected during the poverty simulation at the time of the immediate post-survey so that the delayed post-survey could be emailed to participants. The three surveys were matched using the character names on the pre- and immediate post-surveys (see Appendix K for 90-120 Day Out Empathy Survey Through SurveyMonkey®). The surveys were sent out to participants 90-120 days after participating in the poverty simulation. Each time the survey was sent to study participants, the same script with instructions explaining how to fill out the survey was used (see Appendix L for Script for SurveyMonkey® Surveys).

There were 778 total participants in this research study, but only 661 surveys were sent through SurveyMonkey® (Survey Monkey Website, 2017). The 661 participants receiving surveys may not have filled out the original pre-survey, but may have taken the immediate post-survey providing an email address. There were two reasons not all study participants received surveys; some participants gave no email address and other email addresses could not be read. Of the 661 surveys emailed, SurveyMonkey® returned 53 of the surveys as undeliverable because the email addresses were wrong. A total of 608 delayed post-surveys reached the participants. The response rate was 53 percent, 323 of the 608 participants responded, representing an above average response rate for a web-based survey (Archer, 2008; Nulty, 2008).
The remainder of the participants not returning the surveys were counted as non-responses (Fraenkel et al., 2012).

**Analysis Design**

The data for this study was analyzed using the Statistical Package for the Social Sciences (SPSS) using both descriptive and inferential statistics. Descriptive statistics included means and standard deviations. Inferential statistics were comprised of test statistics, obtained value of the tests, and the probability of the results occurring by change (p value). The study was a behavior research study, meaning inferential statistics were applied to draw an inference about the population based on the data from the sample of participants. The generalizability of the statistics on the parameter of the population was limited because this study used non-random, purposive sampling. In reporting the results for the study, it was be important to keep in mind the limitations of this study pertaining to the generalizability of the inferential statistics to the population parameter ("Descriptive and Inferential," 2013; Shavelson, 1996). Participant information was collected and treated as independent, moderating variables. Data obtained for analyzing immediate and sustained empathetic attitude change were analyzed using paired between subjects t test. Independent between subjects t tests were used to analyze the independent moderating variables with two subgroups. Data for the independent moderating variables with three or more subgroups were analyzed using one-way ANOVAs. Three-way factorial ANOVAs were made use of to test the hypotheses for the interactions of three of the independent moderating variables.

**Immediate and Sustained Empathetic Attitude Change.** Based on the research questions and hypotheses, the overall effect of the poverty simulation on immediate and sustained empathetic attitude change was analyzed for all participants with no missing survey
scores. The paired sample \( t \)-test was employed to test the hypotheses and determine if there was a statistically significant difference in the means for between the pre-survey and immediate post-surveys, for immediate empathetic attitude change, and the immediate post-survey and delayed post-surveys, for sustained empathetic attitude change. Statistical significance used for reporting the results was \( \rho \leq .05 \).

**Research Question** - Does participation in a poverty simulation affect immediate empathetic attitude?

The population mean of the pre-survey score is equal to the population mean of the immediate post-survey.

\[
H_0: \mu_{\text{pre-survey}} = \mu_{\text{immediate post-survey}}
\]

The population mean of the pre-survey score is not equal to the population mean of the immediate post-survey.

\[
H_a: \mu_{\text{pre-survey}} \neq \mu_{\text{immediate post-survey}}
\]

**Research Question** - Does participation in a poverty simulation affect sustained empathetic attitudes?

The population mean of the immediate post-survey score is equal to the population mean of the delayed post-survey.

\[
H_0: \mu_{\text{immediate post-survey}} = \mu_{\text{delayed post-survey}}
\]

The population mean of the immediate post-survey score is not equal to the population mean of the delayed post-survey.

\[
H_a: \mu_{\text{immediate post-survey}} \neq \mu_{\text{delayed post-survey}}
\]

**Effect of independent variables on empathetic attitude change.** Participant data were collected on study participants and analyzed as independent variables. Analyzing this data was
necessary to make an effort to determine if some factor other than the intervention had an effect on the outcome of the poverty simulation regarding empathetic attitude change (Gravetter & Forzano, 2012). Based on the research questions and hypotheses, the independent variables included gender, race, age, income, whether participation was voluntary or in-voluntary, job entails working with those in poverty, volunteer working with those in poverty, personal experience of scarcity of necessary life resources while growing up, and the active role-played in the poverty simulation. Data for each of these independent variables were analyzed based on the number of subgroups for each variable. The findings were discussed based on which variables had prior research reported and which did not.

An independent samples t test was used to analyze the effect of participation was voluntary or in-voluntary, job entails working with those in poverty, volunteer working with those in poverty, personal experience of scarcity of necessary life resources while growing up, each having two subgroups. In discussing the findings of these four variables, the findings were referred to as exploratory findings. These findings were discussed as exploratory taking into account no data were discovered regarding the effect of these types of variables on the poverty simulation and empathetic attitude. The subjective nature of these variables may warrant further research pertaining to their effect on a poverty simulation and empathetic attitude.

**Research Question** - Does reason for participation affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of reason for participation, voluntary/in-voluntary, are equal to each other.

\[ H_0: \mu_{\text{voluntary}} = \mu_{\text{in-voluntary}} \]
The population mean difference scores between the pre- and immediate post-surveys of the two levels of reason for participation, voluntary/in-voluntary, are not equal to each other.

\[ H_a: \mu_{\text{voluntary}} \neq \mu_{\text{in-voluntary}} \]

**Research Question** - Does job entail working with those in poverty affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of job entails working with those in poverty, yes/no, are equal to each other.

\[ H_0: \mu_{\text{yes}} = \mu_{\text{no}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of job entails working with those in poverty, yes/no, are not equal to each other.

\[ H_a: \mu_{\text{yes}} \neq \mu_{\text{no}} \]

**Research Question** - Does volunteering with those in poverty affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of volunteering with those in poverty, yes/no, are equal to each other.

\[ H_0: \mu_{\text{yes}} = \mu_{\text{no}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of volunteering with those in poverty, yes/no, are not equal to each other.

\[ H_a: \mu_{\text{yes}} \neq \mu_{\text{no}} \]

**Research Question** - Does scarcity of necessary resources growing up affect the immediate empathetic attitudes of the poverty simulation participants?
The population mean difference scores between the pre- and immediate post-surveys of the two levels of experiencing scarcity of necessary resources growing up, yes/no, are equal to each other.

\[ H_0: \mu_{yes} = \mu_{no} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of experiencing scarcity of necessary resources growing up, yes/no, are not equal to each other.

\[ H_a: \mu_{yes} \neq \mu_{no} \]

The five independent variables with three or more subgroups, gender, race, age, income, and role in the poverty simulation were analyzed using a one-way between subjects ANOVA. Data were used to analyze the effect of these independent variables which were categorical variables each having three or more sublevels (Parke, 2010). Four of these five variables, gender, race, age, and income, were discussed within the context of prior data. It was necessary to keep in mind that prior data regarding these variables came from studies that were independent of studies conducted on poverty simulations. Role in the poverty simulation was discussed with the intent to obtain specific information as to the effect of the roles for the poverty simulation and their effect on empathetic attitude change. Findings were discussed in terms of determining if strategies may need to be implemented for the poverty simulation based on which role of the poverty simulation had the greatest effect on empathetic attitude. None of the 20 reviewed studies reported this type of participant data.

**Research Question** - Does gender affect the immediate empathetic attitudes of the poverty simulation participants?
The population mean difference scores between the pre- and immediate post-surveys of the two levels of gender, male/female, are equal to each other.

\[ H_0: \mu_{\text{male}} = \mu_{\text{female}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of gender, male/female, are not equal to each other.

\[ H_a: \mu_{\text{male}} \neq \mu_{\text{female}} \]

**Research Question** - Does race affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of race, African American/Caucasian, are equal to each other.

\[ H_0: \mu_{\text{African American}} = \mu_{\text{Caucasian}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of race, African American/Caucasian, are not equal to each other.

\[ H_a: \mu_{\text{African American}} \neq \mu_{\text{Caucasian}} \]

**Research Question** - Does age affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are not equal to each other.

\[ H_0: \mu_{18-25 \text{ years}} = \mu_{25-35 \text{ years}} = \mu_{35-45 \text{ years}} = \mu_{45-55 \text{ years}} = \mu_{55 \text{ years and older}} \]

At least two of the population mean difference scores between the pre- and immediate post-surveys of the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are not equal to each other.
\( H_a: \text{Not all } \mu \text{ are equal} \)

**Research Question** - Does income affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the four levels of income, student/low-middle/middle/upper-middle, are equal to each other.

\[ H_0: \mu_{\text{student}} = \mu_{\text{low/middle}} = \mu_{\text{middle}} = \mu_{\text{Upper/middle}} \]

At least two of the population mean difference scores between the pre- and immediate post-surveys of the four levels of income, student/low-middle/middle/upper-middle, are not equal to each other.

\( H_a: \text{Not all } \mu \text{ are equal} \)

**Research Question** - Does the role in the poverty simulation affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the four levels of role in the poverty simulation, staffer/family-adult/child 4-18/child 1-3, are equal to each other.

\[ H_0: \mu_{\text{staffer}} = \mu_{\text{family - adult}} = \mu_{\text{family - child 4-18}} = \mu_{\text{family - child 1-3}} \]

At least two of the population mean difference scores between the pre- and immediate post-surveys of the four levels of role in the poverty simulation, staffer/family-adult/child 4-18/child 1-3, are not equal to each other.

\( H_a: \text{Not all } \mu \text{ are equal} \)

**Interaction of independent variables on empathetic attitude change.** One goal of the research study was to determine if the interaction of some of the independent variables in this study had an impact on the effect of the poverty simulation on empathetic attitude change. The
interaction of the independent variables gender*race*did/or did not experience of scarcity of necessary life resources while growing up were analyzed to explain the effect of the poverty simulation on empathetic attitude. The effect of the interaction of these independent variables was studied using a three way between subjects ANOVA to test the hypotheses by analyzing the effect of the interaction of the variables (Howell, 2010; Parke, 2010).

**Research Question** - Does the interaction of gender*race affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the interactions of gender*race is equal to zero.

\[ H_0: \text{Interaction effect}_{\text{gender*race}} = 0 \]

The population mean difference scores between the pre- and immediate post-surveys of the interactions of gender*race is not equal to zero.

\[ H_a: \text{Interaction effect}_{\text{gender*race}} \neq 0 \]

**Research Question** - Does the interaction of gender (male/female)*experienced/did not experience scarcity of necessary resources growing up affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the interactions of gender and experienced/did not experience scarcity of necessary resources growing up is equal to zero.

\[ H_0: \text{Interaction effect}_{\text{gender*experienced/did not experience scarcity growing up}} = 0 \]

The population mean difference scores between the pre- and immediate post-surveys of the interactions of gender and experienced/did not experience scarcity of necessary resources growing up is not equal to zero.
$H_0$: Interaction effect $\text{gender*experienced/did not experience scarcity growing up} \neq 0$

The interactions of these independent moderating variables were analyzed to determine if the interaction of some of these variables provided an alternative explanation for effect of the association between CAPS and empathetic attitude in an effort to address the threat of internal validity (Gravetter & Forzano, 2012). Statistical significance used for reporting the results was $p \leq .05$.

**Validity and Fidelity of the Implementation of the Poverty Simulation**

Validity of a research study addresses the attempt to accurately report findings from a study. The researchers described these findings through words based on the input from the participants (Creswell, 2013). The goal of this research study was to answer the actual research question/questions based on both the accuracy of the findings and the truth of the research (Gravetter & Forzano, 2012). The findings were examined to determine both the intervention effects as well as any other factors contributing to the results of a study. The generalizability of the findings to other groups and contexts, apart from a study, was addressed. A scientist evaluates both external and internal validity threats to the study as well as reliability (Creswell, 2009; Onwuegbuzie, 2000).

**Internal Validity.** Taking into account that often times research in social science fields deals with theoretical constructs, which are abstract concepts, it is necessary that the measurement instruments be valid and reliable (Kimberlin & Winterstein, 2008). The validity of the instrument used for a quantitative study is important because it determines "whether one can draw meaningful and useful inferences from scores on the instruments" (Creswell, 2009, p. 149). This Basic Empathy Scale (BES) used in its entirety did measure the construct it was intended to measure, empathetic attitude (Creswell, 2009; Jolliffe & Farrington, 2006). The
validity of the BES was validated by both the developer of the survey as well as prior research (Albiero et al., 2009; Carre et al., 2013; Cavojova et al., 2012; D’Ambrosio et al., 2009; Geng et al., 2012; Pechorro et al., 2015; Salas-Wright et al., 2012). Though other researchers cited the validity and reliability of this instrument, the different formatting of the surveys, the first two presentations written and the last survey using the internet, may have posed some instrument validity threats.

The Basic Empathy Scale (BES) was the data collection tool for both pre-survey, immediate post-data collection, as well as the delayed post-survey, posing the possibility of a testing threat for this study. There was a creation of the possibility of some degree of test error because the BES was used three times resulting a familiarity to both the survey and some of the answers, especially for the pre- and immediate post-survey taken at the time of the simulation (Creswell, 2009; Shuttleworth, 2009). There was a two-hour time difference between the pre-surveys and the immediate post-surveys for the study, and that time was filled with constant activity. Taking into account the time allotment between the pre- and immediate post-surveys, this should not have posed a validity problem. The survey was implemented the third time 90-120 days after participation in the poverty simulation, leaving sufficient time to not pose a threat for remembering the survey or the answers.

The interaction of participant backgrounds and treatment may have posed validity threats for the survey administered 90 days after participating in the poverty simulation (Creswell, 2009). An external moderating factor, or event, affecting the participant might have caused the results of the 90 day delayed post-survey to be different if this event had not occurred (Creswell, 2009; Gravetter & Forzano, 2012; Shuttleworth, 20090. Future research on the topic of poverty simulation could address this external threat through the addition of a question to the survey
addressing the interaction of history and treatment and possible events affecting the delayed post-survey answers.

Though the reliability and validity of the BES was supported, a reliability issue may have been posed for this study because of the use of self-reporting of data on the surveys (Kimberlin & Winterstein, 2008). The questions used for his survey were subjective using a Likert-scale of 1 – 5 to record the answers. The level of comprehension of both the questions and the meaning of each number on the Likert-scale posed a possible threat to the data collection instrument used for the study. Interpretation of both the questions and the value of each of the numbers of the Likert-scale may have been different for each participant.

The research study participants were from social service fields resulting in the possibility they knew more about the issues surrounding poverty than the general population might know. This defining characteristic of the participants might have influenced them to answer questions in certain ways (Creswell, 2009). Stasser et al. (2013) argues this prior knowledge could have resulted in the scores on a survey for a poverty simulation of being more conservative.

Non-response was also a threat for this research study (Creswell, 2009). There were 778 different participants in the study throughout the collection of data from the three surveys, but data for only 643 of the 778 participants were analyzed. The missing data was a result of some participants taking only the pre-survey and others taking only the immediate post-survey based on late arrivals and early departures. Only 661 participants received email surveys because some participants chose not to include an email address. Of those sent, 53 were sent back as undeliverable and 323 responded, the others being non-responses. The 53 percent response rate for the email surveys resulted in the use of caution in interpreting the findings for sustained empathetic attitude change.
There may have been an instrument threat as well (Creswell, 2009). The survey itself did not change, but the form for the surveys did change. At the poverty simulation, the participants took the pre- and immediate post-survey using paper and pencil. The delayed post-survey was taken on-line using SurveyMonkey® for collecting data to examine sustained effect of the poverty simulation. The participants’ comfort or lack of comfort with technology may have posed a threat.

**External validity.** Several threats to external validity may limit the generalizability of the findings from the research study "to groups, environments, and contexts outside of the experimental settings" (Onwuegbuzie, 2000, p. 1). The interaction of participant selection and treatment may create one threat (Creswell, 2009). The restricted characteristics of the research study participants, who were primarily from the fields of education, health care, and social work, warranted no generalizability of the findings to others who do not share the same characteristics of the participants. One option for future research studies to support generalizability of the findings is the addition of more experiments using participants from other fields (Creswell, 2009). Future studies may also consider the use of a control group (Creswell, 2009).

An interaction of setting and treatment presented a threat in two ways (Creswell, 2009). The first threat was to the study itself. The poverty simulations took place at ten different locations that may have influenced the outcomes of the effect of the simulation between the 11 groups participating in the research study. The room layout for the poverty simulation was the same each time but the settings were not. The lack of uniform setting would prevent the future replication of the poverty simulation resulting in the lack of the generalizability of this study for individuals in other settings. Experiments are time bound as well meaning the results from a
research study are time bound producing research findings that are not generalizable to the past or the future (Creswell, 2009).

Fidelity of implementation of the poverty simulation. Random sampling was not feasible in this research study because of the need to use defined groups of participants who requested to participate in the study. Therefore, maintaining the reliability of the implementation of the poverty simulation by standardizing the conditions of the implementation of the intervention was necessary in an effort to ensure the reliability of the measurement procedure (Fraenkel et al., 2012; Gravetter & Forzano, 2012). The poverty simulation was conducted 11 times, and each time the primary investigator facilitated the poverty simulation. This ensured the fidelity of implementation of the poverty simulation by following, precisely, the pre-survey and immediate post-survey procedures, simulation layout, materials, debriefing sessions, and timeframes each time the poverty simulation using a written script (see Appendix D for Director Instructions and Script for Conducting CAPS). This study used the same six questions to generate critical thinking during each debriefing session (see Appendix M for Debriefing Questions). The reading of Scalzi’s (2005) “Being Poor” ended each simulation (see Appendix I for “Being Poor”). The poverty simulation participants involved in data collection through SurveyMonkey® received three to five different messages for each phase of the web based data collection process depending on when and if they responded to the surveys. Scripts sent for each phase of web based data collection were identical for all 11 groups in the research study (see Appendix L for Script for Survey Money Surveys). Conducting the poverty simulation each time in this manner assured the fidelity of implementation of the learning experience.
Biases

Researcher bias was acknowledged for this study. The secondary researcher examined both personal values and expectations pertaining to the effect the poverty simulation could have on the creation of immediate and sustained empathetic attitude change. The secondary researcher experienced poverty as a child; therefore, it was necessary to acknowledge this bias within the context of relating the findings from this study to prior research. The secondary researcher acknowledged the personal subjectivity of personal technical knowledge, background, and prior experience, and the need to be aware of these in the process of analyzing the data and reporting the findings (Maxwell, 2013).

Participant bias was acknowledged in addition to researcher bias. The participants arrived at the poverty simulation influenced by prior personal biases, myths, and misconceptions toward those in poverty (Klemme & Rommel, 2004; Nickols & Nielsen, 2011). Educational and personal life experiences, political leaning, and family life experiences, co-workers, and place of employment influence a person’s beliefs about poverty (Long, 2016). These experiences and beliefs shape the way in which the participants view their personal experience of the poverty simulation. These experiences and beliefs also shape the participants’ attitudes toward the issues faced by those in poverty; issues addressed during the poverty simulation (Davidson, 2009; Long, 2001).

Ethical Considerations

One ethical consideration taken into account was the collection of the emails from the participants. Collecting participant email addresses provided the opportunity to match survey answers with an individual participant as well as having access to possibly contact study participants in the future. The Institutional Review Board (IRB) addressed the email issue based
on the type of application required. Taking into account the collection of emails for this research study, the IRB Committee approved an expedited review under the category “Research on Individuals or Group Characteristics of Behavior (language, communications, cultural beliefs, or practices, or social behavior)”. The IRB Committee requested an explanation of the process for keeping participant email address information confidential.

Another ethical consideration dealt with the number of organizations participating. The original IRB gave consent for seven organizations to participate in the research study. The final count for the number of organizations participating in the research study was 11. For each of the four new organizations participating, a form had to be filled out that was given to the Chair of the IRB; the form was kept on file to indicate that permission had been obtained from IRB to conduct this study at the four new locations.

Chapter 4 - Findings

The purpose of this study was to investigate the effect of a poverty simulation as an experiential learning modality to create immediate and sustained empathetic attitude change toward those experiencing poverty. The data collected for this study was analyzed using paired sample t-tests, independent sample t-tests, one-way ANOVAs, and a three-way ANOVA. The hypothesis for each research question was tested. Findings from the analysis of data were reported.

Descriptive Data for the Independent Variables

Descriptive data were examined to investigate which sub-groups had the highest mean difference between the immediate pre-survey and the pre-survey for immediate empathetic attitude scores. Descriptive data for the mean difference between the immediate post-survey and there pre-survey were reported for all sub-groups of the independent variables (see Table 4).
Table 4

Descriptive Data for the Subgroups for Each Individual, Participant Data Levels

<table>
<thead>
<tr>
<th>Mean Difference Immediate Post-Survey – Pre-Survey</th>
<th>Std. Deviation</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td><strong>Mean</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>132</td>
<td>.86</td>
<td>4.92</td>
<td>51.00</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>505</td>
<td>.80</td>
<td>4.06</td>
<td>37.00</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>2</td>
<td>-3.00</td>
<td>5.66</td>
<td>8.00</td>
</tr>
<tr>
<td><strong>African-American</strong></td>
<td>98</td>
<td>1.83</td>
<td>4.41</td>
<td>27.00</td>
</tr>
<tr>
<td><strong>Asian</strong></td>
<td>9</td>
<td>2.22</td>
<td>14.68</td>
<td>51</td>
</tr>
<tr>
<td><strong>Caucasian</strong></td>
<td>500</td>
<td>.53</td>
<td>3.80</td>
<td>35.00</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td>19</td>
<td>1.63</td>
<td>4.69</td>
<td>18.00</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>10</td>
<td>2.10</td>
<td>3.54</td>
<td>12.00</td>
</tr>
<tr>
<td><strong>18 - 25 years</strong></td>
<td>86</td>
<td>1.40</td>
<td>3.21</td>
<td>19.00</td>
</tr>
<tr>
<td><strong>25 - 25 years</strong></td>
<td>143</td>
<td>.28</td>
<td>3.81</td>
<td>27.00</td>
</tr>
<tr>
<td><strong>35 - 45 years</strong></td>
<td>156</td>
<td>1.21</td>
<td>4.12</td>
<td>27.00</td>
</tr>
<tr>
<td><strong>45 - 55 years</strong></td>
<td>177</td>
<td>.41</td>
<td>5.10</td>
<td>58.00</td>
</tr>
<tr>
<td><strong>55 years and older</strong></td>
<td>75</td>
<td>1.19</td>
<td>4.14</td>
<td>24.00</td>
</tr>
<tr>
<td><strong>Student</strong></td>
<td>88</td>
<td>1.30</td>
<td>4.01</td>
<td>27.00</td>
</tr>
<tr>
<td><strong>Low/Middle</strong></td>
<td>74</td>
<td>.89</td>
<td>5.99</td>
<td>58.00</td>
</tr>
<tr>
<td><strong>Middle</strong></td>
<td>283</td>
<td>.74</td>
<td>3.96</td>
<td>25.00</td>
</tr>
<tr>
<td><strong>Upper/Middle</strong></td>
<td>176</td>
<td>.43</td>
<td>3.95</td>
<td>29.00</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td>12</td>
<td>2.25</td>
<td>3.96</td>
<td>14.00</td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td>128</td>
<td>1.06</td>
<td>4.91</td>
<td>47.00</td>
</tr>
<tr>
<td><strong>Family - Adult</strong></td>
<td>273</td>
<td>.70</td>
<td>3.98</td>
<td>30.00</td>
</tr>
<tr>
<td><strong>Family - Child 1-3 years</strong></td>
<td>3</td>
<td>-3.00</td>
<td>2.00</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Family - Child 4-18 years</strong></td>
<td>233</td>
<td>.82</td>
<td>4.15</td>
<td>34.00</td>
</tr>
<tr>
<td><strong>Voluntary Participation</strong></td>
<td>534</td>
<td>.69</td>
<td>4.35</td>
<td>58.00</td>
</tr>
<tr>
<td><strong>In-voluntary Participation</strong></td>
<td>95</td>
<td>1.13</td>
<td>3.39</td>
<td>19.00</td>
</tr>
<tr>
<td><strong>Works with those in poverty</strong></td>
<td>487</td>
<td>.68</td>
<td>4.39</td>
<td>58.00</td>
</tr>
<tr>
<td><strong>Does not work with those in poverty</strong></td>
<td>145</td>
<td>1.06</td>
<td>3.78</td>
<td>22.00</td>
</tr>
<tr>
<td><strong>Volunteers with those in poverty</strong></td>
<td>528</td>
<td>.69</td>
<td>4.04</td>
<td>37.00</td>
</tr>
</tbody>
</table>
Based on descriptive data for sample results, the findings for the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey suggest the following subgroups showed a gain in empathetic attitude scores of 2.00 or more points: Asian (M = 2.22, SD = 14.68), Other race (M = 2.10, SD = 3.54), and upper income (M = 2.25, SD = 3.96) (see Table 4). Some of the larger differences may be a reflection of the under representation of the subgroups with sample sizes of ten or less. (See Footnote\(^1\) for additional descriptive data for the mean difference between the pre-survey – immediate-post survey and Footnote\(^2\) for additional descriptive data for the pre-survey and immediate post-survey scores for each subgroup of the independent variables.)

**Effect for Immediate and Sustained Empathetic Attitude Change**

This study utilized a paired sample \(t\) test to analyze the effect of the poverty simulation on immediate and sustained empathetic attitude change. The difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey were reported to examine the effect of the poverty simulation on immediate empathetic attitude change. The difference in the mean empathetic attitude scores for the delayed post-survey – immediate post-survey were reported to examine the effect of the poverty simulation on sustained empathetic attitude change.
The data met the assumptions for using the paired sample t-test in analyzing data. The test was conducted on paired data and there was a normal distribution of the data (see Figure 7, Figure 8, and Figure 9). The participants were not chosen using simple random sampling, but simple random sampling was used to assign the roles for the poverty simulation (Shavelson, 1996). The results of the findings were examined with caution taking into account the lack of simple random sampling. Statistical significance was reported at $\rho \leq .05$.

Figure 7. Distribution for Pre-Survey Scores

Figure 7. The figure represents the distribution of participants’ pre-survey scores with the normal curve of distribution over the scores. The pre-survey was taken prior to the start of directions for the poverty simulation. The researcher determined the distribution of scores was normal other than two outliers.
Figure 8. Distribution for Immediate Post-Survey Scores

The figure represents the distribution of participants’ immediate post-survey scores with the normal curve of distribution over the scores. The immediate post-survey was taken immediately following participation in the poverty simulation. The researcher determined the distribution of scores was normal other than one outlier.
Figure 9. The figure represents the distribution of participants’ delayed post-survey scores with the normal curve of distribution over the scores. The delayed post-survey was taken 90 to 100 days after participation in the poverty simulation. The researcher determined the distribution of scores was normal other than two outliers.
**Research Question** – Does participation in a poverty simulation affect immediate empathetic attitude?

The population mean of the pre-survey score is equal to the population mean of the immediate post-survey.

\[ H_0: \mu_{\text{pre-survey}} = \mu_{\text{immediate post-survey}} \]

The population mean of the pre-survey score is not equal to the population mean of the immediate post-survey.

\[ H_a: \mu_{\text{pre-survey}} \neq \mu_{\text{immediate post-survey}} \]

A paired sample *t* test was conducted to compare the effect of the poverty simulation on the mean empathetic attitude scores for the immediate post-survey – pre-survey. Based on sample results, the null hypothesis was rejected indicating there is evidence to suggest the population mean of the pre-survey score is not equal to the population mean of the immediate post-survey, \( t(642) = 4.67, p < .01 \) (at \( p \leq .05 \)) (see Table 5). There was a statistically significant difference (at \( p \leq .05 \)) in the mean empathetic attitude scores for the pre-surveys and the immediate post-surveys (\( M = .78, SD = 4.25 \)). Though there was a high statistical significance for immediate empathetic attitude change, the effect size (Cohen’s D .18) was small.
Table 5

Immediate Effect of Poverty Simulation on Empathetic Attitude Change

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Lower</th>
<th>Upper</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Cohen’s D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate Post-Survey – Pre-Survey</td>
<td>643</td>
<td>.78</td>
<td>4.25</td>
<td>.45</td>
<td>1.11</td>
<td>4.67</td>
<td>642</td>
<td>.01</td>
<td>.18</td>
</tr>
</tbody>
</table>

Note. Significance was determined at \( \rho \leq .05 \) and was adjusted for Bonferroni post hoc test.

**Research Question** – Does participation in a poverty simulation affect sustained empathetic attitude?

The population mean of the immediate post-survey score is equal to the population mean of the delayed post-survey.

\[ H_0: \mu_{\text{immediate post-survey}} = \mu_{\text{delayed post-survey}} \]

The population mean of the immediate post-survey score is not equal to the population mean of the delayed post-survey.

\[ H_a: \mu_{\text{immediate post-survey}} \neq \mu_{\text{delayed post-survey}} \]

A paired sample \( t \) test was conducted to compare the effect of the poverty simulation on the mean empathetic attitude change for the immediate post-survey and the delayed post-survey. Based on sample results, the null hypothesis was rejected indicating there is evidence to suggest the population mean of the immediate post-survey score is not equal to the population mean of the delayed post-survey, \( t (298) = -3.50, \rho < .01 \) (at \( \rho \leq .05 \)) (see Table 6). There was a statistically significant difference (at \( \rho \leq .05 \)) in the mean empathetic attitude change scores between the immediate post-surveys and the delayed post-surveys. Though there was a high statistical significance for sustained empathetic attitude change, the effect size (Cohen’s D -0.20)
was small as well as negative. The negative Cohen’s D indicated a statistically significant drop in empathetic attitude.

Table 6

*Sustained Effect of Poverty Simulation on Empathetic Attitude Change*

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>95% Confidence Interval of the Difference</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Lower</th>
<th>Upper</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Cohen’s D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delayed Post-Survey - Immediate Post-Survey</td>
<td></td>
<td>299</td>
<td>-.90</td>
<td>4.45</td>
<td>-1.41</td>
<td>-.39</td>
<td>-3.50</td>
<td>297</td>
<td>.01</td>
<td>-.20</td>
</tr>
</tbody>
</table>

Note. Statistical significance was determined at ρ ≤ .05 (two-tailed) and was adjusted for Bonferroni post hoc test.

Figure 10 shows the increase and the decrease of the scores for the mean empathetic scores for the pre-survey, immediate post-survey, and the delayed posted survey. Despite there being a statistically significant difference for both immediate and sustained empathetic attitude change, Figure 10 illustrates an increase in the immediate empathetic attitude score, and a decrease in the sustained empathetic attitude score. The score for sustained empathetic attitude score decreased to near the point of the empathetic attitude score for the pre-survey.
Figure 10. The scores for the Adult Empathy Survey ranged from 0 – 100. The developers of the survey indicated the higher the scores the more empathy a participant had. The three points represent the mean scores for the pre-survey (#1), immediate post-survey (#2), and the delayed post-survey (#3). Based on an analysis of the mean value of the survey scores, there was a statistically significant increase in the difference of the mean scores between #1 and #2, and a statistically significant decrease in the difference of the mean scores between #2 and #3.

Association of Independent Variables on Empathetic Attitude Change

Independent variables were investigated to determine if there was an explanation for the association between the independent and dependent variable. This study investigated the following independent variables: gender, race, age, income, role assigned in the poverty simulation, reason for participation was voluntary or in-voluntary, job did or did not entail working with those in poverty, do or do not volunteer with those in poverty, and experienced or
did not experience scarcity of resources growing up using an independent sample t test and a one-way between subjects ANOVA.

**Analyze data – independent sample t test.** The independent sample t test was used to analyze the differences in empathetic attitude change for independent variables with two subgroups. The independent sample t test was used for analyzing data for reason for participation (voluntary or in-voluntary), job did or did not entail working with those in poverty, do or do not volunteer with those in poverty, and experienced or did not experience scarcity of resources growing up. The findings for the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for each of these variables are reported.

The data met all but one of the assumptions for the independent sample t-test. The test was conducted on a continuous dependent variable, and the independent variables were categorical. Both the independent and dependent variables had assigned values. The subgroups were independent of each other. There was a normal distribution of the data for the subgroups for each variable (see Figure 11, Figure 12, Figure 13, and Figure 14).
Figure 11. The figure represents the distribution of the difference between the immediate post-survey and the pre-survey scores for the two subgroups participation in the poverty simulation was voluntary or in-voluntary. The pre-survey was taken prior to the start of directions for the poverty simulation, and the immediate post-survey was taken immediately following participation in the poverty simulation. The researcher determined the distribution of scores was normal other than two outliers for the voluntary subgroup.
Figure 12. The figure represents the distribution of the difference between the immediate post-survey and the pre-survey scores for the two subgroups job does/does not entail working with those in poverty. The pre-survey was taken prior to the start of directions for the poverty simulation, and the immediate post-survey was taken immediately following participation in the poverty simulation. The researcher determined the distribution of scores was normal other than one outlier for yes the job does entail working with those in poverty subgroup.
Figure 13. Distribution for Do or Do Not Volunteer to Work With Those in Poverty

![Histogram showing the distribution of the difference between immediate post-survey and pre-survey scores for two subgroups: do volunteer vs. do not volunteer with those in poverty.]

*Figure 13.* The figure represents the distribution of the difference between the immediate post-survey and the pre-survey scores for the two subgroups do/do not volunteer with those in poverty. The pre-survey was taken prior to the start of directions for the poverty simulation, and the immediate post-survey was taken immediately following participation in the poverty simulation. The researcher determined the distribution of scores was normal other than one outlier for do volunteer with those in poverty subgroup.
Homogeneity of variances was indicated for all subgroups based on Levene’s Test for Equality of Variance at $\rho > .05$. The participants were not chosen using simple random sampling, but simple random sampling was used to assign the roles for the poverty simulation.
(Shavelson, 1996). The results of the findings were examined with caution, taking into account the lack of simple random sampling. Statistical significance was reported at \( \rho \leq .05 \).
Table 7

*Difference in the Mean Empathetic Attitude Scores for Immediate Post-Survey – Pre-Survey for Participation Was or Was Not Mandated, Do or Do Not Work With Those in Poverty, Do or Do Not Volunteer With Those in Poverty, and Did or Did Not Experience Scarcity of Necessary Resources Growing Up*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
<th>Cohen’s D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntary or involuntary participation in the poverty simulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do or do not work with those in poverty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did or did not experience scarcity growing up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>2.16</td>
<td>.14</td>
<td>-.94</td>
<td>627</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.77</td>
<td>.38</td>
<td>-.94</td>
<td>630</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.20</td>
<td>.66</td>
<td>-.99</td>
<td>629</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>2.11</td>
<td>.15</td>
<td>.96</td>
<td>626</td>
</tr>
</tbody>
</table>

Note. Significance was determined at $\rho \leq .05$ (two-tailed).
Research Question - Does reason for participation affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of reason for participation, voluntary/in-voluntary, are equal to each other.

\[ H_0: \mu_{\text{voluntary}} = \mu_{\text{in-voluntary}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of reason for participation, voluntary/in-voluntary, are not equal to each other.

\[ H_a: \mu_{\text{voluntary}} \neq \mu_{\text{in-voluntary}} \]

An independent sample t test was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable attendance of the poverty simulation was voluntary or in-voluntary. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the two levels of reason for participation, voluntary/in-voluntary, are not equal to each other, \( t (627) = -.94, \rho = .35 \) (at \( \rho \leq .05 \)) (see Table 7). There was no statistically significant difference (at \( \rho \leq .05 \)) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for voluntary participation in the poverty simulation (\( M = .69, SD = 4.35 \)) and in-voluntary participation in the poverty simulation (\( M = 1.13, SD = 3.39 \)) (see Table 4). (See Footnote\(^3\) for additional descriptive data for the independent variable for participation was voluntary or in-voluntary.)

Research Question - Does job entail working with those in poverty affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of job entails working with those in poverty, yes/no, are equal to each other.
\[ H_0: \mu_{\text{yes}} = \mu_{\text{no}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of job entails working with those in poverty, yes/no, are not equal to each other.

\[ H_a: \mu_{\text{yes}} \neq \mu_{\text{no}} \]

An independent sample t test was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable job does or does not entail working with those in poverty. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the two levels of job entails working with those in poverty, yes/no, are not equal to each other, \( t (630) = -.94, \rho = .35 \) (at \( \rho \leq .05 \)) (see Table 7). There was no statistically significant difference (at \( \rho \leq .05 \)) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for working with those in poverty (\( M = .68, SD = 4.39 \)) and not working with those in poverty (\( M = 1.06, SD = 3.78 \)) (see Table 4). (See Footnote 4 for additional descriptive data for the independent variable does/does not work with those in poverty.)

**Research Question** - Does volunteering with those in poverty affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of volunteering with those in poverty, yes/no, are equal to each other.

\[ H_0: \mu_{\text{yes}} = \mu_{\text{no}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of volunteering with those in poverty, yes/no, are not equal to each other.

\[ H_a: \mu_{\text{yes}} \neq \mu_{\text{no}} \]
An independent sample t test was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable do or do not volunteer with those in poverty. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the two levels of volunteering with those in poverty, yes/no, are not equal to each other, \( t(629) = -.99, \rho = .32 \) (at \( \rho \leq .05 \)) (see Table 7). There was no statistically significant difference (at \( \rho \leq .05 \)) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for volunteering with those in poverty (M = .69, SD = 4.04) and not volunteering with those in poverty (M = 1.15, SD = 5.24) (see Table 4). (See Footnote 5 for additional descriptive data for the independent variable does/does not volunteer with those in poverty.)

**Research Question** - Does scarcity of necessary resources growing up affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of experiencing scarcity of necessary resources growing up, yes/no, are equal to each other.

\[
H_0: \mu_{\text{yes}} = \mu_{\text{no}}
\]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of experiencing scarcity of necessary resources growing up, yes/no, are not equal to each other.

\[
H_a: \mu_{\text{yes}} \neq \mu_{\text{no}}
\]

An independent sample t test was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-
survey – pre-survey for the independent variable did or did not experience scarcity of necessary resources growing up. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the two levels of experiencing scarcity of necessary resources growing up, yes/no, are not equal to each other, \( t(626) = .96, \rho = .34 \) (at \( \rho \leq .05 \)). The effect size (Cohen’s D .07) for scarcity of necessary resources growing up was small (see Table 7). There was no statistically significant difference (at \( \rho \leq .05 \)) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for did experience scarcity of necessary resources growing up (\( M = .98, SD = 4.81 \)) and not experience scarcity of necessary resources growing up (\( M = .65, SD = 3.82 \)) (see Table 4). (See Footnote\(^6\) for additional descriptive data for the independent variable did/did not experience scarcity of necessary resources growing up.)

**Analyze – one-way between subjects ANOVA.** This study utilized the one-way between subjects ANOVA to analyze the effect of the independent variables, having three or more subgroups, on empathetic attitude change. The one-way between subjects ANOVA was used for analyzing data for gender, race, age, income, and role in the poverty simulation. The findings for the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for each of these variables are reported.

The data met all but one of the assumptions for the one-way between subjects ANOVA (Shavelson, 1996). The test was conducted on a continuous, interval dependent variable. All the independent variables were categorical. The subgroups were independent of each other. The data for each cell was drawn from a population in which there was a normal distribution of scores (see Figure 7 and Figure 8). Homogeneity of variances was conducted for all subgroups of the independent variables using Levene’s Test for Equality of Variance at \( \rho > .05 \). The
subgroups analyzed for each of the independent variables were adjusted when indicated by Levene’s Test for Equality of Variance.

Research Question - Does gender affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the three levels of gender indicate homogeneity of variance was met, $F(2, 636) = .21, \rho = .81$ (at $\rho > .05$), passing Levene’s Test. All three levels of gender, male, female, and other, were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the three levels of gender, male/female/other, are equal to each other.

$$H_0: \mu_{male} = \mu_{female} = \mu_{other}$$

The population mean difference scores between the pre- and immediate post-surveys of the three levels of gender, male/female/other, are not equal to each other.

$$H_a: \text{Not all } \mu \text{ are equal}$$

A one-way between subjects ANOVA was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable gender. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the three levels of gender, male/female/other, are not equal to each other, $F(2, 636) = .81, \rho = .45$ (at $\rho \leq .05$) (see Table 8). There was no statistically significant difference (at $\rho \leq .05$) in the difference of the mean empathetic attitude scores for the immediate post-survey – pre-survey for gender. The mean scores and standard deviations for male (M = .86, SD = 4.92), female (M = .80, SD = 4.06), and other (M = -3.00, SD = 5.66) were not significantly different (see Table 9). (See Footnote 7 for additional descriptive data for gender.)


Table 8

*Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Gender*

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>η²</th>
<th>Power</th>
<th>α = .05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>29.30</td>
<td>2</td>
<td>14.65</td>
<td>.81</td>
<td>.45</td>
<td>.00</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>11519.86</td>
<td>636</td>
<td>18.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11549.16</td>
<td>638</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significance was determined at ρ ≤ .05.

Table 9

*Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Male, Female, and Other*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Male</td>
<td>132</td>
<td>.86</td>
<td>4.92</td>
<td>.43</td>
<td>.01</td>
</tr>
<tr>
<td>Female</td>
<td>505</td>
<td>.80</td>
<td>4.06</td>
<td>.18</td>
<td>.45</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>-3.00</td>
<td>5.66</td>
<td>4.00</td>
<td>-53.83</td>
</tr>
<tr>
<td>Total</td>
<td>639</td>
<td>.80</td>
<td>4.25</td>
<td>.17</td>
<td>.47</td>
</tr>
</tbody>
</table>

Note. Descriptive data for the three subgroups of gender. It is necessary to note that N for Other was very small.

**Research Question** - Does race affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the five levels of race indicate homogeneity of variance was not met, F(4, 631) = 9.64, ρ < .001 (at ρ > .05), failing to pass Levene’s Test. The results of Levene’s Test for Equality of Variance for four of the five levels of race, omitting Asian, indicate homogeneity of variance was met, F(3, 623) = .88, ρ = .451 (at ρ ≤ .05), passing Levene’s Test. Four of the five levels of race, African-America, Caucasian, Hispanic, and Other, were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the four levels of race, African American/Caucasian/Hispanic/Other, are equal to each other.
H₀: \( \mu_{\text{African American}} = \mu_{\text{Caucasian}} = \mu_{\text{Hispanic}} = \mu_{\text{Other}} \)

The population mean difference scores between the pre- and immediate post-surveys of the five levels of race, African American/Caucasian/Hispanic/Other, are not equal to each other.

Hₐ: Not all \( \mu \) are equal

A one-way between subjects ANOVA was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable race. Based on sample results, the null hypothesis was rejected indicating there is evidence to suggest the four levels of race, African American/Caucasian/Hispanic/Other, are not equal to each other, \( F(3, 623) = 3.64, \rho = .01 \) (at \( \rho \leq .05 \)). The effect size (\( \eta^2 = .02 \)) is small, and power (.73) based on \( \alpha = .05 \) is large taking into account .80 is considered a good standard of comparison (see Table 10). There was a statistically significant difference (at \( \rho \leq .05 \)) in difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for race. Tukey’s post hoc test was conducted and indicated that African-American and Caucasian subgroups were significantly different at \( \rho = .02 \) (at \( \rho \leq .05 \)) (see Table 11). The mean scores and standard deviations for African-American (\( M = 1.83, \ SD = 4.41 \)) and Caucasian (\( M = .53, \ SD = 3.80 \)) were significantly different (see Table 12). The descriptive results suggest the subgroups Other, African-American, and Hispanic had higher differences of the mean empathetic attitude scores for immediate post-survey – post-survey, and the subgroup Caucasian had the lowest difference in the mean empathetic attitude score. (See Footnote⁸ for additional descriptive data for race.)
Table 10

**Difference in the Mean Empathetic Attitude Score for Immediate Post-Survey – Pre-Survey for Race**

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>$\eta^2$</th>
<th>Power $\alpha = .05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>168.67</td>
<td>3</td>
<td>56.22</td>
<td>3.64</td>
<td>.01</td>
<td>.02</td>
<td>.73</td>
</tr>
<tr>
<td>Within Groups</td>
<td>9615.79</td>
<td>623</td>
<td>15.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9784.46</td>
<td>626</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significance was determined at $\rho \leq .05$.

Table 11

**Tukey Post Hoc for Race**

Multiple Comparisons
Dependent Variable: Immediate Post-Survey - Pre-Survey
Tukey HSD

<table>
<thead>
<tr>
<th>(I) Race of participant</th>
<th>(J) Race of participant</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>Caucasian</td>
<td>1.29</td>
<td>.43</td>
<td>.02</td>
<td>.18 - 2.41</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>.19</td>
<td>.98</td>
<td>1.00</td>
<td>-2.34 - 2.73</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>-.27</td>
<td>1.30</td>
<td>1.00</td>
<td>-3.63 - 3.09</td>
</tr>
<tr>
<td>Caucasian</td>
<td>African-American</td>
<td>-1.29</td>
<td>.43</td>
<td>.02</td>
<td>-.24 - .18</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-1.10</td>
<td>.92</td>
<td>.63</td>
<td>-3.46 - 1.27</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>-1.57</td>
<td>1.25</td>
<td>.60</td>
<td>-4.80 - 1.67</td>
</tr>
<tr>
<td>Hispanic</td>
<td>African-American</td>
<td>-.19</td>
<td>.98</td>
<td>1.00</td>
<td>-2.73 - 2.34</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>1.10</td>
<td>.92</td>
<td>.63</td>
<td>-1.27 - 3.46</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>-.47</td>
<td>1.53</td>
<td>.99</td>
<td>-4.42 - 3.49</td>
</tr>
<tr>
<td>Other</td>
<td>African-American</td>
<td>.27</td>
<td>1.30</td>
<td>1.00</td>
<td>-3.09 - 3.63</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>1.57</td>
<td>1.25</td>
<td>.60</td>
<td>-1.67 - 4.80</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>.47</td>
<td>1.53</td>
<td>.99</td>
<td>-3.49 - 4.42</td>
</tr>
</tbody>
</table>

Note. Based on observed means. The error term is Mean Square(Error) = 15.44. The mean difference is significant at the 0.05 level.
Table 12

*Descriptive Data for the Difference in Mean Empathetic Attitude Score for Immediate Post-Survey – Pre-Survey for African-American, Caucasian, Hispanic, and Other*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>98</td>
<td>1.83</td>
<td>4.41</td>
<td>.45</td>
<td></td>
<td>.94</td>
<td>2.71</td>
<td>-10.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Caucasian</td>
<td>500</td>
<td>.53</td>
<td>3.80</td>
<td>.17</td>
<td></td>
<td>.20</td>
<td>.87</td>
<td>-20.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Hispanic</td>
<td>19</td>
<td>1.63</td>
<td>4.69</td>
<td>1.08</td>
<td></td>
<td>-.63</td>
<td>3.89</td>
<td>-4.00</td>
<td>14.00</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>2.10</td>
<td>3.54</td>
<td>1.12</td>
<td></td>
<td>-.43</td>
<td>4.63</td>
<td>-4.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Total</td>
<td>627</td>
<td>.79</td>
<td>3.95</td>
<td>.16</td>
<td></td>
<td>.48</td>
<td>1.10</td>
<td>-20.00</td>
<td>17.00</td>
</tr>
</tbody>
</table>

Note. Descriptive data for the four subgroups of race. It is necessary to note that N for Hispanic and Other were very small and that the subgroup Asian was not included in the analysis because Asian did not meet homogeneity of variance.

**Research Question** - Does age affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the five levels of age indicate homogeneity of variance was met, $F(4, 632) = 1.73, \rho = .14$ (at $\rho > .05$), passing Levene’s Test. All five levels of age, 18-25 years, 25-35 years, 35-45 years, 45-55 years, and 55 years or older were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are equal to each other.

$H_0: \mu_{18-25 \text{ years}} = \mu_{25-35 \text{ years}} = \mu_{35-45 \text{ years}} = \mu_{45-55 \text{ years}} = \mu_{55 \text{ years and older}}$

At least two of the population mean difference scores between the pre- and immediate post-surveys of the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are not equal to each other.

$H_a: Not \ all \ \mu \ are \ equal$
A one-way between subjects ANOVA was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable age. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are not equal to each other, $F(4, 632) = 1.84, \rho = .12$ (at $\rho \leq .05$) (see Table 13). There was no statistically significant difference (at $\rho \leq .05$) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for age. The mean scores and standard deviations for 18-25 years (M = 1.40, SD = 3.21), 25-35 years (M = .28, SD = 3.81), 35-45 years (M = 1.21, SD = 4.12), 45-55 years (M = .41, SD = 5.10), and 55 years and older (M = 1.19, SD = 4.14) were not significantly different (see Table 14). (See Footnote⁹ for additional descriptive data for age.)

Table 13

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>$\eta^2$</th>
<th>Power $\alpha = .05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>132.60</td>
<td>4</td>
<td>33.15</td>
<td>1.84</td>
<td>.12</td>
<td>.01</td>
<td>.56</td>
</tr>
<tr>
<td>Within Groups</td>
<td>11415.09</td>
<td>632</td>
<td>18.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11547.68</td>
<td>636</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significance was determined at $\rho \leq .05$. 

\textit{Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Age}
Table 14

Descriptive Data for the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for 18-25 Years, 25-35 Years, 35-45 Years, 45-55 Years, and 55 Years, and Older

<table>
<thead>
<tr>
<th>Age Group</th>
<th>N</th>
<th>Mean</th>
<th>Deviation</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 25 years</td>
<td>86</td>
<td>1.40</td>
<td>3.21</td>
<td>.35</td>
<td>.71</td>
<td>2.08</td>
<td>-8.00</td>
<td>11.00</td>
</tr>
<tr>
<td>25 - 35 years</td>
<td>143</td>
<td>.28</td>
<td>3.81</td>
<td>.32</td>
<td>-.35</td>
<td>.91</td>
<td>-13.00</td>
<td>14.00</td>
</tr>
<tr>
<td>35 - 45 years</td>
<td>156</td>
<td>1.21</td>
<td>4.12</td>
<td>.33</td>
<td>.55</td>
<td>1.86</td>
<td>-10.00</td>
<td>17.00</td>
</tr>
<tr>
<td>45 - 55 years</td>
<td>177</td>
<td>.41</td>
<td>5.10</td>
<td>.38</td>
<td>-.34</td>
<td>1.17</td>
<td>-20.00</td>
<td>38.00</td>
</tr>
<tr>
<td>55 years and older</td>
<td>75</td>
<td>1.19</td>
<td>4.14</td>
<td>.48</td>
<td>.23</td>
<td>2.14</td>
<td>-11.00</td>
<td>13.00</td>
</tr>
<tr>
<td>Total</td>
<td>637</td>
<td>.80</td>
<td>4.2</td>
<td>.17</td>
<td>.47</td>
<td>1.13</td>
<td>-20.00</td>
<td>38.00</td>
</tr>
</tbody>
</table>

Note. Descriptive data for the five subgroups of age.

**Research Question** - Does income affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the five levels of income indicate homogeneity of variance was met, $F(4, 628) = .21, \rho = .93$ (at $\rho > .05$), passing Levene’s Test. All five levels of income, student, low-middle, middle, upper-middle, and upper were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the five levels of income, student/low-middle/middle/upper-middle/upper are equal to each other.

$$H_0: \mu_{\text{student}} = \mu_{\text{low/middle}} = \mu_{\text{middle}} = \mu_{\text{Upper/middle}} = \mu_{\text{Upper}}$$

At least two of the population mean difference scores between the pre- and immediate post-surveys of the five levels of income, student/low-middle/middle/upper-middle, and upper are not equal to each other.
A one-way between subjects ANOVA was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable income. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the five levels of income, student/low-middle/middle/upper-middle/upper, are not equal to each other, $F(4, 628) = 1.00, \rho = .41$ (at $\rho \leq .05$) (see Table 15). There was no statistically significant difference (at $\rho \leq .05$) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for income. The mean scores and standard deviations for student ($M = 1.30, SD = 4.01$), low/middle ($M = .89, SD = 5.99$), middle ($M = .74, SD = 3.96$), upper/middle ($M = .43, SD = 3.95$), and upper ($M = 2.25, SD = 3.96$) were not significantly different (see Table 16). (See Footnote\(^{10}\) for additional descriptive data for income.)

Table 15

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>$\eta^2$</th>
<th>Power $\alpha = .05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>72.14</td>
<td>4</td>
<td>18.03</td>
<td>1.00</td>
<td>.41</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>11340.01</td>
<td>628</td>
<td>18.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11412.15</td>
<td>632</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significance was determined at $\rho \leq .05$. 

\(H_0: \text{Not all } \mu \text{ are equal}\)
Table 16

Descriptive Data for the Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Student, Low/Middle, Middle, Middle/Upper, and Upper Incomes

<table>
<thead>
<tr>
<th>Income</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>88</td>
<td>1.30</td>
<td>4.01</td>
<td>.43</td>
<td>.45</td>
<td>2.14</td>
<td>-13.00</td>
<td>14.00</td>
</tr>
<tr>
<td>Low/Middle</td>
<td>74</td>
<td>.89</td>
<td>5.99</td>
<td>.70</td>
<td>-.50</td>
<td>2.28</td>
<td>-20.00</td>
<td>38.00</td>
</tr>
<tr>
<td>Middle</td>
<td>283</td>
<td>.74</td>
<td>3.96</td>
<td>.24</td>
<td>.27</td>
<td>1.20</td>
<td>-10.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Upper/Middle</td>
<td>176</td>
<td>.43</td>
<td>3.95</td>
<td>.30</td>
<td>-.16</td>
<td>1.02</td>
<td>-12.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Upper</td>
<td>12</td>
<td>2.25</td>
<td>3.96</td>
<td>1.14</td>
<td>-.26</td>
<td>4.76</td>
<td>-3.00</td>
<td>11.00</td>
</tr>
<tr>
<td>Total</td>
<td>633</td>
<td>.78</td>
<td>4.25</td>
<td>.17</td>
<td>.44</td>
<td>1.11</td>
<td>-20.00</td>
<td>38.00</td>
</tr>
</tbody>
</table>

Note. Descriptive data for the five subgroups of income. It is necessary to note that N for Upper is very small.

**Research Question** - Does the role in the poverty simulation affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the four levels of role in the poverty simulation indicate homogeneity of variance was met, $F(3, 633) = .34, \rho = .80$ (at $\rho > .05$), passing Levene’s Test. All four levels of role in the poverty simulation, organization, family adult, family child 1-3, and family child 4-18 were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the four levels of role in the poverty simulation, organization/family adult/ family child 1-3/family child 4-18 are equal to each other.

\[
H_0: \mu_{organization} = \mu_{family - adult} = \mu_{family - child 1-3} = \mu_{family - child 4-18}
\]

At least two of the population mean difference scores between the pre- and immediate post-surveys of the four levels of role in the poverty simulation, organization/family adult/family child 1-3/family child 4-18 are not equal to each other.

\[
H_a: Not \; all \; \mu \; are \; equal
\]
A one-way between subjects ANOVA was conducted to compare the effect of the poverty simulation on the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for the independent variable role in the poverty simulation. Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the four levels of role in the poverty simulation, organization/family adult/family child 1-3/family child 4-18 are not equal to each other, $F(3, 633) = 1.02, \rho = .38$ (at $\rho \leq .05$) (see Table 17). There was no statistically significant difference (at $\rho \leq .05$) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for role in the poverty simulation.

The mean scores and standard deviations for organization ($M = 1.06, SD = 4.91$), family adult ($M = .70, SD = 3.98$), family child 1-3 ($M = -3.00, SD = 2.00$), and family child 4-18 ($M = .82, SD = 4.15$) were not significantly different (see Table 18). (See Footnote 11 for additional descriptive data for role in the poverty simulation.)

Table 17

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>$\eta^2$</th>
<th>Power $\alpha = .05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>55.14</td>
<td>3</td>
<td>18.38</td>
<td>1.02</td>
<td>.38</td>
<td>.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>11378.33</td>
<td>633</td>
<td>17.98</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11433.47</td>
<td>636</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significance was determined at $\rho \leq .05$. 

---

Footnote 11: Additional descriptive data for role in the poverty simulation.
Table 18

Descriptive Data for the Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey for Organization, Family Adult, Family Child 1-3, and Family Child 4-18

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Organization</td>
<td>128</td>
<td>1.06</td>
<td>4.91</td>
<td>0.43</td>
<td>0.20</td>
</tr>
<tr>
<td>Family Adult</td>
<td>273</td>
<td>0.70</td>
<td>3.98</td>
<td>0.24</td>
<td>0.22</td>
</tr>
<tr>
<td>Family Child 1-3 years</td>
<td>3</td>
<td>-3.00</td>
<td>2.00</td>
<td>1.15</td>
<td>-7.97</td>
</tr>
<tr>
<td>Family Child 4-18 years</td>
<td>233</td>
<td>0.82</td>
<td>4.15</td>
<td>0.27</td>
<td>0.28</td>
</tr>
<tr>
<td>Total</td>
<td>637</td>
<td>0.80</td>
<td>4.24</td>
<td>0.17</td>
<td>0.47</td>
</tr>
</tbody>
</table>

Note. Descriptive data for the four roles in the poverty simulation. It is necessary to note that N for Family child 1-3 years is very small.

**Analyzed data using a three way between subjects ANOVA.** A three way between subjects ANOVA was used to analyze data for the interactions of gender, race, and did or did not experience scarcity of necessary resources while growing up to explain empathetic attitude change were analyzed. The data met all the assumptions for the three way between subjects ANOVA (Shavelson, 1996). The test was conducted on a continuous, interval dependent variable. All the independent variables were categorical. Each independent variable had two or more subgroups that were independent of each other. There was a normal distribution of the data (see Figure 7 and Figure 8).

Earlier results of the Levene’s Test for Equality of Variance indicated that all three levels of gender, male, female, and other, met homogeneity of variance. Though the other level for gender did meet homogeneity of variance, other for gender will not appear in the three way ANOVA taking into account no data were reported for the scarcity question for the participants categorized as other. This resulted in the number of subgroups for gender to drop from three to two levels, meaning only male and female for gender were analyzed in the interaction of...
variables. Based on the previous analysis for the homogeneity of variance for race using Levene's Test for Equality of Variance, only four levels of race were used in the three way ANOVA. Because Asian did not pass Levene's Test for Equality of Variance at $\rho > .05$, the five levels of race dropped to four levels. Data for African-American, Caucasian, Hispanic, and Other were used. Experienced scarcity of necessary resources growing up had two levels, yes and no.

Based on sample results, the main effect for gender yielded an F ratio of $F(1, 601) = .00, \rho = 1.00$ (at $\rho \leq .05$), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the main effect of the two levels of gender, male and female, is not equal to zero (see Table 19). The F ratio indicates no significant difference between male ($M = 1.57, SD = .93$) and female ($M = 1.48, SD = .47$) (see Table 20).

Based on sample results, the main effect for race yielded an F ratio of $F(3, 601) = 1.67, \rho = .17$ (at $\rho \leq .05$), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the main effect of the four levels of race, African-American, Caucasian, Hispanic, and Other is not equal to zero (see Table 19). The F ratio indicates no significant difference between African-American ($M = 1.48, SD = .50$), Caucasian ($M = .52, SD = .23$), Hispanic ($M = 1.08, SD = 1.13$), and Other ($M = 2.90, SD = 1.59$) (see Table 21).

Based on sample results, the main effect for did or did not experience scarcity of necessary resources while growing up yielded an F ratio of $F(1, 601) = .68, \rho = .41$ (at $\rho \leq .05$), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the main effect of the two levels of experienced scarcity of necessary resources while growing up, yes, no, is not equal to zero (see Table 19). The F ratio indicates no significant difference between did
experience scarcity of necessary resources growing up (M = 1.73, SD = .70) and did not experience scarcity of necessary resources growing up (M = 1.27, SD = .72) (see Table 22).

Based on sample results, the interaction effect of gender and race yielded an F ratio of F(3, 601) = .53, ρ = .66 (at ρ ≤ .05), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the interaction effect of gender and race is not equal to zero (see Table 19).

Based on sample results, the interaction effect of gender and scarcity yielded an F ratio of F(3, 601) = 1.37, ρ = .24 (at ρ ≤ .05), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the interaction effect of gender and scarcity is not equal to zero (see Table 19).

Based on sample results, the interaction effect of race and scarcity yielded an F ratio of F(3, 601) = .74, ρ = .53 (at ρ ≤ .05), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the interaction effect of race and scarcity is not equal to zero (see Table 19).

Based on sample results, the interaction effect of gender, race, and scarcity yielded an F ratio of F(2, 601) = 1.16, ρ = .32 (at ρ ≤ .05), meaning the null hypothesis was not rejected indicating there is no evidence to suggest the interaction of gender, race, and scarcity of necessary resources while growing up is not equal to zero (see Table 19).
Table 19

*The Main Effect and the Interaction of Gender, Race, and Scarcity of Necessary Resources Growing Up on the Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey*

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
<th>Noncent. Parameter</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>228.65</td>
<td>14</td>
<td>16.33</td>
<td>1.05</td>
<td>.40</td>
<td>.02</td>
<td>14.67</td>
<td>.67</td>
</tr>
<tr>
<td>Intercept</td>
<td>108.74</td>
<td>1</td>
<td>108.74</td>
<td>6.98</td>
<td>.01</td>
<td>.00</td>
<td>.00</td>
<td>.05</td>
</tr>
<tr>
<td>Gender</td>
<td>.000</td>
<td>1</td>
<td>.00</td>
<td>.00</td>
<td>1.00</td>
<td>.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td>78.10</td>
<td>3</td>
<td>26.03</td>
<td>1.67</td>
<td>.17</td>
<td>.01</td>
<td>5.01</td>
<td>.44</td>
</tr>
<tr>
<td>Scarcity</td>
<td>10.53</td>
<td>1</td>
<td>10.53</td>
<td>.68</td>
<td>.41</td>
<td>.00</td>
<td>.68</td>
<td>.13</td>
</tr>
<tr>
<td>Gender * Race</td>
<td>24.88</td>
<td>3</td>
<td>8.29</td>
<td>.53</td>
<td>.66</td>
<td>.00</td>
<td>1.60</td>
<td>.16</td>
</tr>
<tr>
<td>Gender * Scarcity</td>
<td>21.33</td>
<td>1</td>
<td>21.33</td>
<td>1.37</td>
<td>.24</td>
<td>.00</td>
<td>1.37</td>
<td>.22</td>
</tr>
<tr>
<td>Race * Scarcity</td>
<td>34.70</td>
<td>3</td>
<td>11.57</td>
<td>.74</td>
<td>.53</td>
<td>.00</td>
<td>2.23</td>
<td>.21</td>
</tr>
<tr>
<td>Gender * Race * Scarcity</td>
<td>36.04</td>
<td>2</td>
<td>18.02</td>
<td>1.16</td>
<td>.32</td>
<td>.00</td>
<td>2.31</td>
<td>.25</td>
</tr>
<tr>
<td>Error</td>
<td>9369.15</td>
<td>601</td>
<td>15.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9961.00</td>
<td>616</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>9597.80</td>
<td>615</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. R Squared = .024 (Adjusted R Squared = .001). b. Computed using alpha = .05.

Table 20

*Descriptive Data for the Main Effect of Gender*

<table>
<thead>
<tr>
<th>Gender of participant</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1.57</td>
<td>.93</td>
<td>-.26</td>
<td>3.40</td>
</tr>
<tr>
<td>Female</td>
<td>1.48</td>
<td>.47</td>
<td>.56</td>
<td>2.40</td>
</tr>
</tbody>
</table>

Note. a. Based on modified population marginal mean.
Table 21

**Descriptive Data for the Main Effect of Race**

<table>
<thead>
<tr>
<th>Race of participant</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>1.48</td>
<td>.50</td>
<td>.50</td>
<td>2.48</td>
</tr>
<tr>
<td>Caucasian</td>
<td>.52</td>
<td>.23</td>
<td>.06</td>
<td>.97</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.08</td>
<td>1.13</td>
<td>-1.15</td>
<td>3.31</td>
</tr>
<tr>
<td>Other</td>
<td>2.90</td>
<td>1.59</td>
<td>-.22</td>
<td>6.01</td>
</tr>
</tbody>
</table>

Note.  a. Based on modified population marginal mean.

Table 22

**Descriptive Data for the Main Effect of Scarcity of Necessary Resources Growing Up**

<table>
<thead>
<tr>
<th>Did or did not experience scarcity growing up</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1.73</td>
<td>.70</td>
<td>.37</td>
<td>3.10</td>
</tr>
<tr>
<td>No</td>
<td>1.27</td>
<td>.72</td>
<td>-.15</td>
<td>2.69</td>
</tr>
</tbody>
</table>

Note.  a. Based on modified population marginal mean.

**Research Question** - Does the interaction of gender * race affect the immediate empathetic attitudes of the poverty simulation participants?

The interaction of the difference in pre- and immediate post-scores for gender and race is equal to zero.

\[ H_0: \text{Interaction effect}_{gender \times race} = 0 \]

The interaction of the difference in pre- and immediate post-scores for gender and race is not equal to zero.
**Ha: Interaction effect*race ≠ 0**

The interaction of the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for gender and race yielded an F ratio of \( F(3, 601) = .53, \rho = .66 \) (at \( \rho \leq .05 \)). Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the interaction of gender and of race is not equal to zero (see Table 19). There was no statistically significant effect of the interaction of gender and race (at \( \rho \leq .05 \)) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey. The mean scores and standard deviations for the interactions of male/African-American (M = 1.49, SD = .85), male/Caucasian (M = .49, SD = .41), male/Hispanic (M = -1.00, SD = 2.79), male/Other (M = 4.00, SD = 2.79), female/African-American (M = 1.46, SD = .52), female/Caucasian (M = .54, SD = .21), female/Hispanic (M = 2.12, SD = .97), and female/Other (M = 1.79, SD = 1.51) were not significant (see Table 23). See Figure 15 that shows the interaction of the two variables gender and race.
Table 23

Descriptive Data for the Effect of the Interaction of Gender and Race on the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey.

Dependent Variable: Mean Difference Between Post- and Pre-Survey

<table>
<thead>
<tr>
<th>Gender of participant</th>
<th>Race of participant</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Male</td>
<td>African-American</td>
<td>1.49</td>
<td>.85</td>
<td>-.17</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>.49</td>
<td>.41</td>
<td>-.32</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>-1.00</td>
<td>2.79</td>
<td>-6.48</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>4.00</td>
<td>2.79</td>
<td>-1.48</td>
</tr>
<tr>
<td>Female</td>
<td>African-American</td>
<td>1.46</td>
<td>.52</td>
<td>.45</td>
</tr>
<tr>
<td></td>
<td>Caucasian</td>
<td>.54</td>
<td>.21</td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>2.12</td>
<td>.97</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>1.79</td>
<td>1.51</td>
<td>-1.17</td>
</tr>
</tbody>
</table>

Note. a. Based on modified population marginal mean.
Figure 15. Effect of the Interaction of Gender and Race on the Difference in the Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey

The line graph displays the interaction between gender and race for the mean difference in the immediate post-survey and the pre-survey. It is necessary to keep in mind the scale is small for the difference between the difference in scores. Descriptive data for interaction between gender and race interactions of male/African-American (M = 1.49, SD = .85), male/Caucasian (M = .49, SD = .41), male/Hispanic (M = -1.00, SD = 2.79), male/Other (M = 4.00, SD = 2.79), female/African-American (M = 1.46, SD = .52), female/Caucasian (M = .54, SD = .21), female/Hispanic (M = 2.12, SD = .97), and female/Other (M = 1.79, SD = 1.51) (see Table 23).
Research Question - Does the interaction of gender*did/did not experience scarcity of necessary resources growing up affect the immediate empathetic attitudes of the poverty simulation participants?

The interaction of the difference in pre- and immediate post-scores for gender and experienced/did not experience scarcity of necessary resources growing up is equal to zero.

\[ H_0: \text{Interaction effect } \text{gender*experienced/did not experience scarcity growing up} = 0 \]

The interaction of the difference in pre- and immediate post-scores for gender and experienced/did not experience scarcity of necessary resources growing up is not equal to zero.

\[ H_a: \text{Interaction effect } \text{gender*experienced/did not experience scarcity growing up} \neq 0 \]

The interaction of the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey for gender and did/did not experience scarcity of necessary resources growing up yielded an F ratio \( F(1, 601) = 1.37, \rho = .24 \) (at \( \rho \leq .05 \)). Based on sample results, the null hypothesis was not rejected indicating there is no evidence to suggest the interaction of gender and did/did not experience scarcity of necessary resources growing up is not equal to zero (see Table 19). There was no statistically significant effect of the interaction of gender and did or did not experience scarcity of necessary resources growing up (at \( \rho \leq .05 \)) in the difference in the mean empathetic attitude scores for the immediate post-survey – pre-survey. The mean scores and standard deviations for the interactions of male/did experience scarcity of necessary resources growing up (M = 2.24, SD = 1.25), male/did not experience scarcity of necessary resources growing up (M = .67, SD = .1.39), female/did experience scarcity of necessary resources growing up (M = 1.23, SD = .61), and female/did not experience scarcity of necessary resources growing up (M = 1.72, SD = .72) were not significant (see Table 24). See Figure 16.
that shows the interaction of the two variables gender and did/did not experience scarcity of necessary resources growing up.

Table 24

*Descriptive Data for the Effect of the Interaction of Gender and Did or Did Not Experience Scarcity of Necessary Resources Growing Up on the Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey*

<table>
<thead>
<tr>
<th>Gender of participant</th>
<th>Did/did not experience scarcity growing up</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Male</td>
<td>Yes</td>
<td>2.24</td>
<td>1.25</td>
<td>-.22</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>.67</td>
<td>1.39</td>
<td>-2.06</td>
</tr>
<tr>
<td>Female</td>
<td>Yes</td>
<td>1.23</td>
<td>.61</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1.72</td>
<td>.72</td>
<td>.32</td>
</tr>
</tbody>
</table>

*Note.* a. Based on modified population marginal mean.
Figure 16. Effect of the Interaction of Gender and Did or Did Not Experience Scarcity of Necessary Resources Growing Up on Difference in Mean Empathetic Attitude Scores for the Immediate Post-Survey – Pre-Survey

The line graph displays the interaction between gender and did or did not experience scarcity of necessary resources growing up for the mean difference in the immediate post-survey and the pre-survey. It is necessary to keep in mind the scale is small for the difference between the difference in scores. Descriptive data for interaction interaction of male/did experience scarcity of necessary resources growing up (M = 2.24, SD = 1.25), male/did not experience scarcity of necessary resources growing up (M = .67, SD = .1.39), female/did experience scarcity of necessary resources growing up (M = 1.23, SD = .61), and female/did not experience scarcity of necessary resources growing up (M = 1.72, SD = .72) (see Table 24).
The quantitative analyses of data for this quasi-experimental experiential learning experience study provided insight into the effect of a poverty simulation on empathetic attitude change. The findings reported for this study suggest there was an effect of the poverty simulation for immediate empathetic attitude change, but no suggested effect of the poverty simulation for sustained empathetic attitude change. Though findings indicate the effects of the poverty simulation on empathetic attitude change were limited, continued research is warranted to further investigate the potential effects of other independent variables. These insights resulting from the analysis of data as well as the limitations of the study are discussed in the following chapter.

Chapter 5 - Implications of the Study

Summary of This Study

The American Other (Harrington, 1962) evoked a sense of urgency (Kilty & Segal, 2003) surrounding Appalachian poverty and brought to light a poverty that is capable of destroying the spirit (Harrington, 1962). This in turn brought attention to poverty throughout America, which led to President Johnson's “War on Poverty” (Modarres, 2003; Zosky, 2014). Research indicates that more than 50 years after the inception of the “War on Poverty” America has yet to win the war (Piven, 2014; Stricker, 2007). Poverty remains pervasive (Godfrey, 2016), hovering between 11-15 percent (“What is the Current Poverty Rate,” 2017). One of the factors the loss of the “War on Poverty” is attributed to is the focus of the American society on blaming only those who experience poverty and failing to also address the structural causes of poverty (Godfrey, 2016; Rank et al., 2003). Having an empathetic attitude toward those in poverty helps the other to have insight of the structural causes for poverty (Galper, 1976; Stricker, 2007), challenging the mentality that the individual talents or aspirations of those in poverty are sufficient to
overcome the structural causes of poverty (Coghlan & Huggins, 2004). Dolby (2012) contends that empathy can turn the tide in solving societal problems, one being poverty, with long-term solutions.

Social justice advocates have put forth a call to action in overcoming the social inequalities of poverty through increased knowledge and understanding of poverty (Jackson, 2014), bearing in mind the beliefs regarding the attributes of poverty can define attitudes as well as actions toward those in poverty (Davidson, 2009). Prior research has held up the experiential learning of a poverty simulation as a means to empower the participants (Rutherford-Hemine, 2012). The participant is directly involved in their education, and become recipients as well as generators of knowledge (Krain & Shadle, 2006). This type of learning tool allows the participants to walk in another’s shoes (Menzel et al., 2014) empowering the participants by filling the societal gap in knowledge and understanding of poverty as well as developing empathy toward those in poverty (Fialova, 2014; Krain & Shadle, 2006; Patterson & Hulton, 2011).

The findings from this study added to the empirical research of prior studies that examined the use of a poverty simulation to create attitude change toward those experiencing poverty. The study did support prior research on immediate attitude change resulting from participation in a poverty simulation. This study also added new, empirical data pertaining to the poverty simulations’ ability to generate empathy toward those in poverty thus supported the creation of knowledge and understanding of those experiencing poverty.

The purpose of this study was to assess the efficacy of the poverty simulation, "Community Action Poverty Simulation," generating immediate and sustained empathetic attitude. The null hypotheses was tested to answer the research question “Does participation in a
poverty simulation affect immediate empathetic attitude?” The research findings from this study of the “Community Action Poverty Simulation” aligned with the findings of the 20 poverty simulation studies reviewed which indicated that immediate attitude change did result from participation in poverty simulations (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Sustained empathy was also analyzed, and the findings indicate no sustained effect of the poverty simulation on empathetic attitude change. These findings support the findings of the four reviewed poverty simulation studies that reported no sustained effect of the poverty simulations on attitude change as well as knowledge and understanding of those in poverty (Browne & Roll 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014).

In addition to examining immediate and sustained empathetic attitude change, the effect of participant data on empathetic attitude change was analyzed as well. The scope of this study moved beyond the independent variables studied in prior research. Prior researcher has investigated the effect of gender, race, income, age, and political leanings regarding beliefs regarding the attributes of poverty (Carre et al., 2013; Cavojova et al., 2012; D’Ambrosio et al., 2009; Dolby, 2012; Geng, Xia, & Qin, 2012; Hunt, 1996, 2004; Konrath et al., 2011; Peck, 2007; Zosky & Thompson, 2013). This study did not investigate the effect of participant political leanings pertaining to the attributes of poverty but did examine gender, race, income and age. Additional independent variables included participation was voluntary/in-voluntary, job entails working with those in poverty, volunteer working with those in poverty, personal experience of
scarcity of necessary life resources while growing up, and roll in the poverty simulation. The null hypothesis was tested to answer the research question, “Do independent variables affect the immediate empathetic attitudes of the poverty simulation participants?” Vandsburger et al. (2010) was the only researcher, of the 20 poverty simulation studies reviewed, that examined any type of independent variables. The study by Vandsburger et al. (2010) analyzed the effect of the higher education program the students were enrolled in, Social Work or Human Service, on critical thinking and understanding of poverty. The findings for the independent variables of gender, race, income, and age is additional data added to prior research regarding the beliefs about empathy and attitudes toward about those experiencing poverty. Findings for the remaining participant data added new data to the research of poverty simulations and attitude toward those experiencing poverty.

The interaction of gender*race and gender*did/did not experience scarcity of necessary life resources while growing up was also examined. The null hypothesis was tested to answer the two following research questions, “Does the interaction of gender*race and gender*did/did not experience scarcity of necessary life resources while growing up affect the immediate empathetic attitudes of the poverty simulation participants?” Data resulting from the interactions of these independent moderating variables added new data to prior research of poverty simulations and attitude toward those experiencing poverty.

The construct of empathy was measured for the understanding of poverty. The construct of empathy was used because empathy supports the *actor* understanding the needs of *other* (Harvey, Arkin, Gleason, & Johnston, 1974; Jones & Nisbett, 1971; Long, 2001; Onder & Ozkan, 2003). Davis (1983) advances the following definition of empathy believing "that empathy can best be considered as a set of constructs, related in that they all concern
responsivity to others" (p. 113). Studies also suggest that an empathetic mindset helps the observer understand poverty based on structural attributions, such as the set of labor market opportunities and/or demographic propensities that characterize the population's likelihood of being poor, rather than individual attributions (Galper, 1976; Skiffington et al., 1984). Empathy is necessary for moral development (Jolliffe & Farrington, 2006), and Dolby (2012) postulates that only empathy can provide the critical point for moving toward solving the problems of the world's social inequalities with solutions that are lasting based on an understanding of the structural causes of poverty (Galper, 1976; Skiffington et al., 1984).

Participating in the poverty simulation allowed for a real-life, experiential learning exercise providing the opportunity to critically think about the multi-dimensional layers of poverty such as power, agency, and the deterrents to overcoming the adversities of poverty (Ansoms, 2012). This experience moved beyond the concrete monetary understanding of poverty. The participants brought with them their own ideas about poverty, most having never experienced the hardships of surviving while being poor, nor understanding how it felt to be poor (Klemme & Rommel, 2004; Long, 2016; Maxwell, 2013; Nickols & Nielsen, 2011).

This experience brought a very small glimpse of the world of poverty to the participants. The participants of the poverty simulation stood in long lines only to have to fill out tedious forms they often times did not understand. During the simulation, it was normal to be turned away from a service agency, because it was closing time, in spite of having spent the entire time allotment for the simulation week waiting to see a service provider. Quick cash loan facility could legally be charge up to 460% interest often ripping off the client who was there to cash a check or get a loan. Some of the participants felt the humiliation of having to pawn necessary household items to help their family survive. Participants lived the difficulty of having to
navigate the social service system trying to seek public assistance, a system that was foreign many of the participants, all while getting from one organization to another using public transit. In spite of making the effort to survive and pay bills during the poverty simulation, there were still families evicted from their homes.

This learning experience brought with it a recognition of the struggles and challenges of associated with living in poverty. The participants experienced frustration, humiliation, hopelessness, and a sense of loss. The experience of the poverty simulation opened the door for understanding where and how the real struggles of those in poverty fit into their own views of poverty. This experiential learning experience, which data indicated helped create an empathetic mindset, was one means "to challenge the idea that individual talents or aspirations are enough to overcome structural barriers to upward class mobility" (Coghlan & Huggins, 2004, p. 177).

The goal of the active learning of the poverty simulation was to lead to reflective thinking during the oral debriefing, Kolb’s third stage of experiential learning (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). The constructivist view posits that reflective thinking challenges the participant to ruminate on thinking and acting differently in the future when encountering a real-life situation, such as the adversities of poverty (Rutherford-Hemine, 2012). This personal social experience supported participants in the engagement of issues surrounding poverty (Vandsburger et al., 2010). Participation in the poverty simulation supporting having an empathetic attitude toward those living within the multi-dimensional nature of poverty, beyond monetary assets, and is needed to understand the structural inequalities of poverty (Galper, 1976; Skiffington et al., 1984) which supports taking action in addressing the socio-economic inequalities that continue to plague America (Ansoms, 2012; Kolb, 2013).
This study utilized 778 study participants and chose the participants using non-probability purposive sampling making this study a quasi-experimental research design with no control groups (Creswell, 2009; Fraenkel, Wallen, & Hyun, 2012; Gravetter & Forzano, 2012). The target population of participants were pre-existing groups of participants with defined characteristics (Fraenkel et al., 2012. The participants chosen for this study came from social service organizations and institutions of higher education focusing on education, health care, and social work.

The Basic Empathy Scale (BES) was the measurement tool utilized for collecting data on participant data used as independent variables. Prior research analyzed the validity and reliability of this measurement tool to support validity (Albiero et al., 2009; Cavojova et al., 2012; D’Ambrosio, Olivier, Didon, & Besche, 2009; Salas-Wright et al., 2012). The dependent variable was the score on the BES, a continuous variable measuring empathetic attitude (Jolliffe; Creswell, 2009; Fraenkel, Wallen, & Hyun, 2012; Gravetter & Forzano, 2012). The independent variable was the intervention, the Community Action Poverty Simulation (CAPS), and participant data were treated as independent variables with levels. The analysis and reliability of the measurement tool for this study exceeded the rigor of the measurement tools discussed by the 20 reviewed poverty simulations (Albiero et al., 2009; Cavojova et al., 2012; D’Ambrosio, Olivier, Didon, & Besche, 2009; Salas-Wright et al., 2012).

The research design was a pre-and immediate post-survey study based on the format of the BES (Fraenkel et al., 2012) using a Likert-Scale to collect data. Data were analyzed using a paired sample t-test to examine overall effect on immediate and sustained empathetic attitude. Participant data were analyzed an independent between subjects t-test, a one-way ANOVA, and a three way ANOVA. The purpose for investigating the independent moderating variables was
to address the threat of internal validity (Gravetter & Forzano, 2012). Based on the data analyzed, the findings suggested that poverty simulations created attitude change, but as evidenced by the data, the change was immediate and not sustained.

**Summary of Findings**

**Immediate and sustained overall main effect.** The overall effect of the poverty simulation was analyzed to determine if the poverty simulation affected immediate or sustained empathy. Twenty poverty simulations were reviewed in the literature review, and all 20 studies suggested findings that supported the immediate effect of the poverty simulations on either empathetic attitude change or knowledge and understanding of toward those in poverty (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Only four of the reviewed poverty simulations studied sustained empathy (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014). The study of sustained empathetic attitude change in addition to knowledge and understanding if the attributes of poverty is necessary because to take action against social inequalities time is needed to move from critical thinking to the creation of concrete resolutions for resolving social inequalities (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). Having a sustained empathetic attitude change toward those in poverty allows for time as a participant moves closer to taking action (Batson, 2002; Garoutte, 2001).
In terms of the first research question, which examined the overall effect of a poverty simulation on immediate empathetic attitude, the study findings appear to build on and support the empirical findings presented in the 20 reviewed poverty simulations. Findings from the analysis of quantitative data do align with previous research suggesting that poverty simulations can produce increased empathetic attitude change toward those in poverty (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll, 2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). The findings suggested that prior knowledge and biases (Klemme & Rommel, 2004; Long, 2016; Maxwell, 2013; Nickols & Nielsen, 2011) did not affect the potential for the poverty simulation to create immediate empathetic attitude toward poverty. Though there was statistical significance for immediate empathetic attitude change, the effect size of the poverty simulation on empathetic attitude was small warranting further research of additional use of other strategies that may support the creation of a greater effect of the poverty simulation.

Though study findings indicted immediate attitude change, it is important to keep in mind that "statistical significance does not always translate to practical significance" (Stasser et al., 2013, p. 23) as was evidenced by the four studies that examined longitudinal attitude change or understanding of toward those experiencing poverty (Browne & Roll, 2016; Fialova, 2014; Krain & Shadle, 2006; Yang et al., 2014). Findings reported for the studies by Browne and Roll, (2016), Fialova, (2014), Krain and Shadle (2006), and Yang et al. (2014) indicated no sustained empathetic attitude change or understanding of poverty. The investigation of the second research
question, which examined sustained empathetic attitude resulting from the poverty simulation, reflected the same findings of prior research by Browne and Roll (2016), Fialova (2014), Krain and Shadle (2006), and Yang et al. (2014). The findings for this study suggest there was no sustained empathetic attitude change. Figure 10 represents the movement of the empathy scores for the pre-survey, immediate post-survey, and the delayed post-survey. Future study of strategies that may enhance the sustained effect of poverty simulations is justified based on Dolby’s (2012) contention to create solutions to solve world problems empathy is needed (Clarke et al., 2016; Fialova, 2014; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013).
Findings based on participant data. This study collected data on all participants and analyzed the possible effect of the personal data on the effect of the poverty simulation on empathetic attitude change. Studying this type of data separated this study from other studies examined. Only one of the poverty simulations (Vandsburger et al., 2010) studied the effect of this type of participant data beyond the main effect for the entire group; this study compared the difference in the effect of a poverty simulation for the Social Work students and the Health and
Human Service students using an ANOVA. The effect of the following independent moderating variables was studied, gender, race, age, income, reason for participation in the poverty simulation (voluntary/in-voluntary), job entails working with those in poverty (yes/no), volunteering with those experiencing poverty (yes/no), participant experienced scarcity of necessary resources growing up (yes/no), and role assigned participant for the poverty simulation.

**Variables studied within context of prior data.** Prior research has been conducted on gender, race, age, and income and their association to understanding the structural attributes of poverty that in turn is related to empathetic attitude toward poverty. Though findings from prior research is noted for each of these four independent variables, it was necessary to keep in mind that the prior findings for these variables did not come from the context of a poverty simulation. The findings also relate understanding of poverty to understanding the structural attributes of poverty. As Galper (1966) and Skiffington (1984) argue, having empathy for those experiencing poverty can generate the acknowledgment of the structural attributes of poverty that in turn can lead to taking action toward the issues of poverty (Batson, 2002; Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985). This one area warrants future study to see if the findings from poverty simulations continue to match prior research of empathetic attitude and structural attributes of poverty, because some of the findings for the participant data matched prior research and some did not.

Research suggests that women are more likely to attribute poverty to structural attributes of poverty rather than individual attributes of poverty than are men (D’Ambrosio, Olivier, Didon, & Besche, 2009; Carre et al., 2013; Cavojova et al., 2012; Geng, Xia, & Qin, 2012; Hunt, 1996, 2004; Zosky & Thompson, 2013). Research indicates that acknowledging and understanding the
structural attributes of poverty are associated with having more empathy toward those who are in poverty (Galper, 1976; Skiffington et al., 1984). The findings for this study suggest that there was no difference between the three subgroups for gender, male, female, and other, which does not support prior research pertaining to gender, attributes of poverty and empathy. Descriptive data did show that females had a higher mean empathetic attitude score for both the pre-survey and immediate post-survey, and that both female and male empathetic attitude scores rose at a proportional rate. The empathetic attitude score for other dropped. Further research is warranted to continue to determine the effect of gender on empathetic attitude change which research indicates can lead to the acknowledgment of structural attributes of poverty.

Hunt (1996, 2004) and Zosky et al. (2014) assert that Caucasians are less likely to acknowledge the structural attributes of poverty blaming the individual. Minorities are more likely to attribute poverty to structural causes and the systems within which they reside (Hunt, 1996, 2004; Klemme & Rommel, 2004; Kluegel & Smith, 1986; Zosky & Thompson, 2013). This suggests Caucasians have less understanding of those in poverty, which is based on research indicating the more empathetic an individual is the more likely the individual is to attribute poverty to structural causes rather than individual causes (Galper, 1976; Klemme & Rommel, 2004; Kluegel & Smith, 1986; Skiffington et al., 1984). Findings from this research indicate there was a significant difference between the individual subgroups of race, African-America, Caucasian, Hispanic, and Other. The descriptive data indicate that the difference in the mean empathetic attitude score for the immediate post-survey – pre-survey show that Caucasians had the lowest mean empathetic attitude score of the four subgroups. Descriptive data for the subgroup Caucasians show there is close to no gain at all between the pre-survey and the immediate post-survey.
Minorities often have the least voice in advocating for themselves (Hunt, 1996; Long 2001). However, minorities are the subgroups that understand the structural attributes of poverty (Hunt, 1996, 2004; Klemme & Rommel, 2004; Kluegel & Smith, 1986; Zosky & Thompson, 2013), and research suggests a more empathetic attitude toward those in poverty (Galper, 1976; Skiffington et al., 1984). It is necessary to take into account that actions toward those in poverty are based on the beliefs about the attributes of poverty (Davidson, 2009), and that the beliefs about poverty policies and programs are often played out in our legislature (Davidson, 2009; Shaw, 2009-10; Zosky et al., 2014). The question becomes what steps can be taken to give those in poverty more voice in the creation of policies and programs designed to ameliorate the adversities of poverty.

Prior research, between 1972 and 2009, indicates that there has been a more recent decline in the rate of empathy among college students (Doby, 2012; Konrath, 2011). Findings suggest that older people are more empathetic than those who are younger people and are more likely to attribute poverty to structural causes rather than individual causes (Galper, 1976; Skiffington et al., 1984). The findings for this study indicate there was no significant difference between the five subgroups for age. These findings from the descriptive data for the individual age subgroup scores for the pre-survey and immediate post-survey are counter to the findings of earlier research by Dolby (2012) and Konrath (2011) showing older individuals are more empathetic than younger individuals. The two younger subgroups, 18-25 years and 25-35 years, had higher empathetic attitude scores on both the pre-survey and the immediate post-surveys, and that the oldest subgroup, 55 years and older had the lowest scores. Further research is warranted to see if this is a new trend, and if so what can be generated to help those who are younger take action towards the hardships faced by those in poverty.
Peck (2007) makes use of the federal poverty line (FPL) in addressing the attributes of poverty. The FPL is based on the thresholds of poverty created by Mollie Orshansky in 1964 (Fisher, 1992). Currently a family of four with an income of $24,600 or a single person with an income of $12,600 are considered to be living below the poverty line ("Federal Poverty,"). Peck suggests that those having an income falling the FPL are more likely to attribute poverty to situations beyond an individual’s control, and those who have an income greater than two times the poverty line are more likely to blame the individual for being poor. Based on research by Gaslper (1976) and Skiffington (1984), those individuals with the lowest incomes are more likely to acknowledge the structural attributes of poverty and are the individuals who are more empathetic.

The findings for this study suggest there was no significant difference between the subgroups of income, which does not support prior research. Though there was no significant difference in the age subgroups, the descriptive data for the individual subgroups of age do support prior research. The two income subgroups of student and low/middle had higher pre-survey and immediate post-survey empathetic scores than the three income subgroups of middle, middle/upper, and upper. The two highest scoring subgroups for income were more closely grouped, and the three lowest income subgroups were closely grouped together. An area of interest for future research would be to study the association of income level with the amount an individual contributes to those in poverty.

**Variables studied from the exploratory perspective.** Four independent variables were studied from an exploratory perspective taking into account no prior research was found on these types of independent variables and poverty simulations. The four variables were reason for participation in the poverty simulation, does job entail working with those in poverty, does
participant volunteer with those in poverty, and did participant experience scarcity of necessary resources growing up. These variables were examined to determine if there was an association between any of these four variables and the role they played in the effect on empathy created through the poverty simulation. These variables were subjective in nature, and as a result may have been the source of participant biases, based on prior knowledge and experience (Klemme & Rommel, 2004; Nickols & Nielsen, 2011). The findings for these independent variables, discussed from an exploratory perspective, added new knowledge to the study of poverty simulations.

Findings for these four independent variables reported no significant difference between the individual subgroups for each of these independent variables. My assumption was that reason for participation in the poverty simulation, working with those in poverty, volunteering with those in poverty, and experiencing scarcity growing up may have had a mediating effect of the poverty simulation on empathy. The findings did not support my assumptions. Each participant’s perception pertaining to these four independent variables were shaped by the participant’s prior experience.

A more efficient manner for measuring these types of variables, which represent a subjective involvement with poverty, may be the use of a mixed methods research design having a qualitative component. Adding a qualitative piece to the research design of these independent variables, with a subjective nature, may be one strategy to more effectively explain the effect these variables have on the poverty simulation and empathetic attitude. A qualitative component would also provide a strategy for better understanding the biases toward those in poverty that individuals have as they participate in the poverty simulation. Open-ended questions added to the immediate post-survey is one strategy that may help to explain empathy and its association to
the understanding of the multi-dimensional nature of poverty and the structural attributes of poverty (Ansoms, 2012; Feagin, 1972; Hudson, 2016; Misturelli & Heffernan, 2010; Robb, 2000; Williams & Mickelson, 2008). Research indicates the need to understand the multi-dimensional layers of poverty bearing in mind there is gap in knowledge and understanding of poverty (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 1996, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011).

**Variable studied separately.** The role of the participant in the 20 reviewed poverty simulations was not examined, but prior studies have addressed the issue of role as it relates to poverty in real life (Jones & Nisbett, 1971; Harvey, Arkin, Gleason, & Johnston, 1974; Onder & Ozkan, 2003; Regan & Totten, 1975; Zosky et al., 2014). Two roles were played in real life, actor and observer. Actors, those experiencing poverty, are more knowledgeable about the encompassing circumstances of poverty and are more likely to attribute poverty to structural or situational causes (Jones & Nisbett, 1971; Harvey, Arkin, Gleason, & Johnston, 1974; Onder & Ozkan, 2003). Whereas observers, those not in poverty, attribute poverty to personal dispositions or attributes of the actor (Harvey et al., 1974). Both actor and observer bring a different set of background knowledge to their understanding of poverty (Jones & Nisbett, 1971; Harvey, Arkin, Gleason, & Johnston, 1974; Onder & Ozkan, 2003.) Some researchers assert that these differences in the beliefs, pertaining to the attributes of poverty, are rooted in the biases, misconceptions, and prior assumptions (Ajello, 2014; Jones & Nisbett, 1971; Steck et al., 2011). These prior beliefs can hinder both the actor and the observer from the potential to move beyond self in examining the attributes of poverty (Ajello, 2014; Jones & Nisbett, 1971; Steck et al., 2011).
Findings for the poverty simulation show there was no significant difference between the subgroups for the roles in the poverty simulation. However, descriptive data for the subgroups does show that the organization had the highest immediate post-survey score for empathetic attitude. This does not support prior research of income, which indicates those who have less income have more empathy based on research of empathy and attributes of poverty. Those assigned to organizations during the simulation had a higher income than those who had the role of either a working poor participant or a participant in poverty. The empathy score for the role of the child 1-3 dropped, and the score for the remaining subgroups increased slightly.

Using the descriptive data about the individual subgroups for the role in the poverty simulation may support a more efficient implementation of the poverty simulation. Keeping in mind that the organization and implementation of the poverty simulation in important with respect to the effect of the poverty simulation on empathetic attitude (Browne & Roll, 2016; Chambers, 1983; Dorn, 1989; Gupta, 2006; Patterson & Hulton, 2011), one strategy to improve the implementation of the poverty simulation would be to eliminate assigning a person to the child 1-3. It indicated by the empathy scores on the immediate post-survey that there was no effect at all for those who were assigned that role. The implementation may be improved with having an adult member of the families with the babies to be assigned responsibility of the baby.

Anecdotal data, which was not analyzed for this study, do support the findings regarding the roles in the poverty simulations. At the end of each poverty simulation those who had a role as the head of an organization, mortgage, pawn shop, quick cash, and others, were asked to share their thoughts with the group regarding their experience. Many of those who shared discussed the empathy they felt for the customers/clients who came to them. The majority of those who worked at the mortgage company said that it was very difficult for them when they had to evict
some of the families on the fourth week of the simulation. Some of the workers from the quick cash did not like charging the high interest rates for quick cash advances given to family members. The average annual interest rate for a two-week term loan is 400%, but up to 390 – 780% can legally be charged. If a state has no cap on the APR, the rate of interest can be higher ("Payday Loans," 2015). As of 2015, many working poor and those in poverty are either unbanked, 7% of households representing nine million American households having no banking accounts, or under-banked, 19.9% 24.5 million American households having checking or savings account. This is the segment of the American population that often uses services and products outside the banking system such as quick cash type of establishments ("Unbanked and Underbanked," 2015). Going outside the banking system for many is the only option.

The role in the poverty simulation is one area that warrants future research. A qualitative component would allow research to examine and explain the effect of the role in the poverty simulation on empathetic attitude. Further research may provide data that could be used to enhance the implementation of the poverty simulation in an effort that gain insight of effect of this type of experiential learning experience.

_Interaction of independent moderating variables on empathetic attitude._ The findings for the descriptive data for gender supported prior research that females are more empathetic than males (D’Ambrosio, Olivier, Didon, & Besche, 2009; Carre et al., 2013; Cavojova et al., 2012.; Geng, Xia, & Qin, 2012; Hunt, 1996, 2004; Zosky & Thompson, 2013). The findings for statistical analysis for race also supported prior studies that minorities are more empathetic than non-minorities (Hunt, 1966, 2004; Zosky & Thompson, 2013) based on research regarding empathy and structural attributes of poverty (Galper, 1976; Skiffington, 1984). Poverty data

Based on prior research of gender and race as separate variables, the secondary researcher was interested in understanding the interaction of the gender*race and the effect of the interaction of the two variables. Gender, race, empathy, and attributes of poverty are important considering the tensions that play out in the American legislature regarding anti-poverty programs and policies (Shaw, 2009-10). The anti-poverty programs and policies are resolved by legislatures who may be less empathetic toward those who experience poverty based on research for race, gender, empathy, and attribution of poverty (Bialik & Krogstad, 2017; Shaw, 2009-10).

The interaction of gender*experiencing scarcity of necessary resources growing up was analyzed to investigate whether or not gender may have answered questions pertaining to scarcity of necessary resources while growing up. The findings for the descriptive data for the gender subgroup for female supported prior research regarding women having more empathy than men (D’Ambrosio, Olivier, Didon, & Besche, 2009; Carre et al., 2013; Cavojova et al., 2012; Geng, Xia, & Qin, 2012; Hunt, 1996, 2004; Zosky & Thompson, 2013). Because females suffer poverty at a more disproportionate rate than males ("Poverty Statistics," 2015; "The Real Face of Low-Wage Work," 2016), the goal was to examine the effect of the interaction of gender and scarcity of resources while growing up

Research Question - Does the interaction of gender (male/female)*race (African American/Caucasian) affect the immediate empathetic attitudes of the poverty simulation participants?

Though the 115th American Congress is the most diverse in history, it is still composed of members who are predominately non-minority males (Bialik & Krogstad, 2017; Levy, 2017).
Based on the make-up of the American legislature, the interaction of gender and race was analyzed because beliefs about poverty drive action toward poverty (Davidson, 2009; Shaw, 2009-10). It is important to question whether those who are in the position to take action through the creation of anti-poverty policy and programs, non-minority males, have empathy toward those in poverty. Understanding the multi-dimensional layers of poverty supported by an empathetic attitude that can foster an acknowledgement of the structural attributes of poverty that are an important factor in the creation of anti-poverty programs and policies (Davidson, 2009; Shaw, 2009-10; Stasser et al., 2013; Zosky et al., 2014).

The findings indicate that there was no statistical difference for the interaction of gender*race on empathetic attitude. However, the descriptive data for the mean of the immediate post-survey scores shows that Caucasian males had the lowest, mean empathetic attitude score. All the mean empathetic attitude scores for females were higher than Caucasian males, with African-Americans, Caucasians, and Other being the highest female scores. The subgroup Hispanic was the lowest for the females. Bearing in mind that members of the 115th American Congress are predominately non-minority males (Bialik & Krogstad, 2017; Levy, 2017), more research is warranted to better understand the impact of the interaction of race and gender and the effect of the empathetic attitude of those who are creating the anti-poverty policies and programs. Do those most impacted by the anti-poverty policies and programs have any real voice in the policies and programs designed to ameliorate poverty?

Research Question - Does the interaction of gender*experienced/did not experience scarcity of necessary resources growing up affect the immediate empathetic attitudes of the poverty simulation participants?
The interaction of gender*experiencing scarcity of necessary resources growing up was analyzed to answer questions pertaining the effect of scarcity of necessary resources on gender in relation to immediate empathy scores. Poverty data indicates that more females live in poverty than males ("Poverty Statistics," 2015; "The Real Face of Low-Wage Work," 2016). More children currently live in poverty than ever before, 19.7%, meaning the number of children growing up with scarcity of necessary resources is on the rise ("Child Hunger," 2017; Haveman et al., 2014; "Hunger in America," 2016). Does the scarcity of necessary resources while growing up moderate the effect of the poverty simulation for females?

The findings indicate that there was no statistical difference for the interaction of gender*scarcity of necessary resources while growing up. However, the descriptive data for the mean of the pre-survey and immediate post-survey scores shows that females had higher empathy scores than males. The females scoring the highest empathy scores for both the pre-survey and immediate post-survey were the females who had not experienced scarcity while growing up. Descriptive data scores show those females who experienced scarcity while growing up scored lower empathy scores for both the pre-survey and the immediate post-survey. Future research is warranted to determine why those females who experienced scarcity while growing up indicated being less empathetic toward those in poverty as adults.

**Future Research.** Based on findings reported for this study, further research is warranted in two areas. The first area to study is the lack of sustained knowledge and empathy resulting from the poverty simulation. Stasser et al. (2013) supports the need to study the lack of sustained attitude change toward those in poverty as well as understanding and knowledge of poverty and to investigate the steps needed to help create sustained attitude change toward those in poverty and knowledge and understanding of poverty. Anderson and Lawton (2009) consider
the lack of sustained attitude change and knowledge a gap in present research. The question becomes, what can be done to change the lack of sustained attitude change and knowledge created by the poverty simulation? How can the poverty simulation be implemented in such a manner that sustained change is produced?

The second area to study are the independent variables in an effort to explain the effect of these variables on both the poverty simulation and empathetic attitude change. Some of the findings for the participant data treated as independent variables did not support the findings from prior research. One independent variable needing more research is gender, taking into account the findings from this study ran counter to prior research. Prior research indicated that females are more likely to acknowledge the structural attributes of poverty in comparison to males (D’Ambrosio, Olivier, Didon, & Besche, 2009; Carre et al., 2013; Cavojova et al., 2012; Geng, Xia, & Qin, 2012; Hunt, 1996, 2004; Zosky & Thompson, 2013). The number of participants in the study may have influenced the findings for this independent variable. Conducting additional research on the four independent variables discussed from the exploratory perspective may also help to develop a clearer understanding of the biases participants bring with them to the poverty simulation (Ajello, 2014; Jones & Nisbett, 1971; Steck et al., 2011).

Understanding the effect of an experiential learning experience of a poverty simulation is important based on the assertion that actions toward those in poverty are driven by beliefs about poverty (Davidson, 2009; Shaw, 2009-10).

**Anecdotal data.** While anecdotal data was excluded from analysis for this study, anecdotal details pertaining to attitude change did emerge during this study (Lee & Priester, 2016,). The dynamics during the simulation in addition to the two debriefing activities at the end of the simulation did indicate an attitude change for the poverty simulation participants. The
simulations often started out with a sense of fun, but by the second week, the mood of the participants began to change. By the fourth week, an intense sense of urgency became evident as the family adult member made an effort to accomplish tasks set forth for the survival of their families. As the whistle was blown to start the fourth week, it was normal for a participant to run over another participant in an effort to get where one needed to be. During the simulations, the participants became frustrated as they tried to meet their daily needs as a working poor family or a family experiencing poverty. At one point during the simulation, one of the participants cried when she thought the "Luck of the Draw" card she was being given may have been another expense to figure out how to pay. At times, the participants could be heard saying, "This is really hard, harder than I thought it would ever be."

Debriefing for the poverty simulation study took two forms. The first debriefing took place when those manning the organizations, such as the pawn shop, mortgage company, quick cash, doctor, utilities, and grocery, were asked to share their experience. A common thread running through their comments was the frustration the organization staffers saw in the family members as they tried to live from day to day. Several shared feeling empathy for the families, especially some of those working for the mortgage company. The staffers for the mortgage company noted they did not like evicting the families from their homes. Some expressed that there had to be a more effective way to deal with these types of issues.

The oral debriefing for the whole group was similar to the oral debriefing used by 13 of the 20 simulation studies examined (Ajello, 2014; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Coghlan & Huggins, 2004; Fialova, 2014; Davidson et al., 2009; Franck et al., 2016; Johnson et al., 2015; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Steck et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). The purpose of the oral debriefing was to assist the
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE

participants to critically think about their learning experience (Davidson et al., 2009; Patterson & Hulton, 2011; Steck et al., 2011). The debriefing was based on trust as the dialogue took place (Freire, 2000). Each small group then summarized their thoughts for the whole group, sharing their small glimpses into the struggles faced by those in poverty. The experiential learning experience of the poverty simulation allowed the participants to experience poverty from the role of actor rather than observer (Chambers, 1983; Galper, 1976; Skiffington et al., 1984). Some of the participants shared their personal, internal experience, resulting from the poverty simulation, with the entire group of participants.

The goal of this experiential learning experience was to determine if participants could more effectively comprehend the adversities of poverty resulting from viewing poverty through the lens of empathy (Rutherford-Hemine, 2012). The oral debriefings allowed the participants the opportunity to take a detour around their own biases, knowledge and understanding of poverty (Freire, 2000) and through empathy make an effort to acknowledge the struggles of those in poverty. The findings from both the quantitative data and the anecdotal data not analyzed indicated liberation from prior biases, knowledge, and understanding of poverty that in turn can move one closer to action resulting in the possible transformation of reality (Freire, 2000), reaching the final stage of Kolb's model of experiential learning (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

Scalzi's (2005) "Being Poor" followed each debriefing. Some of the same statements from "Being Poor" were read for each poverty simulation:

- Being poor is making lunch for your kids when a cockroach skitters over the bread, and you looking over to see if your kids saw.
- Being poor is relying on people who don't give a damn about you.
- Being poor is believing a GED actually makes a goddamned difference.
- Being poor is people surprised you're not actually lazy.
- Being poor is people surprised to discover you're not really stupid.
Being poor is knowing how few options you have.
Being poor is knowing how hard it is to stop being poor.
Being poor wears you out.
(Scalzi, 2005)

The above statements reflect the multi-dimensional layers of poverty addressed in the literature review, such as agency as it pertains to access of resources for those in poverty (Ajello, 2014; Ansoms & Greenen, 2012; Lee & Priester, 2016; Sen, 1984), feelings of being stigmatized (Benjamin, 2010; Hudson, 2016; Williams & Mickelson, 2008; Williams, 2009), and the misconceptions about those in poverty (Klemme & Rommel, 2004; Rich, 2017; Ullucci & Howard, 2015). The powerful significance of these statements could be seen in the eyes and on the faces of the participants. Some of the participants cried during this segment of the poverty simulation.

Each poverty simulation also generated increased interest, in the use of this simulation, by other organizations in an effort to help their employees gain insight of the adversities of poverty. This study originally entailed collecting data for seven poverty simulations. Because of the increased interest in the poverty simulation, eleven poverty simulations were conducted and used for collecting data. This was approved through the IRB. Since closing the simulations for this study, the poverty simulation has been facilitated six more times, with additional organizations asking to have the poverty simulation conducted for their employees. The largest social service agency bought its own poverty simulation kit in an effort to help close the gap in the knowledge and understanding of poverty in an effort to create attitude change toward those in poverty. Though sustained empathy was not evidenced in this study, the anecdotal data, not analyzed, did indicate some level of sustained empathy. The interested was maintained as indicated by the continued interest and involvement with the simulation by other organizations.

Bearing in mind the rich bank of anecdotal data that would be available in a study of this type,
employing a mixed-methods research in the future may assist in answering the many questions as to why empathy was not sustained.

**Explanations**

The findings for the effect of the poverty simulation on the immediate empathy was expected, as was evidenced by the other poverty simulations studied. Examining the explanation for the effect of the poverty simulation on sustained empathy becomes more complicated. The time frame between the pre-survey and the delayed post-survey brings with it variables that would need to be addressed (Creswell, 2013). A possible explanation may be the presence of a moderating event that may have affected the score on the BES, causing either increases or decrease (Creswell, 2013). Another possible explanation for the lack of sustained empathy may be the manner in which most poverty simulations are implemented. Poverty simulations are often times presented as a stand-alone experimental learning activity. Suggestions for the future use of poverty simulations as an embedded activity was addressed in an effort to help participants move beyond immediate empathy to sustained empathy in addition to the effort to increase the effect size of the poverty simulation.

**Limitations**

The limitations for this study were very similar to the limitations noted in the studies of the 20 reviewed poverty simulations. Several features of the research design may have affected the quality of the findings. The first was the fact this study was quasi-experimental using non-probability, purposive sampling (Creswell, 2009) in which some participants were mandated to attend. A second shortcoming dealt with the fields the participants represented. Participants represented, primarily, the three fields of education, health care, and social work meaning it is likely they differed from nonparticipants regarding their knowledge and interest of poverty
The effects of a poverty simulation on immediate (Stasser et al., 2013). The type of participants attracted to this study may have caused some bias in the results. The third problem concerned no use of control groups for the study. Fialova (2014) and Krain and Shadle (2006) were two poverty simulation studies reviewed using control groups, and noted the use of this strategy strengthened their findings. As Stasser et al. (2013) noted for their study, the parameters of this type of research study limited the generalizability of the findings (Creswell, 2013).

The implementation of the simulation was at times challenging. Varying group sizes posed a problem for three of the poverty simulations. The appropriate number of participants for the simulation ranged from 60-100. For two of the poverty simulations not all participants showed up, with approximately 50 participants in attendance, posing two problems. First, there was a limited number of participants to fill the simulation organization positions meaning some services did not have someone to staff a position, therefore one person was required to fill two staff positions. Limited attendance also appeared to create less of an urgency in the families meeting their needs because lines for available services were not as long and the whole simulation moved more slowly. During one of the simulations, 130 participants attended. Every effort was made to accommodate the additional participants, but approximately 15 were asked to leave because of the limited space. Having this large a group made it more difficult to efficiently conduct the poverty simulation.

The simulations were conducted at 10 different locations. Some of the locations were very well suited for the simulation and others were not. This at times caused frustration for the participants bearing in mind that at times they had no idea what they were supposed to be doing or where they were going. It would have been less complicated to implement if the simulation had been held at the same location each time with approximately the same number in attendance.
The degree of reliability for implementation would have been increased. The same facilitator implemented the poverty simulation each time supporting the fidelity of implementation.

Data collection posed several problems. The poverty simulation studies reviewed used many different scales to indicate attitude change, knowledge, and understanding in discussing poverty. The question needs to be asked was the Basic Empathy Scale (BES) the appropriate tool to use for measuring attitude change toward those experiencing poverty, or were there other measurement tools more suited. The administration of the survey posed problems as well. At each one of the simulations, some of the participants arrived late or left early meaning some of the pre-surveys and immediate post-surveys were not taken. The surveys not taken were treated as missing data and were not included in the analysis of data.

Some participants had no pencils for answering the surveys, at times causing confusion, as well as a delay in taking the surveys and starting the simulation. Pencils were handed out to participants as needed, but this did slow down the start of the simulation each time. Two of the questions appeared to be ambiguous, which caused some not to answer the two questions. As some participants answered the survey questions, the leaders realized several could not read. Each one of these problems in data collection caused some bias in the results.

The simulation oral debriefings were facilitated by a leader chosen from within each small group of participants. The same discussion question were used to generate dialogue. One of the limitations for this type of exercise is the lack of continuity for each small group taking part in the oral debriefings. The quality of the leader chosen to facilitate the discussion played a large role in the effectiveness of the oral debriefing. Developing some type of strategy that would support consistent implementation of the oral debriefing is necessary.
One point to also note was whether participants were mandated to attend by their employer or school. Some of the participants were mandated to attend for either work or a higher education class and others attended on a voluntary basis. The reason for attending may have had an effect on the level and effort of the participant’s participation. Being mandated may have resulted in what appeared to be a lack of interest in what was going on. Others were at the poverty simulations on a voluntary basis. Several behaviors indicated the degree of interest. Some participants moved around very little and appeared to have no interest in being at the poverty simulation or being involved. Others participated to the point that both during the simulation and at the end of the simulation some participants were brought to tears resulting from the experience.

A final limitation to consider is the cost of the kit and implementing this particular poverty simulation, Community Action Poverty Simulation. The kit can be purchased from the Missouri Community Action Network at the cost of $2150.00, and training to use the kit is an additional $410.00 (Missouri Community Action Network Website, 2017). Many organizations wishing to use this poverty simulation may not be able to afford the kit at this cost. It often takes time to arrange for each poverty simulation held. Every time the simulation is conducted materials have to be recopied or additional materials have to be purchased. Depending on the location for the implementation of the simulation, there may be a cost to drive to the location. The simulation takes about four hours to set up and facilitate. The kit takes approximately 12 hours to put back together each time it is used. If the goal of the facilitators to make the poverty simulation part of a more comprehensive educational program about poverty, the additional activities would be an additional cost. In total, the simulation may become very cost prohibitive. An organization may choose to look into the use of another poverty simulation.
Future research can address the limitations noted for this study. A qualitative piece in the research design may be beneficial for learning how to help overcome the limitations discussed. These limitations may have affected the validity and reliability of the findings.

IMPLICATIONS AND RECOMMENDATIONS

It is necessary to address and act on the social determinants that drive pervasive poverty (Godfrey, 2016; Piven, 2014; Stricker, 2007), poverty that has remained stagnant for the last 30 years ("What is the Current Poverty Rate," 2017; "Poverty Gap," 2016; "Number in Poverty," 2016). Fialova (2014) contends that educational simulations, such as poverty simulations, have the potential to achieve the goal of creating “better conceptual understanding, critical thinking and problem-solving skills” therefore enhancing learning (p. 686). Krain and Shadle (2006) support Fialova’s (2014) thinking pertaining to educational simulations. They contend enhanced learning can stem from poverty simulations because the active learning from a poverty simulation, based on the tenets of constructivism, empowers the participants allowing them to access learning both as recipients and as generators of knowledge (Krain & Shadle, 2006). Poverty simulations can give the participants the tools and knowledge needed to be a “positive impetus for lifelong learning and civic engagement” (Patterson & Hulton, 2011, p. 149) that address the social determinants surrounding ubiquitous poverty (Krain & Shadle, 2006). Poverty simulations put a face to the faceless framing the opportunity to address the structural attributes of poverty thus generating a greater understanding of the associations between poverty and inequality (Krain & Shadle, 2006).

Prior research indicated that poverty simulations did affect immediate attitude change toward those in poverty and knowledge and understanding of those experiencing poverty (Ajello, 2014; Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2015; Browne & Roll,
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE EMPATHETIC ATTITUDE CHANGE TOWARD THOSE IN POVERTY

2016; Coghlan & Huggins, 2004; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Garoutte & Bobbit-Zeher, 2011; Johnson et al., 2015; Kihm & Knapp, 2015; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011; Stasser et al., 2013; Steck et al., 2011; Todd et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Findings from this study did indicate an effect of the poverty simulation on immediate empathetic attitude change toward those in poverty. Research, including this study, does suggest the immediate effect of poverty simulations empathetic attitude change is not sustained (Browne & Roll, 2016; Fialova, 2014; Krain and Shadle, 2006; Yang et al., 2014). The question to address is how to create sustained attitude change and knowledge toward those in poverty. Based within the context of the gap in knowledge and understanding of those in poverty (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 1996, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011), as well as Dolby’s (2012), assertion for the need of empathy to address problems for those marginalized, the implication from this study supports further research on poverty simulations. The need to understand sustained empathetic change toward those in poverty is paramount (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 1996, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011). Prompted by sustained empathetic attitude change toward those in poverty and knowledge and understanding of poverty, collective action can be taken to promote social change (Gupta, 2006). The goal is to reach Kolb’s fourth stage of experiential learning, taking action in real life (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

Research Design. A change in the research design may be considered. To move this type of study beyond the quasi-experimental design to an experimental research design study two measures can be taken; one the use of random sampling for choosing participants and another adding a control group to the study. However, implementing an experimental research design for
a human study can be more difficult (Chambers, 1983; Creswell, 2009, 2013). Making use of random sampling for this study would have been difficult considering specific groups of participants were involved in the poverty simulation. Each of the organizations involved in this study wanted all the members of their organization or institutions of higher education to participate, thus meaning there could be no control group. Though implementing an experimental research design for a human study can be more difficult, this type of research design can increase the rigor and generalizability of the findings (Creswell, 2009, 2013; Fialova, 2014; Krain & Shadle, 2006).

Adding a qualitative component to the research design would provide the opportunity to examine the independent variables, based on participant data, as lurking variables. An intendent variable treated as a lurking variable acknowledges the effect an independent variable can have on both the intervention, the independent variable, and the dependent variable (Angelo, 2017; "Statistics - Lurking," 2017). This quantitative study examined the independent variables only as mediating variables, or variables that affected only the dependent variable (Creswell, 2009). A qualitative research design would buttress the study of the multi-dimensional layers of poverty, these layers often referred to the subjective nature of poverty (Ansoms, 2012; Fialova, 2014; Van Praag & Ferre-i-Carbonell, 2007). A quantitative research design provides numeric measurements for specific outcomes, but the qualitative data provides a rich image of the experiences, thoughts and feelings of the participants in the poverty simulation. Some of the data collection instruments for collecting qualitative data might include observation, interviews, open-ended questions, and round-table discussions (Fialova, 2014). Quantitative and qualitative research may provide a more extensive picture of the simulation effect. The quantitative data measure attitude change during the simulation, and the qualitative data help to generate not only
a more detailed picture of the experience of the simulation, but also corroborates the quantitative findings (Todd et al., 2011). Fialova (2014) supports the need to add other forms of qualitative data collections.

This type of research design would fulfill several purposes. Adding a qualitative component to the study would afford the researcher the opportunity to begin to make an effort to answer the question *Why* as it pertains to those who were most or least affected based on the subgroups of the individual participant data. This type of research design could also support insight as to why some of the quantitative data did not corroborate prior research findings and some assumptions made by the secondary researcher pertaining to the effects of the independent variables. A qualitative component to a study may help to bring insight into understanding the mediating effect of the independent variables that were discussed as exploratory variables, as well, taking into account no prior findings were discovered on those types of variables.

The effect of prior biases, knowledge, and understanding were not addressed in this study or the 20 poverty simulation studies reviewed (Ajello, Browne & Roll, 2016; Clarke et al., 2016; Stasser et al., 2013; Steck et al., 2011). The question becomes how prior experience influenced the findings (Clarke et al., 2016). Did prior knowledge and understanding cause the empathy score toward those in poverty to be more conservative, as measured by the BES (Stasser et al., 2013)? Did prior biases toward poverty cause no increase in understanding of poverty, or did the experience of the poverty simulation possibly reinforce participants' biases (Steck et al., 2011)?

Gair (2010) argues that an understanding of the student’s level of empathy at the beginning of a poverty simulation is necessary, in addition to understanding the preconceived biases participants bring to the poverty simulation. Though this study used a pre-survey to measure empathy, it was not understood what empathy meant to the participants through
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE quantified data. Gair (2010) presented one such example in which the ability to empathize with a birth mother's story was investigated, and findings suggested all the participants empathized with the birth mothers, but not with the degree of empathy the researcher assumed would present itself. In analyzing the findings, four themes became known regarding empathy: compassionate empathy, comparable empathy, conditional empathy, and dispassionate empathy. It was suggested that more studies be conducted that take into account the student's level of empathy at the start of the simulation. To understand these visceral levels of empathy, qualitative research is warranted.

Qualitative data may help to answer questions pertaining to biases and assist in the effort to evaluate the other factors that may have been instrumental in shaping the students' prior beliefs and attitudes (Noone et al., 2012). Open-ended questions, interviews, and study groups, are some of the techniques that may be used for collecting qualitative data in an effort to find themes that bring a clearer understanding of the effect prior biases and knowledge can play in creating change in thinking toward those who experience poverty. Qualitative data collected for a mixed-methods research design may support and corroborate the findings from the quantitative data or assist in explaining why the quantitative data may not support prior research (Creswell, 2009, 2013; Fialova, 2014; Krain & Shadle, 2006).

Implementation. Research does indicate that simulations provide a realistic environment that can create higher-level learning (Browne & Roll, 2016; Chambers, 1983; Kolb, 2013; McLeod, 2013; Rutherford-Hemine, 2012; Silvia, 2012; Sugarman, 1985). But, future research of poverty simulations is needed to understand how to maximize the sustained effect of poverty simulation in an effort to generate knowledge and understanding of poverty as well as attitude change of the general society of Americans toward those experiencing poverty. The goal
of poverty simulations is to generate attitude change, knowledge, and understanding that is sustained. Sustained understanding of poverty is needed, because the three fields most commonly making use of the poverty simulations "will care for increasingly diverse populations, including people who struggle because of socioeconomic status" (Noone, p. 621). Knowing this drives the need to move forward in developing a greater understanding the multi-dimensional parameters of poverty. Past study findings have asserted a gap in studying the effect of poverty simulations on longitudinal understanding of poverty and called for the need to develop strategies that support sustained understanding (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 1996, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011).

The need to develop strategies that support the sustained knowledge and understanding of poverty as well as attitude change toward those in poverty is echoed by Jansson et al. (2016). The study conducted by Jansson et al., (2016) examined the sustained effectiveness the simulation, in the field of nursing, only as a stand-alone strategy. The study findings of Jansson et al., (2016) indicated that the simulation could have a benefit over other kinds of teaching strategies, based on the manner in which it is implemented (Browne & Roll, 2016; Chambers, 1983; Dorn, 1989; Gupta, 2006; Patterson & Hulton, 2011). Nevertheless, it was also suggested that other strategies be used in addition to a stand-alone simulation, such as repeated education sessions, immediate audiovisual debriefings, retraining, and re-assessments, were warranted for long-lasting improvements (Jansson et al., 2016).

Examining the implementation of poverty simulations based on Gupta’s (2006) assertion that participants willingly engage in learning when it is has meaning, purpose, context, and can empower. Proper planning, organization, active participation, and meaningful reflection can enhance the effect of a poverty simulation (Gupta, 2006; Patterson & Hulton, 2011). The
The effects of a poverty simulation on immediate understanding of the social inequality of poverty. New learning and thinking often takes time and is not immediate (Garoutte & Bobbit-Zeher, 2011). Further study is warranted to determine if other more rigorous socio-scientific strategies (Krain & Shadle, 2006) may affect sustained attitude change, knowledge, and understanding toward those experiencing poverty (Clarke et al., 2016; Fialova, 2014; Krain & Shadle, 2006; Livingston, 1970; Patterson & Hulton, 2011).

Some of the 20 reviewed studies did use an additional learning strategy to support the poverty simulation, but only as a single add-on strategy that did not embed the poverty simulation within a larger context. Pre-readings were assigned that dealt with both policy development (Patterson & Hutton, 2011) as well as information about the barriers and challenges facing those in poverty (Coghlan & Huggins, 2004). The presentation of local and national poverty data were incorporated into the simulations in two ways. One study presented the data before the simulation began (Patterson & Hutton, 2011), and another poverty simulation proffered the data before the oral debriefings began (Steck et al., 2011).

One of the poverty simulation studies reviewed, “In Their Shoes,” made an effort to embed the simulation within a larger learning experience (Johnson et al., 2015). The simulation was one piece in a 10-week class. Data reflecting statistics about poverty were presented and discussed in class. Some of the assignments for class included pre-readings as well as continued readings during the 10-week class. The book used for these reading was Amazing Grace: The Lives of Children and the Conscience of a Nation by Jonathan Kozol (1995). Kozol’s (1995) book followed the plight of children and families enduring a low-income living in an
underserved community in New York City. The next step was to participate in an online poverty simulation followed the next day by the participants experiencing the practicum designed for the class and the study. The participants were assigned health and social service agencies to find needed services and had to get there using public transit (Johnson et al., 2015). The agencies the students had to locate were based on the scenarios each student was given. Some of the agencies needed were for domestic violence, homeless shelter, medical agencies, legal services, clinic for immigrants, and a school to meet the needs of a child with disabilities. Discussions about the experience were facilitated during the remainder of the 10-week class. This type of implementation of the experiential learning experience of a poverty simulation supports Garoutte’s (2001) argument that learning takes time. The study of the poverty simulation conducted by Johnson et al., (2015) analyzed only the immediate effect of this embedded poverty simulation that allowed the nursing students to walk in the shoes of those who experience poverty. This study could be expanded and used as a model for gaining increased awareness of the sustained effect of a poverty simulation that has been embedded within a more comprehensive learning experience.

Written debriefings in addition to oral debriefings were used in one of the poverty simulations reviewed (Bramesfeld & Good, 2016; Browne & Roll, 2016). Browne (2016) postulated that writing helped to reflect the internal process the participant was experiencing. Patterson (2011) not only used pre-reading assignments, but also continued an on-line discussion for the participants that focused on current policy. Though the use of these strategies supported change in learning, no studies examining sustained learning or attitude change reported a sustained effect (Browne & Roll, 2016; Fialova, 2014; Krain and Shadle, 2006; Yang et al., 2014).
The use of the following strategies may support the future implementation of poverty simulations in creating sustained knowledge and attitude change resulting from sustained critical thinking. The goal of these suggestions is to use the poverty simulation as an embedded piece of a comprehensive program that intentionally supports the poverty simulation using the rigorous socio-scientific strategies that Krain and Shadle (2006) discussed. Fialova (2014) referred to this type of study as a longitudinal study. Chen and Martin (2015) argue that four benchmarks are needed for experiential learning experiences, such as poverty simulations, to support social activism resulting from sustained attitude change and critical thinking:

1. knowledge pertaining to the social issue with a focus on change
2. the context of the experience should be real-world
3. provide the opportunity for participants in a simulation to experience both their own feelings as well as how those feelings intersect with the perspectives of other participants
4. allow for critical thinking providing the opportunity to problem solve around issues related to social injustices.

The intent for implementing the poverty simulation in this manner is to create an effect that supports and reflects Kolb’s fourth stage of learning, taking action through problem solving (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

**The poverty simulation as an embedded piece of a comprehensive poverty exercise.**

The first step for embedding the implementation of the poverty simulation within a more comprehensive, longitudinal program, surrounded by rigorous strategies, is the use of pre-readings that provides a basis on which the poverty simulation can build (Vandsburger et al., 2010). Each participants would receive two Ruby Payne’s publications, *A Framework for Understanding Poverty* (Payne, 2013) and “Bridges Out of Poverty: Study Guide” (Bein &
Smith, 2012) through email. Articles pertaining to each of the fields, education, health care, and social work, using poverty simulations would also be sent out to participants. Those in the field of education would receive “Moving from Middle Class to Situational Poverty - from Stability to Instability: What You Can Do to Help Your Students and Parents During the Present Economic Downturn” (Payne, 2009). Those in the health care profession would be sent “Childhood Poverty and Health: Cumulative Risk Exposure and Stress Deregulation” (Evans & Kim, 2007). Participants from the field of social work would be given “Poverty and Social Work” (Mantle & Backwith, 2010). A request would be made of the participants to peruse the articles to be able to discuss some of the points during the oral debriefing.

Each participant in a poverty simulation brings with them a personal definition of poverty. That definition is often based on prior beliefs, knowledge, and biases surrounding poverty (Ajello, 2014; Browne & Roll, 2016; Clarke et al., 2016; Jones & Nisbett, 1971; Stasser, Steck et al., 2011). Clarke et al. (2016) asked the question, how does one account for these prior perceptions brought to this experience with the goal that most move forward in the poverty simulation with a very similar understanding of poverty. The many personal definitions of poverty support the argument that there is a gap in the knowledge and understanding of poverty (Benjamin, 2010; Hunt, 2004) based on the existence of a paucity in research pertaining to the social inequality of poverty (Hunt, 2004). This gap in knowledge takes on several forms. Ogujiuba et al. (2011) discuss the lack of understanding of the clear causes of poverty, and where as Loix and Pepermans (2009) see a lack of understanding the perceived consequences of poverty. Anderson and Lawton (2009) address the need for longitudinal knowledge and understanding of poverty. This type of knowledge could increase the sustained effect of poverty simulations.
Providing both local and national data at the beginning of the poverty simulation is one strategy for beginning to close the gap in the knowledge of poverty (Patterson & Hulton, 2011; Steck et al., 2011). The fiscal measurements used for determining poverty may not be familiar to those who are not or have never experienced poverty. A number needs to be put on the face of those in poverty providing the sense that there is a real person dealing with real financial issues. Providing national data is important, but local data brings the participants in direct contact with the poverty issues the participant's own community or organization is dealing with. This type of data can bring understanding to the financial parameters those experiencing poverty live within as well as shine light on the financial barriers faced by those in poverty. After a short presentation of the general data pertaining to poverty, each family member would be told the amount of income their family unit would have access to for supporting their family during the four weeks of the simulation. This type of information helped to make the situations for each of the families feel more real as the families tried to keep a roof over their heads and food on the table. The next time they go to the grocery store these figures may also remind them that not all individuals have the amount to money to spend that they were afforded to spend on their groceries.

All the poverty simulation studies reviewed implemented oral debriefing to support critical thinking through meaningful and thoughtful discussions centered on privilege, biases toward those in poverty, and social and structural inequalities (Bramesfeld & Good, 2016). But, only five of the poverty simulations used some form of written debriefing in addition to the oral debriefing (Ansoms, 2012; Ansoms & Greenen, 2012; Bramesfeld & Good, 2016; Browne & Roll, 2016; Coghlan & Huggins, 2004). To improve the debriefing component for the future presentation of the poverty simulation, a written piece would be added to the debriefing based on
Petranek’s (2000) assertion that this type of learning strategy should be a major tool to enhance learning. Irmscher (1979) posits writing produces a higher level of learning than simply the use of oral debriefing. Writing can bring about greater recognition and understanding of the participants own ideas pertaining to change that warrants being made for their profession (Wollman-Bonilla, 1989). Browne & Roll, (2016) argues that a written debriefing allows the participants of the poverty simulation to internalize their experience (Emig, 1977). Facing the issues that deal with poverty are also often complex issues and written debriefing allows the participant the time to sort out those complex issues through the connection of old knowledge to new knowledge (Hughes, Kooy, & Kanevsky, 1997; Irmscher, 1979). Each participant would be requested to write one action they believe could be accomplished within their field that would begin to help create change for those they serve who are experiencing poverty. Participants would be asked to voluntarily share their goal and to make publically known what they believe they can be accomplished in the effort to make a difference. The public sharing is an important piece to moving toward the commitment of a more concrete way of critically thinking about action that can be taken in their own field toward social inequalities (Kolb, 2013; Petranek, 2000; Petranek, Corey, & Black, 1992; Sugarman, 1985).

The real-life experience of the poverty simulation can begin to give voice, through others, to those experiencing poverty who struggle to survive everyday (Poverty Simulation Purdue Website, 2017). However, the real voice of those who are marginalized is also needed because these often have no voice in their own destination (Hunt, 1996; Long 2001). Hunt (1996) argues that the weakest political voice is often the voice of the minority and marginalized. This politically weak voice results from the struggle in fighting the dominant ideology of attribution
of poverty (Hunt, 1996). Long (2001) considers this to be a more agent or “actor oriented approach” (p. 12). Long (2001) contends that it is necessary for the less powerful actor to have voice so they can become their own resource for pursuing their agency freedom. The “actor oriented approach” allows for the discussion of both structural and individual attributes of poverty (Long, 2001). Minorities are more willing to look at the individual attributes of poverty in addition to the structural attributes of poverty, and this approach would support looking at all of the facets of poverty (Hunt, 1996, 2004).

A round table discussion would be conducted, at some point in the more comprehensive implementation of the learning experience, that includes both the participants of the poverty simulation as well as those experiencing poverty. To purpose of this type of activity is to give real voice to those who are experiencing poverty (Hunt, 1996; Long 2001; Robb, 2000). Engaging in this type of activity would highlight the need to understand the structural positions and experiences of those who experience poverty on a daily basis and to understand the need for this type of dialogue and interaction to be a factor in the endeavor to create solutions to ameliorate the consequences of poverty (Hunt, 1996). Many in America will never experience poverty (Chambers, 1983; Poverty Simulation Purdue Website, 2017; The United States Census Bureau, 2017), and Robb (2000) proposes that this type of participatory approach to anti-poverty policy making provides valuable contribution to the understanding of poverty. Robb (2000) referred to this as a new approach to policy development, and suggested that a more comprehensive definition of poverty will emerge resulting in informed insight of anti-poverty policy development.
One such example of this type of activity was a Community Conservative Activity discussed by Ajello (2014). This community activity was attended by a cross-section of those from the community including prior homeless, current homeless, students, social service providers, and elected local and government officials. All who attended, the homeless to the community leaders and policy makers, helped to fill the gap in the knowledge and understanding of poverty educating those involved about the real causes of poverty as well as the consequences of poverty (Browne & Roll, 2016; Davidson et al., 2009; Steck et al, 2011; Vandsburger et al., 2010). An activity such as this more importantly gave voice to all involved in an effort to mitigate the adversities of poverty, and allowed all affected by poverty to be heard (Ajello, 2014; Hunt, 1996). Knowledge and understanding of poverty as well as the voice of all affected by poverty supports true transformation if action follows activities such as these (Freire, 2000). An activity such as this is reflected in Kolb’s model of learning and supports the need to take reflection to action if real change around the issues of socio-economic inequalities is to happen (Browne & Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

The facilitator for the poverty simulation would continue contact with the participants until the delayed post-survey is taken three months after the initial poverty simulation. Approximately every three weeks participants would receive additional emails containing interesting information related to poverty. The emails would be brief with information such as some type of data, short readings, quotes, or possibly a video. The effort would be made to keep the issue of poverty in front of the participants. The information emails would continue for an additional three months after the delayed post-surveys are taken. The goal is to create a mindset in which the participants develop the desire to find out more information about poverty, with no prompting from the facilitator of the poverty simulation. The desired outcome for the
participants would address the gap in knowledge and understanding of the issues of poverty (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 1996, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011). This knowledge and understanding is foremost if the critical thinking of the participants is to lead to civic action (Browne & Roll, 2016; Gupta, 2006; Kolb, 2013; McLeod, 2013; Sugarman, 1985).

At the end of the longitudinal, comprehensive implementation of the simulation, the participants would be asked to fill out a survey commenting on both the student's own participation and effort during the poverty simulation as well as address the effect of the strategies used for the implementation of the poverty simulation (Dorn, 1989). This type of information supports the enhanced implementation of poverty simulations in two ways. The effort put into participation in the poverty simulation may influence the effect of the poverty simulation on empathetic attitude change. The study would investigate the level of engagement in the poverty simulation by the participant.

The participants would also be asked to address the effect, they believed, the poverty simulation had on their personal beliefs about those in poverty. This data would be compared with all the data collected, both qualitative and quantitative, to see if the scores for the personal effect of the poverty simulation corroborated with all other data collected. The improved implementation of the poverty simulation would be driven by the responses of the participants (Yang et al., 2014); the ultimate goal being to maximize the effect of the poverty simulation regarding attitude change toward those experiencing poverty as well as knowledge and understanding of poverty.

Measurement Instrument. In an effort to explain the effect of the associations between empathy, attribute, and action, two additional pieces of information would be collected. The
factors a participant attributes poverty to would be investigated through the addition of a question at the end of each of the three of the surveys. The question would be “What do you see as the attributes of poverty?” A Likert-Scale with a range of 1-10 would be employed, 1 = Poverty is the fault of the individual and 10 = Poverty results from structural societal barriers. A list would be included with the question that explained what research indicates individual and structural causes of poverty are. As data were measured, a correlation between the score on the BES and the movement on the Likert-Scale addressing the attributes of poverty would be analyzed to determine if there is an association between the empathy score and the movement on the Likert-Scale pertaining to the attributes of poverty. The following research question would be investigated, does an increase in empathy create an increase in the Likert-scale score that indicates a stronger belief in the structural attributes of poverty. The association between the two scores, the empathetic attitude score and the score pertaining to the beliefs of the structural attributes of poverty, would be analyzed testing the null hypothesis for the research questions.

Davidson’s (2009) asserts that beliefs about the attributes of poverty can affect attitude and come to fruition in actions taken toward those in poverty. The actions toward those in poverty are often played-out in the American legislature as it struggles to create anti-poverty programs and policies (Shaw, 2009-10). Understanding both personal and political beliefs is necessary as part of the framework for developing anti-poverty programs and policies because this is where the real job of change begins, in our legislature (Zosky et al., 2014). A qualitative component could be added to the measurement instrument to address prior, political leanings of the participants.

Those who are of a conservative thinking have a greater tendency to blame the individual for being poor (Bradshaw, 2006), whereas those who are liberal are more willing to acknowledge
the structural attributes of poverty which lie within the American system designed to maintain poverty (Clyburn, 2014; Zosky et al., 2014). Bullock et al. (2003) use different terms for political leanings, indicating that beliefs are either progressive or restrictive. The progressive mentality sees structural causes, while those who think more restrictively have a greater tendency to blame the individual. Pellegrini et al. (1997) maintains that Republicans have a less favorable attitude toward programs for the homeless, which are publically funded.

The findings Representative Clyburn (2014) presented are a reflection of the conservative, or Republican, and liberal, or Democratic, political leanings of those in the American Congress. As evidenced by Clyburn (2014), of the 488 counties, Democrats represented 139 of the counties, 331 are represented by Republicans, and 18 have bipartisan representation. Pelligrini et al. (1997) assert that Republicans are less likely to favor publically funded programs for the homeless (Bradshaw, 2006), and Zosky et al. (2014) claim that Democrats are more likely to acknowledge the structural barriers of poverty. Is there an association between the political leanings of the Republicans and the fact almost three times as many American counties with high populations living in persistent poverty are represented by Republicans as compared to those counties represented by Democrats (Clyburn, 2014)?

Analysis of data for the interaction of political leanings*thinking toward attributes of poverty*empathy may produce enlightened findings between political beliefs and the development and success of anti-poverty programs.

It is necessary to implement the simulation in a manner in which all-prior beliefs and biases are acknowledged and addressed, even the political party an individual is affiliated with, because of the impact personal beliefs and political leanings can have on anti-poverty programs and policies. One more piece of participant information would be collected. This piece of data
would address the participant’s political leanings. The question could be worded in one of two ways:

What political party do you affiliate with?
Are your personal beliefs about the world more conservative or liberal?

This kind of participant information may assist in awareness and knowledge of the components needed for the implementation of the poverty simulation, such as data presented at the start of the poverty simulation or the types of prior readings to recommend in an effort to create sustained empathy.

It may be necessary to examine more closely the measurement tool used for assessing attitude change toward those in poverty as well as knowledge and understanding of those in poverty. Though seven of the reviewed poverty simulations implemented The Community Action Poverty Simulation, none of the 20 reviewed poverty simulation studies used the same measurement tool used for this study (Ajello, 2014; Franck et al., 2016; Kihm & Knapp, 2015; Patterson & Hulton, 2011; Steck et al., 2011; Vandsburger et al., 2010; Yang et al., 2014). Some of the measurement tools were created by the researchers (Ajello, 2014; Franck et al., 2016; Kihm & Knapp, 2015; Steck et al., 2011; Vandsburger et al., 2010; Yang et al., 2014) and others had been developed prior to the studies (Patterson & Hulton, 2011; Yang et al., 2014). One study used both types of measurement tools (Yang et al., 2014). All of the studies that were qualitative studies, supporting a qualitative piece for the future research of poverty simulations. The question becomes what is the best tool to use for measuring knowledge and understanding about poverty and attitude change toward those in poverty. More research is warranted regarding the most appropriate construct for measuring attitude change, knowledge, and
understanding of poverty, as well as measurement instrument to measure the construct chosen that represents knowledge, understanding, and attitude change pertaining to poverty.

**Cognitive and affective empathy.** Some of the reviewed poverty simulation studies, as well as this study, discussed empathy in terms of understanding poverty (Ajello, 2014; Bramesfeld & Good, 2015; Browne & Roll, 2016; Davidson et al., 2009; Fialova, 2014; Franck et al., 2016; Johnson et al., 2015; Stasser et al., 2013; Yang et al., 2014). Empathy was investigated only as a single construct for this study, in addition to the reviewed studies that examined empathy. The BES was used for this study and was appropriate for measuring empathy as a single construct, but can also be used to measure empathy as two constructs, affective and cognitive empathy (Jolliffe & Farrington, 2013).

A study conducted by Einolf (2012) examined whether cognitive or affective empathy played a more important role in determining who was more likely to help natural-disaster victims. Findings indicated that cognitive empathy, which was referred to as perspective taking, played a more important role in predicting who was willing to help natural-disaster victims than affective empathy. Einolf (2012) asserted that cognitive empathy supported potential donors in not blaming the victim in human-caused disasters and contends that solving social issues based on reason and justice, or cognitive empathy, is more effective than appeals based on emotions. The studied indicated that these findings applied to those who were educated (Einolf, 2012). A study conducted by Decety and Yoder (2016) supports Einolf’s (2012) findings regarding cognitive empathy. The findings from the study suggested that cognitive empathy, or what was referred to as reasoning and perspective taking, was a more suitable predictor of sensitivity of injustice towards others than underscoring emotional sharing or affective empathy (Decety & Yoder, 2016).
Future studies may wish to consider the cognitive and affective multidimensional aspects of empathy to help develop cognizance of the possible effect empathy can have on attitudes toward those experiencing poverty. Though the focus of the studies by Decety and Yoder (2016) and Einolf (2012) was not poverty, the same principles could be applied to studies pertaining to poverty simulations and empathy. Further research could be conducted on the information that was collected for this study. The scores for both cognitive and affective empathy could be tabulated. An analysis of data would examine the association between cognitive and affective empathy in an effort to determine if cognitive or affective empathy was a more accurate predictor of immediate and sustained empathy. If further research indicates a correlation between the scores for either cognitive or affective empathy with immediate or sustained empathy, further research would be warranted to examine specific strategies that support empathetic attitude change.

**Poverty simulations as virtual reality.** The success of digital simulations has been documented (Cuhadar & Kampf, 2014; Franciosi & Mehring, 2015; Johnson, 2007; Lin & Sun, 2003; Yuen, 2006), indicating that simulations can create a dynamic learning environment capable of creating both attitude change knowledge (Yuen, 2006). Inter-active simulation games cover a wide spectrum of topics in which the knowledge and attitude change is measured after the inter-active simulation is completed. Though having fun is an important piece of any simulation, Lin (2003) cautions that in the field of social reality having too much fun may mean that the social issue is no longer dealt with in a simulation.

One such inter-active simulation game studying poverty is called SPENT, created by Achieving the Dream ("Spent," 2017). This game is similar to CAPS in many ways, but does have one valuable feature that CAPS is not capable of performing. As the player is taking part in
the interactive poverty simulation (SPENT, 2017), the immediate consequences of the player’s choices are explained. This creates knowledge that is immediately connected to real-life choices. The secondary researcher for this study played the game, and made some very difficult choices during the game. At the end of the game, the family still had $494 left but student loans had not been paid, and even more important than that was the fact $550 was owed on the car which needed to be paid to keep the car from being reprocessed. The problem with the car payment was the next month’s rent was due the next day. Some very difficult choices were made during the game, and there still was not enough money to pay the bills.

In addition to inter-active poverty simulations being used to enhance the sustained effect of poverty simulations, this type of experiential learning experience could be used as part of a research design using two interventions that would provide two strategies for a researcher to compare. The use of these two types of poverty simulations, a regular poverty simulation and an inter-active technology based simulation, could be implemented in one of two ways. One group could participate in CAPS and SPENT (2017) with the results being compared. The study would have to account for test-retest effects taking into account both simulations were designed to create empathy, so was less empathy shown during the second simulation because the first simulation had been experienced. Another option would be the use of two groups of participants having each group participate in one of the two simulations. The concern with this type of research design is the fact the two groups of participants were not randomly chosen, which produces less likelihood that systematic bias is eliminated. Using the inter-active simulation in this manner may help to increase the argument for greater generalizability of the findings (Creswell, 2013).
Changes in beliefs and attitudes toward those experiencing poverty as well as those having low wages, or the working poor, may result in the more efficient delivery of the services by the three fields primarily using poverty simulation, education, health care, and social work which are based on higher standards for each profession (Aspden et al., 2016). This is a result of increased knowledge of understanding of poverty and attitude change toward those experiencing poverty (Aspden et al., 2016). Learning from poverty simulations takes place when the learning is meaningful, purposeful, contextual, and can empower those who can take action against social inequalities (Gupta, 2006). Proper planning, organization, active participation, and critical thinking based on meaningful reflection can enhance the effect of the sustained effect of the poverty simulation (Browne & Roll, 2016; Chambers, 1983; Dorn, 1989; Gupta, 2006; Patterson & Hulton, 2011). Based on the suggestions of prior research, implementation of poverty simulations is a key factor to the kind of effect a simulation can have as an experiential learning experience. The need to engage in future research that examines strategies to enhance the rigor of the implementation of poverty simulations is even more necessary in an effort to achieve sustained effect on empathetic attitude.

**Conclusion**

Ogujiuba et al., 2011) can be narrowed through the experiential learning modality of a poverty simulation.

Research indicates that a poverty simulation can increase empathy toward those in poverty resulting in the increased understanding of the structural power of the systems (Galper, 1976; Skiffington et al., 1984) that continue to entrap a portion of the American population who experience poverty ("Hunger in America," 2016; Piven, 2014; "What is the Current Poverty Rate," 2017; Rank, 2011). Understanding the structural power of systems helps direct attention away from blaming the individuals in poverty (Bastiaensen et al., 2005). Yunus and Weber (2017) posit that unless we understand the structural attributes of poverty embedded within the failing government systems can there be a change of the "existing structure of power" (Bastiaensen et al., 2005, p. 3), thus transforming society’s social systems and economic structures that continue to marginalize individuals (Peters & Hinson-Hasty, 2008). Bastiaensen et al. (2005) argue that understanding the structural power of poverty through empathy is the key to poverty reduction, resulting in the redistributive reform of wealth (Harper, 1991; Shaw, 2009-10).

The goal of this real-life, experiential learning experience that is based on tenets of constructivism is to give voice, through others, to those in poverty who struggle every day to simply survive (Poverty Simulation Purdue Website, 2017). The poverty simulation provided a glimpse into the adversities of poverty resulting in an increased awareness and understanding of those adversities. The overall intent of the poverty simulation was to open the door for the participants and allow them to critically think and move beyond just wanting to help. Based on the intent to help, paired with critical thinking, the end goal of this experiential learning experience was that participants to take action against poverty. This action would be based on
the creation of effective interventions having the potential to positively affect those facing poverty (Browne & Roll, 2016; Davidson, 2009; Gupta, 2006; Kolb, 2013; McLeod, 2013; Shaw, 2009-10; Sugarman, 1985; Vandsburger et al., 2010; Zosky et al., 2014).

This study measured attitude change toward those in poverty through the lens of empathy. Empathy was used as the construct to measure poverty based prior research that indicated that an individual with empathy toward those in poverty was more willing to acknowledge the structural attributes of poverty (Galper, 1976; Skiffington et al., 1984). The immediate effect of the poverty simulation on the on diminishing the gap in knowledge and understanding of poverty and attitude change toward poverty is important (Anderson & Lawton, 2009; Benjamin, 2010; Hunt, 1996, 2004; Loix & Pepermans, 2009; Ogujiuba et al., 2011). However, the more important question becomes what steps are needed to ensure that the effect of the poverty simulation is sustained in an effort to create action regarding the social inequalities of poverty (Browne & Roll, 2016; Gupta, 2006; Kolb, 2013; McLeod, 2013; Sugarman, 1985). This study confirmed prior research indicating an effect of the poverty simulation on immediate empathetic attitude but no sustained empathetic attitude. In addition to investigating the effect of the poverty simulation on immediate and sustained empathy, the effect of independent variables was analyzed as well. The findings pertaining to individual participant information generated new data adding to the existing data regarding poverty simulations (see Figure 17).
Knowledge + Understanding of the multi-dimensional, subjective layers of poverty and the structural power of systems that continue to entrap a portion of the American population (Bastiaensen et al., 2005; Clyburn, 2014; Hunt, 1996, 2004; "What is the Current Poverty Rate," 2017)

The Will to Take Civic Action to address and overcome the social determinants that have maintained persistent poverty for the last 30 years (Clyburn, 2014; Gupta, 2006; Kolb, 2013; Piven, 2014)

Empathetic Attitude toward those in poverty entails feeling the pain another feels as a result of poverty and the willingness to acknowledge the structural attributes of poverty which continue to ensnare 15 percent of America's counties in persistent poverty (Brown, 2011; Clyburn, 2014; Dolby, 2012; Galper, 1976; Skiffington et al., 1984)

Note. A poverty simulation is one form of experiential learning that allows the participant to walk in the shoes of another. The goal of this experience is to achieve new insight and understanding of the adversities faced by those in poverty through the lense of empathy. Empathy can lead one to take civic action to help address the social determinants that continue to ensnare those in poverty.
Many understand poverty at an intellectual level as evidenced by the plethora of poverty data that has been generated over the years (The United States Census Bureau, 2017). However, to turn the tide and make a difference for those confronted with the adversities of poverty, Dolby (2012) argues that only empathy can create the long-term solutions needed to overcome the dilemmas and barriers endured by those facing poverty. Empathy provides the positive impetus to understand the pain of poverty at the visceral level as we experience the shared emotions of another (Brown, 2011). Brown (2011) contends that any individual can have empathy toward another even though we are not experiencing their exact situation. This thinking is based on the idea that we each feel pain resulting in the ability to feel another's pain. Visceral understanding of poverty can lead to Kolb’s (2013) final stage of learning which entails the willingness to take collective action against the social inequalities of poverty (Gupta, 2006) providing the momentum for civic action based on lifelong learning (Patterson & Hulton, 2011). The visceral understanding of poverty based on empathy can also bring new meaning when an individual experiencing poverty makes the comment, “Being poor wears you out” (Scalzi, 2005).

The true understanding of the attributes of poverty will be reflected in the anti-poverty programs and policies generated by American lawmakers (Clyburn, 2014; Davidson, 2009; Shaw, 2009-10; Zosky et al., 2014). It becomes imperative that these programs and policies be designed to give hope to those impoverished bearing in mind persistent and deep poverty "correlates [with] hopelessness and polarisation" (Carter & Barrett, 2006, p. 195). "Man can live about 40 days without food, about three days without water, about eight minutes without air, but only for one second without hope" (Anonymous, 2009). Based on sustained empathy for those in poverty and feeling the pain of others created by privation (Brown, 2011; Dobly, 2012), a visceral understanding of the adversities of poverty in America will emerge, thus creating hope
and generating the will to take action to overcome poverty that is capable of twisting and deforming the human spirit (Clyburn, 2014; Gupta, 2006; Harrington, 1962; Kolb, 2013).
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Footnotes

1Descriptive data for the mean difference between the pre-survey and the immediate post-survey is displayed in line graphs in Appendix N: Additional Descriptive Data for Reason for Participation through Appendix V: Additional Descriptive Data for Role in the Poverty Simulation. The data were not necessary to answer the research questions for this study, but the researcher believed the descriptive data for the pre-survey and immediate post-survey for each subgroup were germane for future studies. The data was displayed in this form to provide a visual for each independent variable in an effort to help other researchers determine if research of an independent variable is of interest to a researcher. It is necessary for the reader to keep in mind the scale for increase is small. The research question for the independent variable is included in each Appendix.

2Descriptive data were also collected for the pre-survey and the immediate post-survey scores for each subgroup of the independent variables. The data were not necessary to answer the research questions for this study, but the researcher believed the descriptive data for the pre-survey and immediate post-survey for each subgroup were germane for future studies. Research questions based on the pre-survey and immediate post-survey scores of each subgroup may allow the researcher to examine each subgroup in an effort to tailor the implementation of future poverty simulation to address the needs and biases of each of the subgroups participating in a poverty simulation. This type of study may provide date to support an increase in sustained empathy resulting from participation in a poverty simulation. The descriptive data can be found in Appendix N: Additional Descriptive Data for Reason for Participation through Appendix V: Additional Descriptive Data for Role in the Poverty Simulation. The research question for each of the independent variables will be included in Appendix N: Additional Descriptive Data for
Reason for Participation through Appendix V: Additional Descriptive Data for Role in the Poverty Simulation which will include the subgroups for the independent variable.

3Descriptive data for the mean difference between the immediate post-survey and the pre-survey for participation was voluntary or in-voluntary and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix N: Additional Descriptive Data for Reason for Participation).

4Descriptive data for the mean difference between the immediate post-survey and the pre-survey for job does/does not entail working with those in poverty and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix O: Additional Descriptive Data for Job Does/Does Not Entail Working With Those in Poverty).

5Descriptive data for the mean difference between the immediate post-survey and the pre-survey for job does/does not volunteer with those in poverty and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix P: Additional Descriptive Data for Does/Does Not Volunteer With Those in Poverty).

6Descriptive data for the mean difference between the immediate post-survey and the pre-survey for did/did not experience scarcity of necessary resources growing up and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix Q: Additional Descriptive Data for Did/Did Not Experience Scarcity of Necessary Resources Growing Up).

7Descriptive data for the mean difference between the immediate post-survey and the pre-survey for gender and for the scores for the pre-survey and the immediate post-survey for each
subgroup. The descriptive data are displayed in line graphs (see Appendix R: Additional Descriptive Data for Gender).

Descriptive data for the mean difference between the immediate post-survey and the pre-survey for race and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix S: Additional Descriptive Data for Race).

Descriptive data for the mean difference between the immediate post-survey and the pre-survey for age and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix T: Additional Descriptive Data for Age).

Descriptive data for the mean difference between the immediate post-survey and the pre-survey for income and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix U: Additional Descriptive Data for Income).

Descriptive data for the mean difference between the immediate post-survey and the pre-survey for the role in the poverty simulation and for the scores for the pre-survey and the immediate post-survey for each subgroup. The descriptive data are displayed in line graphs (see Appendix V: Additional Descriptive Data for the Role in the Poverty Simulation).
### Appendix A: Twenty Reviewed Poverty Simulations Chart #1

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<th>Field – Health Care</th>
<th>Field – Social Services</th>
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<th>Measurement Instrument</th>
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### Appendix B: Twenty Reviewed Poverty Simulations Chart #2

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<th>Strategies to Improve Implementation of Poverty Simulations/Other Comments</th>
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<tr>
<td>Ajello, 2014</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>Referenced the need to understand the role being played, and understanding that role in reference to another, whether it be actor of other. Also discussed the problem that there is not discourse around elections and public policy and as a result no action is taken, and action is necessary.</td>
</tr>
<tr>
<td>Ansoms, 2012</td>
<td>&quot;Negotiating Poverty&quot;</td>
<td>The focus for this study was the multi-dimensional nature of poverty.</td>
</tr>
<tr>
<td>Ansoms &amp; Greenen, 2012</td>
<td>“Development Monopoly”</td>
<td>The positive effects of participating in the game was highlighted, but the researchers cautioned the need to remember, also, that the game may have the potential to reinforce negative stereotypes.</td>
</tr>
<tr>
<td>Bramesfeld &amp; Good, 2015</td>
<td>&quot;The Game of Social Life&quot;</td>
<td>The focus for this study was the multi-dimensional nature of poverty. Both individual and structural attributes of poverty were discussed</td>
</tr>
<tr>
<td>Browne &amp; Roll, 2016</td>
<td>&quot;Welcome to the State of Poverty&quot;</td>
<td>Experiential learning theory was the lens used to study understanding of poverty and was related to Kolb's model of learning (Kolb, 2013). There is a need to turn experience and knowledge into concrete action.</td>
</tr>
<tr>
<td>Coghlan &amp; Huggins, 2004</td>
<td>&quot;Version of Game Monopoly&quot;</td>
<td>Focus was to relate the experience of a poverty simulation to the real world. Connected social inequalities to social conditions and inequalities. Discussed how difficult it is for an individual to overcome barriers</td>
</tr>
<tr>
<td>Davidson et al., 2009</td>
<td>&quot;It's In the Bag&quot;</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. Discussed the importance of role-play in simulations. The future should address simulations and the need for more time in light of learning taking time (Garoutte &amp; Bobbit-Zeher, 2011). Stressed the need for dialogue and debate about development &quot;across the entire political and economic spectrum&quot; (Davidson et al., 2009, p.</td>
</tr>
<tr>
<td>Authors, Year</td>
<td>Simulation Title</td>
<td>Summary</td>
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<td>Fialova, 2014</td>
<td>“Pennies: Scramble for Wealth”</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. The study researcher discussed the need for qualitative research in the future be implemented to control of such variables as demographics, learning styles, and personality types.</td>
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<tr>
<td>Franck et al., 2016</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. The researchers also used Kolb’s model as part of their model for learning (Browne &amp; Roll, 2016; Kolb, 2013; McLeod, 2013; Sugarman, 1985).</td>
</tr>
<tr>
<td>Garoutte &amp; Bobbit-Zeher, 2011</td>
<td>“Budget Exercise”</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. The researchers discussed the need to take into account that learning happens over time in examining strategies that support sustained knowledge, understanding, and attitude change.</td>
</tr>
<tr>
<td>Johnson et al., 2015</td>
<td>“In Their Shoes”</td>
<td>This study was a qualitative study. The researcher discussed the need for a quantitative piece using pre- and post-questionnaires measuring knowledge and awareness of poverty.</td>
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<tr>
<td>Kihm &amp; Knapp, 2015</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>Experiential learning theory was the lens used to study understanding of poverty.</td>
</tr>
<tr>
<td>Krain &amp; Shadle, 2006</td>
<td>“The Hunger Banquet”</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. A focus for the future should be how to retain knowledge pertaining to poverty with more rigorous socio-science strategies.</td>
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<tr>
<td>Livingston &amp; Stoll, 1973</td>
<td>“Ghetto”</td>
<td>This was the oldest poverty simulation study reviewed. The researchers noted long-term effects as a limit.</td>
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<tr>
<td>Patterson &amp; Hulton, 2011</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>The focus of this study was to examine the difference between clinical, classroom settings, the real-life experience of a poverty simulation. This study was embedded within a larger learning experience including the use of prior readings. The goal of participation was to produce lifelong learners willing to take action through civic engagement.</td>
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<td>Stasser et al., 2013</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>The focus of this study was to help the participants understand the institutionalized power structures as they relate to public policy. Experiential learning theory was the lens used to study understanding of poverty. The researchers discussed the need to understand sustained knowledge of poverty that supported real-life change.</td>
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<tr>
<td>Steck et al., 2011</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>Expressed the need that poverty simulations to be used to educate all, from policy makers to community leaders. Experiential learning theory was the lens used to study understanding of poverty. This study was embedded within a larger learning experience including the use of classroom assignments. Discussed the importance of small debriefing groups.</td>
</tr>
<tr>
<td>Todd et al., 2011</td>
<td>“Community Action Poverty Simulation”</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. Must address in the future the toll poverty takes on not only the individual but also all of society. Discussed the importance of both quantitative and qualitative research to support findings.</td>
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<td>Vandsburger et al., 2010</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>Experiential learning theory was the lens used to study understanding of poverty. This study was embedded within a larger learning experience including the use of prior readings and movie clips. Connecting the experience to education by addressing cognitive and affective empathy.</td>
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<tr>
<td>Yang et al., 2014</td>
<td>&quot;Community Action Poverty Simulation&quot;</td>
<td>The researchers studied the longitudinal effect of the poverty simulation. The purpose of the longitudinal study was to share how this experience changed policy where you are employed. This study was embedded within a larger learning experience including the use of prior readings.</td>
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Appendix C: Community Action Poverty Simulation

Understanding the day-to-day reality of poverty is important for everyone involved in fighting poverty – from policymakers to service providers. **MISSOURI’S COMMUNITY ACTION POVERTY SIMULATION (CAPS)** is a unique tool that helps people begin to understand what life is like with a shortage of money and an abundance of stress.

During a simulation, participants role-play the lives of low-income families, including single parents, people with disabilities, and senior citizens on Social Security. The task of each family is to provide for food, shelter and other basic necessities during four, 15-minute “weeks.” Families interact with community resources.

Although it uses “play” money, fictional scenarios and time limits, **CAPS** is not a game. It’s a simulation that enables participants to view poverty from different angles and then to discuss the potential for change within local communities. It’s designed to sensitize those who frequently deal with low-income families and to create a broader awareness among policymakers and community leaders.

**CAPS** is a copyrighted learning tool made available by the Missouri Association for Community Action (MACA) after purchasing the rights from the ROWEL welfare reform organization. MACA updated the poverty simulation and is now offering it to organizations wanting to promote a greater understanding of poverty.

A simulation requires between 40 and 86 participants, approximately 20 resource people and space of at least 3,000 square feet and takes 2½ to 3 hours to complete.

Who might participate in your poverty simulation? Local human service agency personnel; church staff, volunteers and clergy; school faculty and staff; high school and college students; community leaders and volunteers; government officials and policymakers; employers; law enforcement officials; family practice residency program physicians and many others.

“I don’t feel anyone can have complete understanding of poverty unless they have been there, and the simulation certainly raised my awareness of what people have to deal with. The sense of helplessness and frustration was quite real, even though I knew it wasn’t.”

—CAPS participant

“...dramatically demonstrates how much time and energy many families have to give just to survive from day to day.”

—CAPS participant

For the purpose of compliance with the federal Steven Amendment, this program is funded with 2% of $901,786 federal funds received from the U.S. Department of Health and Human Services (HHS) provided by the Missouri Department of Social Services, Family Support Division.

(East Missouri Action Agency Website, 2017)
Appendix D: Director's Instructions and Suggested Script for Conducting Community Action Poverty Simulation

Community Action Poverty Simulation
DIRECTOR’S INSTRUCTIONS AND SUGGESTED SCRIPT

CONTENTS OF DIRECTOR’S PACKET
1 Director’s Instructions and Suggested Script
1 Family Listing
1 Pad of Paper
1 Pen/Pencil
1 Transparency Marker
1 Whistle, Bell or Horn
1 Timer
1 Box of Small Band-Aids
“Luck of the Draw” cards
Small Group Discussion Sheets
Poverty Statistics Sheets
“What You Can Do” Sheets

GENERAL INFORMATION
These instructions include a sample script that the director might use in conducting the simulation. The script is in boldface type. It is, of course, more effective for you as the director to become very familiar with the content and flow of this material and to use your own words and style.

Remember that your manner and example are as important as your words in reinforcing that this is a simulation, not a game. Take the simulation seriously while at the same time help participants appreciate the experience so they will be receptive to the information that will be shared during this time.

In addition to setting the tone for the families, a confident attitude on your part will help the volunteer staffers handle whatever comes their way. Staffers have to think quickly in responding to the unlimited number of situations the family members may create. Your own creativity will be stretched in presenting this simulation.

BEFORE THE PARTICIPANTS ARRIVE
Be prepared to make last minute substitutions for staff roles, since sometimes a volunteer will not arrive by starting time, or at all, due to transportation problems, illness, and other emergencies. In such cases, you might combine roles if the number of simulation participants is small (30 to 45). For example, the co-facilitator can double as police, or the utility and mortgage stations can be worked by a single volunteer.
staffer, but participants will need 2 transportation passes as they are 2 different entities.

In a large simulation, you will want to have two volunteer staffers at the Quik Cash station and at the employer, as these stations see a lot of use and one staffer can quickly become overwhelmed. In a large simulation, you may also want to increase the length of the “weeks” from 15 to 18 minutes to accommodate the longer lines that will result. In smaller simulations, you may want to shorten one or two weeks by 2-3 minutes. Between weeks, make sure that participants return to their chairs and give them 2 minutes between weeks to represent the weekend. This time is necessary as it allows the volunteer resource staffers time to regroup and allows the families to interact with each other.

You may also, no matter what the size of the group, decide to ask members of your planning committee to stand by in case they are needed as last minute substitutes in the least critical roles. Sometimes the community volunteers you have recruited have had experience in a variety of situations and may be willing to make a last minute shift to another crucial role. If you have planned to divide the participants into family profile groupings during the debriefing period, make sure that you have designated a place in the room where each group can gather, so that you can announce these locations at the beginning of the debriefing.

WHEN THE PARTICIPANTS ARRIVE

Assigning family roles: below are 2 suggested ways to assign participants to families.

☐ Pull one set of nametags out for each family (Aber, Duntly, Guten/Garofalo, Isma/Issacson, Knowles, Olsen, Quant, Smith, Ussar, Wiscott) so you can have even representation of all of the family scenarios. This represents the first 28 participants. You can then go back though the nametags and randomly assign families. Try keeping a couple of the single adults and the families with two people for individuals that show up late and still want to participate.

☐ Place the name tags for the families you have selected face down on the sign-in table and as participants arrive, ask them to draw a name tag telling them that will be their role for the day. This prevents people from forming families with those they work with and already know and forces them to be more realistic in their roles. When you have a mixture of youth and adults in the simulation, you may want to divide the tags into adult and youth roles and give the adult roles to youth and vice versa.
When participants arrive you may also wish to give them the Pre-Assessment form to fill out while they wait for everyone to get settled into a family role.

**Ask them not to rearrange the chairs and not to open their packets until asked to do so.**

Planning committee members may be designated to serve as greeters/ushers. Be prepared by knowing how many participants you can expect, so you can set up family units based on that number. It is possible you may not know until the last minute the exact number of persons participating. Even if you have asked for reservations, someone is bound to cancel at the last minute or bring a friend along. You will probably need to make last-minute adjustments so that the family groupings correspond with the exact number of participants. Try to ensure that there are at least two families from each family profile category (A to C, D to F, etc.) and that each family unit has the correct number of persons represented. (Be sure that if you use family A, that you use family D, B-E, and C-F as these families interact with each other.)

If you fill a family except for a younger child role, you can tell that family their child is visiting grandma and continue. That is easier than rearranging families at the last minute and takes less time.

When you know the exact families participating, **ask someone to tell the staffers which families will not be included in this simulation**, so they can note it on their recording sheets. The staffers need to know what families are present so they can complete their duties (e.g. delivering delinquent notices, collecting debts, etc.). You may wish to call out the names of those families present before beginning the script below. You can also give this information to the staffers prior to all participants arriving and if the number of families changes, just let them know once you have determined that.
1. THE OPENING ORIENTATION –

SAMPLE SCRIPT

Introduction
Welcome to the Community Action Poverty Simulation. During the next hour, you will be participating in a simulation of what it might be like to be a part of a family with a low-income trying to survive from month to month. You will be living in poverty for one month – a month consisting of four 15-minute weeks.
The object of this experience is to sensitize us to the day-to-day realities of life faced by people with low-incomes and to motivate us to become involved in activities which help to reduce poverty in this country.

Family Units
When you entered, you were assigned to a family unit and given a packet of information. The packet contains:
- A description of your family and its individual members
- Your sources of income, your possessions, and your bills
- Identification documents
- Various other items which you will need to survive the month

Reviewing the packet
During the next few minutes we will give your family some time to study the contents of the packet. Study your instructions and your family description very carefully, this defines who you are going to be for the next month. We will allow about 10 minutes for reviewing the packet, and during that time I will circulate among you answering any questions that may arise.
At the end of the 10 minutes, I will blow this whistle (you may use either a whistle or a bell). Then I will give you additional information about your responsibilities and introduce you to the community resources around the room.
Circulate among the families as they read. After about ten minutes, blow the whistle to gain the group’s attention.

Not a game
I want to reinforce the fact that this is a simulation, not a game. You may be tempted to treat this experience as a game, since the “play money” and other “props” may be reminiscent of some Milton Bradley recreational product. But the statistics and situations we use are real, based on real-life experiences of families with low-income.
Poverty is not a game for the over (get current number of people living in poverty) United States citizens whose lifestyles you will simulate. You are going to try to walk a mile in the shoes of those who are poor. You may wish to add poverty statistics for your local area – see the U.S. Census Bureau’s web site at www.census.gov.

Your family unit is struggling, but it does not represent the lower end of the poverty spectrum. Many of your families do not, technically speaking, fall below the poverty line. Rather, they typify the average or vast majority of low-income homes. Likewise, your expenses are based on average amounts, not the lower or upper end of the scale.

Your responsibilities
Be as realistic as possible about your role. Act the age and position of the role you have been given. Remember:

- No healthy teenager likes to sit quietly at home
- A child who has not eaten all day will cry and complain.
- A child is probably not knowledgeable enough to give his or her parents advice on where to seek resources.
- Adults seeking work are often frustrated and irritable.
- Parents can get desperate in their search for food and shelter for their children.

Try to think as a person facing poverty would think.

“Luck of the Draw” cards
Sometime during the month, I (or my co-facilitator) may be visiting your family with a “Luck of the Draw” card. These represent the unexpected hand of fate in all our lives, sometimes bringing good news, sometimes bad. You are expected to follow the instructions on these cards.

Transportation passes
Let me say a word about the transportation passes in your packets. Transportation is one of the most critical considerations for families with low-income. Community resources are seldom neatly clustered within walking distance of your home. You will need bus fare, gas money, or walking time to move about. With the exception of schoolchildren, who do not need transportation passes to get to and from school (we are fortunate enough to have a school bus in our community!), in this simulation, you cannot go anywhere without a transportation pass.

The transportation pass represents the cost of transportation, be it public transport or fuel and maintenance for a private vehicle or the time and effort
it takes to walk from resource to resource in your community (especially during inclement weather or extreme temperatures)!

Each community resource will ask for a pass from you and each person with you before you can be served. Passes can be purchased at the Quik Cash (the currency exchange, as it is called in many states).

Ground Rules
Now a few ground rules for our simulation. When figuring your budget or writing notes, use the blank paper in your packet. PLEASE do not write on any other materials that are not laminated, as we re-use them. When the simulation is over, carefully return all materials in your possession to the family packet.

Your one-hour month is divided into four 15-minute weeks which will be designated by this whistle. When I blow the whistle, please stop whatever you are doing and return to your homes until I tell you to start your next week.

Director’s role
I am the person you may come to see if you have questions about the simulation. No transportation pass is needed to come see me. We thought you’d enjoy getting at least one break!

Community Resources
At the various tables around the room are the community resources available to you. Your family will need to rely on these resources in order to survive the month. Please pay close attention to what each resource does as you don’t want to waste transportation passes going to the wrong place. Also note that week three of the Simulation is a school holiday and there will be no school.

The staffers around the room can call out the title of their business or service and what services they provide—pawnshop, bank, social service office, etc., or you may identify the resources yourself.

Employment
If you are employed full time you will need 5 transportation passes to get to work and you must be at the Employer for 7 minutes to represent your full time job. You must also be at work and ready to go within 3 minutes of the start of the week. Therefore, if you are employed it is recommended that you go straight to work! If you are employed part time you must work for 4 minutes and it will require 3 transportation passes and again you must be at the employer within the first few minutes of the week or you will be considered “late for work”. If you show up with five minutes left to go in the week, you will not get paid for that week!
Terminology
There may be some terms used in the simulation that you are unfamiliar with. EBT stands for Electronic Benefits Transfer card and this is the Social Services Agency’s card for Food Stamp and cash benefits. TANF is Temporary Assistance for Needy Families and this is the federal government’s program to provide cash benefits. If you have an EBT card in your packet it means that you are receiving assistance and the amount of your benefit is written on the back of the card. If you do not have a card, you *may* qualify for benefits (or not), you will have to apply at the Social Services Agency.

Your goals
Keep in mind that your goals during this month are to keep your home secure, feed your family on a regular basis, keep your utilities on, make all necessary loan payments, pay for miscellaneous expenses, and meet unexpected situations. If you work, you must report to your employer each week unless you have received approved leave from the employer. For those families with school-age children, you must see to it that your children are in school. If you are a working parent with preschoolers, you must ensure that those children are cared for while you work.

The debriefing
After the month is up you will have a chance to reflect on and talk about your experience. You will also be introduced to the community resource staffers, who will also make comments on the simulation.

Let us begin.
Are you ready? As I blow this whistle your first week in poverty will begin.

2. THE POVERTY MONTH
During the month you have a number of responsibilities:
A. Keep track of time, blow the whistle, and announce each new week.
B. At the end of each week, ask everyone to quickly return to their homes. These community resources are not open during the weekend. Allow 3 minutes between weeks to allow the resource volunteers time to regroup.
C. If the Quik Cash runs short of money or transportation passes, pick up collected passes and money from other community resources (such as the grocer, bank, pawnshop, etc.) and give them to the Quik Cash operator.
D. Between the weeks you may wish to remind the participants to be sure to feed their families.
E. See that the “Luck of the Draw” cards are distributed. Give each family at least one. You may either shuffle the cards or ask the family to draw one or leave a card on a chair in the family’s “home”. Remind families that they must follow the directions on the cards. (This is a good activity to conduct during the “weekend”).
F. If you are planning to divide into discussion groups during the debriefing, decide on one person (e.g. Albert Aber, Doris Duntley, etc.) from each of the six family profile groupings to facilitate the discussion.

G. If participants or staffers are confused by any of their forms or procedures, you might turn their confusion into an object lesson during the debriefing. Any bureaucracy can be very difficult to understand. All of us can be victims of unclear or incorrect information. We just do the best we can.

H. Remember that week 3 of the Simulation is a school holiday.

3. THE DEBRIEFING PERIOD

After you have blown the whistle on the final week, ask all family members to return quickly to their chairs. Tell the families and the staffers to spend a minute putting all of the materials in their possession back in the packet. Ask someone to quickly collect the packets.

You might begin the debriefing by saying something like this:

Now we will spend some time reflecting and commenting on our month in the State of Poverty. You will be given the opportunity to share both your experiences and your feelings. You will also have a chance to meet and hear from the volunteer staffers.

At this point there are two options for the next segment of the debriefing period. Option A should be used if you have allocated two and a half hours for the simulation experience. Option B, which provides for small-group discussions, requires about three hours to be effective. No matter which option you use, it is helpful to decide ahead of time approximately how much time you can allocate to discussion among the participants. Be sure to allow ample time for dialogue between the participants and the volunteer staffers.

Option A

Here are some suggested questions for your use in leading the debriefing discussion with the entire group. You may choose from among these questions or construct your own based upon the size and composition of the participating group, on what you observed during the simulation, and on the amount of time you have for the discussion.

1. What feelings did you experience during your month in poverty? How did you feel about yourself? Why did you feel that way?

2. What happened to your family? What good things? What bad things?

You might note that among the families represented there are six different family profiles, so that each family has shared a similar experience as several others. You may
wish to ask one representative from each of the six family profiles (A to C, D to F, etc.) to explain their family situation and to respond to these questions.

3. **How did other people respond to your needs? How did you feel about their response?**

4. **Did your attitudes change during the month? If so, how?**

5. **How many families:**

   - Paid the rent or mortgage bill?
   - Kept the utilities on?
   - Bought the required food each week?
   - Made loan payments?
   - Carried out their “Luck of the Draw” cards’ demands?
   - Were evicted?

6. **How many families:**

   - Improved their situation through the month?
   - Are in a worse situation now than at the beginning?

7. **How many people:**

   - Looked for a job?
   - Neglected their children?
   - Cheated, stole money, or did something else illegal?

8. **Did any of you help each other out?**

9. **How did those of you who were children feel about the family’s situation? Why? How do you think poverty affects relationships?**

10. **What insights or conclusions have you come to about the life experience of low-income families?**

11. **What do you think you can do to change the perception of the low income in our community? Maybe a way to exchange ideas?**

   After you have finished this discussion, go on to the next step (introducing volunteer staffers) as it is described at the end of Option B.

**Option B**

Instructions to the participants:

To begin our reflections on our month in poverty, we will meet in groups corresponding to our specific family profile. Among the families represented
Here there were six different family profiles, so your family has shared a similar experience as several others.

You will have approximately 10 minutes (more, if time permits) in which to share your common experiences. We will be passing around some questions which you might use to guide your discussion. Before the simulation, ask someone from your committee to be prepared to distribute the “Small Group Discussion Guide” (located in the debriefing and evaluation materials section of this manual).

At the beginning of your discussion choose one person from your group to describe briefly your family profile – one or two sentences – and to give a two to three minute summary of your group discussion when we reconvene.

When your discussion time is over, I will blow the whistle.

Tell each family profile group where in the room they should gather, and ask the person you have previously designated to facilitate the discussion.

When the family profile groups are finished, ask each representative to report. Remind them of the three-minute maximum.

If time allows, and if the shared group reflections don’t pick up on some of the questions on the Small Group Discussion sheet, you may want to ask those questions again to the entire group.

Option A and Option B both continue as follows:

Next, you may have the volunteer staffers introduce themselves. Up until this point, the participants probably will not have been aware that at least some of the staffers have experienced poverty first-hand.

The staffers have been told that each one will be asked to comment for no more than a couple of minutes on the simulation experience. If they feel comfortable doing so, they may briefly describe their personal situation.

Some of the most powerful moments in simulations such as these can come during this time as low-income volunteers share a little about their own experiences or point out misconceptions or fool-hardy behavior that they observed in the participants. For example, staffers are often amazed at the participants’ overly trusting attitude, not counting money in transactions, failing to ask for receipts, etc. It is, however, important to work with your volunteers so that this segment does not turn into a serious of long sermons or “True Confessions.” Even truly moving stories can lose their power when too many are heard in succession.

Be sure to allow time for dialogue between participants and staffers.
Many participants will be energized by the simulation and eager to do something to combat poverty. However, studies show that if they do not take action within 20 days, they never will. Distribute and briefly discuss the **“What You Can Do” sheet** (located in the debriefing and evaluation materials section of this manual) and be prepared to recruit participants into volunteer roles in your agency by giving them real, immediate opportunities to get involved! You are strongly encouraged to produce a local “What You Can Do” sheet that highlights opportunities to work against poverty in your geographic area or in association with your organization. You will also want to distribute the **U.S. poverty statistics sheet** (suggested format located in the debriefing and evaluation materials section of this manual) and as stated earlier you may wish to add poverty statistics for your local area or state.

Ask participants to remember what they have learned and how they have felt, and to direct those feelings and that learning toward positive action. Encourage them to move beyond charity to working for justice. Charity seeks to remedy today what justice could have prevented yesterday. It is strongly urged that you close by sharing with them information about a specific issue on which their advocacy and support could make a difference for low-income persons – perhaps a particular bill in the U.S. Congress or state legislature, or perhaps some local issue or initiative.

Thank the volunteer staffers and the participants for their time and ask them to take just a few more minutes to complete the **Post Assessment form** (located in the debriefing and evaluation materials section of this manual) emphasizing their input about the CAPS is very important.

*someone from your planning committee should be prepared to distribute all the documents listed above at one time during the debriefing period.

### Health Care Script

Some of you have medical conditions that you have to attend to during the second, third, and fourth week of the simulation. Those who need to see the doctor have an appointment card in the family packets. You will have to have a Transportation Pass to get to your doctor’s appointment. If a child has a doctor’s appointment, the child must be accompanied by an adult. Both you and the child will need a Transportation Pass.

The cost for your appointment will be on the appointment card, and you will be expected to pay your bill at the time of your appointment. The Health Clinic will note whether you come in for your appointment or not. If you miss your appointment you can go the following week, with a Transportation Pass, and hope that you will be able to be seen. Keep in mind no appointment may be available.

Many of you will be given a prescription during your doctor visit and will need to go the Super Center to get the prescription filled. You will also need a Transportation Pass to get your prescription filled. There will be a charge for the prescription. The Super Center will note whether or not you fill your prescription.

(Missouri Community Action Network, 2012; Missouri Community Action Network Website, 2017)

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(The United States Census Bureau, 2017)
## Appendix F: Poverty Rate for States for 2014: Least to Greatest

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<th>Rank</th>
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<th>Poverty Rate (by Household Income)</th>
<th>People in Poverty Household Income (in thousands)</th>
<th>2014 Poverty Rates (includes unrelated children)</th>
<th>Supplemental Poverty Measure (2010–2014 average) (Geographically Adjusted)</th>
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(Wikipedia Poverty by State, 2017)
Appendix G: Community Action Poverty Simulation Room Layout for Community Resources and Families

(Missouri Community Action Network, 2012; Missouri Community Action Network Website, 2017)
Appendix H: Family Roles

A, B, C Family Profiles: Recently unemployed head of household, daughter is pregnant by son in DEF families.

ABER 731 Windermere
Name Age Social Security Number
Albert 42 234-13-6557
Ann 39 234-12-6557
Alice 16 234-14-6557
Al, Jr. 10 234-15-6557
Andy 8 234-09-6557

BOLING 206 Westmoreland
Ben 42 455-24-0987
Betty 39 455-23-0987
Barbara 16 455-25-0987
Bart 10 455-26-0987
Brian 8 455-27-0987

CHEN 321 Portland
Charles 42 345-66-9987
Cindy 39 345-67-9987
Connie 16 345-65-9987
Carl 10 345-68-9987
Chad 8 345-69-9987

D, E, F Family Profiles: Recently abandoned head of household applying for Social Services and Employment, son has gotten ABC family’s 16 year old daughter pregnant.

DUNTLEY 3643 21st St. East
Name Age Social Security Number
Doris 34 224-35-0876
Dan 17 224-34-0876
Diana 14 224-33-0876

EPPERMAN 5092 39th St. West
Emily 34 339-05-3454
Ed 17 339-04-3454
Ellen 14 339-03-3454

FUENTES 6319 15th St. North
Felicia 34 235-88-9765
Franco 17 235-89-9765
Francisca 14 235-87-9765
G, H Family Profiles: Man is living with his girlfriend and her child from a previous relationship in the Interfaith Services homeless shelter.

GUTEN/GAROFALO Shelter/ 102 Flora St., Lot 24
Name Age Social Security Number
Glen Guten 25 342-22-7650
Gayle Garofalo 19 342-21-7650
Gerald Garofalo 1 342-23-7650

HANLOW/HARPER Shelter/ 108 Pine St., Lot 32
Harry Hanlow 25 213-44-7890
Helen Harper 19 213-45-7890
Harvey Harper 1 213-43-7890

I, J Family Profiles: Man is living with his girlfriend and her child from a previous relationship.

ISMA/ISAACSON 429 Pearl St., Lot 4
Name Age Social Security Number
Isaiah Isma 25 453-67-8909
Iris Isaacson 19 453-67-8908
Ian Isaacson 1 453-67-8907

JOLLY/JACOBI 863 Apple St., Lot 4
Jack Jolly 25 457-76-1309
Joyce Jacobi 19 457-76-1209
Josh Jacobi 1 457-76-1109

K, L, M, N Family Profiles: Parents are employed and receive food stamps, they have one daughter and an elderly parent who must live with them due to health issues.

KNOWLES/KAMINSKI 734 Orange St.
Name Age Social Security Number
Kris Knowles 36 334-65-0987
Kellie Knowles 36 334-66-0987
Katlin Knowles 15 334-67-0987
Kate Kaminski 57

LOCKE/LOUIS 7345 Walnut St.
Larry Locke 36 501-12-8743
Linda Locke 36 500-12-8743
Lily Locke 15 502-12-8743
Lester Louis 57

MORRIS/MOORE 8345 Seventh St.
Miles Morris 36 543-98-0711
Melinda Morris 36 543-99-0711
Mandy Morris 15 543-97-0711
Margaret Moore 57 543-96-0711
NATTIN/NETTER 5214 First St.
Nolan Nattin 36 322-10-9854
Nancy Nattin 36 322-13-9854
Nola Nattin 15 322-12-9854
Ned Netter 57 322-11-9854

O, P Family Profiles: Head of household is incarcerated, 21-year old son is taking care of his siblings while trying to attend college.

OLSON 9345 Sixth St.
Name Age Social Security Number
Otto 21 253-77-6641
Olivia 13 253-77-6641
Opal 13 253-77-6641
Oscar 3 253-77-6641

PEREZ 3456 First St.
Pablo 21 504-88-5435
Patricia 13 504-89-5435
Penelope 13 504-89-5435
Pedro 3 504-90-5435

Q, R Family Profiles: Single father is taking care of his young son and his daughter. His daughter has a one year old child and is attending college.

QUANT 102 Seventh St.
Name Age Social Security Number
Quentin 40 675-45-9889
Kayley 20 675-48-9889
Clarice 1 675-47-9889
Kirby 9 675-46-9889

ROGERS 701 Eighth St.
Robert 40 534-21-1721
Rita 20 534-22-1721
Ryan 1 534-23-1721
Roland 9 534-24-1721

S, T Family Profiles: Single elderly adults are living in a homeless shelter

SMITH Shelter/ 106 E. 24th St.
Name Age Social Security Number
Stella 85 132-65-7788

TISKIT Shelter/ 15 Main St.
Ted 85 349-79-3542

U, V Family Profiles: Single elderly adults are living in a homeless shelter
THE EFFECTS OF A POVERTY SIMULATION ON IMMEDIATE

USSAR 144 Dunhill St.
Name Age Social Security Number
Eunice 85 199-91-6537

VIMMER 1926 State St.
Vince 85 345-90-8084

W, X, Y, Z Family Profiles: Grandparents, one with limited mobility and one with language issues are raising their two grandchildren.

WISCOTT 14 Grand Ave.
Warren 52 892-44-3433
Winona 50 892-45-3433
Whitney 9 892-46-3433
William 7 892-47-3433

XANTHOS 406 Peacock St.
Anthony 52 294-66-4646
Zelda 50 294-55-4646
Zoe 9 294-77-4646
Xerxes 7 294-88-4646

YARROW 1624 Murphy St.
Yuri 52 676-78-9114
Yomelda 50 676-79-9114
Yolanda 9 676-80-9114
Yohan 7 676-81-9114

ZUPPOT 1924 Felix St.
Zeke 52 722-27-5398
Zola 50 722-27-5498
Zenobia 9 722-27-5598
Xander 7 722-27-5698

(Missouri Community Action Network, 2012; Missouri Community Action Network Website, 2017)
Appendix I: “Being Poor”

Being poor is knowing exactly how much everything costs.

Being poor is getting angry at your kids for asking for all the crap they see on TV.

Being poor is having to keep buying $800 cars because they’re what you can afford, and then having the cars break down on you, because there’s not an $800 car in America that’s worth a damn.

Being poor is hoping the toothache goes away.

Being poor is knowing your kid goes to friends’ houses but never has friends over to yours.

Being poor is going to the restroom before you get in the school lunch line so your friends will be ahead of you and won’t hear you say “I get free lunch” when you get to the cashier.

Being poor is living next to the freeway.

Being poor is coming back to the car with your children in the back seat, clutching that box of Raisin Bran you just bought and trying to think of a way to make the kids understand that the box has to last.

Being poor is wondering if your well-off sibling is lying when he says he doesn’t mind when you ask for help.

Being poor is off-brand toys.

Being poor is a heater in only one room of the house.

Being poor is knowing you can’t leave $5 on the coffee table when your friends are around.

Being poor is hoping your kids don’t have a growth spurt.

Being poor is stealing meat from the store, frying it up before your mom gets home and then telling her she doesn’t have make dinner tonight because you’re not hungry anyway.

Being poor is Goodwill underwear.

Being poor is not enough space for everyone who lives with you.

Being poor is feeling the glued soles tear off your supermarket shoes when you run around the playground.

Being poor is your kid’s school being the one with the 15-year-old textbooks and no air conditioning.
Being poor is thinking $8 an hour is a really good deal.

Being poor is relying on people who don’t give a damn about you.

Being poor is an overnight shift under fluorescent lights.

Being poor is finding the letter your mom wrote to your dad, begging him for the child support.

Being poor is a bathtub you have to empty into the toilet.

Being poor is stopping the car to take a lamp from a stranger’s trash.

Being poor is making lunch for your kid when a cockroach skitters over the bread, and you looking over to see if your kid saw.

Being poor is believing a GED actually makes a goddamned difference.

Being poor is people angry at you just for walking around in the mall.

Being poor is not taking the job because you can’t find someone you trust to watch your kids.

Being poor is the police busting into the apartment right next to yours.

Being poor is not talking to that girl because she’ll probably just laugh at your clothes.

Being poor is hoping you’ll be invited for dinner.

Being poor is a sidewalk with lots of brown glass on it.

Being poor is people thinking they know something about you by the way you talk.

Being poor is needing that 35-cent raise.

Being poor is your kid’s teacher assuming you don’t have any books in your home.

Being poor is six dollars short on the utility bill and no way to close the gap.

Being poor is crying when you drop the mac and cheese on the floor.

Being poor is knowing you work as hard as anyone, anywhere.

Being poor is people surprised to discover you’re not actually stupid.

Being poor is people surprised to discover you’re not actually lazy.

Being poor is a six-hour wait in an emergency room with a sick child asleep on your lap.
Being poor is never buying anything someone else hasn’t bought first.

Being poor is picking the 10 cent ramen instead of the 12 cent ramen because that’s two extra packages for every dollar.

Being poor is having to live with choices you didn’t know you made when you were 14 years old.

Being poor is getting tired of people wanting you to be grateful.

Being poor is knowing you’re being judged.

Being poor is a box of crayons and a $1 coloring book from a community center Santa.

Being poor is checking the coin return slot of every soda machine you go by.

Being poor is deciding that it’s all right to base a relationship on shelter.

Being poor is knowing you really shouldn’t spend that buck on a Lotto ticket.

Being poor is hoping the register lady will spot you the dime.

Being poor wears you out.

Being poor is feeling helpless when your child makes the same mistakes you did, and won’t listen to you beg them against doing so.

Being poor is a cough that doesn’t go away.

Being poor is making sure you don’t spill on the couch, just in case you have to give it back before the lease is up.

Being poor is a $200 paycheck advance from a company that takes $250 when the paycheck comes in.

Being poor is four years of night classes for an Associates of Art degree.

Being poor is a lumpy futon bed.

Being poor is knowing where the shelter is.

Being poor is people who have never been poor wondering why you choose to be so.

Being poor is knowing how hard it is to stop being poor.

Being poor is seeing how few options you have.
Being poor is running in place.

Being poor is people wondering why you didn’t leave.

(Scalzi, 2005)
Appendix J: Basic Empathy Scale

Please answer each of the following questions on a scale of 1 – 5

1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

1. My friends’ emotions don’t affect me much.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

2. After being with a friend who is sad about something, I usually feel sad.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

3. I can understand my friend’s happiness when she/he does well at something.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

4. I get frightened when I watch character in a good scary movie.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

5. I get caught up in other people’s feelings easily.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

6. I find it hard to know when my friends are frightened.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

7. I don’t become sad when I see other people crying.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree

8. Other people’s feelings don’t bother me at all.
   1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree
9. When someone is feeling ‘down’ I can usually understand how they feel.
   1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
   5 = Strongly Agree

10. I can usually work out when my friends are scared.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

11. I often become sad when watching sad things on TV or in films.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

12. I can often understand how people are feeling even before they tell me.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

13. Seeing a person who has been angered has no effect on my feelings.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

14. I can usually work out when people are cheerful.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

15. I tend to feel scared when I am with friends who are afraid.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

16. I can usually realize quickly when a friend is angry.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree

17. I often get swept up in my friends’ feelings.
    1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,
    5 = Strongly Agree
18. My friend’s unhappiness doesn’t make me feel anything. 
   1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,  
   5 = Strongly Agree

19. I am not usually aware of my friends’ feelings. 
   1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,  
   5 = Strongly Agree

20. I have trouble figuring out when my friends are happy. 
   1 = Strongly Disagree,  2 = Disagree,  3 = Neither Agree nor Disagree,  4 = Agree,  
   5 = Strongly Agree

(Carre et al., 2013, p. 690)
Appendix K: Delayed Post Empathy Survey Through SurveyMonkey®

<table>
<thead>
<tr>
<th>Organizations</th>
<th>Date of Simulation</th>
<th>1st Survey</th>
<th>1st Reminder</th>
<th>2nd Reminder</th>
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<th>Thank You</th>
<th>Total Responses</th>
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<td>10/25/16</td>
<td>11/4/16</td>
<td>11/11/16</td>
<td>12/4/16</td>
<td>27/41 Responses (3 No Delivery) 66% Response Rate</td>
</tr>
<tr>
<td></td>
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<td>6/28/16</td>
<td>10/27/16</td>
<td>11/4/16</td>
<td>11/22/16</td>
<td>12/14/16</td>
<td>12/14/16</td>
<td>27/79 Responses (9 No Delivery) 39% Response Rate</td>
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<td>12/14/16</td>
<td>1/10/17</td>
<td>1/25/17</td>
<td>1/25/17</td>
<td>20/41 Responses (1 No Delivery) 50% Response Rate</td>
</tr>
<tr>
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<td>20 Sent</td>
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</tr>
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<td>1/25/17</td>
<td>2/3/17</td>
<td>2/14/17</td>
<td>2/14/17</td>
<td>20/52 Responses (8 No Delivery) 47% Response Rate</td>
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<td>30 Sent</td>
<td>25 Sent</td>
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<td>2/3/17</td>
<td>2/14/17</td>
<td>2/14/17</td>
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<td>3/2/17</td>
<td>3/2/17</td>
<td>25/52 Responses (0 No Delivery) 48% Response Rate</td>
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<td>3/13/17</td>
<td>3/13/17</td>
<td>20/46 Responses (2 No Delivery) 47% Response Rate</td>
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<td></td>
<td></td>
<td>46 Sent</td>
<td>35 Sent</td>
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<td></td>
<td>20 Sent</td>
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## Site #10

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<th>Date 6</th>
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</thead>
<tbody>
<tr>
<td>52 Sent</td>
<td>36 Sent</td>
<td>28 Sent</td>
<td>31 Sent</td>
<td>31/51 Responses (0 No Delivery)</td>
<td>61% Response Rate</td>
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## Site #11

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<tr>
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<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
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<th>Date 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>99 Sent</td>
<td>75 Sent</td>
<td>58 Sent</td>
<td>52 Sent</td>
<td>52/99 Responses (1 No Delivery)</td>
<td>53% Response Rate</td>
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Appendix L: Script for SurveyMonkey® Surveys

1st Message sent

Dear Poverty Simulation Participants,

You participated in the Poverty Simulation facilitated by Primary Investigator at (LOCATION) on (DATE). This is a short follow-up to that experience. Your feedback is very important and will help provide more information so we can improve the experience and continue to benefit the community.

Thank you for participating in the Poverty Simulation and also for your valuable support of this study.

Best Regards,
Ph.D. Student

2nd Message – 1st Reminder

Dear Poverty Simulation Participants,

We recently contacted you about the follow-up for the Poverty Simulation which was facilitated by Primary Investigator at (LOCATION) on (DATE). We have not received your responses yet, and they are very important. We would really appreciate your feedback so as to improve the experience and continue to benefit the community.

Thank you for participating in the Poverty Simulation and also for your valuable support of this study.

Best Regards,
Ph.D. Student

3rd Message – 2nd Reminder

Dear Poverty Simulation Participants,

We recently contacted you about the follow-up for the Poverty Simulation which was facilitated by Primary Investigator at (LOCATION) on (DATE), but have not yet received your responses. I will be closing the survey next week and very much value your input. We would really appreciate your feedback so as to improve the experience and continue to benefit the community.

Thank you for participating in the Poverty Simulation and also for your valuable support of this study.
Best Regards,
Ph.D. Student

Closing Message

Dear Poverty Simulation Participants,

The survey for the Poverty Simulation is currently closed. Please contact me at Ph.D.Student@gmail.com for further assistance.

Thank you.

Best Regards,
Ph.D. Student

Thank You

Dear Poverty Simulation Participants,

Thank you for taking our recent Poverty Simulation follow-up survey. We appreciate your valuable feedback as we move forward to improve this experience and continue to benefit the community.

Best Regards,
Ph.D. Student
Appendix M: Debriefing Questions

1. As you think about the simulation you just completed, what were the surprises or the “Ahhhh” moments?

2. In a word or a few words, what are your emotional reactions to this experience?

3. What were your family’s priorities as you moved through the four weeks of the simulation?

4. What will stick with you after this simulation?

5. What will you commit to in your thinking and actions from now on?

6. Should all teachers/community leaders go through this simulation? Why or why not?

(Missouri Community Action Network, 2012; Missouri Community Action Network Website, 2017)
Appendix N: Additional Descriptive Data for Reason for Participation

**Research Question** - Does reason for participation affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of reason for participation, voluntary/in-voluntary, are equal to each other.

\[ H_0: \mu_{\text{voluntary}} = \mu_{\text{in-voluntary}} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of reason for participation, voluntary/in-voluntary, are not equal to each other.

\[ H_a: \mu_{\text{voluntary}} \neq \mu_{\text{in-voluntary}} \]

(See Figure N1 and N2 additional descriptive data for participation in poverty simulation was voluntary/in-voluntary.)
Figure N1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Participation Was Voluntary/In-voluntary.

The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups of the independent variable participation was voluntary or in-voluntary. It is necessary to keep in mind the scale is small for the difference between the two subgroups. Descriptive data for voluntary participation in the poverty simulation (M = .69, SD = 4.35) and in-voluntary participation in the poverty simulation (M = 1.13, SD = 3.39) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure N2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Participation was Voluntary or In-voluntary

<table>
<thead>
<tr>
<th></th>
<th>Pre-Survey</th>
<th>Immediate Post-Survey</th>
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<tr>
<td><strong>Voluntary Participation</strong></td>
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</tr>
<tr>
<td>M</td>
<td>60.09</td>
<td>60.80</td>
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<tr>
<td>SD</td>
<td>4.22</td>
<td>4.52</td>
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<tr>
<td><strong>In-voluntary Participation</strong></td>
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<td></td>
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<tr>
<td>M</td>
<td>60.57</td>
<td>61.96</td>
</tr>
<tr>
<td>SD</td>
<td>3.90</td>
<td>3.49</td>
</tr>
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</table>

Figure N2. The line graph displays the mean scores for pre-survey and the immediate post-survey for each subgroup of this independent variable participation was voluntary or in-voluntary. It is necessary to keep in mind the scale is small. Note. M = Mean Difference, SD = Standard Deviation.
Appendix O: Additional Descriptive Data for Job Does/Does Not Entail Working With Those in Poverty

**Research Question** - Does job entail working with those in poverty affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of job entails working with those in poverty, yes/no, are equal to each other.

\[ H_0: \mu_{yes} = \mu_{no} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of job entails working with those in poverty, yes/no, are not equal to each other.

\[ H_a: \mu_{yes} \neq \mu_{no} \]

(See Figure O1 and Figure O2 additional descriptive data for job does/does not entail working with those in poverty.)
Figure O1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Job Does/Does Not Entail Working With Those in Poverty

The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups of the independent variable job does/does not entail working with those in poverty. It is necessary to keep in mind the scale is small for the difference between the two subgroups. Descriptive data for working with those in poverty (M = .68, SD = 4.39) and not working with those in poverty (M = 1.06, SD = 3.78) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure O2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Job Does/Does Not Entail Working With Those in Poverty

<table>
<thead>
<tr>
<th>Does Work with Those in Poverty</th>
<th>Pre-Survey</th>
<th>Immediate Post-Survey</th>
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<td>M</td>
<td>60.14</td>
<td>60.87</td>
</tr>
<tr>
<td>SD</td>
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<td>4.39</td>
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<tr>
<td>Does Not Work with Those in Poverty</td>
<td>60.08</td>
<td>61.30</td>
</tr>
<tr>
<td>SD</td>
<td>4.03</td>
<td>4.32</td>
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*Figure O2.* The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of this independent variable job does/does not entail working with those in poverty. Note. M = Mean Difference, SD = Standard Deviation.
Appendix P: Additional Descriptive Data for Does/Does Not Volunteer With Those in Poverty

**Research Question** - Does volunteering with those in poverty affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of volunteering with those in poverty, yes/no, are equal to each other.

$H_0: \mu_{yes} = \mu_{no}$

The population mean difference scores between the pre- and immediate post-surveys of the two levels of volunteering with those in poverty, yes/no, are not equal to each other.

$H_a: \mu_{yes} \neq \mu_{no}$

(See Figure P1 and P2 additional descriptive data for does/does not volunteer with those in poverty.)
Figure P1. The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups of the independent variable does/does not volunteer with those in poverty. It is necessary to keep in mind the scale is small for the difference between the two subgroups. Descriptive data for volunteering with those in poverty (M = .69, SD = 4.04) and not volunteering with those in poverty (M = 1.15, SD = 5.24) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure P2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Job Does/Does Not Volunteer With Those in Poverty

<table>
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<th></th>
<th>Pre-Survey</th>
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<td></td>
</tr>
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<tr>
<td><strong>Does Not Volunteer with Those in Poverty</strong></td>
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*Figure P2.* The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of this independent variable does/does not volunteer with those in poverty. Note. M = Mean Difference, SD = Standard Deviation.
Appendix Q: Additional Descriptive Data for Did/Did Not Experience Scarcity of Necessary Resources Growing Up

Research Question - Does scarcity of necessary resources growing up affect the immediate empathetic attitudes of the poverty simulation participants?

The population mean difference scores between the pre- and immediate post-surveys of the two levels of experiencing scarcity of necessary resources growing up, yes/no, are equal to each other.

\[ H_0: \mu_{yes} = \mu_{no} \]

The population mean difference scores between the pre- and immediate post-surveys of the two levels of experiencing scarcity of necessary resources growing up, yes/no, are not equal to each other.

\[ H_a: \mu_{yes} \neq \mu_{no} \]

(See Figure Q1 and Figure Q2 additional descriptive data for did/did not experience scarcity growing up.)
Figure Q1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Did/Did Experience Scarcity Growing Up

Figure Q1. The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups did/did not experience scarcity growing up. It is necessary to keep in mind the scale is small for the difference between the two subgroups. Descriptive data for did experience scarcity of necessary resources growing up (M = .98, SD = 4.81) and not experience scarcity of necessary resources growing up (M = .65, SD = 3.82) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure Q2. The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of this independent variable did/did not experience scarcity growing up. Note. M = Mean Difference, SD = Standard Deviation.
Appendix R: Additional Descriptive Data for Gender

**Research Question** – Does gender affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the three levels of gender indicate homogeneity of variance was met, $F(2, 636) = .21, \rho = .809$ (at $\rho > .05$), passing Levene’s Test. All three levels of gender, male, female, and other, were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the three levels of gender, male/female/other, are equal to each other.

$$H_0: \mu_{\text{male}} = \mu_{\text{female}} = \mu_{\text{other}}$$

The population mean difference scores between the pre- and immediate post-surveys of the three levels of gender, male/female/other, are not equal to each other.

$$H_a: \text{Not all } \mu \text{ are equal}$$

(See Figure R1 and Figure R2 additional descriptive data for gender.)
Figure R1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Gender

<table>
<thead>
<tr>
<th>Gender of participant</th>
<th>Estimated Marginal Means of Immediate Post-Survey - Pre-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0.86 (SD = 4.92)</td>
</tr>
<tr>
<td>Female</td>
<td>0.80 (SD = 4.06)</td>
</tr>
<tr>
<td>Other</td>
<td>-3.00 (SD = 5.66)</td>
</tr>
</tbody>
</table>

Note. M = Mean Difference, SD = Standard Deviation.
Figure R2. The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of gender: male, female, and other. Note. M = Mean Difference, SD = Standard Deviation.
Appendix S: Additional Descriptive Data for Race

Research Question - Does race affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the five levels of race indicate homogeneity of variance was not met, $F(4, 631) = 9.64$, $\rho < .001$ (at $\rho > .05$), failing to pass Levene’s Test. The results of Levene’s Test for Equality of Variance for four of the five levels of race, omitting Asian, indicate homogeneity of variance was met, $F(3, 623) = .88$, $\rho = .451$ (at $\rho \leq .05$), passing Levene’s Test. Four of the five levels of race, African-American, Caucasian, Hispanic, and Other, were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the four levels of race, African American/Caucasian/Hispanic/Other, are equal to each other.

$H_0: \mu_{\text{African American}} = \mu_{\text{Caucasian}} = \mu_{\text{Hispanic}} = \mu_{\text{Other}}$

The population mean difference scores between the pre- and immediate post-surveys of the five levels of race, African American/Caucasian/Hispanic/Other, are not equal to each other.

$H_a: \text{Not all } \mu \text{ are equal}$

(See Figure S1 and Figure S2 additional descriptive data for race.)
Figure S1. The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups for race. It is necessary to keep in mind the scale is small for the difference between the four subgroups, that data for Asian was not analyzed because it did not meet homogeneity of variance, and that the subgroups Hispanic and other had a smaller number of participants. Descriptive data for African-American (M = 1.83, SD = 4.41), Caucasian (M = .53, SD = 3.80), Hispanic (M = 1.63, SD = 4.69) and other (M = 2.10, SD = 3.54) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure S2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Race

<table>
<thead>
<tr>
<th>Race of participant</th>
<th>Pre-Survey</th>
<th>Immediate Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
<td>M 59.56</td>
<td>61.09</td>
</tr>
<tr>
<td></td>
<td>SD 4.88</td>
<td>4.98</td>
</tr>
<tr>
<td>Caucasian</td>
<td>M 60.30</td>
<td>60.98</td>
</tr>
<tr>
<td></td>
<td>SD 3.89</td>
<td>4.02</td>
</tr>
<tr>
<td>Hispanic</td>
<td>M 60.50</td>
<td>57.50</td>
</tr>
<tr>
<td></td>
<td>SD 4.95</td>
<td>.70</td>
</tr>
<tr>
<td>Other</td>
<td>M 60.50</td>
<td>57.50</td>
</tr>
<tr>
<td></td>
<td>SD 4.95</td>
<td>.70</td>
</tr>
</tbody>
</table>

Figure S2. The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of race except Asian which are: African-American, Caucasian, Hispanic, and Other. Note. M = Mean Difference, SD = Standard Deviation.
Appendix T: Additional Descriptive Data for Age

**Research Question** - Does age affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the five levels of age indicate homogeneity of variance was met, $F(4, 632) = 1.73, \rho = .142$ (at $\rho > .05$), passing Levene’s Test. All five levels of age, 18-25 years, 25-35 years, 35-45 years, 45-55 years, and 55 years or older, were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are equal to each other.

$$H_0: \mu_{18-25\ years} = \mu_{25-35\ years} = \mu_{35-45\ years} = \mu_{45-55\ years} = \mu_{55\ years\ and\ older}$$

At least two of the population mean difference scores between the pre- and immediate post-surveys of the five levels of age, 18-25 years/25-35 years/35-45 years/45-55 years/55 years or older, are not equal to each other.

$$H_a: Not\ all\ \mu\ are\ equal$$

(See Figure T1 and Figure T2 additional descriptive data for age.)
Figure T1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Age

<table>
<thead>
<tr>
<th>Age Range of Participant</th>
<th>Estimated Marginal Means</th>
<th>Error bars +/- 1SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 25 years</td>
<td>1.40 (SD = 3.21)</td>
<td></td>
</tr>
<tr>
<td>25 - 35 years</td>
<td>0.28 (SD = 3.81)</td>
<td></td>
</tr>
<tr>
<td>35 - 45 years</td>
<td>1.21 (SD = 4.12)</td>
<td></td>
</tr>
<tr>
<td>45 - 55 years</td>
<td>0.41 (SD = 5.10)</td>
<td></td>
</tr>
<tr>
<td>55 years and older</td>
<td>1.19 (SD = 4.14)</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* M = Mean Difference, SD = Standard Deviation.
Figure T2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Age

<table>
<thead>
<tr>
<th>Age Range of participant</th>
<th>Pre-Survey</th>
<th>Immediate Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>51.16</td>
<td>62.67</td>
</tr>
<tr>
<td>SD</td>
<td>4.34</td>
<td>4.14</td>
</tr>
<tr>
<td>25-35 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>61.14</td>
<td>61.47</td>
</tr>
<tr>
<td>SD</td>
<td>3.361</td>
<td>3.76</td>
</tr>
<tr>
<td>35-45 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>59.65</td>
<td>60.71</td>
</tr>
<tr>
<td>SD</td>
<td>3.49</td>
<td>3.97</td>
</tr>
<tr>
<td>45-55 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>59.97</td>
<td>60.56</td>
</tr>
<tr>
<td>SD</td>
<td>4.10</td>
<td>5.61</td>
</tr>
<tr>
<td>55 years and older</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>58.54</td>
<td>59.80</td>
</tr>
<tr>
<td>SD</td>
<td>4.69</td>
<td>4.25</td>
</tr>
</tbody>
</table>

Figure S2. The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of age: 18-25 years, 25-35 years, 35-45 years, 45-55 years, and 55 years and older. Note. M = Mean Difference, SD = Standard Deviation.
Appendix U: Additional Descriptive Data for Income

**Research Question** - Does income affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the five levels of income indicate homogeneity of variance was met, $F(4, 628) = .21, \rho = .932$ (at $\rho > .05$), passing Levene’s Test. All five levels of income, student, low-middle, middle, upper-middle, and upper were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the five levels of income, student/low-middle/middle/upper-middle/upper are equal to each other.

$$H_0: \mu_{\text{student}} = \mu_{\text{low/middle}} = \mu_{\text{middle}} = \mu_{\text{upper/middle}} = \mu_{\text{upper}}$$

At least two of the population mean difference scores between the pre- and immediate post-surveys of the five levels of income, student/low-middle/middle/upper-middle, and upper are not equal to each other.

$$H_a: \text{Not all } \mu \text{ are equal}$$

(See Figure U1 and Figure U2 additional descriptive data for income.)
Figure U1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Income

Estimated Marginal Means of Immediate Post-Survey - Pre-Survey

<table>
<thead>
<tr>
<th>Age Range of participant</th>
<th>Estimated Marginal Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 - 25 years</td>
<td>0.50</td>
</tr>
<tr>
<td>25 - 35 years</td>
<td>1.50</td>
</tr>
<tr>
<td>35 - 45 years</td>
<td>1.00</td>
</tr>
<tr>
<td>45 - 55 years</td>
<td>0.00</td>
</tr>
<tr>
<td>55 years and older</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Figure U1. The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups for income. It is necessary to keep in mind the scale is small for the difference between the five subgroups and that the upper subgroup had a smaller number of participants. Descriptive data for student (M = 1.30, SD = 4.01), low/middle (M = .89, SD = 5.99), middle (M = .74, SD = 3.96), upper/middle (M = .43, SD = 3.95), and upper (M = 2.25, SD = 3.96) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure U2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Income

<table>
<thead>
<tr>
<th>Income Level</th>
<th>Pre-Survey</th>
<th>Immediate Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>60.95</td>
<td>62.42</td>
</tr>
<tr>
<td>SD</td>
<td>4.51</td>
<td>4.34</td>
</tr>
<tr>
<td><strong>Lower</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>61.17</td>
<td>62.03</td>
</tr>
<tr>
<td>SD</td>
<td>4.34</td>
<td>6.33</td>
</tr>
<tr>
<td><strong>Middle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>59.99</td>
<td>60.84</td>
</tr>
<tr>
<td>SD</td>
<td>3.90</td>
<td>3.89</td>
</tr>
<tr>
<td><strong>Upper/Middle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>59.74</td>
<td>60.18</td>
</tr>
<tr>
<td>SD</td>
<td>4.05</td>
<td>4.06</td>
</tr>
<tr>
<td><strong>Upper</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>58.86</td>
<td>60.75</td>
</tr>
<tr>
<td>SD</td>
<td>2.85</td>
<td>3.65</td>
</tr>
</tbody>
</table>

*Figure U2.* The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup of income: student, low/middle, middle, upper/middle, and upper. Note. M = Mean Difference, SD = Standard Deviation.
Appendix V: Additional Descriptive Data for Role in the Poverty Simulation

**Research Question** - Does the role in the poverty simulation affect the immediate empathetic attitudes of the poverty simulation participants? The results of Levene’s Test for Equality of Variance for the four levels of role in the poverty simulation indicate homogeneity of variance was met, $F(3, 633) = .34, \rho = .799$ (at $\rho > .05$), passing Levene’s Test. All four levels of role in the poverty simulation, organization, family adult, family child 1-3, and family child 4-18, were analyzed.

The population mean difference scores between the pre- and immediate post-surveys of the four levels of role in the poverty simulation, organization/family adult/ family child 1-3/family child 4-18 are equal to each other.

$$H_0: \mu_{\text{organization}} = \mu_{\text{family - adult}} = \mu_{\text{family - child 1-3}} = \mu_{\text{family - child 4-18}}$$

At least two of the population mean difference scores between the pre- and immediate post-surveys of the four levels of role in the poverty simulation, organization/family adult/family child 1-3/family child 4-18 are not equal to each other.

$$H_a: \text{Not all } \mu \text{ are equal}$$

(See Figure V1 and Figure V2 for additional descriptive data for role in the poverty simulation.)
Figure V1. Descriptive Data for Estimated Marginal Means for the Mean Difference Between the Immediate Post-Survey and the Pre-survey for Role in the Poverty Simulation

*Figure V1.* The line graph displays the mean difference in the immediate post-survey and the pre-survey for the subgroups for role in the poverty simulation. It is necessary to keep in mind the scale is small for the difference between the four subgroups and that the subgroup family - child 1-3 had a small number of participants. Descriptive data for organization (M = 1.06, SD = 4.91), family adult (M = .70, SD = 3.98), family child 1-3 (M = -3.00, SD = 2.00), and family child 4-18 (M = .82, SD = 4.15) (see Table 4). Note. M = Mean Difference, SD = Standard Deviation.
Figure V2. Descriptive Data for Estimated Marginal Mean Scores for the Pre-Survey and the Immediate Post-Survey for Role in the Poverty Simulation

<table>
<thead>
<tr>
<th>Role in poverty simulation</th>
<th>Pre-Survey</th>
<th>Immediate Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 60.21</td>
<td>61.08</td>
<td></td>
</tr>
<tr>
<td>SD 4.03</td>
<td>5.30</td>
<td></td>
</tr>
<tr>
<td><strong>Family – Adult</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 60.07</td>
<td>60.80</td>
<td></td>
</tr>
<tr>
<td>SD 4.17</td>
<td>4.53</td>
<td></td>
</tr>
<tr>
<td><strong>Family – Child 1-3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 61.50</td>
<td>59.00</td>
<td></td>
</tr>
<tr>
<td>SD 3.00</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td><strong>Family – Child 4-18</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M 60.17</td>
<td>60.90</td>
<td></td>
</tr>
<tr>
<td>SD 4.27</td>
<td>3.76</td>
<td></td>
</tr>
</tbody>
</table>

Figure U2. The line graph displays the mean scores for the pre-survey and the immediate post-survey for each subgroup role in the poverty simulation: organization, family adult, family child 1-3, and family child 4-18. Note. M = Mean Difference, SD = Standard Deviation.