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Heather Staples

*University of the Incarnate Word*, hlstaples@gmail.com

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THE GENERATIONAL DIVIDE: GENERATIONAL DIFFERENCES  
IN PSYCHOLOGICAL CAPITAL

by

HEATHER LYNN STAPLES

A DISSERTATION

Presented to the faculty of the University of the Incarnate Word  
in partial fulfillment of the requirements  
for the degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF THE INCARNATE WORD

December 2014

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Heather L. Staples

## THE GENERATIONAL DIVIDE: GENERATIONAL DIFFERENCES IN PSYCHOLOGICAL CAPITAL

Heather Lynn Staples

University of the Incarnate Word, 2014

Human resource development has customarily focused on social and human capital; however, an innovative new theory within positive organizational behavior focuses on psychological resources. The purpose of this research was to examine the differences across generations on dimensions of psychological resources using the core construct psychological capital. Using a quantitative survey research approach, this study focused on the differences among the three largest generations in the current workforce: Baby Boomers, Generation X, and Generation Y.

The independent variable, generations, was defined through a self-identified connection with age and significant events. The dependent variable, psychological capital (PsyCap), was defined as a numeric score representing respondent's psychological state of development determined through the PCQ-24 instrument. The sample for this study consisted of 347 participants obtained through personal and professional contacts.

The results of the ANOVA suggested there is a statistically significant difference among the generations. Specifically, Baby Boomers had higher PsyCap scores than the younger generations. There was also evidence suggesting a difference among generations in three of the four subscales: both Baby Boomers and Generation Y were higher than Generation X in PsyCap efficacy; Baby Boomers were highest, Generation X were in the middle, and Generation Y were the lowest in PsyCap resiliency; and Baby Boomers were higher than both Generation X and

Generation Y in PsyCap optimism. The three generations showed equivalent levels of hopefulness.

Evidence of differences imply that generational consideration be given in strategies to maximize job satisfaction, commitment, and retention for different generations, specifically training to increase PsyCap among employees within the younger generations. This finding also contributed to the growing field of research on both generations and PsyCap.

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## **Chapter I: Introduction to the Generational Divide**

For the first time in the history of the United States workforce, five distinct generations are working side by side. The 145.2 million workers in the U.S. civilian workforce spanning these distinct generations include the oldest generation, known as Traditionalists, represents approximately 5% of the workforce; the succeeding generation, known as the Baby Boomers, accounts for approximately 16% of civilian workers; the largest generation in the current labor force, known as Generation X, includes approximately 44% of personnel; the second largest generation, also known as Generation Y, consists of approximately 31% of the workforce; the final group is our youngest of the generations, Generation Z, who make up approximately 3% of the civilian workforce (U.S. Department of Labor, 2014a). Each generation offers benefits and challenges to the workforce. Although they may not always agree, it is essential for these cohorts to work in harmony. According to Lancaster and Stillman (2002), generational misunderstandings are common, and the consequences can be costly to employers. Differences in belief tend to result in communication and actions that other generations do not support. These generational differences may result in poor employee morale which could impact the company through “loss of valuable employees, higher payroll costs, poor customer service, derailed careers, wasted human potential, and even potentially serious health problems caused by stress” (Lancaster & Stillman, 2002, p. 13).

Additionally, employers can no longer assume that high pay and benefits will attract top employees. The need to take human resources to the next level is extremely vital given the diverse generations in our workforce.

A clear description of generations is essential to recognize and appreciate their diversity. The term generation is often used to connect people in a particular group characteristically

associated by chronological age. However, age may not be the only factor that links these groups. People born within a specific timeframe also experience similar significant historical, social, and cultural events. These events influence their beliefs, expectations, and actions (Kupperschmidt, 2000; Strauss & Howe, 1991). Researchers have suggested the unity of one's chronological age with significant experiences explains the connection within generations.

Examining maturity, Wey Smola and Sutton (2002) studied the differences among generations. They compared generational differences of participants to differences found in a similar survey conducted in 1974. The results suggested that values change as workers mature; however, the study also strongly suggested that a generational cause accounts for the change in work values more than age or maturation.

In another study on generational differences at work, Benson and Brown (2011) compared Baby Boomers to Generation X in their attitudes towards work. More specifically, they compared differences in job satisfaction, organizational commitment, and willingness to quit. The results concluded that there were differences among these two generations. The younger generation desired quicker promotion than their older counterparts. The younger workers were more individual oriented and less interested in work being important to life. On the other hand, the older generation had a higher level of job satisfaction than their younger colleagues. Organizational and work factors such as job security and co-worker support predicted job satisfaction more for older generations. They were also more committed to the job and less likely to quit.

### **Statement of the Problem**

The problem with generational differences in the U.S. workforce is twofold: (a), conflict occurs among managers and coworkers when generational differences are not considered

(Kupperschmidt, 2000) and (b) younger generations have less job satisfaction and are more likely to quit than their older counterparts (Benson & Brown, 2011). Human resource professionals confirm the younger generation turnover rate is twice that of their older counterparts (Schawbel, 2013). Replacing these younger workers is expensive and impacts the bottom line for employers. The problem addressed by this research study is the inability of employers to motivate, encourage, and retain a multigenerational workforce.

### **Theoretical Framework**

Human resources development has customarily focused on human capital like knowledge, skills, and abilities; however, in today's ever-changing workforce, this may not be sufficient. Psychological capital takes human resources a step further by focusing on "who people are and developing what they can become" (Luthans, Vogelgesang, & Lester, 2006, p. 40). Psychological capital, or PsyCap, is the theoretical framework for this study.

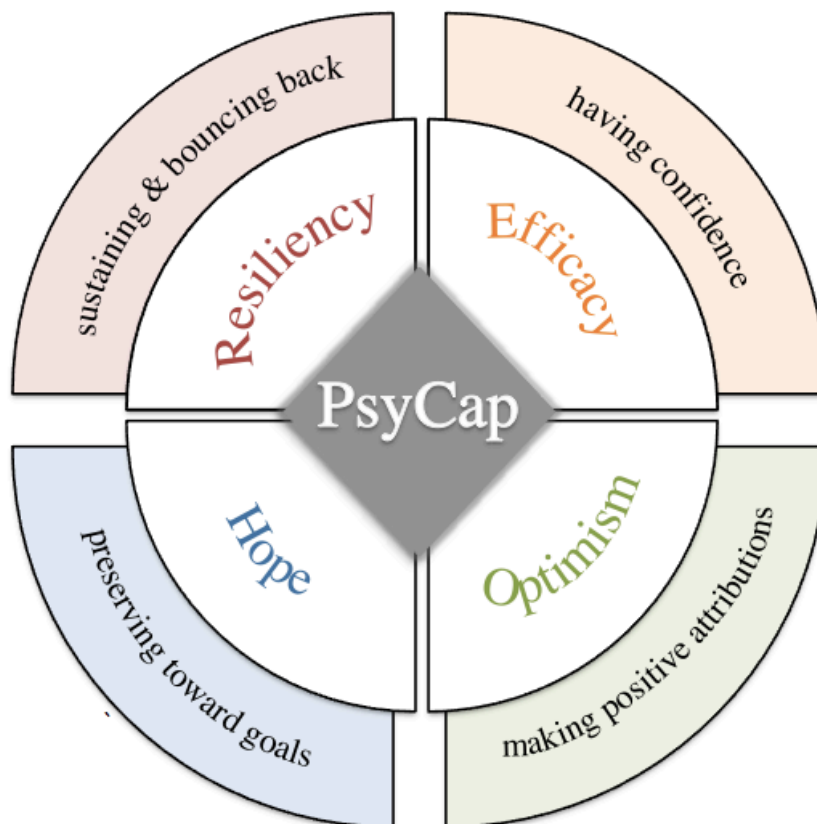
Research has revealed that efficacy, optimism, hope, and resiliency have a synergistic effect when combined (Luthans, Youssef, & Avolio, 2007a). For example, Luthans et al. (2007a) described hopeful people to "be more motivated to and capable of overcoming adversities" (p. 19). Additionally, people with efficacy, hope, and resiliency possess an optimistic viewpoint as a result of the internal perception of being in control.

Psychological capital promotes aptitude through these four dimensions. Luthans et al. (2007a) coined the term psychological capital, or PsyCap, to describe the unison of these four factors. Figure 1 illustrates the relationship of these dimensions within PsyCap. Psychological capital is defined in more detail:

An individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary, redirecting paths to goals



(hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success (Luthans, Youssef, et al., 2007a, p. 388).



*Figure 1.* Psychological capital, or PsyCap, consists of four constructs: (a) self-efficacy, (b) optimism, (c) hope, and (d) resiliency. Research suggests they have a synergistic effect when combined (Luthans, Avey, Avolio, Norman, & Combs, 2006).

Psychological capital plays an important role within the human resources realm. Studies on PsyCap have suggested it is positively related to performance, satisfaction, and commitment (Avey, Luthans, & Youssef 2010; Luthans, Norman, Avolio, & Avey, 2008; Walumbwa, Luthans, Avey, & Oke, 2011). Luthans, Avey, Avolio, Norman, and Combs (2006) conducted experimental research on developing PsyCap that indicated increasing employees psychological capital could have a significant return on investment for employers based on a brief two- to three-hour training.

Additionally, Avey, Luthans, and Youssef (2010) studied the negative relationship between PsyCap and intentions to quit such as job search behaviors. This study suggested that PsyCap is directly linked to high job satisfaction and low burnout. Employees with high PsyCap tended to have more positive emotions resulting in higher employee engagement and organizational citizenship. This study suggested that PsyCap in a supportive environment could produce the desired impact on the actual performance of employees.

### **Purpose of the Study**

The purpose of this research was to examine the differences across the generational cohorts on dimensions of psychological resources using the core construct psychological capital. This study focused on the differences among the three largest generations in the current workforce (Baby Boomers, Generation X, and Generation Y) to assist in determining management and training needs to increase job satisfaction and retention through psychological resources.

### **Research Question**

The research question for this study was: Is there a statistically significant difference in psychological capital scores among Baby Boomers, Generation X, and Generation Y?

### **Overview of the Methodology**

This study used a quantitative survey research approach. The independent variable, generations, was defined by a self-identified connection with age and significant events. The dependent variable, psychological capital, was defined as a numeric score representing participant's psychological state of development determined through the psychological capital questionnaire.

The study population consisted of workers within the United States workforce belonging to various generations, employment levels, ethnicities, and genders. The sample for this study consisted of a convenience sampling of the population. The clusters were identified through my personal and professional contacts and included two employers in Texas of diverse industries and company sizes. I used a convenience and snowball sampling through personal and professional contacts including professional social media to increase survey participation.

The demographic survey consisted of a researcher-designed questionnaire requesting professional classifications of each participant including the industry of the employer, employment classification, and personal characteristics such as gender, ethnicity, education, year of birth, and generation. Psychological capital was measured using the psychological capital questionnaire, or PCQ-24. The PCQ-24 consists of four subscales: hope, efficacy, resilience, and optimism (Luthans, Youssef, & Avolio, 2007a).

Participants were identified and contacted through face-to-face interaction, electronic mail, or social media networks. Participants were asked to participate in an online survey lasting approximately 15 to 20 minutes regarding generations and employee attitudes.

### **Significance of the Study**

Generational misunderstandings are common to both the employee and employer. “The ramifications of these generational collisions at work include everything from reduced profitability to the loss of valuable employees, higher payroll costs, poor customer service, derailed careers, wasted human potential, and even potentially serious health problems caused by stress” (Lancaster & Stillman, 2002, p. 13). Research suggested that satisfaction, commitment, and retention might be improved by appreciating the differences between generational cohorts

(Kupperschmidt, 2000; Lancaster & Stillman, 2002). Understanding differences between generations at work is a beneficial first step in meeting diverse employee needs.

Based on a systemic review of the literature in generational differences and psychological capital, no study was found to address psychological capital from a generational perspective. Another significance of this study is the potential contribution to the fields of both generational diversity and psychological capital.

### **Limitations of the Study**

Though this study offers benefits to research and practice, there are also limitations. This quantitative study utilized closed-ended questions forcing the participants to answer on a 6-point likert scale. This method did not allow participants to express thoughts outside of the established responses. Additionally, a 6-point likert scale did not have an option for neutral responses forcing participants to agree or disagree.

Furthermore, the purpose of this study was to determine if differences between generations exist; therefore, differences within generations were not examined. Another limitation worth noting was that the participants were from a convenience sample and, therefore, cannot necessarily be representative of the population of all working adults. To account for shared historical and cultural contexts that contribute to generational development, the scope of the study was limited to U.S. workers.

In summary, this chapter introduced an important dilemma many employers face today: a multigenerational workforce. This chapter has explained a problem in the current workforce, presented a theoretical framework, and outlined the study. This section also addressed the significance for the study and limitations.

## **Definition of Terms**

**ADAPTIVE GENERATION** – A generation who “encounters a secular crisis entering youth and a spiritual awakening entering midlife” (Strauss & Howe, 1991, p. 430).

**AUTHENTIC LEADERSHIP** – Leaders who “build effective organizations based on self-awareness and transparent sharing of their personal values” (Nahavandi, 2009, p. 216).

**BABY BOOMERS** – Workers who self-identified as being born between 1940 and 1964 and influenced by significant events such as the Vietnam War, assassination of John F. Kennedy, first moon walk, and popularization of the television. Also referred to as Boomers, Sandwich Generation.

**CIVIC GENERATION** – A generation who “encounters a secular crisis entering rising adulthood and a spiritual awakening entering elderhood” (Strauss & Howe, 1991, p. 430).

**DOMINANT GENERATION** – A generation who “encounters social moments while entering rising adulthood and again while entering elderhood” (Strauss & Howe, 1991, p. 430). This includes the idealistic or civic generational types.

**GENERATION** – “An identifiable group or cohort that shares birth years, age location, and significant life events at critical developmental stages” (Kupperschmidt, 2000, p. 66).

**GENERATIONAL CHARACTERISTICS** – “Worldview, values, and attitudes commonly shared by or descriptive of cohorts” (Kupperschmidt, 2000, p. 66).

**GENERATIONAL CYCLE** – “A set of consecutive generations beginning with Idealist-type and ending with and Adaptive-type” (Strauss & Howe, 1991, p. 430).

**GENERATIONAL TYPE** – “Four basic types of peer personalities and lifecycles, determined by age location relative to social moments” (Strauss & Howe, 1991, p. 430).

GENERATION X – Workers who self-identified as being born between 1960 and 1982 and influenced by significant events such as the fall of the Soviet Union, birth of the internet, and popularization of MTV. Also referred to as GenX, Slacker Generation, Me Generation.

GENERATION Y – Workers who self-identified as being born between 1979 and 2001 and influenced by significant events such as the September 11 terrorist attacks, the internet era, and popularization of cellphones. Also referred to as GenMe, Gen Y, Millennials.

GENERATION Z – Workers who self-identified as being born after 1995 and influenced by significant events such as the September 11 terrorist attacks and social media. Also referred to as Gen Z.

HOPE – “A positive motivational state that is based on an interactively derived sense of successful (a) agency (goal directed energy) and (b) pathways (planning to meet goals)” (Snyder, Irving, & Anderson, 1991, p. 287).

HUMAN CAPITAL – “Education, experience, and implicit knowledge of human resources” (Luthans, Avey, Avolio, & Peterson, 2010, p. 42).

IDEALIST GENERATION – A generation who “encounters a spiritual awakening entering rising adulthood and a secular crisis entering elderhood” (Strauss & Howe, 1991, p. 430).

LOCUS OF CONTROL – “A locus of control orientation is a belief about whether the outcomes of our actions are contingent on what we do (internal control orientation) or on events outside our personal control (external control orientation).” (Zimbardo, 1985, p. 275)

OPTIMISM – “An explanatory style that attributes positive events to personal, permanent, and pervasive causes and interprets negative events in terms of external, temporary, and situation-specific factors” (Luthans, Youssef, et al., 2007a, p. 90-91).

PEER PERSONALITY – “A generational persona recognized and determined by (1) common age location; (2) common beliefs and behavior; and (3) perceived membership in a common generation” (Strauss & Howe, 1991, p. 62).

POSITIVE ORGANIZATIONAL BEHAVIOR – “The study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace” (Luthans, 2002, p. 698). When referring to positive organizational behavior, positive and negative constructs are not necessarily opposite sides of a single continuum. Positive organizational behavior focuses on positive aspects whereas a negative approach focuses on what is wrong. Also referred to as POB.

POSITIVE PSYCHOLOGY – “A science of positive subjective experience, positive individual traits, and positive institutions promises to improve quality of life and prevent the pathologies that arise when life is barren and meaningless” (Seligman & Csikszentmihalyi, 2000, p. 5).

PSYCHOLOGICAL CAPITAL – “An individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals, and when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success” (Luthans, Avey, et al., 2006, p. 388). Also referred to as PsyCap.

REACTIVE – A generation who “encounters a spiritual awakening entering youth and a secular crisis entering midlife” (Strauss & Howe, 1991, p. 430).

RECESSIVE GENERATION – A generation who “encounters social moments while entering youth and again while entering midlife” (Strauss & Howe, 1991, p. 430). This includes the adaptive and reactive generational types.

RESILIENCY – “The positive psychological capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibility” (Luthans, 2002, p. 702).

SECULAR CRISIS – “When society focuses on reordering the outer world of institutions and public behavior” (Strauss & Howe, 1991, p. 430).

SELF-EFFICACY – “The individual’s convictions (or confidence) about his or her abilities to mobilize the motivation, cognitive resources, and courses of action needed to successfully execute a specific task within a given context” (Stajkovic & Luthans, 1998, p. 66). Self-efficacy, efficacy, and confidence are used synonymously in PsyCap.

SOCIAL MOMENT – “A brief era (typically about a decade) when people perceive that historic events are radically altering their social environment” (Strauss & Howe, 1991, p. 430).

SPIRITUAL AWAKENING – “When society focuses on changing the inner world of values and private behavior” (Strauss & Howe, 1991, p. 430).

STATE-LIKE CAPACITIES – “Relatively malleable and open to development; the constructs could include not only efficacy, hope, resilience, and optimism, but also a case has been made for positive constructs such as wisdom, well-being, gratitude, forgiveness, and courage as having state-like properties as well” (Luthans, Avolio, Avey, & Norman, 2007, p. 544).



TRADITIONALIST – Workers who self-identified as being born between 1922 and 1946 and influenced by significant events such as the great depression, World War II, Korean War, GI Bill. Also referred to as Silent Generation, Silents, Matures, and Veterans.

TRAIT-LIKE CAPACITIES – “Relatively stable and difficult to change; represents personality factors and strengths. Examples could include the Big Five personality dimensions, core self-evaluations, and character strengths and virtues (CSV)” (Luthans, Avolio, et al., 2007, p. 544).

## **Chapter II: Review of Literature**

This chapter provides a review of the literature on generations, focusing on the three largest generations in the current workforce. This section discusses their values, work attitudes, and employment satisfaction. This chapter provides a review of the literature that discusses psychological capital including employee relation influences, results-driven factors, and leadership.

### **Generations**

The term generation was mentioned as early as the Old Testament; however, Strauss and Howe (1991) outlined the earliest noted theory focusing on American generations. Their model, known as the generational diagonal, sought to understand how people move through time together. Strauss and Howe examined 18 generations dating as early as 1584. Of the 18 generations, they identified five different generation cycles: colonial, revolutionary, civil war, great power, and millennial. Each of these generation cycles consisted of approximately 89 years. Strauss and Howe found several distinct patterns across these cycles. For instances, Strauss and Howe observed that each generation altered between dominant and recessive lifecycles. Lifecycles were defined by the individual's age at the time of influential social moments. They also discovered four distinct generation types: idealist, reactive, civic, and adaptive. The generation type was determined by the individual's age at the time of specific social moments. These generation types consistently appeared across each generation cycle except one; the civil war cycle lacked the civic type. Social moments included either a spiritual awakening that focused on the inner world (i.e. great awakening, labor radicalism) or a secular crisis that focused on the outer world (i.e. Civil War, Great Depression). Each generation type

lasted approximately 22 years. Table 1 illustrates the differences among these types while Table 2 illustrates the two most recent generation cycles according to Strauss and Howe.

Table 1

*Time of Social Moments in Lifecycles and Generation Types*

Lifecyle	Dominant	Social Moment	Specific Social Moment	
			Spiritual Awakening	Secular Crisis
	Dominant	Rising Adulthood Elderhood		
	Recessive	Youth Midlife Adulthood		
Generational Type	Idealist		Rising Adulthood	Elderhood
	Reactive		Youth	Midlife Adulthood
	Civic		Elderhood	Rising Adulthood
	Adaptive		Midlife Adulthood	Youth

Table 2

*Most Recent Generation Cycles*

Generation Cycle	Generation	Generation Type	Lifecyle	Years of birth
Great Power	Missionary	Idealist	Dominant	1860-1882
	Lost	Reactive	Recessive	1883-1900
	G.I.	Civic	Dominant	1901-1924
	Silent	Adaptive	Recessive	1925-1942
Millennial	Baby Boomers	Idealist	Dominant	1943-1960
	Generation Y	Reactive	Recessive	1961-1981
	Generation X	Civic	Dominant	1982-2003

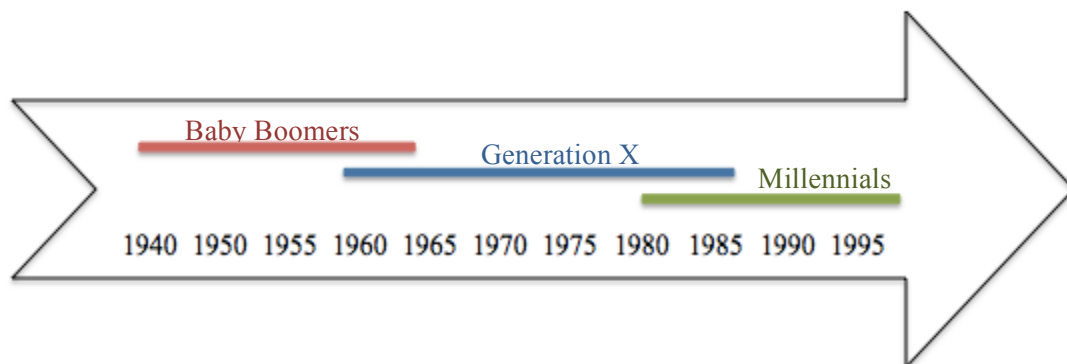
Strauss and Howe (1991) was the first to define the distinct generations in America. They also introduced the idea that chronologic age played a significant role in the study of generations. However, years of birth identified with each generation may not be as straightforward as Strauss

and Howe proposed. Years of birth are inconsistent in the current literature, specifically with the newer generations. Additionally, people born on the cusp of a generation may relate more with the older or younger generation. Due to these ambiguities, a generational cohort's years of birth may overlap. Strauss and Howe (1991) recognized an overlap of up to four years. However, research over the past two decades shows a larger gap in some generations as illustrated in Table 3 while Figure 2 illustrates the overlap among the years of birth within the current literature.

Table 3

*Generational Dates Reported in Various Studies*

	Baby Boomer	Generation X	Millennial
Strauss & Howe (1991)	1943-1960	1961-1981	1982-2003
Kupperschmidt (2000)	1940-1960	1960-1980	--
Wey Smola & Sutton (2002)	1946-1964	--	1979-1994
Pitt-Catsouphe & Smyer (2007)	1946-1964	1965-1980	1981-1999
Cennamo & Gardner (2008)	1946-1961	1962-1979	1980-2000
Fogg (2009)	1946-1964	1964-1982	1982-1990s
Murphy, Gibson, & Greenwood (2010)	1946-1964	1965-1979	1980-present
Benson & Brown (2011)	1946-1964	1965-1976	--



*Figure 2.* Due to the ambiguity among the various generations and years of birth, there is an overlap of possible years associated with a specific generation.

Chronologic age may not be the only factor that links these groups. As generations move through time, each generation is impacted by social moments in history (Strauss & Howe, 1991). These social moments may include a spiritual awakening or secular crisis representing historic events that have significantly changed the environment. The connection between age and social moments forms what is known as a peer personality. A peer personality has three main characteristics: (a) chronologic age, (b) shared beliefs and behaviors, and (c) generation connection. Generational placement is based on the date of birth and peer personality. Shifts in sociological attitudes, changes in public policy, and times of war are examples of such significant and influential factors (Kupperschmidt, 2000; Pitt-Catsoupes & Smyer, 2007, June; Strauss & Howe, 1991). These mutual experiences cultivate a peer personality and unite people within a generational cohort. Each individual is unique; however, these peer cohorts tend to share similar values, attitudes, preferences, and behaviors.

Essentially, chronologic age and significant events cultivate a generational cohort. Kupperschmidt (2000) defined generations as “a group of people or cohorts who share birth years and experiences as they move through time together, influencing and being influenced by a variety of critical factors” (p. 66). Clearly defining a generation is important; however, understanding the disposition of each generation is essential.

**Generational characteristics.** As life expectancy of the U.S. population increases, the distinct generations must continue to work side by side (Toosi, 2012). Each generation views the world differently depending on when they entered (Strauss & Howe, 1991). Experiences that are passed down from one generation to another are perceived useful to the newer generation only if it affects them personally. Therefore, the experiences of one generation are less impactful to the newer generation that did not experience the event first-hand. In other words, the same event

leads to different subjective experiences based on the age of the generation at the time of the event. These variances developed unique and diverse characteristics for each generation. The first step in leveraging the uniqueness of the generations is to understand their differences.

***Baby Boomers.*** Individuals in this generation were born between 1940 and 1964. Significant events that may have influenced Baby Boomers include the Vietnam War, assassination of John F. Kennedy, first moon walk, and popularization of the television (Fogg, 2009; Lancaster, 2004). Baby Boomers are also known as Boomers, Sandwich Generation, Boom Generation, and simply Boom (Fogg, 2009; Strauss & Howe, 1991; Twenge, Campbell, Hoffman, & Lance, 2010). Positive attributes of the Baby Boomer's peer personality indicates they are principled, resolute, and creative (Strauss & Howe, 1991). On the other hand, negative attributes suggest they are ruthless, selfish, and arrogant. Boomers are determined, competitive, optimistic, and involved (Bartley, Ladd, & Morris, 2007). They believe in personal growth and individual gratification. As a consumer, they spend rather than save (Kupperschmidt, 2000).

Workers in this generation are diligent, focused, dedicated, loyal, and self-motivated (Kupperschmidt, 2000). They also have a strong work ethic (Angeline, 2010). Baby Boomers are strong-willed and concerned about work content (Kupperschmidt, 2000). The Boom Generation typically value promotion, titles, and status. Boomers feel work should be the most important part of life (Wey Smola & Sutton, 2002). They respect authority and hierarchy in the workplace (Gursoy, Maier, & Chi, 2008). In a study comparing generational values, managers in the Baby Boomer generation placed higher importance on comfortable life and wisdom (Murphy, Gibson, & Greenwood, 2010). They were also the only generation to rank ambition as a top-five value. On the other hand, non-managers valued salvation, self-respect, and inner harmony.

**Generation X.** Individuals in this generation were born between 1960 and 1982.

Significant events that may have influenced Generation X include the fall of the Soviet Union, birth of the internet, and popularization of MTV (Fogg, 2009; Lancaster, 2004). Generation X is also known as GenX, Slacker Generation, Me Generation, and Thirteenth (Fogg, 2009; Strauss & Howe, 1991; Twenge et al., 2010). Positive attributes of the Generation X peer personality indicates they are savvy, perceptive, and practical (Strauss & Howe, 1991). On the other hand, negative attributes suggest they are amoral, pecuniary, and uncultured. Me Generation are informal, fun, self-reliant, and practical (Bartley et al., 2007). They are diversity-aware and global thinkers. They believe in autonomy and flexibility (Fogg, 2009). Gen X are savvy consumers (Kupperschmidt, 2000).

Workers in this generation are idealistic, materialistic, and skeptical (Kupperschmidt, 2000). Xers are multi-tasking parallel thinkers, risk takers, and entrepreneurs. They are resourceful, independent, and cynical. They tend to resist authority and expect work-life balance. They typically ask *what's in it for me* and are less loyal than their older counterparts; however, they believe one should work hard even if the supervisor is not around (Wey Smola & Sutton, 2002). Xers respond well to instant gratification (Gursoy et al., 2008). In a study comparing generational values, managers in Generation X valued courageousness, forgiveness, helpfulness, and politeness the most (Murphy et al., 2010). They were the only generation to rank inner harmony in the top-five values. Non-managers valued pleasure the most.

**Generation Y.** Individuals in this generation were born between 1979 and 2001.

Significant events that may have influenced Millennials include September 11 terrorist attacks, the internet era, and popularization of cellphones (Fogg, 2009; Lancaster, 2004). Generation Y are also known as GenMe, GenY, nGen, iGen, or Millennials (Fogg, 2009; Strauss & Howe,

1991; Twenge et al., 2010). Positive attributes of the Generation Y peer personality indicates they are rational, selfless, and competent (Strauss & Howe, 1991). On the other hand, negative attributes suggest they are overly bold, unreflective, and insensitive. Millennials are optimistic, sociable, confident, and moral (Bartley et al., 2007). They tend to be casual, fun loving, optimistic, and creative (Twenge & Campbell, 2008). They are civic-minded, street smart, and diversity-aware. GenMe believe in feedback, fulfillment, and advanced technology (Fogg, 2009). According to Twenge and Campbell (2008), Gen Y have higher self-esteem, narcissism, anxiety, and depression. Their need for social approval is less than their parents, but they have a higher external locus of control.

Workers in this generation are team players and are willing to learn (Angeline, 2010). Generation Y believe *the more the merrier* (Gursoy et al., 2008). They also believe *rules are made to be broken*. Generation X desire to be promoted quickly and believe working hard makes them a better person (Wey Smola & Sutton, 2002). In a study comparing generational values, managers in Generation Y respected a sense of accomplishment, world peace, equality, national security, self-respect, and true friendship the most (Murphy et al., 2010). They are also broadminded, independent, loving, and self-controlled. Non-managers were the only generation to rank capable as a top-five value.

**Work Ethics and Values.** Studying generational work ethics can provide insight in today's dynamic workforce. According to Kupperschmidt (2000), "a generational perspective enables managers to leverage employee uniqueness as a source of learning, productivity, and innovation and to create and role model a shared vision of positive co-worker relationships" (p. 66). Research suggested that generations vary in work ethics and values (Angeline, 2010; Bartley



et al., 2007; Gursoy et al., 2008). Table 4 illustrates some of these differences among Baby Boomers, Generation X, and Generation Y.

Table 4

*Different Generational Views of Work*

Baby Boomer	Generation X	Generation Y
Proactive	Reactive	Impulsive
Team oriented	Technologically oriented	Goal oriented
Value job security	Value prompt recognition and reward	Value prompt recognition and reward
Live to work	Work to live	Live first, then work
Live large and in charge	Friends in high places	Here today, gone tomorrow

In a recent study, Twenge et al. (2010) found that Boomers, Gen X, and Gen Y all valued work that helps society or others; however, both Generation X and Generation Y displayed more individualistic traits. Social rewards were consistent among Boomers and Gen X, however, were valued lower for Gen Me (Twenge et al., 2010). Younger employees preferred “a psychological contract with the organization, which emphasizes freedom, status and social involvement” (Cennamo & Gardner, 2008, p. 904).

There is evidence that the generations view work-life balance differently. Twenge (2010) examined generational differences and discovered that older generations considered work central to their lives. They also have a stronger work ethic than younger generations. Beutel and Wittig-Berman (2008) suggested a generational effect in work-family conflict, mental health, and supervisor family support (level of supervisors support for personal issues). There has also been research in longitudinal studies addressing generational differences across time. This research suggested younger generations such as Gen X and Gen Y rate leisure more and value work less

(Twenge, 2010). They also have weaker work ethics than older generational cohorts supporting a generational trend toward leisure values. In another longitudinal study comparing different generations, Twenge et al. (2010) suggested a generational shift in work values signifying that Gen X and Gen Me desired a work-life balance more than other generations when asked at the same age. Gen X desired it more than boomers, and Gen Me desired it even more than Gen X.

**Job Satisfaction.** An employee's job satisfaction has significant advantages for employers including increased performance, commitment, and retention. Research suggested that baby boomers have a higher level of job satisfaction than Gen X (Benson & Brown, 2011). For example, organizational and work factors such as job security and co-worker support predicted job satisfaction more for Baby Boomers than for Gen X. Boomers were more committed to the job. They also valued job security, adequate resources and clear roles. Boomers were less likely to quit their jobs than their Gen X colleagues. Supervisor support played an important role in Boomers likelihood to quit while co-worker support was more important to Gen X. Another cross-sectional study revealed additional differences among generations (Beutel & Wittig-Berman, 2008). This study suggested the older the generation, the more satisfied they were with their job.

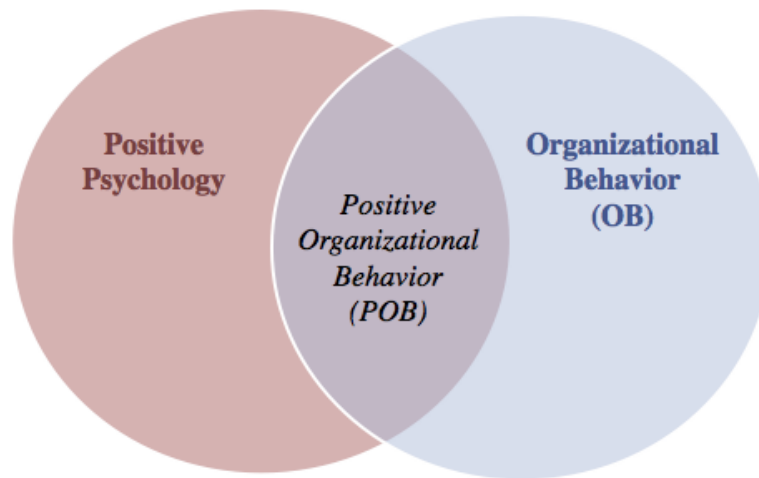
In a study comparing generational cohorts through psychological scales, Twenge and Campbell (2008) claim "generational differences are psychological as well as technological, and these psychological differences can have a big influence on workplace behavior" (p. 873). As illustrated in the review of literature on generations, human and social capital has been explored among generations; however, psychological research is lacking.

## **Psychological Capital**

Traditionally, psychology has focused on the ailments of humans and how to fix what is wrong. Positive psychology, on the other hand, focuses on people's strengths and how to promote positive functioning (Snyder & Lopez, 2007). Positive psychology is defined as "the scientific and applied approach to uncovering people's strengths and promoting their positive functioning" (Snyder & Lopez, 2007, p. 3). Research in this field focuses on what is right with people rather than their ailments. Some areas in this arena include positive emotional states such as happiness and well-being, positive cognitive states containing hope and courage, pro-social behavior such as gratitude and attachment, and positive environments including positive schooling and gainful employment. The term positive in positive psychology and areas within this realm represents a good, affirmative, or constructive quality.

Like psychology, organizational behavior tends to emphasize the negative aspects of behavior in the workplace. For a comprehensive understanding of organizational behavior, Nelson and Cooper (2007) recommended exploring the positive side of organizational behavior as much as the negative aspects. Luthans (2002) suggested shifting focus to strengths and positive capacities will improve understanding of the workplace. This shift is referred to as positive organizational behavior, or POB, and is defined as "the study and application of positively-oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workforce" (Luthans, 2002, p. 59). POB is the study of what goes right in organizations. It is the unification of positive psychology and organizational behavior as illustrated in Figure 3. Research in this area focuses on human strengths at work rather than managing weaknesses. Luthans' POB refers to state-like concepts rather than traits; therefore, they are measurable and can be linked to

performance. This suggests that POB can be taught, developed, and changed within the workplace.



*Figure 3.* Positive organizational behavior is the merger of positive psychology and organizational behavior.

**Psychological capital defined.** As a fundamental concept of positive organizational behavior, Luthans et al. (2007a) coined the term Psychological Capital, or PsyCap for short, to describe the unison of efficacy, optimism, hope, and resiliency. Psychological Capital, as defined in chapter one, is a higher order construct meaning it is multidimensional, and it is greater than the sum of its components. PsyCap goes beyond human capital such as knowledge and skills (Luthans, Youssef, & Avolio, 2007b). It also goes beyond social capital such as relationships and networking.

Psychological capital aims to evolve as the field of positive organizational behavior grows (Luthans et al., 2007a). POB embraces various other concepts that may fall within the psychological capital realm. These principles are divided into four main categories: (a) cognitive such as creativity and wisdom, (b) affective such as subjective well-being, flow, and humor, (c) social such as gratitude and forgiveness, and (d) higher order such as authenticity and courage.

As research on these various concepts mature, they may be considered for inclusion in the PsyCap construct.

To be included in the PsyCap construct, factors must be: (a) theory-based through scientific approach, (b) measurable through reliable and valid instruments, (c) state-like or developmental, and (d) related to work performance (Luthans et al., 2007a). PsyCap presently consists of four major factors that meet these guidelines and have proven to be synergistic. They include self-efficacy, hope, optimism, and resiliency.

***Self-efficacy.*** The first concept of PsyCap is self-efficacy. The PsyCap self-efficacy component derived from Albert Bandura's (1994) social cognitive theory, which defined self-efficacy as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (p. 71). The terms self-efficacy and efficacy are used interchangeably in PsyCap. Bandura detailed five cognitive processes in efficacy that are fundamental in PsyCap: symbolizing, forethought, observation, self-regulation, and self-reflection. This cognitive process combined with previous success establishes efficacy. PsyCap efficacy is variable and domain-specific. It is based on mastery, influenced by others, and always has room for improvement. There are five significant characteristics that differentiate self-efficacious people:

1. They set high goals for themselves and self-select into difficult tasks.
2. They welcome and thrive on challenge.
3. They are highly self-motivated.
4. They invest the necessary effort to accomplish their goals.
5. When faced with obstacles, they persevere. (Luthans et al., 2007, p. 38)

Efficacy has been linked to work-related performance. A meta-analysis of 114 studies revealed a strong positive correlation (.38) between the efficacy and performance (Stajkovic & Luthans, 1998). Research suggested efficacy can mature through "mastery/success, vicarious

learning/modeling, social persuasion and positive feedback, and psychological and physiological arousal and well-being” (Luthans et al., 2007, p. 43).

**Hope.** The second component within PsyCap is hope. Hope is more than wishful thinking or a positive attitude. It not only involves willpower but also a path to accomplish goals (Luthans et al., 2007a). PsyCap hope was based on the definition by Snyder et al. (1991) of “a positive motivational state that is based on an interactively derived sense of successful (1) (goal-directed energy) agency, and (2) pathways (planning to meet goals)” (p. 287). The first component of hope, agency, is the cognitive capability of setting goals and aiming to accomplish them through determination. This is also known as willpower. The second component, pathway, consists of creating alternative paths to the goal as needed.

Hopeful employees are goal-directed and resourceful (Luthans et al., 2007a). They have a strong need for growth, achievement, and autonomy. Hopeful employees tend to be independent thinkers and possess an internal locus of control. Hopeful managers are naturally authentic leaders and develop employees who are motivated to achieve their work and support others.

Research also supports a positive relationship between hope and workplace performance, including performance outcomes (Luthans et al., 2007) and organizational profitability (Adams, Snyder, Rand, King, Sigmon, & Pulvers, 2003). Research suggested that hope can be developed “through goal-setting, participation, and contingency planning for alternative pathways to attain goals” (Luthans et al., 2007a, p. 214).

**Optimism.** Another element of PsyCap is Optimism. Optimism is not just hopefulness and confidence about the future. The reason used to explain why certain events occur, both positive and negative, contributes to PsyCap optimism (Luthans et al., 2007a). According to Luthans et al. (2007a), optimism is “an explanatory style that attributes positive events to

personal, permanent, and pervasive causes and interprets negative events in terms of external, temporary, and situation-specific factors” (pp. 90-91). Essentially, optimists take credit for the desirable events in their lives and believe the causes are within their control. This control of positive events can be translated into success in the future since it is within their influence. On the other hand, they attribute the causes of undesirable events to be external allowing them to continue to be confident about the future. Conversely, pessimists do not give themselves credit for desirable events and tend to blame themselves for the undesirable events.

Depending on the event, one can be both an optimist and a pessimist. Known as flexible optimism, one evaluates the situation and chooses to use an optimistic or pessimistic style (Luthans et al., 2007a). According to Luthans et al. (2007a), PsyCap optimism should be both realistic and flexible. It is an illustration of “(1) self-discipline, (2) analysis of past events, (3) contingency planning, and (4) preventive care” (p. 96). Optimistic employees welcome a challenge and take credit for their triumphs.

Research proposes that optimism can be developed “through leniency for the past, appreciation for the present, and opportunity seeking for the future” (Luthans et al., 2007a, p. 214).

***Resiliency.*** The last factor of PsyCap is resiliency. Resiliency has been defined as “a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk.” (Masten & Reed, 2002, p. 75). There are several characteristics that may contribute to one’s resiliency including cognitive abilities, self-perceptions, faith, emotional stability, and self-regulation. Resiliency is reactive in nature; however, when viewed as proactive, resiliency may lead to positive rewards (Luthans et al., 2007a).

PsyCap resiliency is described as “the capacity to rebound or bounce-back from adversity, conflict, failure, or even positive events, progress, and increased responsibility” (Luthans, 2002, p. 702). PsyCap resiliency views difficulties as both risk factors and challenging opportunities (Luthans et al., 2007a). This perspective enables growth and success beyond the normal state. PsyCap resiliency is a dynamic and flexible psychological strength.

Research on resiliency suggested a positive relationship with workplace performance (Luthans et al., 2007). Additionally, the field of positive psychology considers resiliency to be open for further development. Research indicates resilience can be developed “through asset-focused strategies such as enhancing employability, risk-focused strategies such as proactive avoidance of adversity, and process-focused strategies to influence the interpretation of adverse events” (Luthans et al., 2007a, p. 214).

**PsyCap questionnaire.** In developing an instrument to measure PsyCap, Luthans et al. (2007a) used questions from recognized, published measures of efficacy, hope, optimism, and resiliency. Six items were carefully selected from each of these scales based on content and face validity. Wording was modified for the workplace and responses put into a 6-point Likert scale ranging from strongly disagree to strongly agree.

Since the development of the PsyCap instrument, there have been a significant number of studies in psychological capital. For instance, research suggested that masculinity scores were positively related to levels of PsyCap (Ngo, Foley, Ji, & Loi, 2013). More specifically, employees with high masculine scores had a strong and positive effect on each of the subscales while those with high feminine scores had a weaker effect on efficacy, resilience, and optimism subscales. McMurray, Pirola-Merlo, Sarros, and Islam (2010) found that employees with higher education qualifications demonstrated higher scores on the resilience subscale compared to those



with less education. McMurray et al. also discovered that older employees had a higher score on psychological capital than their younger counterparts. Specifically, respondents 50 years of age or older demonstrated higher scores on the optimism subscale compared to younger respondents.

Rather than focusing on personal characteristics, this section of the literature review will focus on three main categories within PsyCap: employee relation influences, results-driven factors, and leadership aspects of psychological capital.

**Employee relation influences.** It is no surprise that positive organizational behavior, or more specifically, PsyCap, has been linked to desired organizational behaviors such as employee well-being and satisfaction as well as organizational commitment and preferred employee outcomes. Some preliminary research suggested PsyCap can enhance employee's psychological well-being over time (Avey, Luthans, Smith, & Palmer, 2010). Additional empirical studies found that positive PsyCap benefited employees in more ways than improving their work (Luthans, Youssef, Sweetman, & Harms, 2012). Luthans et al. (2012) examined employees' relationships and found PsyCap is linked to satisfaction appraisals and desired objective outcomes. Research over various industries found that PsyCap might help explain perceived symptoms of stress, intentions to quit, and job search behaviors (Avey, Luthans, & Jensen, 2009). The significant negative relationship between PsyCap and job stress suggested that PsyCap helped employees overcome the effects of stress related to work.

Research also suggested that PsyCap is directly linked to high job satisfaction (Avey, Nimnicht, & Pigeon, 2010; Avey, Reichard, Luthans, & Mhatre, 2011; Luthans et al., 2010; Luthans, Avolio, et al., 2007; Luthans, Norman, et al., 2008; Siu, 2008). In a study of schoolteachers in China, PsyCap was related to emotional labor (management of emotions at work), burnout, and job satisfaction (Cheung, Tang, & Tang, 2011). Specifically, there was a

positive association between job satisfaction and participants PsyCap scores but not among participants with low PsyCap. Another study of manufacturing employees suggested a significant relationship between PsyCap, job satisfaction, and organization commitment (Larson & Luthans, 2006). Additionally, a study of Vietnamese marketers revealed PsyCap has positive impacts on both job performance and quality of work life of employees (Nguyen & Nguyen, 2011).

PsyCap has also been linked to multiple measures of desired employee attitudes and behaviors such as organizational commitment, psychological well-being, and citizenship. For instance, a meta-analysis conducted by Avey et al. (2011) indicated significant positive relationships between PsyCap and desirable employee attitudes and behaviors. Conversely, a significant negative relationship between PsyCap and undesirable employee attitudes and behaviors was also supported. Negative behaviors include cynicism, turnover intentions, job stress, and anxiety. Researchers found psychological capital was related to positive emotions across various organizations and positions. This may be connected to attitudes such as engagement or cynicism (Avey, Wernsing, & Luthans, 2008). These positive emotions may also be connected to behaviors such as organizational citizenship and deviance. Employees with high PsyCap tend to have more positive emotions resulting in higher employee engagement and organizational citizenship. Employees with lower PsyCap tend to be more cynical and display more deviant behaviors. Additionally, Norman, Avey, Nimnicht, and Graber Pigeon (2010) found employees who scored highest in PsyCap and most strongly identified with the organization were most likely to engage in positive organizational citizenship behaviors and least likely to engage in deviant behaviors. This suggested that organizational identity moderates the relationship between psychological capital and employee deviance and organizational citizenship behaviors.

McMurray et al. (2010) suggested a strong positive relationship between supervisor's ratings and organizational climate, well-being, employee commitment and psychological capital. Avey, Luthans, and Youssef (2010) also discovered that psychological capital is positively related to organizational citizenship behaviors. This study suggested that PsyCap is negatively correlated to organizational cynicism, intentions to quit, and counterproductive workplace behaviors. It revealed that psychological capital predicted variance beyond demographics, self-evaluation, personality, and employee fit. Additionally, the negative relationship between PsyCap and intentions to quit as well as job search behaviors suggested a potential reduction in voluntary turnover (Avey et al., 2009).

**Results-driven factors.** There is significant research linking psychological capital and financial performance as well (Avey et al., 2010; Luthans et al., 2006; Peterson, Luthans, Avolio, Walumbwa, & Zhang, 2011). For instance, research indicated psychological capital is positively related to performance, satisfaction, and commitment (Luthans et al., 2008). This study suggested that PsyCap in a supportive environment can produce a desired impact on the actual performance of employees. PsyCap research of workers in China provided evidence that PsyCap is related to performance (Luthans, Avey, Clapp-Smith, & Li, 2008). This study suggested both human and psychological capital account for employee performance. In a healthcare study, research supported a strong relationship between psychological capital, job embeddedness, and performance (Sun, Zhao, Yang, & Fan, 2011). In addition, nurses with a high PsyCap were more embedded in their work that made them more adaptive and competent in their jobs. The study suggested increasing employee psychological state had a positive impact on retention and job performance. In a longitudinal study, Peterson et al. (2011) examined PsyCap over time and whether a change in this component related to a change in performance. The study revealed a

significant within-individual change in psychological capital over time. Furthermore, this change in psychological capital was correlated to change in performance outcomes. A Luthans, Avey, Avolio, and Peterson (2010) study suggested PsyCap intervention led to an improvement in employee on-the-job performance.

Avey, Nimnicht, and Pigeon (2010) also linked employees' PsyCap to financial performance. This study suggested that PsyCap is a predictor of higher manager-rated performance, customer referrals, and sales performance. PsyCap's strongest correlation in this study was with sales performance. Lastly, research indicated a significant positive relationship with each component within PsyCap and performance that supports the unison of these factors to be a better predictor of performance than the individual components (Luthans, Youssef, et al., 2007a).

**Leadership and psychological capital.** Human resource research would not be complete without examining the role of leadership. An experimental study of leader and follower PsyCap indicated leader PsyCap was positively related to follower PsyCap (Avey, Richmond, & Nixon, 2012). In a study on authentic leadership, management trust was found to mediate the relationship between PsyCap and performance (Clapp-Smith, Vogelgesang, & Avey, 2008). Additional research on authentic leadership indicated a significant relationship between psychological capital and trust in employee performance and citizenship behavior (Walumbwa, Luthans, Avey, & Oke, 2011). More specifically, psychological capital can be improved with authentic leadership. This could result in desired citizenship behaviors and performance.

Although research in psychological capital is still in its infancy, findings show meaningful promise for today's professionals. Human resources professionals can use this research in two ways: (a) candidate selection: applicants with higher PsyCap have a more

positive outlook and experience higher job satisfaction, and (b) training programs: training current employees in PsyCap will increase job satisfaction and decrease turnover. Understanding the differences in PsyCap could also help human resources professionals efforts to understand and serve our diverse workforce.

### **Chapter III: Research Design and Methodology**

The purpose of this research is to examine differences in a psychological resource, known as psychological capital, among members of three generations in the current workforce. The content of this chapter includes the research design of the study, targeted population, and research instruments. This section will also detail human subject protection, data collection, and analysis procedures.

The research question for this quantitative study is as follows: Is there a statistically significant difference in psychological capital scores among generations within the workforce? Quantitative studies typically have two predictions of the expected outcome known as the hypotheses: the null hypothesis and the alternative hypothesis (Cozby, 2001; Creswell, 2008; Field, 2005). The null hypothesis, or  $H_0$ , predicts that there is no change and that differences in the population are due to random error. On the other hand, the alternative hypothesis, or  $H_1$ , predicts there is a difference, and the independent variable had an effect on the dependent variable. The hypotheses for this study are as follows:

$H_0$ : There is no difference in psychological capital among Baby Boomers, Generation X, and Generation Y.

$H_1$ : At least one generation will demonstrate a statistically significant difference in psychological capital.

Since I cannot make an educated prediction based on past research as to which direction the alternative hypothesis might be, I have elected to maintain a non-directional alternative hypothesis.

## **Research Design**

This study relied on measurable data that can be analyzed through statistical procedures; therefore, I used a quantitative research approach. Quantitative research is beneficial when researchers want to test theories by exploring the relationship between variables (Creswell, 2008). For this study, a survey method was used. The survey approach is under the umbrella of quantitative research and provides a “numeric description of trends, attitudes, or opinions of a population by studying a sample of that population” (Creswell, 2008, p. 155).

## **Population and Participants**

The study population consisted of workers within the U.S. workforce. There are approximately 145.2 million non-institutional civilians in the U.S. labor force (U.S. Department of Labor, 2014a) and an additional 1.4 million members of the armed services (U.S. Department of Labor, 2014b). Since it is impossible for me to use each member of the larger population, I sampled a selection from this vast population. The sample size consisted of the minimum number of participants needed to yield sufficient results. Based on the statistical power analysis program, G\*Power 3.1, the recommended sample size for a medium effect size ANOVA with three groups with a power of .95 was 252 participants or a small effect size with a power of .99 was 348 participants (Faul, Erdfelder, Lang, & Buchner, 2009). The sample was comprised of various ages, employment levels, ethnicities, and genders to represent the diversity of the United States workforce. Sample eligibility was limited to people who:

- are 18 years of age or older;
- are currently employed in a paid role;
- are in the U.S. labor force; and
- live in a non-institutional residence (i.e. household).

For this study, I used a convenience sample of participants who expressed interest in participating. In convenience sampling, participants are selected because they are willing and available to participate (Creswell, 2008). The participants were identified through my professional and personal contacts including two employers in Texas. I also used a snowball sampling through professional social media such as LinkedIn. Participants were asked to share the study with others who may be interested in participating. This technique is called snowball sampling (Creswell, 2008).

The sample spanned two different industries and company size to minimize confounding variables such as company culture. The industry subsectors from the U.S. Department of Labor (2014b) was used to define industries within the sample. These groups included goods-producing industries and service-providing industries. The subsectors within goods-producing industries included natural resources and mining, construction, and manufacturing. The subsectors within service-providing industries included trade-transportation-utilities, information, financial activities, professional and business services, education and health services, leisure and hospitality, and other services. The sampling also comprised companies of varying sizes including a small and large employer. A small employer is a business that employs 100 employees or less while a large employer employs more than 100 employees (The Patient Protection and Affordable Care Act, 2010). Military and civilian employees working on military installations were also asked to participate in this study.

### **Instrumentation**

To examine the differences across generations on dimensions of psychological resources, I used the psychological capital questionnaire (PCQ-24) and a researcher-designed questionnaire.



**Psychological capital questionnaire.** Psychological capital was measured using the PCQ-24 that was designed by Luthans et al. (2007a) to measure psychological capital. The PCQ-24 consists of four subscales: hope, efficacy, resilience, and optimism. Each subscale is measured with six items on the PCQ-24 for a total of 24 items on the survey. All 24 items are measured using a 6-point Likert scale with responses ranging from strongly disagree to strongly agree. Samples of the items on the PCQ-24 include:

- At the present time, I am energetically pursuing my work goals.
- Right now I see myself as being pretty successful at work.
- I always look on the bright side of things regarding my job. (Luthans et al., 2007a, p. 237)

There are three items on the PCQ-24 that are reverse scored. For these items, a “1” is reversed to a “6,” a “2” is reversed to a “5,” and so on. Upon reversing the scores of these items, the scores were added to obtain the participants’ total PsyCap score. PsyCap scores can vary from a minimum of 24 to a maximum of 144. The four subscales were also calculated individually by adding the six items within each subscale. Each subscale score can vary from a minimum of 6 to a maximum of 36.

The PCQ-24 has endured broad psychometric analyses in research in various industries including service, manufacturing, education, high-technology, and military. The items on the PCQ-24 were drawn from established scales previously tested and used in other research of the workplace (Youssef & Luthans, 2007) as well as the PCQ-24 as a whole (Avey et al., 2008). Studies support PsyCap’s psychometric relevance as well as its value in measuring the collective strength of the PsyCap’s four subscales in relation to predicting job satisfaction and performance. In two studies consisting of four samples (N = 167, 404, 115, 144), Luthans et al. (2007a) stated that

the Cronbach alphas for each of the four six-item adapted measures and the overall PsyCap measure for the four samples were as follows: hope (.72, .75, .80, .76); resilience (.71, .71, .66, .72); self-efficacy (.75, .84, .85, .75); optimism (.74, .69, .76, .79); and overall psychological capital (.88, .89, .89, .89). Although the optimism scale in the second sample (.69) and the resilience scale in the third sample (.66) did not reach the generally accepted levels of internal consistency, the reliability of the overall PsyCap measure in all four samples was consistently above conventional standards (p. 555).

There are two versions of the PCQ-24: the self-rater version and the other-rater version. I used the self-rater version of the PCQ-24 for this study. Permission was granted to use the instrument for research purposes and can be found in Appendix A.

**Demographic data.** I collected demographic information through a researcher-designed questionnaire (see Appendix B). This information described characteristics of each participant including:

- Industry of employer based on the U.S. Department of Labor (2014b) definitions
- Employment classification including:
  - o Fair Labor Standard Act category (i.e. salary or hourly),
  - o Employment type (i.e. full-time or part-time),
  - o Employment category (i.e. official/manager, professional, technician)
- Personal characteristics on the demographic questionnaire including:
  - o Gender
  - o Ethnicity
  - o Highest level of education
  - o Year of birth (optional)
  - o Generation they consider themselves

**Protection of Human Subjects**

I followed specific research guidelines established by the University of the Incarnate Word. I completed the Collaborative Institutional Training Initiative course and obtained a certificate, which is valid for three years, prior to conducting the study. Additionally, I received approval from the Institutional Review Board at the University of the Incarnate Word. I took great care and effort to protect the human subjects, their identities, and their right to privacy. Names were not collected in the recording or reporting of data. Approval documents can be found in Appendix C.

**Data Collection**

I contacted participants through face-to-face interaction, email, and social media networks. Participants were asked to participate in an online survey lasting approximately 15 to 20 minutes regarding generations and employee attitudes. Participants were not compensated for their time completing the survey. Participants were provided with access to a secure website where they reviewed the informed consent and the study's protocol before completing the survey. A paper and pencil version of the survey was also available for employee convenience. Participants completing the paper and pencil version of the questionnaire received a written consent form prior to completing the survey.

**Data Analysis**

The data was analyzed to determine the acceptance or rejection of the hypothesis using IBM-SPSS version 22.0. Cronbach's alpha was used to measure reliability and factor analysis was conducted for internal consistency. Since there are several independent categorical variables and a single dependent numerical variable, the Analysis of Variances (ANOVA) test was appropriate. After establishing several statistical assumptions, an ANOVA was used to test the

hypothesis of differences among groups on a single dependent variable (Field, 2005; Tabachnick & Fidell, 2007). After establishing the statistical assumptions, the Kruskal-Wallis test was used for the nonparametric data. Post hoc tests were also employed to determine which means were significantly different.

### **Summary**

This study aimed to investigate differences in psychological capital among three generational cohorts. This chapter focused on the research design of the study, population, and research instruments. This section also explained human subjects protection, data collection, and analysis procedures.

## **Chapter IV: Results**

This study investigated whether statistically significant differences between generations exist in psychological capital. Data analysis was performed on the survey data collected using the PCQ-24 scale developed by Luthans et al. (2007a). This chapter outlines the results of that data analysis including the results of the one-way analysis of variance (ANOVA) performed to test variability between the generations. Determining the differences between the generational groups showed whether the null hypothesis was true. The null hypothesis was that there is no difference in psychological capital among generations of working adults.

### **Response Rate**

The two organizations that participated in the study were from the manufacturing and entertainment industries. The first employer was a small manufacturing company with 68 on-site employees. Employees were asked in-person to participate through the electronic survey or a paper and pencil version of the survey. Of the 68 employees, 47 (69.1%) completed the survey. Of those who completed the survey, 35 completed the paper and pencil version. The second employer was a large leisure and entertainment company with 235 on-site employees. Employees were asked to participate through the electronic survey. Of the 235 employees, 51 (21.7%) completed the survey.

Professional and personal contacts were also engaged through electronic communication including email and social media. The survey was sent through email to 442 people. Of the 442 surveys, 122 (27.6%) were returned. Lastly, the survey was shared on a professional social media website. Participants were also asked to identify others who may be interested in participating by sharing the study. The response rate of participants who completed the survey through snowballing (or referrals) was not tracked during this study. The electronic communication

strategy yielded the majority of the participants with a total of 254. A summary of the response data by generation is provided in Table 5.

Table 5

*Summary of Survey Responses by Generation and Source*

	Small Employer	Large Employer	E-mail	Social Media	Total
Traditionalists	-	-	-	-	-
Baby Boomers	18	9	25	18	70
Generation X	22	20	48	107	197
Generation Y	7	22	19	57	105
Generation Z	-	-	-	1	1
Unknown (disqualified)	-	-	30	71	101
Total	47 (9.9%)*	51 (10.9%)*	122 (25.7%)*	254 (53.5%)*	474

\* Percentage is based on total response rate

### **Validity and Reliability**

A factor analysis is a multivariate technique used to identify whether correlations among a set of variables stem from their relationship to latent variables within the data (Field, 2005). Factor analysis was conducted to examine the construct validity of the PCQ-24 for this study. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) represents the ratio of the squared correlation between variables to the squared partial correlations between variables. This test is used to measure the appropriateness of factor analysis (Field, 2005). The closer the value to 1 indicates the more compact the correlations and factor analysis should yield more distinct and reliable factors. The KMO for this data was .89. A KMO value between .8 and .9 is considered great. Commonalities were also adequate. Six components met Kaiser's criterion of an Eigenvalue greater than 1. A principle-components factor analysis using direct oblimin with

Kaiser normalization was conducted with the six components with eigenvalues over 1. The reversed scored items formed a separate component as illustrated in Table 6.

Table 6

*Principle Component Analysis for Validity of PsyCap*

	Component					
	1	2	3	4	5	6
21	.81	-.23	.28	-.38	.17	-.32
24	.76	-.20	.11	-.30	.25	.00
22	.72	-.33	.38	-.49	.25	-.22
19	.72	-.35	.21	-.22	.29	-.35
3	.18	-.84	.15	-.29	.29	-.05
2	.24	-.82	.23	-.25	.25	-.22
4	.23	-.78	.16	-.41	.33	-.12
6	.16	-.74	.11	-.26	.32	-.26
5	.23	-.62	.03	-.16	.29	-.32
1	.31	-.57	.10	-.40	.34	.01
23R	.21	-.18	.84	-.28	.08	-.05
20R	.15	-.13	.84	-.18	.14	-.03
13R	.25	-.16	.59	-.13	.09	-.37
12	.27	-.29	.20	-.87	.17	-.14
8	.28	-.34	.18	-.81	.26	-.22
11	.42	-.29	.18	-.78	.51	-.09
10	.41	-.41	.36	-.72	.32	-.08
7	.19	-.44	.15	-.30	.83	-.24
9	.42	-.26	.09	-.29	.78	.06
15	.10	-.29	.12	-.20	.58	-.30
14	.39	-.39	.00	-.35	.50	-.30
16	.47	-.25	.23	-.27	.17	-.75
17	.32	-.34	.12	-.32	.48	-.73
18	.21	-.45	.22	-.43	.42	-.60

Next, PsyCap was analyzed using the sum from each of the four subscale scores in a principle component analysis. The KMO for this data was .78. A KMO value between .7 and .8 is considered good. Commonalities were also adequate. A principle-components factor analysis using direct oblimin rotations was conducted. The single factor explained a total of 62.70% of the variance. All items had primary loadings over .5 as illustrated in Table 7.

Table 7

*Principle Component Analysis for Validity of the Instrument*

Factor	KMO	Eigenvalue	% of Variance	Item	Factor Loading
PsyCap	.78	2.51	62.7	Efficacy	.74
				Hope	.83
				Resiliency	.82
				Optimism	.78
Efficacy	.86	3.27	54.48	1	.62
				2	.81
				3	.83
				4	.79
				5	.63
				6	.73
Hope	.80	3.08	51.27	7	.59
				8	.75
				9	.59
				10	.75
				11	.84
				12	.74
Resiliency	.77	2.51	41.79	13R	.46
				14	.59
				15	.51
				16	.73
				17	.79
				18	.72
Optimism	.75	2.73	45.52	19	.71
				20R	.51
				21	.79
				22	.80
				23R	.57
				24	.64

The items from the four subscales were then analyzed separately in a principle-component analysis to find evidence for the assumption that each factor measured a single construct. The factor analysis on this set of data should display a one-component solution if this assumption is supported. The eigenvalues, variance explained, and factor loadings are illustrated in Table 7. The eigenvalues showed the first factor explained 54.48% of the variance in the efficacy subscale and 51.27% of the variance in the hope subscale. Resiliency and optimism had



2 components with eigenvalues greater than 1. For these subscales, the eigenvalues showed that the first two factors explained a cumulative 59.04% and 66.94%, respectively.

The PCQ-24 has demonstrated high reliability in previous studies (Avey et al., 2010; Luthans et al., 2007; Luthans et al., 2008). In this study, the PsyCap Questionnaire (PCQ) was also found to be highly reliable across the 24 items ( $\alpha = .89$ ) as well as the four subscales ( $\alpha = .80$ ). The means, standard deviations, and correlations between the study variables are reported in Table 8. The PsyCap efficacy subscale consisted of 6 items ( $\alpha = .83$ ), the PsyCap hope subscale consisted of 6 items ( $\alpha = .80$ ), the PsyCap resiliency subscale consisted of 6 items ( $\alpha = .68$ ), and the PsyCap optimism subscale consisted of 6 items ( $\alpha = .74$ ). As in previous studies, PsyCap resiliency and PsyCap optimism demonstrated less internal consistency than the other two scales (Avey et al., 2010; Gorgens-Ekermans & Herbert, 2013; Luthans et al., 2007).

Table 8

*Means, Standard Deviations, Reliabilities, and Correlations*

Variable	M	SD	PsyCap	Efficacy	Hope	Resiliency	Optimism
Efficacy	31.67	3.53	.74	(.83)	-	-	-
Hope	30.91	3.41	.81	0.51*	(.80)	-	-
Resiliency	30.49	3.35	.81	0.48*	0.55*	(.68)	-
Optimism	28.51	4.00	.79	0.38*	0.54*	0.55*	(.74)

Note: M, mean; SD, standard deviation. Alpha coefficients on the diagonal

\*,  $p < 0.05$

### **Descriptive Analysis**

A total of 439 respondents attempted to participate in the study. The survey was administered through an online survey website. After acknowledging the consent to take part in the study, participants were asked three qualifying questions. Ninety-five respondents did not qualify based on their responses to these questions. The reason for disqualification included:

under the age of 18 years ( $n = 3$ ), lived in an institution ( $n = 24$ ), and not currently employed in the United States ( $n = 68$ ). The participants who did not qualify bypassed the personal information, employment information, and PCQ-24. Additionally, participants with missing values were also removed prior to analysis ( $n = 24$ ). Of the 24 participants with missing values, nine did not complete the demographics section and did not begin the PCQ-24. The remaining unfinished participants who completed the demographic information did not answer any questions on the PCQ-24. A single participant claimed to be in the Generation Z group. This participant was eliminated due to the lack of sufficient participants within this group.

A paper and pencil version of the survey was also offered to respondents. After agreeing to the written consent to take part in the study, participants were presented a written version of the PCQ-24 and demographic questionnaire. A total of 35 participants completed this version of the survey (13 Baby Boomers, 17 Generation X, and 5 Generation Y). All participants who completed this version were from the small employer that was in the manufacturing industry. Due to the demographics of this company, the majority of these respondents was from a minority ethnic group (83%) and had less than a bachelor degree (77%). Differences between the two methods were not examined in this study due to the uncertainty of causation of variances (i.e. method or demographics). A total of 347 participants were used for the analysis of this study.

Skewness and kurtosis values, as well as boxplots, were obtained to examine the distributions for PsyCap scores. Based on the standardized values for skewness ( $-1.57$ ) and kurtosis ( $6.11$ ) the distribution was somewhat negatively skewed and peaked. The PsyCap score contained three outliers at the lower end with values of 88 or less and four extreme outliers with values of 62 or less. While these outliers did have the lowest subscale scores when compared to the non-outliers, there did not appear to be a pattern among the outlier's subscale scores (i.e.

consistently lower hope score). Since these outliers did not change the results but did affect the assumptions needed for statistical analysis, the outliers were removed. After the cases identified as outliers were removed from the sample, the distribution for PsyCap score was examined again. No outliers were identified and the distribution appeared to be approximately normal, supported by low skewness and kurtosis standardized values, -0.21 and -0.39, respectively.

**Personal characteristics.** Participants were asked several questions about themselves including gender, ethnicity, education level, and generation. First, they were asked to indicate whether they were male or female. Nearly two-thirds of the respondents were female. The gender category is illustrated in Table 9 and visually displayed in Figure 4.

Table 9

*Frequency Table of Respondents' Gender*

	Frequency	Percent
Male	130.0	37.5
Female	217.0	62.5
Total	347.0	100.0

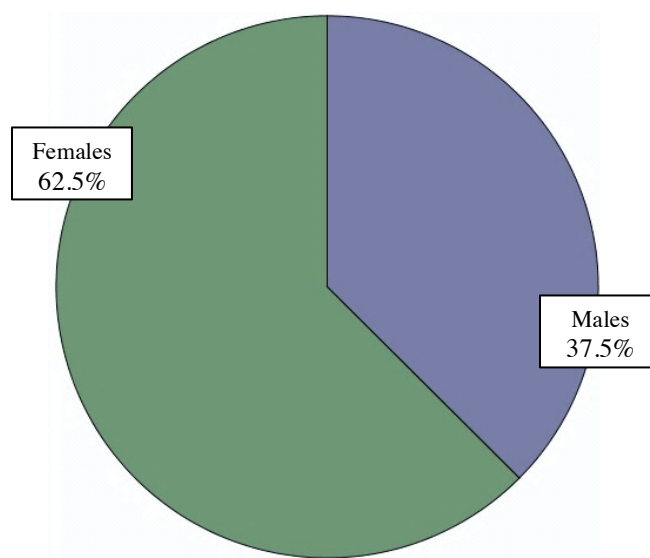


Figure 4. A pie chart illustrates the variance in females and males within the study.

Next, participants were given the option of six ethnicity categories: American Indian or Alaskan Native, Asian or Pacific Islander, Black or African American, Hispanic or Latino, White or Caucasian, and other. The majority (70%) of the participants were Caucasian followed by Hispanic or Latino with 17% as illustrated in Table 10 and visually displayed in Figure 5.

Table 10

*Frequency Table of Respondents' Ethnicity*

	Frequency	Percent
American Indian or Alaskan Native	0.0	0.0
Asian or Pacific Islander	10.0	2.9
Black or African American	27.0	7.7
Hispanic or Latino	60.0	17.3
White or Caucasian	244.0	70.3
Other	6.0	1.7
Total	347.0	100.0

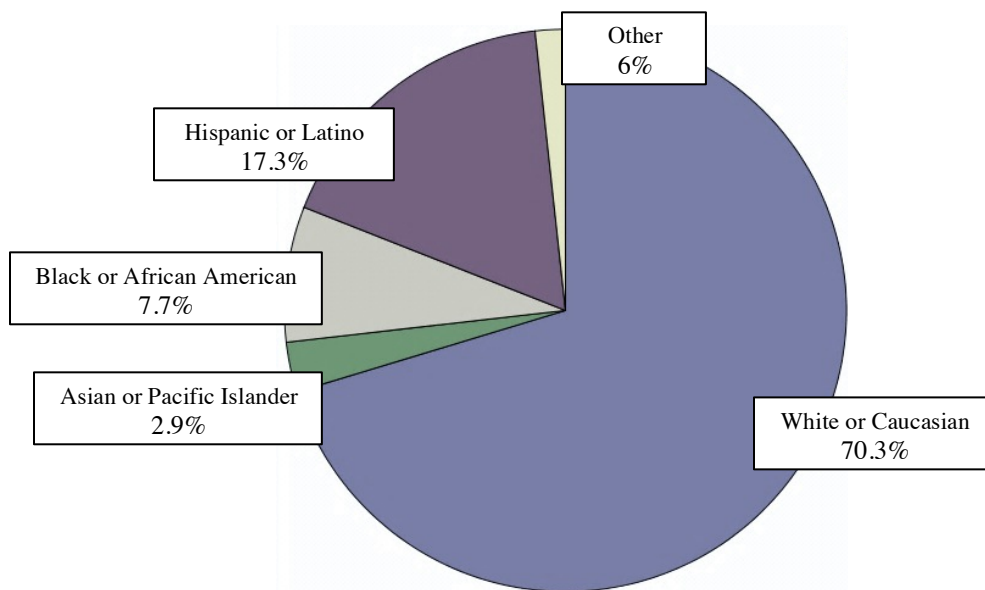


Figure 5. A pie chart displays the substantial proportion of Caucasians within the study.

Respondents were asked the highest level of education they had completed. This category was divided into six options: high school, some college, associate's degree, bachelor's degree, master's degree, and doctorate. The majority (70%) of the respondents had at least a bachelor's degree as illustrated in Table 11. Figure 6 illustrates the range of respondent's education level at the time of the study.

Table 11

*Frequency Table of Respondents' Education Level*

	Frequency	Percent
High school	23.0	6.6
Some college	44.0	12.7
Associate's degree	35.0	10.1
Bachelor's degree	121.0	34.9
Master's degree	94.0	27.1
Doctorate degree	30.0	8.6
Total	347.0	100.0

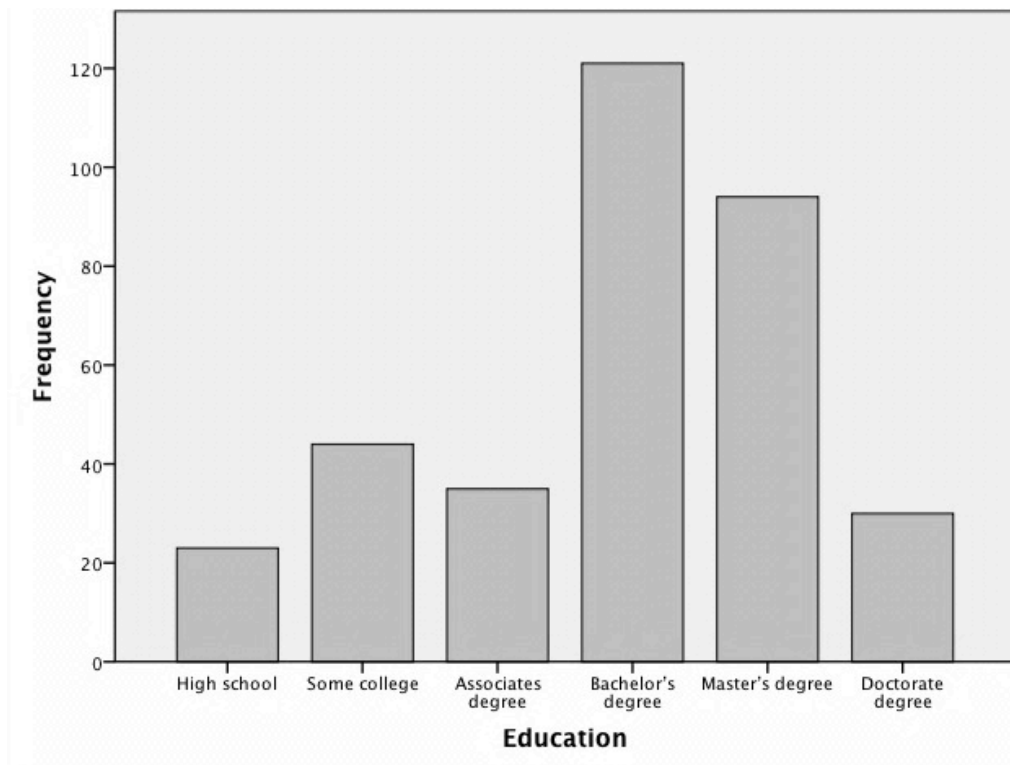


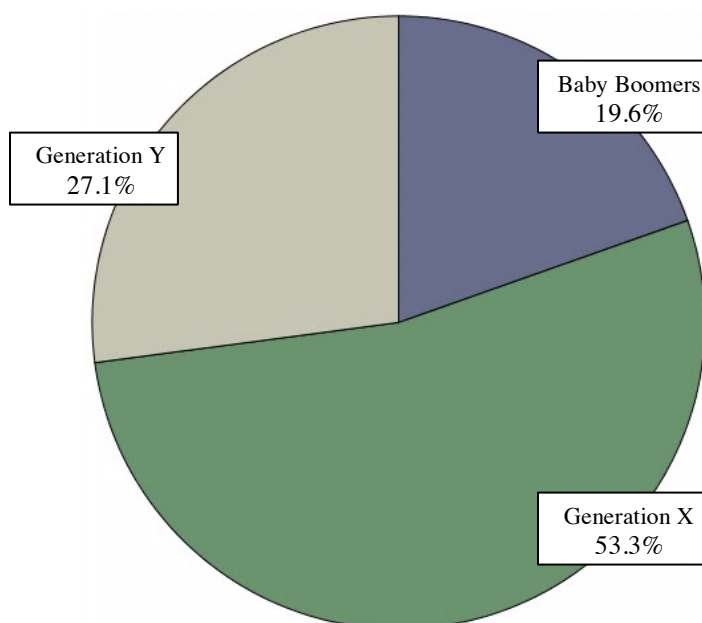
Figure 6. A bar chart displays the uneven distribution among education of participants.

Participants were then asked which generation they considered themselves. The generation category was divided into five options: Traditionalists, Baby Boomers, Generation X, Generation Y, And Generation Z. Traditionalists and Generation Z were eliminated from the study due to lack of sufficient respondents. The frequency of the participant's generation is illustrated in Table 12 and visually displayed in Figure 7.

Table 12

*Frequency Table of Respondents' Generation*

	Frequency	Percent
Baby Boomers	68.0	19.6
Generation X	185.0	53.3
Generation Y	94.0	27.1
Total	347.0	100.0



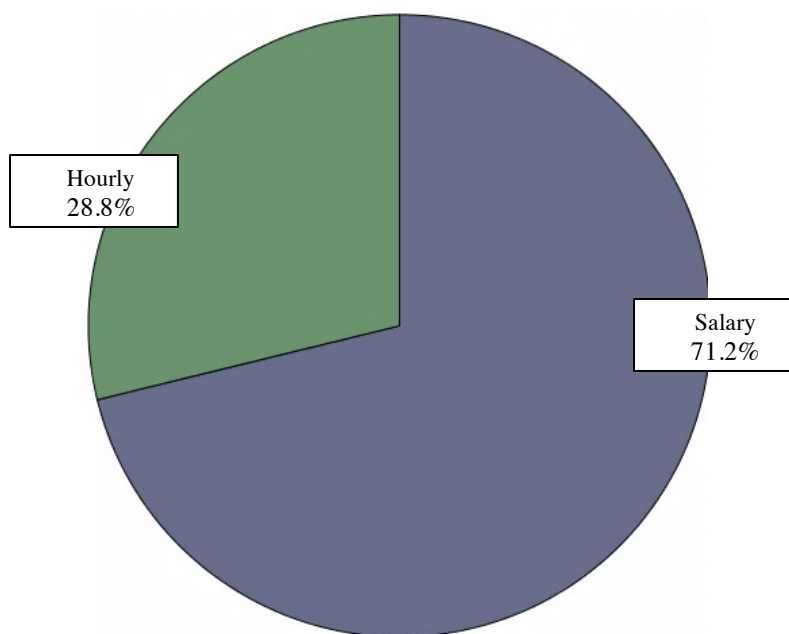
*Figure 7.* A pie chart displays the large proportion of generation X within the study.

**Employment details.** Since Psychological Capital is associated with work, respondents were also asked about their current employment. The Fair Labor Standard Act category is a variable representing whether the participant was hourly or salary at the time of the study. The majority (71%) of the respondents were in the salary category as illustrated in Table 13. Figure 8 also displays this large percentage visually.

Table 13

*Frequency Table of Fair Labor Standard Act Category*

	Frequency	Percent
Salary	247.0	71.2
Hourly	100.0	28.8
Total	347.0	100.0



*Figure 8.* A pie chart displays more respondents were exempt at the time of the study.

Employment category is a variable representing the manner of employment at the time of the study. The participants had nine options: administrative support, craft worker, laborer/helper, official/manager, operator, professional, sales worker, service worker, and technician. Half of the respondents were in the professional employment category followed by official/manager with 19%. Craft workers were the smallest group to respond with 0.3%. The frequency of the employment variable is illustrated in Table 14 and visually displayed in Figure 9.



Table 14

*Frequency Table of Employment Category in Descending Order*

	Frequency	Percent
Professional	176.0	50.7
Official/Manager	66.0	19.0
Administrative Support	31.0	8.9
Technician	27.0	7.8
Sales Worker	18.0	5.2
Operator	10.0	2.9
Laborer/Helper	9.0	2.6
Service Worker	9.0	2.6
Craft Worker	1.0	0.3
Total	347.0	100.0

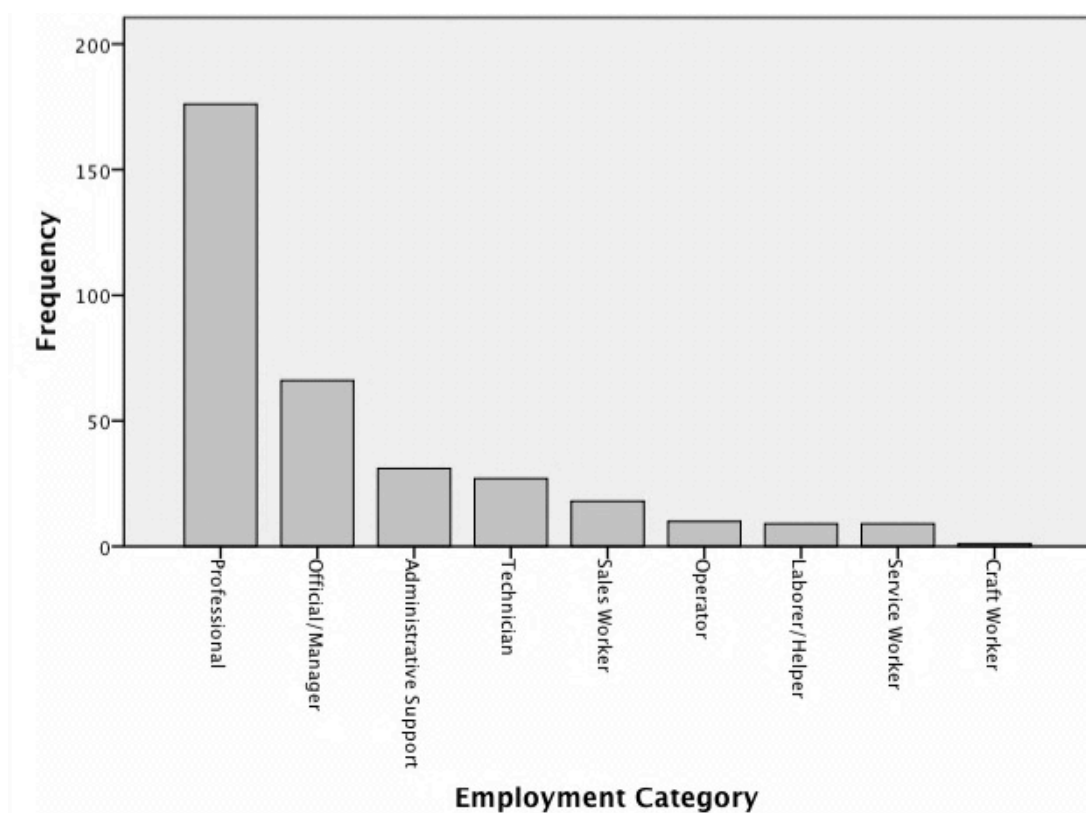


Figure 9. A bar chart displays the distribution among employment levels within the study in descending order.

Respondents were also asked which industry they worked in at the time of the study. This category was divided into 11 options based on the U.S Department of Labor (2014a) standards: construction, education and health services, financial, information, leisure and hospitality, manufacturing, military, natural resources and mining, other services, professional, and trade transportation and utilities. The frequency of the respondent's industry is illustrated in Table 15. The majority of the respondents (31%) were in the education and health services industry. Figure 10 illustrates the industry frequency in descending order.

Table 15

*Frequency Table of Respondents' Industry in Descending Order*

	Frequency	Percent
Education and Health Services	111.0	32.0
Leisure and Hospitality	51.0	14.7
Manufacturing	44.0	12.7
Military	41.0	11.8
Professional	41.0	11.8
Financial	19.0	5.5
Trade, transportation, and utilities	15.0	4.3
Other services	12.0	3.5
Construction	6.0	1.7
Information	4.0	1.2
Natural resources and mining	3.0	0.9
Total	347.0	100.0

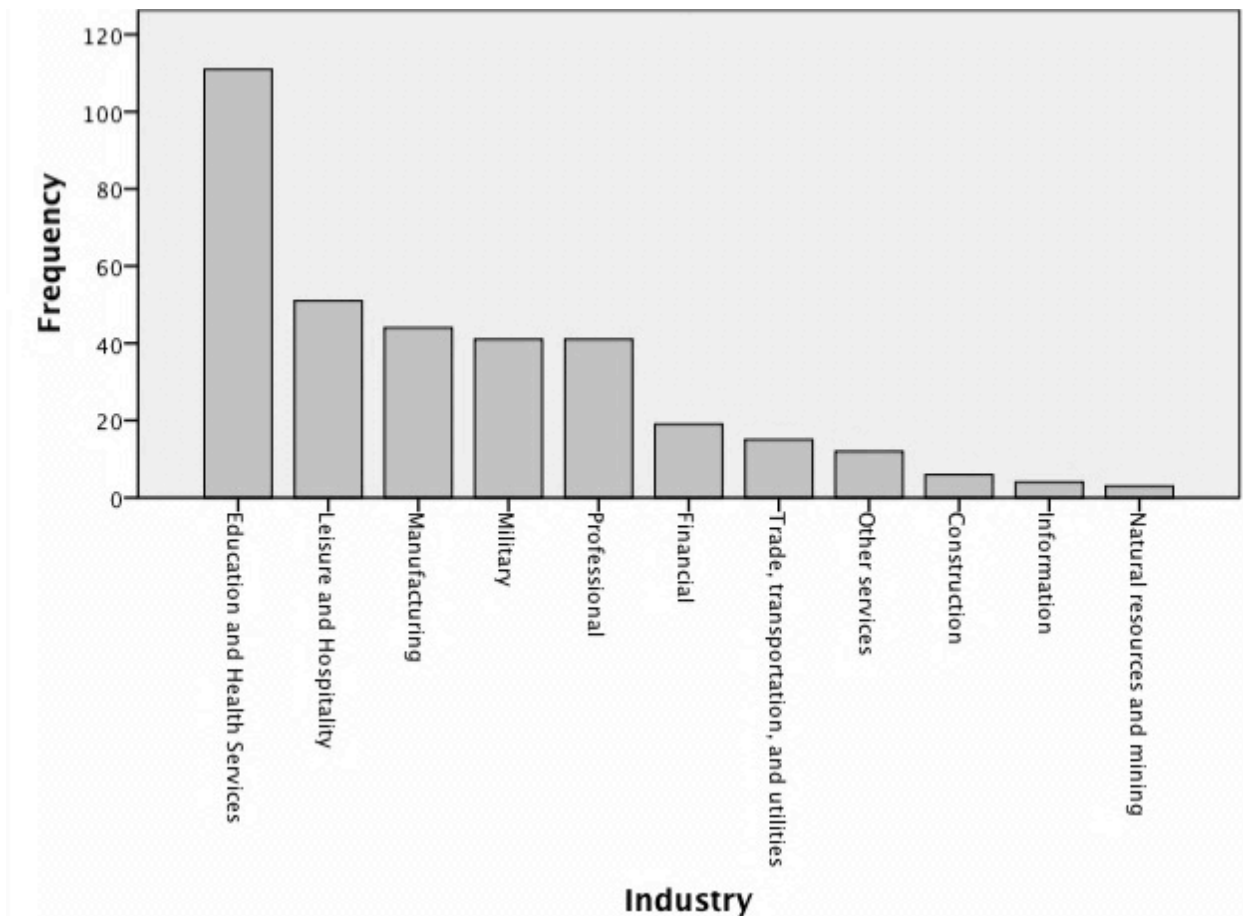


Figure 10. A bar chart displays the frequency of respondent's industry at the time of the study.

**PsyCap Scores by Generation.** Respondent's scores were added for a cumulative PsyCap score. Additionally, scores from each subscale were added for a total in efficacy, hope, resiliency, and optimism. Table 16 illustrates the mean scores by generation for the overall PsyCap and each subscale.

Table 16

*Mean Scores for PsyCap and Subscale Scores by Generation*

Generation	PsyCap	Efficacy	Hope	Resiliency	Optimism
Baby Boomers	126.04	32.54	31.63	31.93	29.94
Generation X	121.52	31.81	30.94	30.48	28.30
Generation Y	118.46	30.76	30.34	29.48	27.88

**Tests of Normality.** In quantitative research, parametric tests assume an underlying normal distribution of the population. Therefore, tests of normality are needed to determine if parametric or non-parametric statistical tests can be used.

**Psychological capital scores.** The PsyCap score from the sample of 347 has a mean of 121.58 and the median is 122.00. The difference between mean and median indicates symmetry in the distribution. The ratio of the standard deviation of 11.29 to the range of 53 is .21, which is between .16 and .25, indicating normality. Although, the data is slightly negatively skewed, the skewness score of -.21 and kurtosis score of -.39 supports an assumption of normality. As illustrated in Table 18, the Smirnov-Kolmogorov Test of Normality shows a p-value of  $< 0.05$ , indicating that this sample is taken from a population which is not normal. As illustrated in Figure 11 and 12, the histogram and Q-Q plot supports normality. Taking all this evidence together, I will assume this sample is taken from a normal population.

Table 17

*Statistics for PsyCap and Subscale Scores*

	PsyCap	Efficacy	Hope	Resiliency	Optimism
Mean	121.58	31.67	30.91	30.49	28.51
Median	122.00	32.00	31.00	30.00	29.00
Std. Deviation	11.29	3.53	3.41	3.35	4.00
Skewness	-0.21	-0.70	-0.41	-0.34	-0.48
Kurtosis	-0.39	0.36	-0.11	-0.16	0.62
Range	53.00	18.00	16.00	18.00	23.00
Minimum	91.00	18.00	20.00	18.00	13.00
Maximum	144.00	36.00	36.00	36.00	36.00
Kolmogorov-Smirnov	0.02	0.00	0.00	0.00	0.00

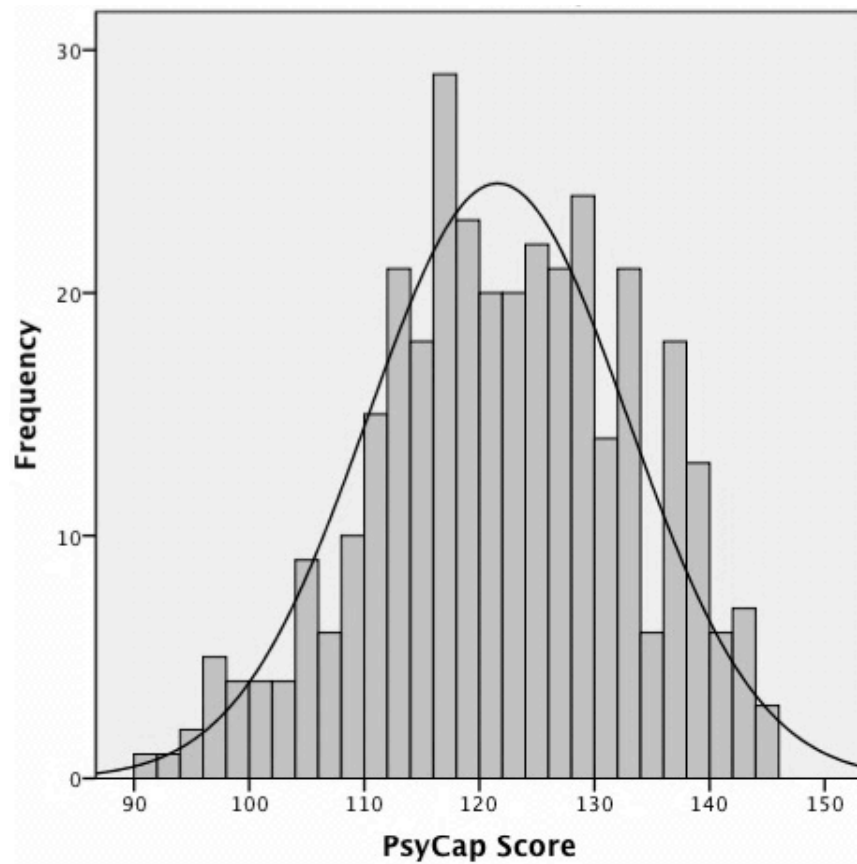


Figure 11. Histogram of the PsyCap Score of Respondents within sample supports normality.

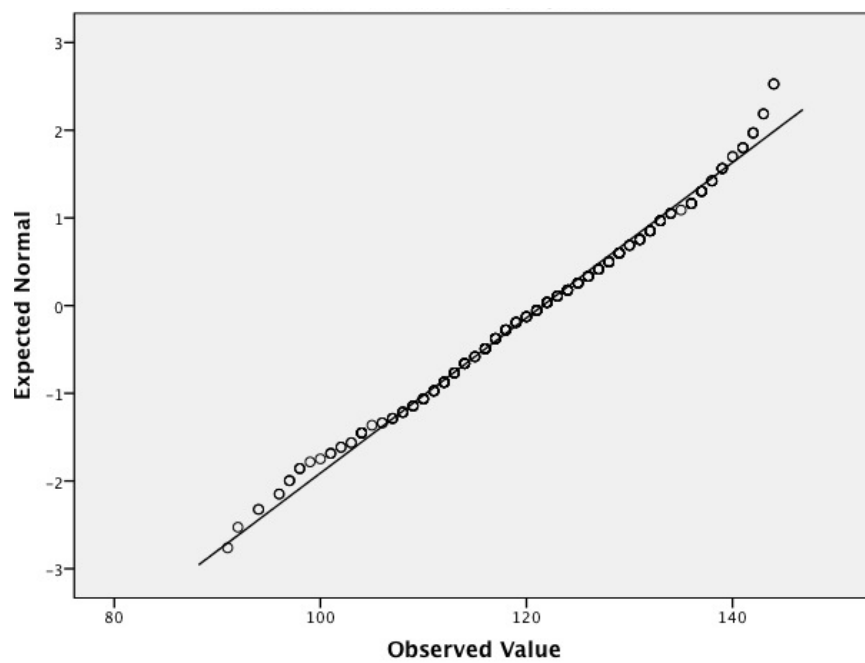


Figure 12. Q-Q plot of the PsyCap score of respondents within sample supports normality.

While the overall PsyCap score is synergetic, the four subscale scores of PsyCap efficacy, PsyCap hope, PsyCap resilience, and PsyCap optimism were also obtained.

***PsyCap Efficacy.*** The PsyCap efficacy score from the sample of 347 has a mean of 31.67 and the median is 32. The difference between mean and median indicates symmetry in the distribution. The ratio of the standard deviation of 3.53 to the range of 18 is .20, which is between .16 and .25, indicating normality. The skewness score of -.70 and kurtosis score of .36 supports an assumption of lack of normality. As illustrated in Table 17, the Smirnoff-Kolmorov Test of Normality shows a p-value of <.001, indicating this sample is taken from a population which is not normal. Neither the histogram nor the Q-Q plot shown in Figures 13 and 14 supports normality. I will assume that this sample is taken from a population which is not normal.

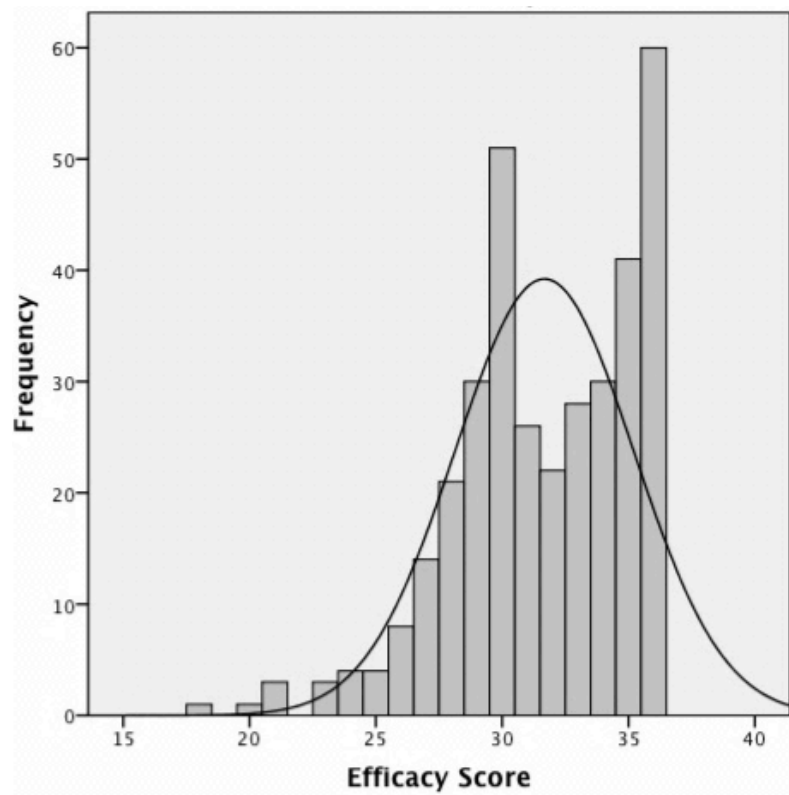


Figure 13. Histogram of the PsyCap efficacy score of respondents within sample supports lack of normality.

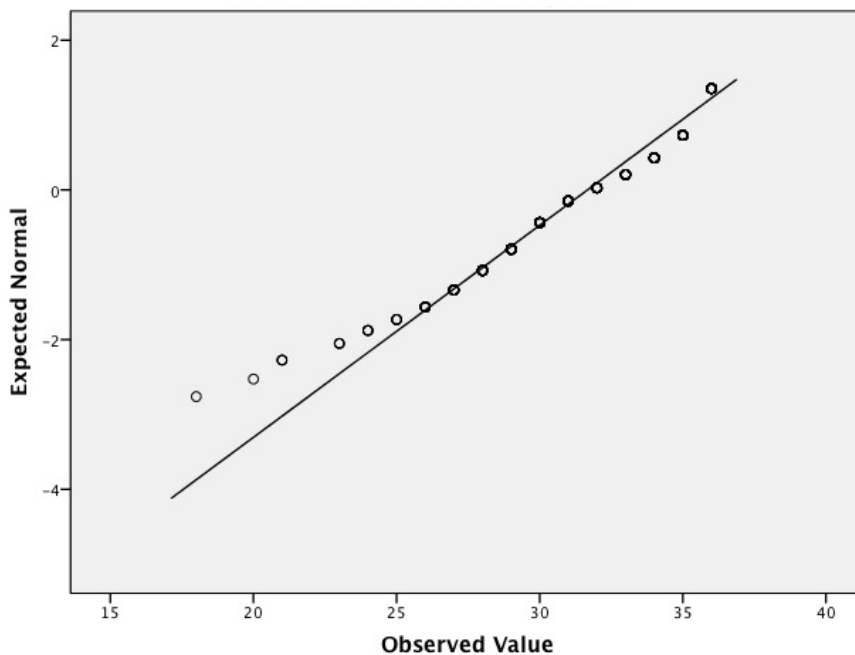
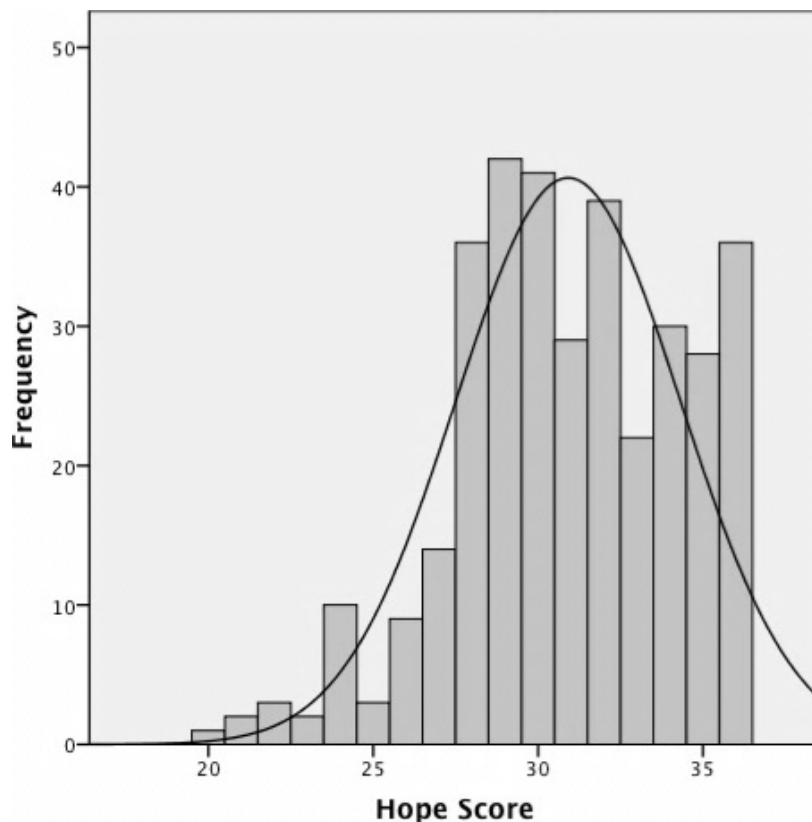


Figure 14. Q-Q plot of the PsyCap efficacy score of respondents within sample supports lack of normality

***PsyCap Hope.*** The PsyCap hope score from the sample of 347 has a mean of 30.91 and the median is 31. The difference between mean and median indicates symmetry in the distribution. The ratio of the standard deviation of 3.41 to the range of 16 is .21, which is between .16 and .25, indicating normality. The skewness score of -.41 supports an assumption of a lack of normality, while the kurtosis score of -.11 supports an assumption of normality. As illustrated in Table 17, the Smirnov-Kolmogorov Test of Normality shows a p-value of  $<.001$ , indicating this sample is taken from a population which is not normal. Neither the histogram nor the Q-Q plot shown in Figures 15 and 16 supports normality. Taking all this evidence together, I will assume that this sample is taken from a population which is not normal.



*Figure 15.* Histogram of the PsyCap hope score of respondents within sample supports lack of normality.



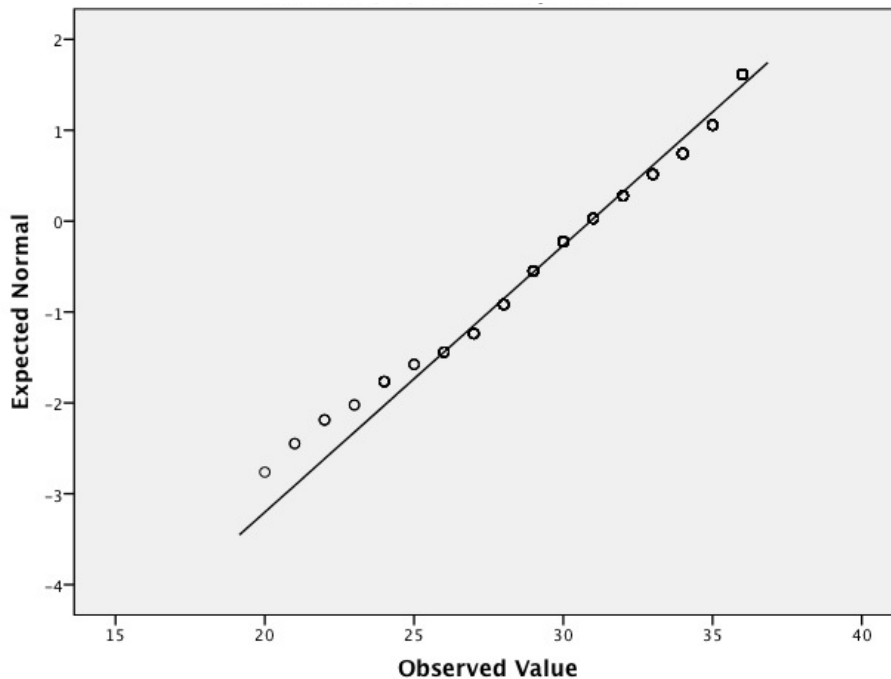


Figure 16. Q-Q plot of the PsyCap hope score of respondents within sample supports lack of normality.

**PsyCap Resiliency.** The PsyCap resiliency score from the sample of 347 has a mean of 30.49 and the median is 30. The difference between mean and median indicates symmetry in the distribution. The ratio of the standard deviation of 3.35 to the range of 18 is .19, which is between .16 and .25, indicating normality. The skewness score of -.34 and the kurtosis score of -.16 supports an assumption of normality. As illustrated in Table 17, the Smirnov-Kolmogorov Test of Normality shows a p-value of <.001, indicating this sample is taken from a population which is not normal. Neither the histogram nor the Q-Q plot shown in Figure 17 and 18 supports normality. Taking all this evidence together, I will assume that this sample is taken from a population which is not normal.

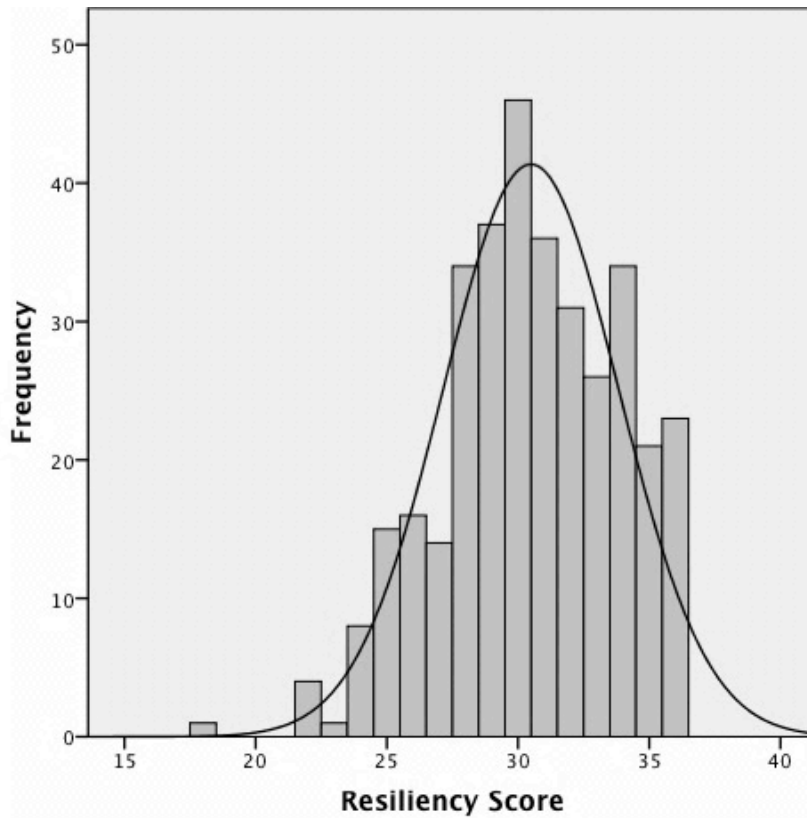


Figure 17. Histogram of the PsyCap resiliency score of respondents within sample supports lack of normality.

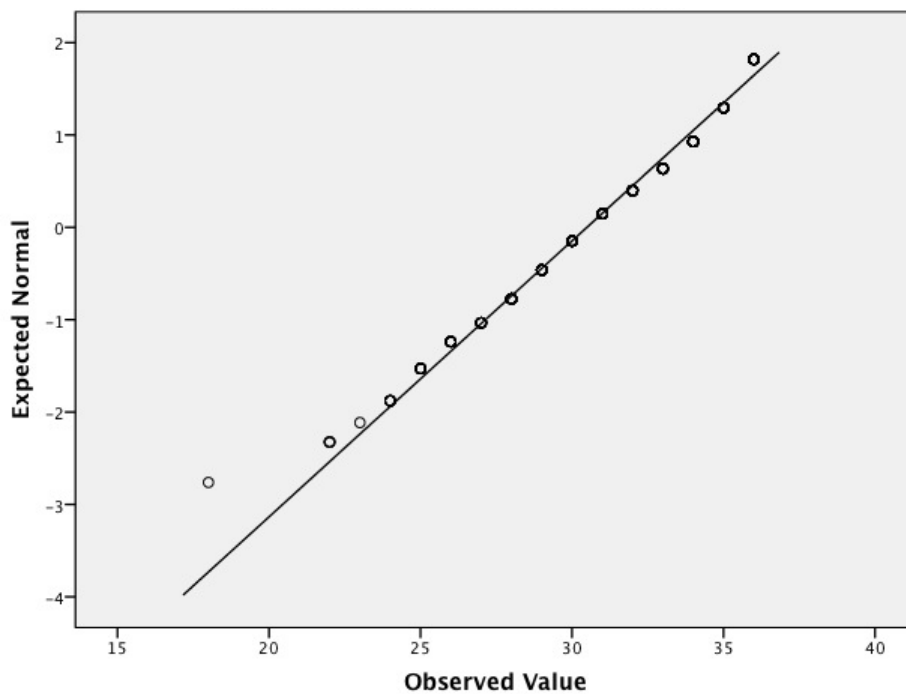


Figure 18. Q-Q plot of the PsyCap resiliency score of respondents within sample supports lack of normality.

***PsyCap Optimism.*** The PsyCap optimism score from the sample of 347 has a mean of 28.51 and the median is 29. The difference between mean and median indicates symmetry in the distribution. The ratio of the standard deviation of 4.00 to the range of 23 is .17, which is between .16 and .25, indicating normality. The skewness score of -.48 and kurtosis score of .62 do not support an assumption of normality. As illustrated in Table 17, the Smirnov-Kolmogorov Test of Normality shows a p-value of <.001, indicating this sample is taken from a population which is not normal. The histogram supports normality while the Q-Q plot shown in Figure 19 and 20 does not support normality. Taking all this evidence together, I will assume that this sample is taken from a population which is not normal.

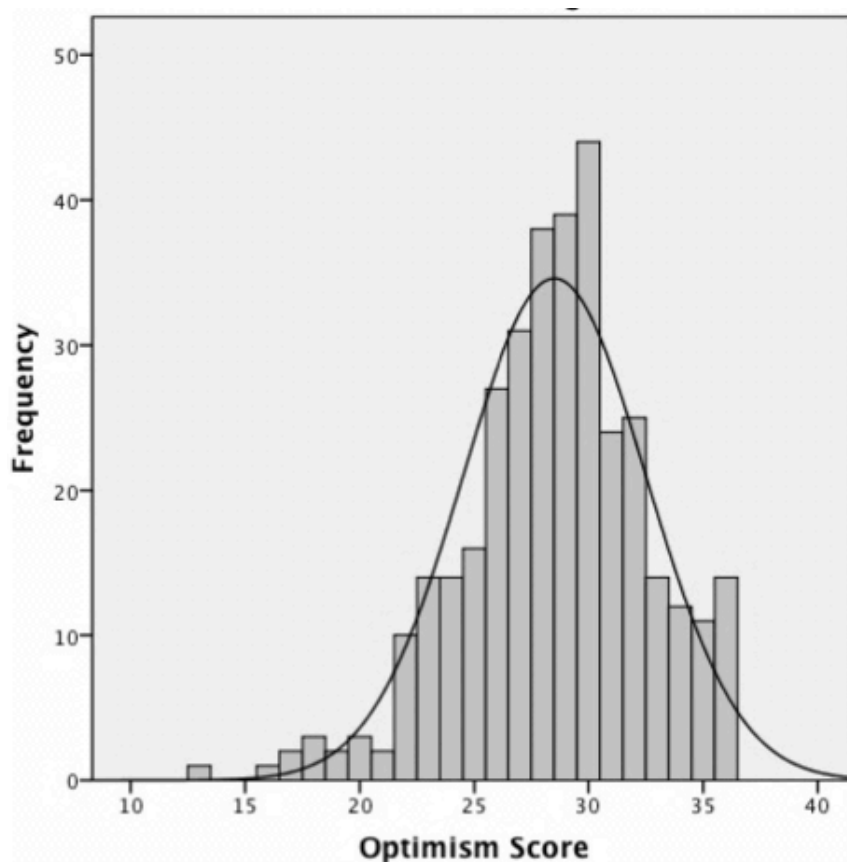


Figure 19. Histogram of the PsyCap optimism score of respondents within sample supports normality.

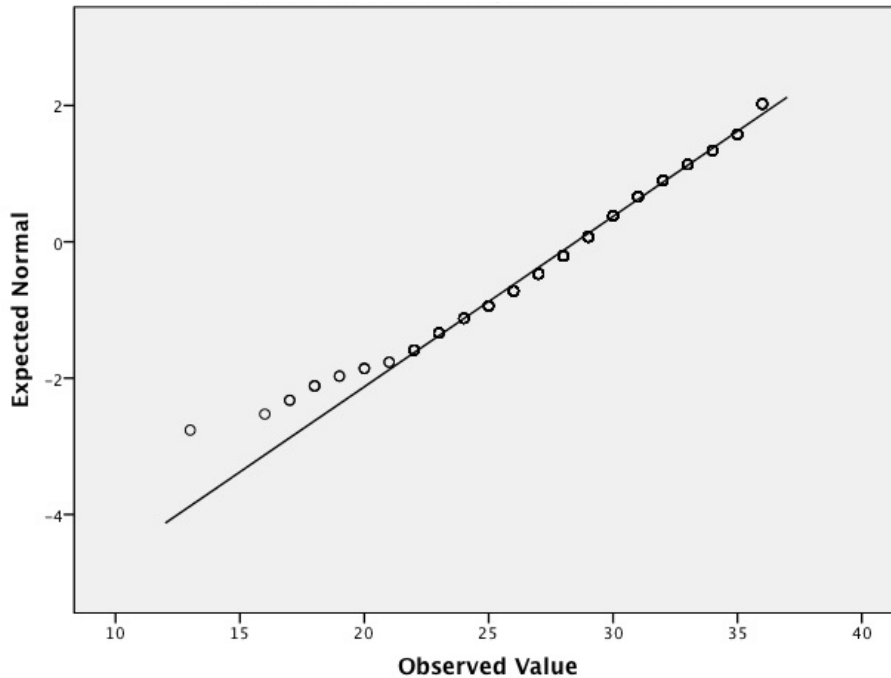


Figure 20. Q-Q plot of the PsyCap optimism score of respondents within Sample supports lack of normality.

### Inferential Analysis

The one-way ANOVA determines the ratio of between-group mean squares to within-group mean squares (Field, 2005; Norusis, 2008; Tabachnick & Fidell, 2007). When the calculated value of this ratio is close to or equals 1, there is little to no difference between the groups. An F ratio that is significantly greater than 1 suggests that a greater variation exists between the groups than within the groups. To determine if there were differences between the generations in psychological capital, F ratios were calculated for the overall survey and subscales. The observed significance level was also calculated, using the standard 0.05 level, to determine the probability of obtaining an F ratio at least as large as the calculated value when the null hypothesis is true (Norusis, 2008).

**Testing assumptions.** As a first step of conducting analysis of variance, the assumptions of normality and equality of variance were tested to ensure that the ANOVA test was

appropriate. Normality was tested by viewing a histogram for each of the groups to determine if a normal curve was present, and a Q-Q plot was created for each of the groups to see if the data values clustered around a straight line. The output of the histograms and Q-Q plots showed the assumptions for normality were met. Baby Boomers, Generation X, and Generation Y also represented normal populations based on Kolmogorov-Smirnov ( $p = 0.20$ ,  $p = 0.07$ ,  $p = 0.20$ , respectively). Next, the Levene test was run to test the assumption of equal variances between the generational groups. Homogeneity of population variances among groups was established ( $p = 0.22$ ). This test supports the equality of variances assumption necessary to use the ANOVA test.

**ANOVA results.** With these assumptions confirmed, the one-way ANOVA was used to test the null hypothesis to determine if psychological capital differences between the generations were statistically significant. The null hypothesis is that there is no difference in psychological capital scores among members of each of the generations.

There was a significant effect of generations on PsyCap scores at the  $p < .05$  level for the three conditions  $F(2, 344) = 9.34$ ,  $p < .01$ . Post hoc comparisons using the Tukey Honestly Significant Difference test indicated that the mean score for the Baby Boomers ( $M = 126.04$ ,  $SD = 9.53$ ) was significantly different than both Generation X ( $M = 121.52$ ,  $SD = 11.43$ ) and Generation Y ( $M = 118.46$ ,  $SD = 11.23$ ). However, Generation X and Generation Y were not significantly different from each other. Both Scheffe and Bonferroni post hoc tests supported these findings. As illustrated in Figure 21, Baby Boomers had higher scores on PsyCap overall scores.

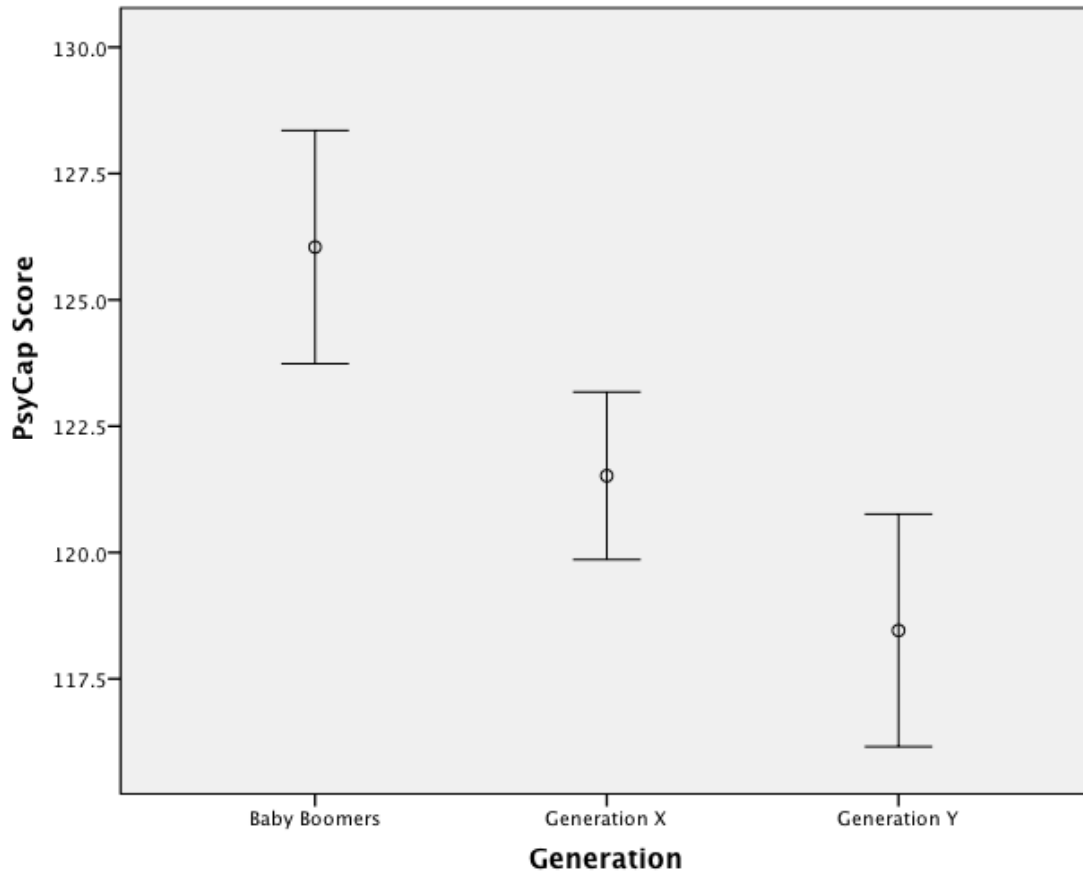


Figure 21. The 95% confidence interval for overall PsyCap scores within this study.

**Subscale scores.** With the assumptions established, the Kruskal-Wallis test was used to determine if there were differences between the generations in the subscales within psychological capital. Since the PsyCap score has four subscales, each subscale was examined for significant differences among the members of each of the generations. The Kruskal-Wallis (K Independent Samples) test is an alternative to the one-way ANOVA for nonparametric data. Lack of normality was established for each subscale based on the Kolmogorov-Smirnov as illustrated in Table 18.

Table 18

*Kolmogorov-Smirnov of Subscale Scores*

	Baby Boomers	Generation X	Generation Y
Efficacy	.00	.00	.00
Hope	.00	.00	.02
Resiliency	.09	.00	.01
Optimism	.20	.00	.02

***PsyCap efficacy.*** Based on the Kruskal-Wallis test, there is a difference in PsyCap efficacy scores among the different generations,  $\chi^2(2) = 12.747, p = .002$ . To test which generation is different, a Mann-Whitney U was used to compare two generations at a time. For this statistical analysis, assumptions included independent, numeric variables from a population which is not normal. With the assumptions established, the Mann-Whitney U test was used. Based on this test, there is a difference in PsyCap efficacy scores among Baby Boomers and Generation Y ( $p = .001$ ) as well as among Generation X and Generation Y ( $p = .007$ ). There is no difference in PsyCap efficacy scores within Baby Boomers and Generation X,  $p = .143$ . As illustrated in Figure 22, both Baby Boomers and Generation Y were higher than Generation X.

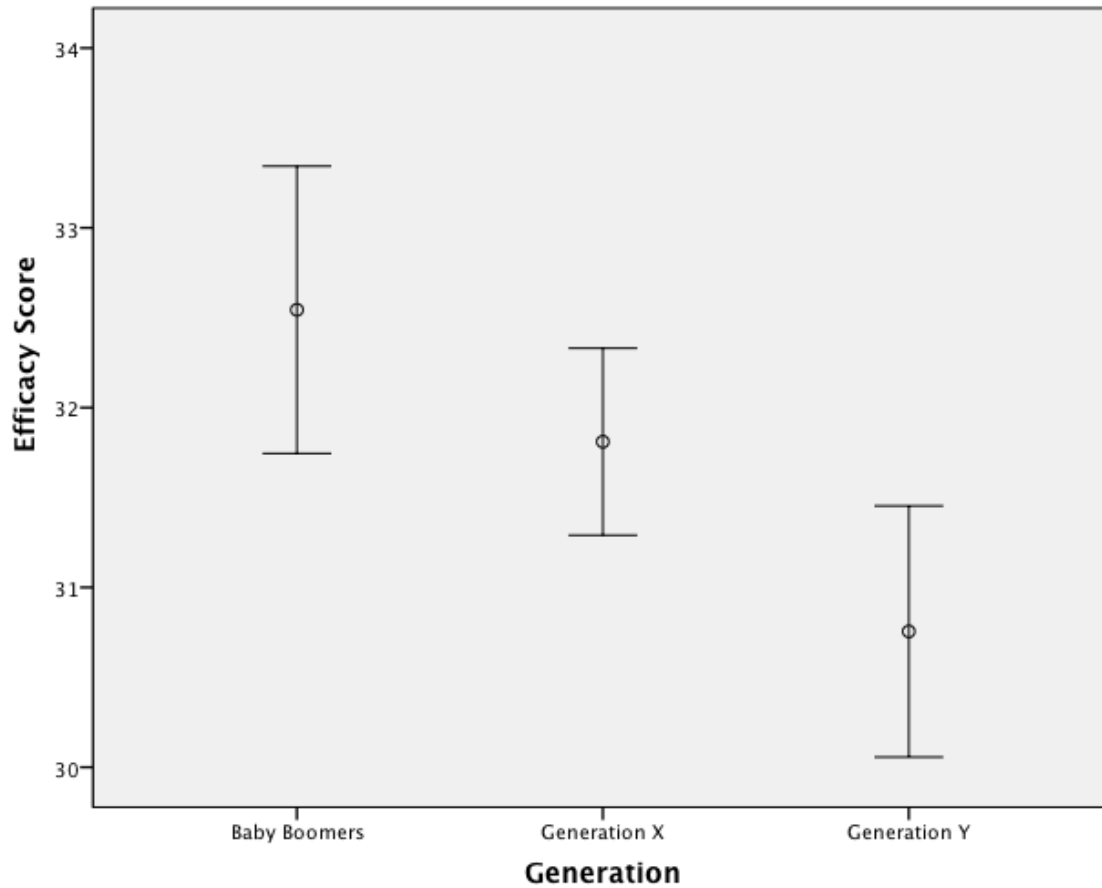


Figure 22. The 95% confidence interval for PsyCap efficacy scores within this study.

***PsyCap hope.*** Based on the Kruskal-Wallis test, there is no statistically significant difference in PsyCap hope scores among the different generations,  $\chi^2(2) = 4.718, p = .095$ . Although Figure 23 illustrates Baby Boomers are slightly higher on hope, these results are not statistically significant. The three generations showed equivalent levels of hopefulness.



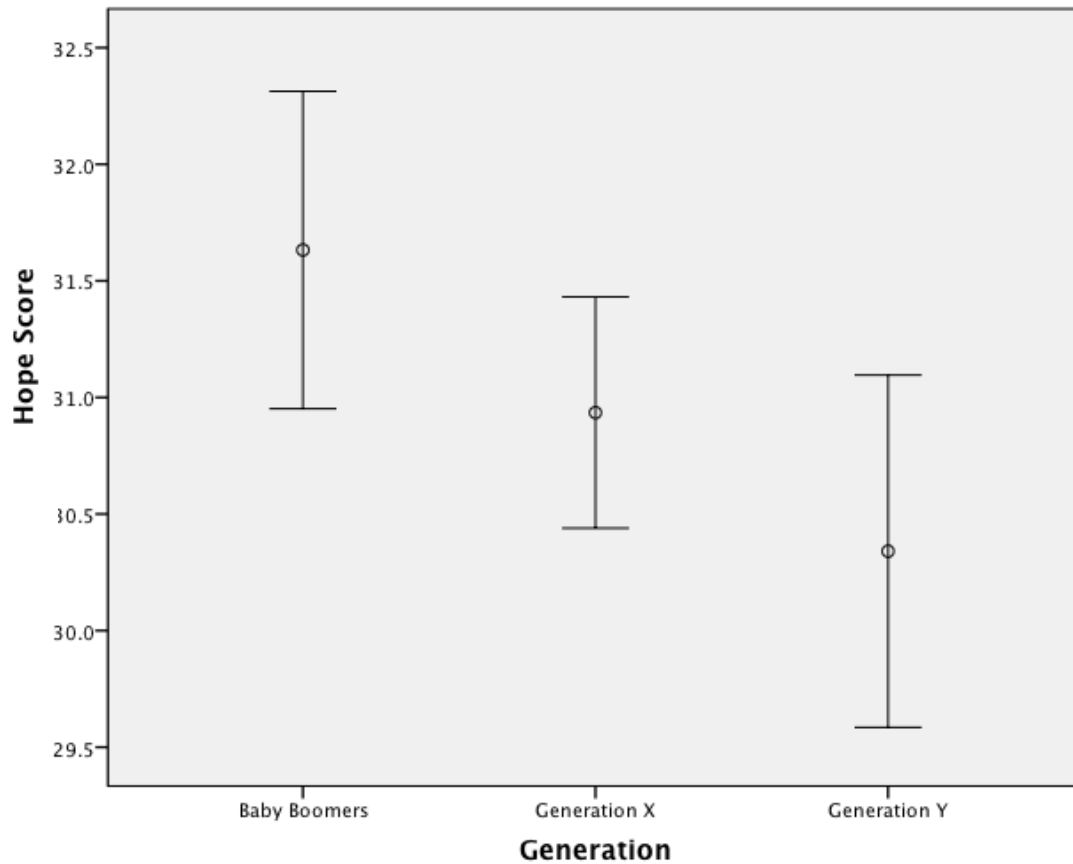


Figure 23. The 95% confidence interval for PsyCap hope scores within this study

***PsyCap resiliency.*** Based on the Kruskal-Wallis test, there is a difference in PsyCap resiliency scores among the different generations,  $\chi^2(2) = 20.270, p < .001$ . To test which generation is different, a Mann-Whitney U was used to compare two generations at a time. There is a difference in PsyCap resiliency scores among each pair of generations: Baby Boomers and Generation X ( $p = .001$ ); Baby Boomers and Generation Y ( $p < .001$ ); Generation X and Generation Y ( $p = .044$ ). As illustrated in Figure 24, Baby Boomers were highest, Generation X were in the middle, and Generation Y were the lowest.

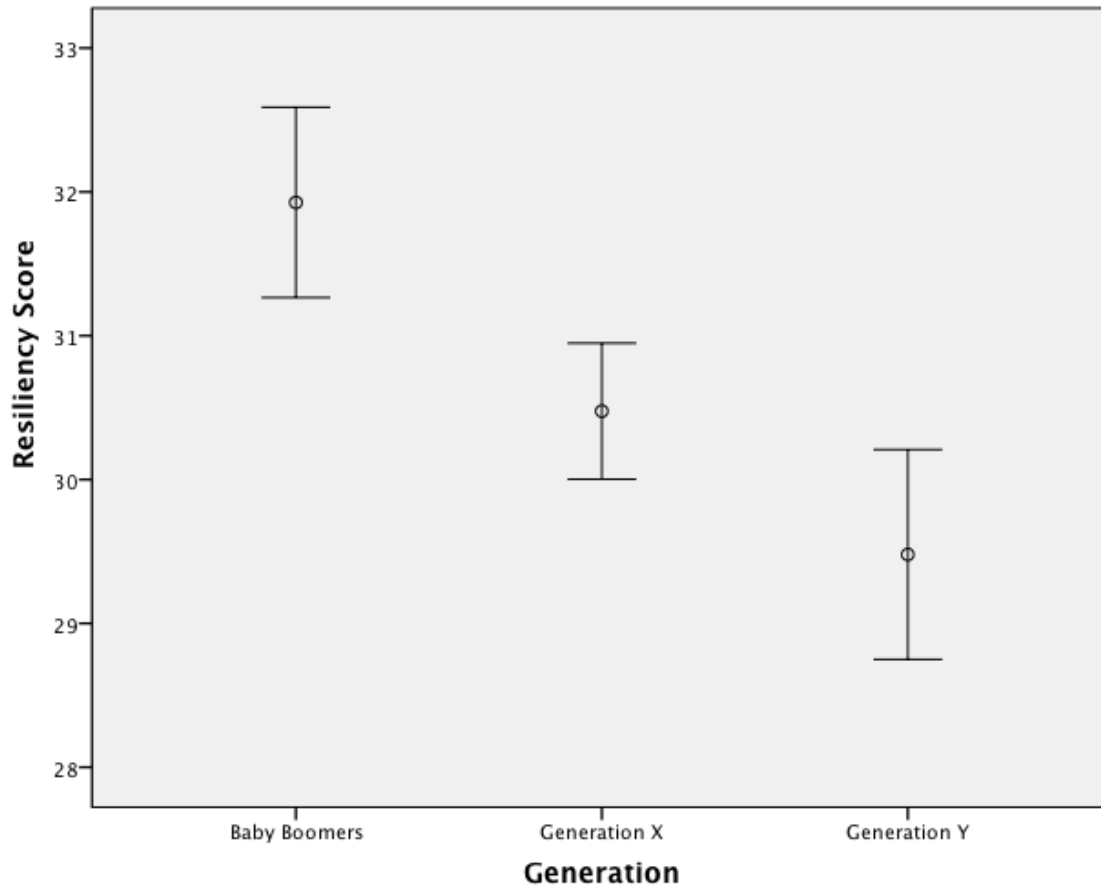


Figure 24. The 95% confidence interval for PsyCap resiliency scores within this study.

***PsyCap optimism.*** Based on the Kruskal-Wallis test, there is a difference in PsyCap optimism scores among the different generations,  $\chi^2(2) = 12.757, p = .002$ . To test which generation is different, a Mann-Whitney U was used to compare two generations at a time. Based on the Mann-Whitney U test, there is a difference in PsyCap optimism scores among Baby Boomers and Generation X ( $p = .002$ ) as well as among Baby Boomers and Generation Y ( $p = .001$ ). There is no difference in PsyCap optimism scores among Generation X and Generation Y,  $p = .363$ . As illustrated in Figure 25, Boomers were higher than both Generation X and Generation Y.

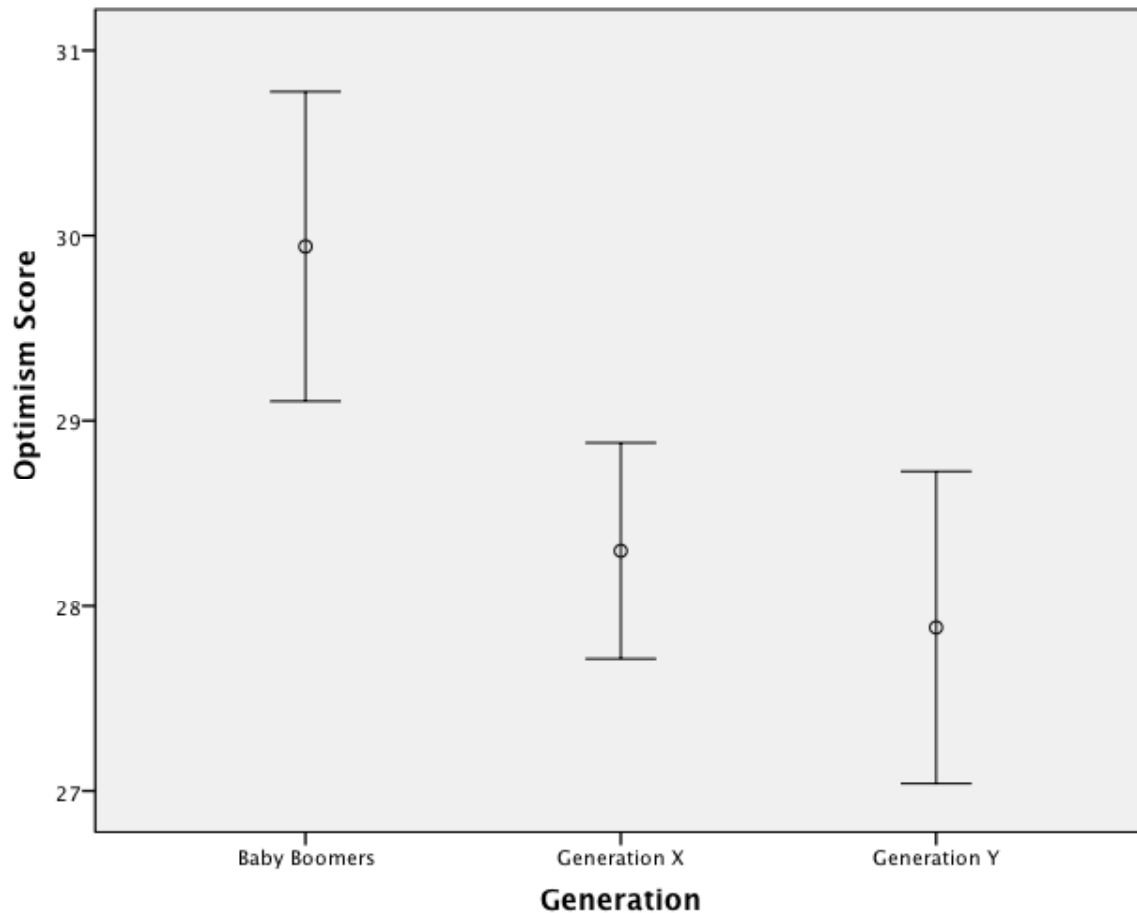


Figure 25. The 95% confidence interval for PsyCap optimism scores within this study.

### Summary of Findings

The results of the ANOVA showed there was enough evidence to reject the null hypothesis that there is no difference in psychological capital scores among members of each of the generations. Specifically, the difference is among Baby Boomers when compared to both Generation X and Generation Y.

Additionally, there was enough evidence to reject the null hypothesis in respect to three of the four subscales. Table 19 illustrates these differences. PsyCap hope was the only subscale that did not have a statistically significant difference among the members of the generations. On the other hand, PsyCap resiliency was the only subscale that had a statistically significant difference among all three generations. There was no statistically significant difference in

PsyCap efficacy among Baby Boomers and Generation X; however, there was a difference among Generation Y when compared to Baby Boomers and Generation X. There was no statistically significant difference in PsyCap optimism among Generation X and Generation Y; however, there was statistically significant difference in PsyCap optimism among Baby Boomers when compared to both Generation X and Generation Y. In each statistically significant scenario, the older generation had the higher score.

Table 19

*Differences among PsyCap and Subscale Scores*

Results	
PsyCap	<p>Baby Boomers were higher than Generation X and Generation Y</p> <p>No difference between Generation X and Generation Y</p>
Efficacy	<p>Baby Boomers were higher than Generation Y</p> <p>No difference between Baby Boomers and Generation X</p> <p>Generation X were higher than Generation Y</p>
Hope	<p>No difference between Baby Boomers, Generation Y, and Generation X</p>
Resiliency	<p>Baby Boomers were higher than Generation X and Generation Y</p> <p>Generation X were higher than Generation Y</p>
Optimism	<p>Baby Boomers were higher than Generation X and Generation Y</p> <p>No difference between Generation X and Generation Y</p>

## **Chapter V: Discussion**

Generational differences in the workforce can be difficult to manage and may demonstrate challenges (Lancaster & Stillman, 2002). In the literature on generational differences, several researchers have provided evidence for social and human capital differences among the generations; however, no evidence had been cited on the differences among psychological resources such as PsyCap. Psychological capital plays an important role in employee performance, satisfaction, and commitment (Avey et al., 2010; Luthans et al., 2008; Luthans et al., 2007a); therefore, the purpose of this research was to examine the differences across the generational cohorts on dimensions of psychological resources using the core construct psychological capital. This study focused on the differences among the three largest generations in the current workforce: Baby Boomers, Generation X, and Generation Y. The purpose of this study was to show whether or not generations differed from one another in psychological resources.

### **Summary of Literature Review**

The literature review described the three largest generations including research on their values, work attitudes, and employment satisfaction. Psychological capital was also explored in the literature review. As a fundamental theory of the emerging field of positive organizational behavior, PsyCap is the higher order construct encompassing the unison of efficacy, optimism, hope, and resilience. This new paradigm goes beyond human and social capital. It takes human resources to the next level by exploring psychological resources. The literature review described the key components of this paradigm and the impact on the professional world including employee relation influences, results-driven factors, and leadership.

## Discussion of Results

A quantitative, survey approach was taken to test whether members of different generations vary in psychological resources. Data was collected from a convenience sample of participants at two different organizations as well as professional and personal contacts using the PCQ-24 developed by Luthans et al. (2007a). The instrument encompassed four subscales: hope, efficacy, resilience, and optimism. One-way analysis of variance (ANOVA) was the statistical tool used to determine if differences between generations existed in psychological capital.

Based on the results of the ANOVA for the overall survey score and three of the four subscales, the null hypothesis that differences do not exist between generations in psychological resources was rejected. Generational cohorts participating in this study differed in psychological capital. Specifically, Baby Boomers had a higher overall PsyCap score than their younger counterparts. This supported previous studies that older generations are different from their younger counterparts in psychological resources (Benson & Brown, 2011; Beutel & Wittig-Berman, 2008). Since psychological resources such as job satisfaction, organizational commitment, and retention have been empirically linked to psychological capital and can affect employers bottom-line, training to increase the younger generations PsyCap could have a significant return on investment for employers. This could also benefit an employer by increasing desired employee behaviors and performance.

Lastly, the oldest generation demonstrated higher PsyCap optimism when compared to their younger counterparts. However, there was no difference between Generation X and Generation Y. This supported research conducted by McMurray et al. (2010) that suggested only participants over a certain age varied in PsyCap optimism.

## **Implications**

Although the results of this study cannot be generalized to the U.S. population because a non-probability sample was used, the findings provided insight into the claim that some generations differ in psychological resources. Evidence of differences imply that generational consideration be given in strategies to maximize job satisfaction, commitment, and retention for different generations, specifically training to increase PsyCap among employees within the younger generations. According to Luthans et al. (2006) psychological capital could have a significant return on investment for employers based on a brief two- to three-hour training. These implications of generational differences pertaining to psychological resources could also impact employers bottom-line through increased employee morale and loyalty.

## **Limitations**

The results of this study provided evidence that generations are different in psychological resources. As with any research, the limitations of the study must be identified so that the findings can be appropriately understood in the context of the research being explored. First, the purpose of this study was to determine if differences between generations existed; therefore, differences within generations were not examined. Additionally, to account for shared historical and cultural contexts that contribute to generational development, the scope of the study was limited to U.S. workers. A third limitation pertained to the use of a non-probability sample. A convenience was necessary due to the infeasibility of obtaining a random sampling for all workers in the United States. While a non-probability sample met the objective of this study such a sample does not allow generalizations to be made for the entire U.S. workforce.

## **Further Research**

The findings of this study present several opportunities for future research. With extensive resources and accessibility, a much larger sample could be generalized to the population. The sample for this study was predominantly Caucasian (70%), educated (70%), and salaried (71%) employees. This is not representative of the larger population. Repeating this study targeting ethnic minorities and hourly employees may yield different results. Additionally, since previous research has also linked higher education with high PsyCap scores, I endorse replicating this study with individuals who have less than a bachelor's degree. Repeating this study with samples from different industries would also help validate the results of this study or provide contrasting results to raise additional questions.

A second recommendation for future study is to include all five distinct generations within the current workforce. Conducting this study with samples from targeted generations would expand on the results of this study or provide additional differences among the generations. Repeating this study targeting the smaller generations would also provide further insight into generational differences.

Alternatively, differences within generations were not examined in this study. Conducting similar research exploring the differences within each generation may yield interesting results.

Lastly, PsyCap is not the only psychological resource to examine in generational differences. This study revealed generational differences among three of the four subscales of PsyCap. Conducting a similar study on the constructs used in the creation of the PCQ-24 may magnify the results of this study and possibly provide additional differences among the generations.



**Conclusion**

This study tested whether differences existed between generations psychological resources in the workplace. The findings revealed that differences existed. Older generations had higher psychological capital scores. The results of this study contributed to the growing field of research on both generations and PsyCap. It also generated ideas for future research to help human resource professionals and managers better understand how they can maximize job satisfaction, commitment, and retention in a multi-generational workforce.

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**APPENDIX A: Permission to use PCQ-24**

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material for his/her thesis or dissertation research:

**Instrument:** Psychological Capital (PsyCap) Questionnaire (PCQ)

**Authors:** Fred Luthans, Bruce J. Avolio & James B. Avey.

**Copyright:** 2007 Psychological Capital (PsyCap) Questionnaire (PCQ) Fred L. Luthans, Bruce J. Avolio & James B. Avey. All right reserved in all media.

**Three sample items** from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Robert Most  
Mind Garden, Inc.  
www.mindgarden.com



## Appendix B: Subject Consent Take Part in a Study (Paper)

DocuSign Envelope ID: 06EF4C57-9002-45B8-904D-14F16C4D8758

### The Generational Divide: Generational Differences in Psychological Capital University of the Incarnate Word

I am a graduate student at UIW working towards a doctorate degree in education with a concentration in organizational leadership. You are being asked to take part in a research study on generations and a psychological resource known as psychological capital (PsyCap). We want to learn if there is a significant difference in PsyCap scores among the diverse generations. You are being asked to take part in this study because either (1) your employer was selected (and agreed) to contribute to the study, (2) you personally or professionally know the researcher, or (3) you were referred by a personal or professional contact of the researcher.

If you decide to take part, we will ask you to complete a short demographics questionnaire inquiring about your employment as well as some personal demographics. We will also ask you to complete a psychological resource survey known as the Psychological Capital Questionnaire (PCQ-24). This study should take approximately 20 minutes to complete. The risks associated with participating in this study are similar to the risks of everyday life. You will benefit from participating in this study by getting firsthand experience in research. You may also enjoy completing the psychological resource survey. Please note that we cannot give you your individual results because the data are anonymous. Additionally, you will be contributing to understanding differences among generations at work.

Everything we learn about you in the study will be confidential. If we publish the results of the study, you will not be identified in any way. Your decision to take part in the study is voluntary. You are free to choose not to take part in the study or to stop taking part at any time. If you choose not to take part or to stop at any time, it will not affect your current and future status at UIW or your current employer. If you have questions now, feel free to ask us. If you have additional questions later or you wish to report a problem that may be related to this study, contact Dr. Osman Ozturgut, 210.805.5885 or 210.519.9870.

The University of the Incarnate Word committee that reviews research on human subjects, the Institutional Review Board, will answer any questions about your rights as a research subject (210.805.3036).

You will be given a copy of this form to keep.

Your signature indicates that you (1) consent to take part in this research study, (2) that you have read and understand the information given above, and (3) that the information above was explained to you.

_____ Signature of Subject	_____ Date	_____ (Time)
_____ Signature of Witness	_____ Date	_____ (Time)
_____ Signature of Investigator	_____ Date	_____ (Time)

University of the Incarnate Word  
IRB Approved  
Application No. 14-05-006

## Subject Consent Take Part in a Study (Email)

**Dear Sir or Madam,**

I am a graduate student at UIW working towards a doctorate degree in education with a concentration in organizational leadership. You are being asked to take part in a research study on generations and a psychological resource known as psychological capital (PsyCap). We want to learn if there is a significant difference in PsyCap scores among the diverse generations. You are being asked to take part in this study because either (1) your employer was selected (and agreed) to contribute to the study, (2) you personally or professionally know the researcher, or (3) you were referred by a personal or professional contact of the researcher.

This study should take approximately 20 minutes to complete. The risks associated with participating in this study are similar to the risks of everyday life. You will benefit from participating in this study by getting firsthand experience in research. You may also enjoy completing the psychological resource survey. Please note that we cannot give you your individual results because the data are anonymous. Additionally, you will be contributing to the understanding of differences among generations at work.

### **Things you should know-**

Everything we learn about you in the study will be confidential. If we publish the results of the study, you will not be identified in any way. Your decision to take part in the study is voluntary. You are free to choose not to take part in the study or to stop taking part at any time.

If you choose not to take part or to stop at any time, it will not affect your current and future status at UIW or your current employer.

If you have questions, feel free to contact myself at 210.863.5703. If you wish to report a problem that may be related to this study, contact Dr. Osman Ozturgut, 210.805.5885 or 210.519.9870. For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information or offer input, contact the UIW IRB Institutional Review Board (IRB) at 210.805.3036. This research and survey tool has been approved by the UIW IRB (IRB #14-05-006).

### **Taking the survey-**

Completing and submitting this survey represents informed consent to participate in the research study. You may choose to opt out of the study at any time. To do so, you may refuse to complete the survey. To take the survey, please click on the link below and follow the directions. This survey will be available for your response until June 30, 2014. <https://www.surveymonkey.com/s/hstaples>

We thank you in advance for your time.

Sincerely,  
Heather Staples, PhD Candidate

## Appendix C: Demographics Questionnaire

### Demographics

Please answer *each* of the following questions;

**Please share the following information:**

**Year of Birth** (for categorizing purposes): \_\_\_\_\_

**Do you live in a non-institutional residence** (i.e. household) ☐ Yes ☐ No

**Currently employed in a paid role in the U.S:** ☐ Yes ☐ No

**Which industry best describes your employer:** *Check one*

Goods-producing Industries:

- ☐ Construction (*including heavy and civil engineering*)
- ☐ Manufacturing (*including mills*)
- ☐ Natural resources and mining (*including agriculture, forestry, fishing/hunting, mining*)

Service-providing Industries:

- ☐ Education and Health Services (*including grade school and higher education*)
- ☐ Financial (*including banking, credit, insurance, real estate*)
- ☐ Information (*including publishing, broadcasting, data processing, motion picture*)
- ☐ Leisure and Hospitality (*including arts, entertainment, sports, amusement parks, gambling, museums, performing arts*)
- ☐ Professional (*including scientific, administrative, management*)
- ☐ Trade, transportation, and utilities (*including wholesale, retail, warehouse*)
- ☐ Other services (*including repair/maintenance, laundry services, religious, civic*)

Other:

- ☐ Military ☐ Other: \_\_\_\_\_

**Which job category best describes your position:**

- Check one:*
- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Official/Manager | <input type="checkbox"/> Professional           | <input type="checkbox"/> Technician     |
| <input type="checkbox"/> Sales Worker     | <input type="checkbox"/> Administrative Support | <input type="checkbox"/> Craft Worker   |
| <input type="checkbox"/> Operator         | <input type="checkbox"/> Laborer/Helper         | <input type="checkbox"/> Service Worker |

*Check one:* ☐ Full-time ☐ Part-time

*Check one:* ☐ Salary ☐ Hourly

**Gender:** ☐ Male ☐ Female

**Ethnicity:** ☐ American Indian/Alaskan Native ☐ Asian/Pacific Islander ☐ Black/African American  
☐ Hispanic or Latino ☐ White / Caucasian ☐ Other \_\_\_\_\_

**Highest Level of Education:** ☐ High School ☐ Some College ☐ Associates degree  
☐ Bachelor's degree ☐ Master's degree ☐ Doctorate degree

**Which generation do you consider yourself:**

- ☐ Traditionalists – born between 1922 and 1946  
*Cultural influences:* great depression, World War II, Korean War, GI Bill
- ☐ Baby Boomers - born between 1940 and 1964  
*Cultural influences:* JFK assassination, first moon walk, Vietnam War, TV
- ☐ Generation X - born between 1960 and 1982  
*Cultural influences:* Soviet Union fall, birth of the internet, MTV
- ☐ Generation Y - born between 1979 and 2001  
*Cultural influences:* internet era, cell-phones
- ☐ Generation Z - born after 1995  
*Cultural influences:* Sept 11, social media