ABSTRACT

DLUGOS, JOSEPH ANTHONY. Perceptions of Face Validity When Utilizing Projective and Objective Personality Assessments: The Impact of Generational Cohort and Gender Identity. (Under the direction of Dr. Siu-Man Ting and Dr. Stanley Baker).

Throughout this study, the importance of perceived face validity as it can be measured when using different assessment tools from the fields of psychology and counseling was examined. Generational cohort theory and gender identity were lenses for acquiring insight about participant decisions as they indicated preference between projective and objective personality assessments.

The methodology used was a quantitative, survey research design. Participants were recruited through convenience sampling and the snowball method. Two-hundred and seven participants responded with usable data. Data sets were collected in the survey consisting of demographic information that indicated each participant’s generational cohort and gender identity. The generational cohorts of interest, and from which the participants were recruited were: Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present).

Participants also listed their perceived face validity using a Likert scale when presented with a sample of images from the Rorschach Inkblot Assessment, which represented projective personality assessments, and a sample of questions from the Big Five Inventory Personality Assessment, which represented objective personality assessments. The Likert scale options ran from 1 through 7 with 1 representing Not Valid at All and 7 representing Extremely Valid. The collected data sets were analyzed using STATA 14 software.
Using a two-way Analysis of Variance (ANOVA), there was a slightly positive mean difference between the face validity reported on projective assessments and the younger generational cohorts \((p=0.25)\). Also, using an Independent Samples t-test, a statistically significant mean difference was observed when measuring face validity between gender identities of exclusively projective assessments \((p=0.02)\). *Cohen’s d* effect size was 0.35 indicating a moderate effect size.

The findings indicated that for younger generational cohorts there is a slight preference for projective assessments while there is an equal amount of preference when using objective assessments across all generational cohorts. Additionally, males indicated a statistically significant preference in projective assessments when compared to females. All participants indicated a higher mean face validity rating when considering the objective personality assessments (4.73) than when considering the projective personality assessments (3.67). This finding aligns with the existing literature and the decline in projective assessment usage in graduate training classrooms and professional internship sites.
Perceptions of Face Validity when Utilizing Projective and Objective Personality Assessments: The Impact of Generational Cohort and Gender Identity

by
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North Carolina State University
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DEDICATION

As best as I can remember, the first person who read to me constantly as a toddler was my maternal grandmother, Josephine Monaco (nee Cennamo). We spent countless hours in the rocking chair thumbing through *Dr. Doolittle*, *Billy Goats Gruff*, *Three Little Pigs*, etc. From my time spent in Connecticut to my years in Minnesota, now North Carolina, and wherever life takes me next; I’ve never been able to stop thumbing through fiction, non-fiction, and poetry. I’ll never be able to stop being curious or learning either. For this, I dedicate this Dissertation to you, with love, Nana.
BIOGRAPHY

Joseph Anthony Dlugos was born on May 12, 1989 in Bridgeport, Connecticut. He was blessed with supportive parents and family who encouraged his involvement in baseball, cross country, track and field, band, and honors academics. He attended Naugatuck High School where he graduated as a Class Officer in June of 2007.

Joseph’s mother encouraged him to pursue a college education and he attended Southern Connecticut State University in New Haven, Connecticut for his undergraduate experience. While at Southern Connecticut State, Joseph worked as a Community Coordinator and Senior Community Advisor with the Office of Residence Life and he served as Vice President and Historian for the Theatre organization on campus, The Crescent Players. Additionally, Joseph earned first place in a University wide poetry contest in 2010 and had work published in the literary magazine, Folio. He received a Bachelor of Arts in English and a Bachelor of Arts in Theatre in May of 2011.

Following graduation, Joseph moved to Moorhead, Minnesota where he accepted a position as a Residence Hall Director at Concordia College in August of 2011. He quickly realized a true vocational calling in working with college students and began to apply for nearby graduate programs.

Alongside his work at Concordia College, Joseph began his graduate degree work at Minnesota State University Moorhead in January of 2012. He immediately became involved in the Counseling and Student Affairs organization and served as the First Year Voice, the Vice President, and the President of the Chi Sigma Iota Honor’s Society.

Joseph completed his Clinical Internship at the Community Outreach Center in Moorhead, Minnesota, a free, counseling service in the community for all ages. Joseph
completed a thesis entitled *Policy Violation Recidivism: Reducing Repeat Offenders on College Campuses* under the advisement of Dr. Lisa Karch and earned a Master of Science in Counseling and Student Affairs in May of 2014. Further professional development while Joseph was in Moorhead, Minnesota included becoming a Nationally Registered Emergency Medical Technician, completing seven Emergency Management courses offered through FEMA, completing a 30 hour course through OSHA, and regularly volunteering through the American Red Cross’s Disaster Action Team.

After three years with Concordia College, Joseph accepted a new position in Wilson, North Carolina as the Director of Housing and Residence Life at Barton College in June of 2014. While continuing to lead the student housing experience at Barton College he began Doctoral work at North Carolina State University in Raleigh, North Carolina in August of 2015 under the advisement of Dr. Siu-Man Ting. Joseph also began serving as an adjunct instructor for Psychology courses at Barton College and Wilson Community College. To date, Joseph has led Introductory Psychology, Abnormal Psychology, Clinical Assessment, and Parapsychology courses both in the classroom and online.

Joseph worked to become involved in the Wilson, North Carolina community and currently serves on the Executive Board and the Board of Trustees for the local Preservation of Wilson. His hobbies include Italian and Eastern European genealogy, residential carpentry, and camping. Joseph additionally became a Licensed Professional Counselor in the state of North Carolina and a Nationally Certified Counselor. Joseph still resides in Wilson, North Carolina with his wife, Lacey, their cat, Tommy, and dog, Maggie. After graduation, Joseph plans to continue his work as the Associate Dean for Student Development & Campus Safety at Barton College as well as teach part time.
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It is my sincere hope that everyone listed henceforth already knows how deep my gratitude and love sits with them. Their hearts, minds, and spirits allowed me to feel prepared enough to begin this journey and, eventually, competent enough to finish it.

First, to my bride, Lacey Dawn Dlugos (nee Nelson). I have no recollection of us agreeing as a family that it would be a good idea for me to go back to school. I hope I at least asked you at some point! But, like with any dream I have, you supported me, challenged me, and were a constant cheerleader. I know you love me regardless of what letters follow my name. For now, my educational journey is over, and I’m excited to see what next steps bring our family. I’m so glad to be on this journey with you.

To my nuclear family, Lisa Monaco, Michael Vinci Jr, and Corey Lynn Dlugos. My family will be the first ones to share that they don’t necessarily understand the pages of a dissertation or thesis. What I can say with certainty is that they all understand how to raise a family and continue to support one another. From day one of the program, they have been asking me if I knew when the commencement ceremonies would be because they wanted to fly out to North Carolina and celebrate with me. Their faith in my finishing the program was at 100% before I even passed my first course and it has never faltered. They are wonderful, loving, genuine, and loyal people and truly the best family.

Next, to my Academic Advisor, Committee Chairperson, and the Program Coordinator for the Counselor Education Program, Dr. Siu-Man Ting. Throughout my time in the program at North Carolina State University, Dr. Ting and I have spoken about careers in student affairs, research methods, genealogy, and my personal/family life. His focus was never solely focused on my study, but more of a holistic approach on me as a person and a
candidate in his program. Dr. Ting was always willing to meet to discuss my progress, to suggest ideas, and he provided me with the exact amount of pushing that I needed to complete my work.

I would also like to provide endless appreciation and thanks to the remaining three members of my Dissertation Committee. First, Dr. Stanley Baker was the first individual who introduced me to the concept of face validity. His leadership in the course, Advanced Assessment in Counselor Education, added fuel to the fire that was my intrigue in assessment. Much of the research included in this study comes directly from my presentation on Projective Assessments that was given in his course. I am also especially grateful to Dr. Baker as he served as a Co-Chairperson for the Dissertation Committee.

Next, Dr. Angela Smith who provided leadership in several of the courses in my time completing the Counselor & Counselor Education program at NC State. Most memorable was the spring 2017, Doctoral Internship in Counselor Education course. Dr. Smith’s organization, energy, and warmth are nothing short of inspiring. In her time on the committee, I greatly appreciated Dr. Smith’s helpful feedback and questions regarding the research.

Rounding out the committee members is Dr. Duane Akroyd, who led the very first doctoral course that I attended, Teaching in College. Coincidentally, at the same time as I was learning effective techniques in his classroom, I was also leading an Undergraduate Introductory Psychology course for the very first time. The synergy between my coursework and practical experience in that Psychology course would not have come so easy without his guidance and expertise. Dr. Akroyd also served as the Graduate School Representative from
outside of the Department of Counseling & Counselor Education which makes me especially grateful.

For about a full calendar year, this research sat in a slow, endless loop between my writing desk and the North Carolina State University’s IRB Office. I’m beyond thankful to Yael Allen, IRB Coordinator for Outreach and Education, for helping me stop that loop and progress with the study. Her guidance was accurate and efficient. Additionally, she was willing to meet in person which cut down any confusion.

Back in the later part of 2013, I was planning for my final two semesters of my Master’s Degree in Moorhead, Minnesota. Given a choice between completing a Master’s Thesis as a final project or a less rigorous Plan B final project, many of my colleagues were choosing the Plan B. I was resistant at first, and insisted on trying to complete a Thesis. Around February of 2014, mere months away from graduation, my progress had stalled and I went to my advisor to ask to switch to the Plan B so I could graduate in time. Dr. Lisa Karch more or less told me ‘no.’ She knew I could finish the Thesis at a time when I didn’t. I am eternally grateful.

Throughout my entire time studying at North Carolina State University, I have been employed full time. Barton College, located in Wilson, North Carolina, gave me the time, resources, and encouragement to finish my degree all the while serving on their campus. In particular, I would like to thank Mr. George Solan, Previous Vice President for Student Affairs, for his advocacy at a time when I had just arrived at Barton. Additionally, Dr. Kevin Pennington, Associate Provost and Dean of the School of Sciences, served as a site supervisor during my Internship. Others who have had a meaningful impact, have asked about my study, or helped me think through particular pieces of the work are Mr. Drew
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Lastly, this research would not have been possible without the kindness of Hogrefe AG, Switzerland, who currently own the rights to the Rorschach Ink Blot Assessment. Ms. Sylvia Schlutius allowed me to use the first two cards of the Rorschach in the survey to represent projective personality assessments. Hogrefe publishing is globally known and has been publishing print and electronic journal in psychology, assessment, and psychiatry for decades.
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CHAPTER ONE:
INTRODUCTION

Overview

The first chapter in this study of the strength of face validity measurements as determined by individuals who belong to different generations and different genders identifies the primary questions, implications, and framework of the research. The statement of the problem, purpose of the study, the context, and the significance of the study are also included. Additionally, assumptions and limitations of the research methods will be included in this chapter. Finally, a list of key terms will be presented for clarification to all readers.

Statement of the Problem

Generation Z, sometimes referred to as the Homeland Generation, is the population of individuals born between 2005 and 2025 (Strauss, 1991) or 1995 and later (Twenge, 2010). The Generation Z individuals are quickly entering their teenage years and will soon become clients in counseling sessions across the nation. Considering their needs as it relates to counseling assessments, the question of “Is the right type of measurement tool being utilized” can be raised. Strauss (1991) labels Generation Z individuals as the artists in the generational cycle. Bearing in mind past commonly used counseling assessments, such as the Rorschach Ink Blot Personality Assessment (1927) or the Thematic Apperception Test (Murray, 1943), allow the client to be more creative in nature, a connection can potentially be made between the Generation Z population’s needs and projective assessments as a best fit in a counseling setting.

As interest and exposure to projective assessments, specifically the Rorschach Ink Blot Personality Assessment, has declined, other researchers have moved on to different
topics for their research and conceptual ideas. Much of the existing literature on the Rorschach is quickly becoming outdated. Additionally, there is limited journal space for topics regarding assessment in the fields of counseling and psychology. That concern is only further enhanced when the research being presented is on a marginalized topic in the field of assessment, such as projective personality tests.

It is unfortunate that the counseling and psychology fields are seeing such a drastic reduction in the amount of time spent in the classroom on projective assessments like the Rorschach (Piotrowski, 2015). Current, younger generations who are in training programs have proven that they desire to communicate with images from social media platforms and communication in the workplace. Objective personality tests, such as the Minnesota Multiphasic Personality Inventory (MMPI), do not align as closely to Generation Z’s communication preferences. Seemiller and Grace (2016) write that,

“Despite its widespread availability, we found that instant messaging is the least preferred communication method for Generation Z. One-third of Generation Z students reported disliking instant messaging, and another third indicated only somewhat liking it.” (p. 58).

Projective assessments are uniquely qualified to satisfy the Generation Z population’s desires with communication styles as well as with face validity. Additionally, as the world becomes more diverse, assessments that are proven to not express either cultural or gender bias need to be embraced, researched, and utilized. The Rorschach Ink Blot test has been tested for bias in both cultural and gender areas and it was found that there was none (Myers et al, 2015). If our budding scholars are not taught how to use these instruments while they are in training
and graduate programs, then they will not utilize them in the field or go on to teach their students and mentees about them.

Rationale for the Study

Some existing literature begins to explore the differences between gender and levels of creativity (Matud et al., 2007). Icevic and Mayer (2009) write, “One common definition (of creativity) states that creativity is the generation of products or behaviors that are both original and appropriate,” (p. 152). This definition, in particular, gives reference to both the potential for creativity as well as the creative behaviors that certain individuals commit. Matud et al. (2007), share that creativity is beneficial for individuals as well as institutions and societies due to the existing links with productivity, adaptability, and health. In this study, the projective personality assessments will be a construct for creativity. Additionally, this study should provide evidence of a possible difference in the levels of creativity between genders.

In some of the existing literature, men have historically been assessed as superior in creativity than women (Matud et al., 2007). It has been suggested that gender differences in creative achievement can be explained by a combination of environmental factors such as gender differences in access to resources, different social expectations between genders, and men’s control of creative standards (Matud et al., 2007). However, when creativity is judged beyond the classroom, women prove to score higher in creativity than men. In the 2009 article by Ivcevic and Mayer, creative life style was found to be greater in females than in males. Ivcevic and Mayer (2009) state, “Creative Life-Style was described by five areas of everyday creativity (crafts, cultural refinement, interpersonal creativity, self-expressive
creativity, and sophisticated media use) as well as the visual arts and writing areas of artistic creativity.” (p. 160).

This dissertation proves timely as technology has only been rapidly evolving and becoming integral in everyone’s daily lives. In fact, Hottman et al (2016) claim that smart phones, tablet computers, and applications for these technologies are, in fact, changing lives. These tools, and others, allow people to express themselves in novel ways and they are broadening the opportunities for individuals to recognize their own creativity and imagination (Hoffman et al, 2016). “Indeed most adolescents have grown up with technology at their fingertips and their facility with technology enables them to embrace it as a means of creative expression,” (Hoffman et al, 2016. p. 149).

Hoffman et al (2016) also recognized the importance of measuring creativity by gender and found similar results to Ivcevic and Mayer (2009). Digital creativity achievement was higher in male students, but school based, everyday creativity was higher in female students, (Hoffman et al, 2016). Hoffman et al (2016) expand on their findings, “School-based everyday creativity and self-expressive creativity do not require such formal training. School-based creativity encompasses behavior within the school setting, in the context of class projects, and school clubs, or organizations. Self-expressive creativity most closely maps on to the everyday creativity domain described by Ivcevic & Mayer (2009),” (p. 152).

This correlation coefficient for the digital creativity, which was higher in male students, was −.16 with a p-value of < .01. Additionally, the correlation coefficient for the school-based everyday creativity, which was higher in female students, was .20 with a p-value of < .01. (Hoffman et al, 2016).
Purpose of the Study

This current study suggests that the field of counseling can be advanced when carefully looking at the importance of perceived face validity as it can be measured when using different counseling assessment tools and utilizing generational theory when choosing counseling assessments with clients of varying generational cohorts. In addition, this study suggests that there may be a difference in preference of counseling assessment tools depending on the specific gender of the client.

This study will not examine cause and effect of face validity perceptions among different personality assessments utilized in counseling and psychology, rather, it will work to explore potential relationships or patterns between the two. Finding a relationship, or not, will assist in determining whether scholars should continue to research and experiment with these theories and constructs in the future.

Theoretical Foundation for the Study

The Strauss-Howe Generational Theory (1997), in particular, will be showcased throughout this research. Researchers can use the Strauss-Howe Generational Theory for multiple disciplines of study, but in this case it is being used from the lens of a counseling and human development field of study. A more contemporary generational theorist, Jean M. Twenge (2010) will also be emphasized in this research. In addition to the Strauss-Howe Generational Theory and Jean M. Twenge Generational Theory, the construct of face validity, used in testing and measurement, will be an essential part of the foundation of this study. Working together in the research design, measuring face validity in specific types of counseling assessments is expected to produce further evidence of the value of the Strauss-Howe Generational Theory.
The Strauss-Howe Generational theory, the Jean M. Twenge Generational Theory, and the construct of face validity are respected in the professional communities of Counseling, Human Development, Education, and specifically, Adult Education. Although the literature may be sparse, it is existent, competent, and respected. As for exposure in a doctoral program’s classroom, face validity was discussed in the text’s dedicated chapter on validity while enrolled in *Advanced Assessment in Counseling* at North Carolina State University and principles involved with generational theory were discussed in courses on *Teaching in College* and *Adult Learner Theories* at North Carolina State University.

It is known through the existing literature that Baby Boomers seek out different validation and balance in the workplace than Generation X members do (Latz & Rediger, 2014). With that said, it would be an appropriate research question to wonder if the same can apply to different generations seeking out a particular assessment to be used in counseling.

Although not currently accepted in the field of counseling as a theory, face validity, being utilized as an essential construct for this research’s foundation, Nevo (1985) defines face validity as when an assessment looks valid from the viewpoint of a layperson. The layperson should think that the assessment in front of them clearly looks like it will assess what it says it can assess. Face validity is completely separate from content, criterion-related, and construct validity. Nevo (1985) also introduces the important idea that an assessment that does have high face validity will help induce cooperation and maintain positive motivation throughout the duration of the assessment. This may not be the case with a test that does not appear, on the face, as being valid. Another way to define face validity is provided by Watson & Flamez (2015). “Face validity basically assesses whether an instrument appears to look like it measures what it is meant to measure” (p. 93).
Although not heavily used in the field of counseling as a theory, the Strauss-Howe generational theory is discussed in literature found in the fields of Human Development and Education. The overall premise of the theory cleanly translates to work that can be done between counselor and client as well as in the counselor education classroom. A large issue that has come up due to the popularity of the generational theory is that competing theories have emerged that do not always align with the Strauss-Howe generational theory. For example, Raymond (2012) talks about how Generation Z are the individuals who were born between 1990 and 2010. However, according to the Strauss-Howe Generational Theory, Generation Z individuals were born between 2005 and the present day.

**Context**

One might question how a valid looking assessment can connect with different generations, but that argument can quickly be rebutted with the current literature and findings on the needs and desires of the different generations that are currently in the classroom and working force. If we know through research that Baby Boomers seek out different validation and balance in the work place than Generation X members do (Latz & Rediger, 2014), it would be an appropriate research question to wonder if the same can apply to different generations seeking out a particular assessment to be used in counseling.

**Assumptions**

One of the first constructs that comes to mind for me when considering face validity is that it falls under the larger umbrella of validity in general. “Validity speaks to the truthfulness of data. When the information counselors gather about their clients is truthful and accurate, they are able to provide more effective services,” (Watson & Flamez, 2015, p. 85). The reader, client, or student must assume that face validity cleanly represents the same
search for truthfulness that validity in general does. “Face validity basically assesses whether an instrument appears to look like it measures what it is meant to measure,” (Watson & Flamez, 2015, p. 93). Watson & Flamez elaborate even further to guide their readers, “You would expect a math test to include items with numbers and equations much the same way you would expect a depression inventory to include questions related to the signs and symptoms of depression.” (Watson & Flamez, 2015, p. 93).

Unfortunately, some researchers and scholars do not assume face validity to be as accepted and respected as content or criterion validity. Mosier (1947) goes in depth on how damaging even just the term off face validity has become to the field of testing and measurement. Sadly this belief has continued on even to contemporary times. In fact, even the Standards for Educational and Psychological Testing do not recognize face validity as a legitimate form of validity. (Watson & Flamez, 2015).

**Research Questions**

1. Are there different measured preferences in projective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

2. Are there different measured preferences in objective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

3. Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?
4. Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?

**Definition of Terms**

**Baby Boom Generation**- The demographic cohort that immediately precedes Generation X. The specific birth years that encapsulate the Baby Boom Generation are widely varying among researchers, but for this study, Twenge’s (2010) birth years will be utilized. Individuals born between the years 1946 and 1964 will be considered a part of the Baby Boom cohort.

**Big Five Inventory Test**- An objective personality assessment created by Lewis R. Goldberg (1993). The Big Five Inventory Test is also abbreviated as the BFI. A self-report inventory that is designed to measure the Big Five dimensions for a multidimensional personality inventory. The personality inventory consists of 44 items total and consists of short phrases with relatively accessible vocabulary. The BFI is freely available for researchers who are using it for non-commercial research purposes.

**Face validity**- In the field of measurement and assessment, face validity is the extent to which a test is subjectively viewed as accurately covering the concept(s) it purports to measure. Face validity can be measured as a yes or no questionnaire or on a continuum where participants report how much the assessment appears to measure what it claims it was designed to measure.

**Female Gender Identity**- Individuals who self-identify as liking stereotypical female things, wear clothing purposefully designed for females, and are often seen by the lay-person as a female sexed individual.
**Gender Identity**- The personal conception of oneself as male or female. Regardless of biological sex, gender identity is self-identified as a result of a combination of inherent and extrinsic or environmental factors. *It is important to note the difference between this definition of gender identity and the definition of sex which would be the two main categories living things are divided into on the basis of their reproductive organs.*

**Generation X**- According to Strauss and Howe (1997), the demographic cohort that immediately follows baby boomers and precedes Millennials. The specific birth years that encapsulate Generation X are widely varying among researchers, but for this study, Twenge’s (2010) birth years will be utilized. Individuals born between the years 1965 and 1981 will be considered a part of the Generation X cohort.

**Generation Z**- The demographic cohort that immediately follows the Millennial Generation. The specific birth years that encapsulate Generation Z are widely varying among researchers, but for this study, Twenge’s (2010) birth years will be utilized. Individuals born between the years 1996 and present day (2019) will be considered a part of the Generation Z cohort. Other accepted names for Generation Z in research include the Homeland Generation, iGeneration, iGen, and Post-Millennials.

**Male Gender Identity**- Individuals who self-identify as liking stereotypical male things, wear clothing purposefully designed for males, and are often seen by the lay-person as a male sexed individual.

**Millennials**- According to Strauss and Howe (1997), the demographic cohort that immediately follows Generation X and precedes Generation Z. The specific birth years that encapsulate Millennials are widely varying among researchers, but for this study, Twenge’s (2010) birth years will be utilized. Individuals born between the years 1982 and 1995 will be
considered a part of the Millennial cohort. Another accepted name for the Millennial Generation that is commonly used in research is Generation Y.

**Objective Personality Assessment** - An assessment method that uses a restricted response format such as an ordinal scale rating or true/false questions. Objective assessments contain extensively tested validity scales to determine whether the person taking and self-reporting on the test is responding truthfully. One of the most well-known objective personality assessments is the Minnesota Multiphasic Personality Inventory (MMPI).

**Projective Personality Assessment** - An assessment method that is designed to reveal hidden emotions and internal conflicts via a subject’s responses to ambiguous stimuli. The content from the responses to the assessment is analyzed for meaning. In theory, the assessment is supposed to be able to measure areas of an individual’s unconscious mind such as personality characteristics, fears, doubts, and attitude. Employers find projective assessments popular to determine if a perspective employee is an appropriate fit for their work environment. One of the most well-known projective personality assessments is the Rorschach Inkblot Test.

**Rorschach Inkblot Test** - A projective psychological assessment consisting of 10 inkblots printed on cards. Five of the cards are printed in black and white while the other five are printed in color. The assessment was created in 1921 by Hermann Rorschach when he published his work titled *Psychodiagnostik*. The assessment’s use has been widespread, however, it is the center of much controversy due to difficulty scoring and a lack of systematic use.
Limitations

What will follow in this dissertation is a large, quantitative, survey research study. Being as such, there are numerous opportunities for limitations to present themselves in the research and methodology. Limitations that the researcher is acutely aware of are the potential improper representation of the target population, the potential for limited outcomes in the response to the research questions, and the difficulty in the data analysis execution and presentation.

The target population for this study is broken down on two separate platforms. First, the generational cohorts are universal throughout the United States of America. All those who were born between the years 1965-1981 belong to the Generation X cohort, all those who were born between the years 1982-1995 belong to the Millennial cohort, and all those who were born between 1996- present day belong to the Generation Z cohort. In this research study, the attempt will be to have a representative sample that closely relates the general population of those three cohorts, however, there is a chance that improper representation may occur. For example, if the researcher is allowed to survey every student who attends one particular middle school that is located in a rural area of eastern North Carolina, the data collected from many of the Generation Z cohort will be too heavily represented from one area. Even worse would be a hypothetical situation where that particular school placed an emphasis on communicating with images. This past experience in their education could influence the students’ ratings of higher face validity on the projective personality assessments they would be shown instead of the objective personality assessments. The second platform of population is by gender identity. A potential limitation could surface with this variable if the researcher is having difficulty achieving an equitable amount of survey
responses from those who identify as male and those who identify as female. Being that the researcher intends to market the survey as institutions of higher education, which are typically represented by more female students, this limitation could certainly occur.

To combat the potential limitation of an improper representation of certain generational cohorts, the research will utilize their connections across the North American continent when marketing the survey to ensure that enough individuals of all ages and all backgrounds have the opportunity to complete the survey. To combat the gender identity potential limitation, the researcher will keep a close eye on the data collection to ensure that it is not becoming skewed in one direction of the other. If 75% of the responses collected have self-identified as female, the researcher will know that the survey must remain open until more responses from those who identify as male have responded to even out the representative sample.

The potential for limited outcomes in the research is also a possibility. The nature of quantitative research surveys is that they are made up of close ended questions. The results may or may not point in the direction of a relationship, however, the results cannot point in the direction of cause and effect. The researcher will work to comment on the findings from the data and how the relate to the Jean Twenge Generational Theory and the construct of face validity, but the commentary will have to end there. Descriptive research, such as this, can only describe relationships, not predict or control them. One upside to this limitation that will likely occur, is that if the data does reject the null hypothesis, follow up experimental research can be conducted to learn more about this interaction between face validity, generational cohorts, and gender identity.
Another potential limitation in this methodology is the difficulty in data analysis that will impact the researcher. Coming from a non-statistical background, the researcher recognizes the value and necessity of quantitative data analysis in research, but also recognizes the complexities that it requires. The researcher has access to a statistical analysis software package, resources from the University Library, past instructors, and textbooks to combat this limitation. Another rebuttal to this potential limitation is that the methodology of this particular research design only requires a two-way analysis of variance (ANOVA) and an independent samples t-test. Both of these statistical analysis methods are less robust than others that can be used in quantitative research.

Chapter Summary

This chapter has presented the disposition that currently exists regarding the topic of face validity and its potential relationship to the Strauss-Howe Generation Theory as well as gender identity. The next chapter will present applicable and significant literature on the three generations to be researched (Generation X, Millennials, and Generation Z), gender identity, and face validity. Following that, literature regarding the Rorschach Ink-Blot Test and the Big Five Inventory will be presented. An emphasis will be placed on the Strauss-Howe Generational Theory and how the patterns that have emerged through the cyclical nature of the theory can potentially impact face validity.
CHAPTER TWO:  
LITERATURE REVIEW

Overview

This section of this research will present a complete review of the literature on the associated topics, theories, and constructs that are being studied in this dissertation. This literature review will provide a synthesis of the existing literature on the topic, while also acknowledging any gaps discovered in the literature. In shaping the synthesis in the literature review, various diverse and sometimes conflicting ideas and findings presented in the literature will be evaluated and combined to create a new, original work. This synthesis will be shaped to ultimately present an organized overview of the state of the knowledge of the topic (Pan, 2016).

To create a successful synthesis the following sections and ideas will be discussed at length in the literature review: a background of the topic, the construct of face validity, a historical presentation of projective assessments, the usage of projective assessments, substantive findings from the Rorschach Inkblot Personality Assessment, an exploration of how certain generational cohorts prefer to communicate with images as opposed to text, the multicultural considerations that are inherently included in projective assessments, the impact that labels can have on perceived face validity, an overview of the Big Five Inventory Personality Assessment, the key constructs in the Strauss-Howe Generational Theory, and the comprehensiveness and generalizability of the Strauss-Howe Generational Theory.

Background

In 2004, Psychology Today magazine conducted a survey that found an estimated 59 million people had received some type of mental health treatment in the past two years.
(Chamberlin, 2004). As the mental health professional field advances and grows, the need for effective tools, theories, approaches, and testing also will grow. This research is focusing on assessments that are utilized as tools for successfully measuring personality when in a counseling session or relationship.

Even further, the research questions being presented are aimed at determining whether certain types of assessments used to measure personality in a counseling session might be a more effective choice than others depending on the individual’s demographics. The construct that will be explored as a way to measure potential effectiveness will be the perceived face validity of the type of assessment as determined by the individual receiving counseling.

The following review of the literature will synthesize the existing literature to showcase the importance of discovering the answers to the research questions that have posed in this dissertation.

**Face Validity**

The earliest scholarly article referencing face validity that discovered in the literature was *A Critical Examination of the Concepts of Face Validity* by Charles I. Mosier. At the time of Mosier (1947) writing the article, it was believed that face validity was not a precise or useful concept due to there not being a commonly accepted definition of what true face validity was. Ultimately, Mosier provided the assessment world three definitions for face validity, “The three meanings which have been attributed to the term may be characterized as: (1) validity by assumption, (2) validity by definition, and (3) the appearance as well as the reality of validity,” (Mosier, 1947, p. 191).
Mosier’s (1947) first definition, validity by assumption, is a dangerous foundation for a characterization and he eventually exposes the lack of scholarship in that definition. Additionally, the third definition that Mosier (1947) provides can be argued as not as useful due to the field of assessment already having commonly accepted other types of validity that we utilize such as content and criterion. Face validity, if argued to be a standalone concept, truly needed to settle on one common definition.

Given a careful and intentional research design, face validity can be tested through survey or correlational methodologies. With data analysis being conducted, the face validity rates can then be calculated as a correlation or a p score to show levels of statistical significance that can supplement the theory and argument that face validity can be considered a stand-alone concept and not solely a framework.

Mosier (1947) was employed in the Office of the United States Secretary of War (currently called Secretary of the Army). At first glance, an employee in the Office of the Secretary of War publishing an assessment article might appear unorthodox, but given that the article was published in 1947, the armed forces had a heavy involvement in the field of assessment and measurement. “The successful use of tests by the armed services led to widespread adoption of tests in education and industry,” (Drummond & Jones, 2006, p. 6). In the same breath that Mosier (1947) was arguing for the generalizability of testing in the armed forces, he was not convinced that face validity should be part of the types of validity that were taken into consideration when tests were being designed. Mosier (1947) was not alone in these thoughts which make the case for studying the importance of face validity a difficult one to argue.
“Face validity should be separated from criterion-related, content, or construct validity. Face validity should not be confused with the other types of validity and it cannot replace them. Some writers have carried the point even further by placing face validity within quotation marks, implying that it is not really a type of validity,” (Nevo, 1985, pp. 287-288).

One of the unfortunate side effects associated with face validity is that students, test takers, or laypeople may rely too heavily on face validity alone to judge the effectiveness of an assessment. Part of being a scholar is recognizing the importance of face validity within an assessment, while also digging for the additional and psychometric validity beyond face validity alone. Betts and Taran (2012) utilized the Forer Test which has been around since 1949, to emphasize this point. The ‘Forer Test’ is a trick personality assessment that is administered to a sample and then everyone receives the exact same personality profile as a result, regardless of their answers. The common personality profile is both positive in nature as well as quite vague. This combination often tricks the participants into thinking that it must be accurate specifically to them. An example of the fake profile is: You have a need for other people to like and admire you, and yet you tend to be critical of yourself. While you have some personality weaknesses you are generally able to compensate for them.

Participants in the study that Betts and Taran (2012) designed rated the personality profile a 4.26 on a scale to 5 with 5 indicating it was an excellent assessment of their personality. It was clear that the participants were relying heavily on face validity. In using the Forer Test, the scholars were able to see the problems with solely relying on face validity to judge a measurement instrument or evaluation. Levy and Orr (1957) cleanly sum up what happened with the Forer Test: “Psychologists, like other scientists, rely upon the logic of
statistical inference and experimental control in attempting to divorce their findings from their own personal beliefs and prejudices” (p. 79). When face validity alone is utilized, students or test takers are not allowed the opportunity to explore their own logic, statistical inference, or experimental controls.

Interestingly, the concept of face validity was ignored throughout peer reviewed journals for a while. Nevo (1985) shares in the abstract of his published article from 1985, “The purpose of this paper is to address the long ignored topic of face validity and attempt to give it some new theoretical and applied meanings,” (Nevo, 1985, p. 287). Beyond being ignored, some scholars have even suggested that face validity does not even exist. (Adams, 1950).

As the field of measurement and assessment has evolved and expanded, face validity has resurfaced in the classroom and in scholarly research. (Betts & Taran, 2012). In fact, some scholars have even proved how impactful face validity alone can be on the actual results of assessments, (Sato & Ikeda, 2015). “If students fail to recognize the abilities that the test developers intend to measure, they are less likely to learn what the test developers wish them to learn,” (Sato & Ikeda, 2015, p. 1). This idea is especially important for those who develop assessments to recognize. Specifically in the fields of Counseling and Psychology, if there is a gap between what the assessment developers are looking to measure and what the test takers believe they are being measured on, not only could there be false negative or positive diagnoses, but the severity of symptoms could also be impacted.

**Projective Assessments**

The Rorschach Ink Blot Test, sentence completion methods, and the Thematic Apperception Test (TAT) are classic examples of projective assessments in the field of
psychology (Piotrowski, 2015). The initial conceptualization for projective tests was that participants would look at meaningless or ambiguous photos or objects and attempt to describe what they saw in them. Through this process, psychologists hoped that the participants would be projecting their personality, unconscious desires, or needs through their answers (Plotnik & Kauyoumdjian, 2013).

Frank (1939) first defined projective assessments in terms of testing personality. The purpose of the projective test is to:

“Induce the individual to reveal his way of organizing experiences by giving him a field (objects, materials, experiences) with relatively little structure and cultural patterning so that the personality can project upon that plastic field his way of seeing life, his meanings, significances, patterns and especially his feelings. Thus we elicit a projection of the individual personality’s private world because he has to organize the field, interpret the material and react affectively to it… The important and determining process is the subject’s personality which operates upon the stimulus-situation as if it had a wholly private significance for him alone or an entirely plastic character which made it yield to the subject’s control (p. 402).”

Specifically, Herman Rorschach, author of the Rorschach Inkblot Test, hypothesized that he imagined that this test allowed an understanding of personality via analysis of how his patients projected meaning on the blots. He paid less attention to what was seen per se (Hubbard & Hegarty, 2016).

Rorschach (1884-1922) developed the Rorschach test in the early 1920s (Hubbard & Hegarty, 2016). Interestingly, Rorschach began playing with ink blot designs much earlier and was aware of their previous inspiration to artists such as Leonardo Da Vinci and Victor
One year before his death, Rorschach published his only book, *Psychodiagnostik*, in which he elaborated on the 10 inkblots and his method for experimenting with them (Hubbard & Hegarty, 2016).

**A Noticeable Decline in Projective Assessment Usage**

Projective testing and assessment methods have been an accepted approach in psychology for the past 75 years (Piotrowski, 2015). However, there has been a decline in interest and use of these methods in the classroom and professional internship sites for the past decade. The decline in use of projective assessments has been attributed to recent developments such as managed care policies, changing professional psychology curriculum emphases, and challenging critiques of projective assessments in professional literature reviews (Piotrowski, 2015).

Recent changes in mental health care policies are a likely culprit for the reduction of projective assessment use and are also responsible for general changes in modern psychological practices. According to Piotrowski (2015), “The untoward effect was that reimbursement and time constraints significantly impacted the extent and availability of psychological testing… Most projective tests are individually administered and moreover, protocol scoring, interpretation, and assessment report integration can be rather time consuming for the clinician” (p. 261).

Beyond the health care policies, updates in the professional psychology curriculum had a hand in the reduction of projective assessments in the classroom and at internship sites as well. Piotrowski (2015) continued: “In 2000, the APA Division 12 Task Force on Assessment recommended that training in projective assessment methods should be excluded from the graduate clinical curriculum. Interestingly, about this time, several authors called
for a moratorium on teaching projective tests” (p. 262). With mandates coming from a sanctioned task force on assessment and pressure from several scholarly authors, it was not surprising that attention to projective assessments was quietly reduced in the classroom. Additionally, many of the seasoned faculty who did appreciate projective assessment were retiring, leaving no one in the classrooms talking about the importance of or training skills for projective assessment.

With increasing emphasis on objective, quantitative assessments, projective assessment, which by definition relies on creativity and subjectivity, was bound to become a victim in contemporary times. Researchers concluded that the bulk of Rorschach and the Thematic Apperception Test indexes were not supported by empirical data, (Piotrowski, 2015). The more criticisms projective assessments received in scholarly journals, the harder it must have been to continue teaching about them in the curriculum. Piotrowski (2015) suggested that, “Attitudes toward projective tests have been blatantly negative in the professional training settings yet guardedly positive in clinical practice” (p. 263). There appears to be a disconnect somewhere if psychology educators are slowly moving away from the projective assessments, yet practitioners are still quietly and happily using them to help clients. Piotrowski (2015) predicted that projective assessment will be discontinued in clinical psychology training, and projective assessments will continue to be used by a small portion of the mental health professional population.

**Substantive Findings in the Rorschach Inkblot Personality Assessment**

For the layperson comparing a projective personality assessment, such as the Rorschach, to an objective personality assessment, it is understandable how one might be skeptical of the usefulness of a projective test. Viglione (1999) shares,
“Taking the time to read and to understand the empirical literature in refereed journals over the last 20 years leads to the conclusion that the Rorschach variables are useful for many purposes in clinical, forensic, and educational settings. This conclusion rests on a synthesis of the empirical literature emphasizing ecologically valid, behavioral, real-life criteria… The assumption that the Rorschach is not useful… is mistaken and contrary to the evidence” (p. 260).

An excellent place to start unpacking the substantive findings concerning the validity itself of the Rorschach would be with Hiller et al’s (1999) meta-analysis. Although Hiller et al. (1999) presented numerous conclusions, this dissertation will focus on three in particular.

First of all, Hiller et al. (1999) found that the Rorschach Inkblot Personality Assessment had an equivalent validity effect size to the Minnesota Multiphasic Personality Inventory (MMPI). Specifically, the Rorschach had an unweighted mean validity coefficient of 0.29 and the MMPI has an unweighted mean validity coefficient of a 0.30. Hiller et al. further commented, “The methodological features of this study, including random sampling from the published literature, expert judgements for inclusion of validity evidence and the use of accepted effect size estimation techniques, lend greater credibility to these results” (p. 291).

Additionally, the effect sizes that were reported when studying both the Rorschach Inkblot Personality Assessment and the Minnesota Multiphasic Personality Inventory were substantial and warranted user confidence in utilizing both of instruments for their intended purpose of measuring personality in participants (Weiner, 2001). A correlation coefficient that is near 0.30 indicates near-maximum outcomes in relating personality assessments to
real-life criteria (Weiner, 2001). Cohen (1988) reported that validity for the Rorschach is about as good as it can get for a personality test.

Finally, Hiller et al. (1991) determined that there was a small likelihood of the existence of thousands of unpublished research studies that contained findings that could ultimately alter the results of their meta-analysis. To be fair, Hiller et al. (1991) do acknowledge that bias may be present in their published meta-analysis because of unrepresented, unpublished articles, the likelihood that they would impact the overall findings greatly is very small.

**Communicating with Images**

One can begin to wonder if Hermann Rorschach (1884-1922) was ahead of his time when considering the values of his famous Rorschach Inkblot Assessment. Little scholarly or factual information has been published about the life of Rorschach (Schwarz, 1996). Schwarz (1996) continued, “Rorschach’s stylistic freedom in his drawings and skillful verbalizations, his creative imagination, his love of the theater and pantomime, and his unusual ability with shadow puppetry and photography all dovetail with his traits of expressing accuracy and precision.” (p. 9). Many of the same traits that describe Rorschach are current values of younger generations such as Millennials and Generation Z. Generations have been defined as a cohort group whose length approximated the span of a phase of life and whose boundaries are fixed by a peer personality (Keeling, 2003).

There are several stereotypes regarding Millennials that appear in non-scientific articles and social media postings. Fortunately, articles about common characteristics of these individuals also appear in peer reviewed journals. Myers and Sadaghian (2010) describe Millennials as the generation of men and women born between 1979 and 1994.
Negative traits attributed to them include that they are considered the *Look at Me* generation because they are overly self-confident and overly self-absorbed. Myers and Sadaghiani, (2010), also report that Millennials can be depicted as lacking in loyalty and work ethic. Some more gentle thoughts about Millennials shared by Keeling (2003) are that, they can be characterized as being protected by their parents, driven to improve the world around them, and possessed of rational minds and positive attitudes. Their shaping event was the Columbine shootings that occurred in 1999. Additional descriptors are: optimistic, cooperative team players, rule followers, and racially and ethnically diverse (Keeling, 2003).

Even more directly aligned with the Ink Blot Assessment’s goals, is the general archetype that the generation following Millennials, Generation Z, is expected to express. The Generational Theory that was developed by William Strauss and Neil Howe describes how each generation spans approximately 20 years and classifies each generation with a certain archetype (Strauss, 1997). Generation Z is depicted as the upcoming artist. Individuals in Generation Z were born between 1990 and 2010, and they are generally more drawn to communication by images rather than verbally (Raymond, 2012).

Currently, 90% of young adults between ages 18 and 29, which includes both Millennials and Generation Z by definition, report often using social media (Vaterlaus, Barnett, Roche, & Young, 2016). Many of the social media platforms young adults are using solely focus on images. Vaterlaus et al (2016) continued:

Launched in 2011 by two young adults, Snapchat is a social media app where users can share pictures and short videos that can include text and drawings with friends that disappear in a matter of seconds. The Pew Research center only recently began tracking the number of adult Snapchat users. 17% of adult smartphone owners use
Snapchat. Among the adult population, young adults (18-29 years old) are the age group with the largest number (41%) of Snapchat users (p. 595).

In the qualitative study completed by Vaterlaus et al, (2016) one of the themes that emerged was the generational differences between users of Snapchat and non-users. Some young adult participants in the study shared that their parents and older generations did not seem to understand the purpose of Snapchat or communicating with images, (Vaterlaus et al, 2016). The functionality of communicating with images also came up in the study. Vaterlaus et al (2016) study:

Texting has been presented as a preferred communication modality among youth because it is private and asynchronous. However, young adults have indicated that a dislike or flaw of texting is that miscommunication is common because of the lack of cues available through text. Young adults reported that Snapchat alleviates the potential for miscommunication because snaps include pictures overlaid with text that can clarify meaning and share emotion within relational communication (p. 599).

Myers and Sadaghiani (2010) also commented on how younger generations are craving communication methods outside of the typical email or written memo. Specifically in the workplace, Millennials expect close relationships and frequent feedback from their supervisors. In the same way that younger generations do not appreciate the potential for miscommunication via text message with their friends, they do not appreciate the potential for miscommunication from their supervisors in the workplace.

The Parallels of Narrative Therapy and Creating Stories Through Images

We know that Rorschach was expecting his clients to project meaning onto the inkblots through their answers and he encouraged his clients to go into detail about what they
saw in the neutral inkblot images (Hubbard & Hegarty, 2016). A parallel should be drawn between the outcome of describing what a client sees in the inkblot images of the Rorschach Personality Assessment and the goals of Narrative Therapy. Gladding (2009) reported that Narrative Therapy was developed in 1990 by Michael White and David Epston. The goals of Narrative Therapy are for the client and counselor to shift the approach of counseling to storytelling as a way of conceptualizing and interpreting the world. Clients should also learn how to construct new stories and meaning in their lives for healing and success in their future.

The stories that clients will tell when engaged in Narrative Therapy represent their sense of self, and Combs and Freedman (2016) note that the stories are located in many different places, including other people’s memories, genealogical records, social media, and cultural practices and rituals. Allowing clients to share their stories, from as many different perspectives as possible, helps create the healing and future success (White & Epston, 1990). Applying this same logic, clients who are able to project their own personality and create their own story while engaged in a personality assessment should be just as successful and just as celebrated in the fields of counseling and psychology.

The counselor’s role throughout the storytelling process of the Rorschach Inkblot assessment is to be an editor of the whole story. Vess and Lara (2016) interviewed Mark Savickas, and he was able to capture what that editorial process can look like in a therapeutic setting. In their interview, Savickas shares: “It is right there in front of them and our job is not to tell them, but to ask the questions so they tell the stories. So they see it themselves. That is why when I begin I ask, ‘how can I be useful?’ And I listen very carefully, because often the end is already there” (Vess & Lara, 2016, p. 86).
Cultural and Gender Inclusion in Projective Assessments

Although Hermann Rorschach likely did not intentionally design his ink blot assessment with cultural bias in mind, the assessment, as well as many other projective assessments, can combat cultural bias that has been proven to be present in many objective assessments. Zamir and Sabo (2012) comment, “Bias is presented when a test score has meanings or implications for a relevant, definable subgroup of examinees that are different from the meaning or implications for different examinees” (p. 46). Zamir and Sabo (2012) admit that there imposes a particular challenge to design an objective assessment, especially one measuring intelligence, that does not introduce cultural bias. In fact, Redden and Simons (1986) created their own objective assessment called the “Rap” Test to highlight the presence of cultural bias in objective assessments. Redden and Simons (1986) normed their intelligence assessment off of street culture in Iowa and classified a passing grade as eight correct out of the 12. When administered to average college students who were not privy to the Iowa street culture, the average score was only two correct out of the 12. With the use of projective assessments, such as the Rorschach Inkblot Test, clients can utilize their own experiences, vocabulary, and values no matter what their upbringing, and consequently, the potential for cultural bias is reduced.

Weiner (2001) shared that the Rorschach Inkblot Personality Assessment is essentially culturally free. He continues, “The instrument can be administered in a standard manner independent of a respondent’s age, gender, ethnicity, nationality, or other demographic characteristics” (p. 424). The individual variations and persona preferences that a participant may have when responding to the Rorschach or that a mental health care
provider may have when interpreting the participant’s responses does not detract from the basic standardization of the assessment itself (Weiner 2001).

Meyer et al. (2015) were also curious about cultural bias as it related to the Rorschach Ink Blot Test, and they chose to look at 60 Rorschach test scores and attempt to identify any associations in the scores that were relevant to gender, ethnicity, age, and education. This type of study is significant because it can help determine inferences for specific groups of people and help build a baseline for what is normal. The authors shared that there was limited existing research on this topic. For example, they could only find one other study on the Rorschach and gender in the last 15 years. The authors used pre-existing data from 15 samples to create a total of 640 records. Ultimately, there was no association among gender or ethnicity in the Rorschach Ink Blot test scores. On the other hand, age and level of education were significantly associated with a number of the Rorschach scoring variables the authors were looking at. This finding was not that surprising as older participants and more educated participants would typically have a more complex vocabulary and sense of syntax to give their answers during the administration of a projective assessment such as the Rorschach.

**Projective and Objective Labels and Their Effect on Face Validity**

Meyer and Kurtz (2006) made an argument for scholars to begin moving away from the terms projective and objective when referring to personality assessments. To be entirely clear, Meyer and Kurtz (2006) define objective when referring to personality tests as: “Instruments in which the stimulus is an adjective, proposition, or question that is presented to a person who is required to indicate how accurately it described his or her personality using a limited set of externally provided response options” (p. 223). Interestingly enough,
Meyer and Kurtz (2006) openly discuss the concern with using the word *objective* alone, “Another serious issue that results from applying the term *objective* to certain personality instruments is that those so labeled will tend to be viewed positively simply by virtue of the term’s positive connotations,” (p. 223).

Objective personality assessments may be viewed more valid without the user or client even seeing the validity data simply because of the name or classification. Meyer and Kurtz (2006) continue: “Tests that are not categorized will tend to be viewed less positively, regardless of psychometric data, because they are, after all, not objective. Accordingly, an unintended consequence of this terminology is that it may encourage or perpetuate prejudices regarding the many alternative methods of assessment that do not carry the objective label” (p 223). At the same time that Meyer and Kurtz (2006) were making their argument to eliminate the objective and projective labels, projective assessments, such as the Rorschach, were experiencing a decline in coverage in the classrooms (Piotrowski, 2015).

Based on Meyer and Kurtz’s (2006) thinking, scholars should recognize that, like it or not, face validity is playing a large role in the determination of which types of personality assessments we are using in our training programs and in clinics. Nevo (1985) defines face validity from previous literature as when an assessment looks valid from the viewpoint of a layperson. The layperson should think that the assessment in front of them looks like it will assess what it says it can assess. Face validity is completely separate from content, criterion-related, and construct validity. Nevo (1985) also introduces the important idea that an assessment that does have high face validity will help induce cooperation and maintain positive motivation throughout the duration of the assessment. This may not be the case with a test that does not appear, on the face, as being valid.
One of the unfortunate side effects associated with face validity is that students, test takers, or laypeople may rely too heavily on face validity alone to judge the effectiveness of an assessment. Part of being a scholar is recognizing the importance of face validity within an assessment, while also digging for the additional and psychometric validity beyond face validity alone. Betts and Taran (2012) utilized the Forer Test which has been around since 1949, to emphasize this point. The ‘Forer Test’ is a trick personality assessment that is administered to a sample and then everyone receives the exact same personality profile as a result, regardless of their answers. The common personality profile is positive in nature as well as quite vague, which tricks the participants into thinking that it must be accurate specifically to them. An example of the fake profile is: *You have a need for other people to like and admire you, and yet you tend to be critical of yourself. While you have some personality weaknesses you are generally able to compensate for them.*

Participants in the study that Betts and Taran (2012) designed rated the personality profile a 4.26 on a scale to 5 with 5 indicating it was an excellent assessment of their personality. It was clear that the participants were relying heavily on face validity. In using the Forer Test the scholars were able to see the problems with solely relying on face validity to judge a measurement instrument or evaluation. Levy and Orr (1957) cleanly sum up what happened with the Forer Test: “Psychologists, like other scientists, rely upon the logic of statistical inference and experimental control in attempting to divorce their findings from their own personal beliefs and prejudices” (p. 79). When face validity alone is utilized, students or test takers are not allowed the opportunity to explore their own logic, statistical inference, or experimental controls.
Key Constructs and Definitions of the Strauss-Howe Generational Theory

Especially in contemporary times, many non-scholarly articles have surfaced talking about the traits, values, and opinions of the certain generations. It is common to see stories regarding millennials and the upcoming Generation Z in the media, from journalists, and even in corporations that are attempting to advertise their product.

A large issue that has come up due to the popularity of the generational theory is that competing theories have emerged that do not always align with the Strauss-Howe generational theory. For example, Raymond (2012) talks about how Generation Z are the individuals who were born between 1990 and 2010. However, according to the Strauss-Howe generational theory, Generation Z individuals were born between 2005 and the present day (2018).

Generations have been defined as a cohort group whose length approximated the span of a phase of life and whose boundaries are fixed by a peer personality, (Keeling, 2003). The Strauss-Howe Generational Theory describes how each generation spans approximately twenty years and classifies each generation with a certain archetype. There are four specific archetypes that rotate in the same order: prophet (baby boomers), nomad (Generation X), Hero (Millennials), and upcoming Artist (Generation Z), (Strauss, 1997).

Howe and Strauss (2007) share that generations are among the most powerful forces in history. Tracking their defined and distinct generations, lends order, and even a measure of predictability, to long term trends. Howe and Strauss define the four distinguishing traits and how they correspond to the four recent generations. Additionally, the authors describe the cyclical nature of the Strauss Howe Generational Theory. For example, once the fourth generation is coming to a close, the cycle begins at the first one again.
The theory is quite detailed and remarkably defined as Strauss commits to aligning his theory of the rotating generations all the way back to what he calls the “Arthurian Generation” in the mid-15th century. However, scholars are not convinced or backing the theory one hundred percent due to the lack of empirical data presented, (Jones, 1992). Ultimately, I would argue that the Strauss-Howe theory can be tested by applying the certain archetypes to past historical figures that would fit into each generation. Although it would be considered subjective, detailed literature does exist on certain famous individuals that can be put to the test for this theory.

**Comprehensiveness and Generalizability of the Strauss-Howe Generational Theory**

One particular area that is discussed often in the literature is generations in the workplace. As the Baby Boomer generation is preparing for retirement, corporations and current Generation X employees are discovering how important it is for them to fully prepare for the younger Millennial and Generation Z employees to enter the workforce.

For example, with the understanding that Millennials have been on the go, fully structured, and living with jam-packed schedules their whole lives, the concept of self-care, especially around a career, will be essential. Studies have suggested that counselor educators may need to aid Millennials, and students in general, in regular assessments of their wellness as they may not be aware of their limitations and the impact some of their pressures may have on their health, (Smith & Koltz, n.d.).

It is important to recognize the Strauss-Howe generational theory as an essential theory in the field of counseling and to utilize it often because of how generalizable it is to so many different environments right now. Another example from Smith & Koltz (n.d.) shows how the generational theory can help explain certain relationships among generations as well.
Parents of Millennials have asserted their values onto this generation by getting them the best teachers, helping them complete their homework, acting as their personal taxi driver, and structuring virtually every aspect of their lives, (Smith & Koltz, nd). Although it may not be entirely fair to blame the parents of millennials for their values that will carry over to the workplace and their relationships, the research shows that it more or less might be very fair to lay the blame exactly with the parents of that generation.

In the year 1995, a study was conducted with younger Millennials where they were asked of all the people, who they looked up to the most. “Seventy-nine percent said that they most looked up to their parents. Parents of Millennials are taking part in every aspect of their children’s educations, including that received in college.” (Keeling, 2003, pp 32-33).

**Multicultural Impact**

Although not explicitly expressed by Strauss (1997), there is a multicultural importance that comes from this theory. Redden & Simons (1986) developed their famous “Rap” test to showcase how many of the assessments that professionals were using at that time were unknowingly exclusive with their language. It would be unfair to expect a participant or student who learned English as their second language to respond to an intelligence test in the same way as someone who grew up with English as their first language. The list can go on considering which students had books in their homes and which students were more exposed to social situations.

Redden & Simons (1986) designed their assessment with norms from the Des Moines, Iowa street culture to essentially flip the script and prove how essential inclusivity in assessment is. If we know from the work of Redden & Simons (1986) that norming an assessment on a particular culture is the best practice, we can also expand that to norming as
assessment on a particular generation. Or, at the very least, a counselor or educator can
determine which of the array of assessments they have at their disposal, would be the best
selection for the particular generation they are working with.

Generation Z will have greater amounts of exposure to diversity than any previous
generation. Some noteworthy examples include never having lived in a world without the
Civil Rights Act, Voting Right Act, Fair Housing Act, and Americans with Disabilities Act.
(Seemiller & Grace, 2016). Seemiller and Grace (2016) also share,

“Generation Z is the most racially diverse generation in recent history, with the most
diverse social circles. And more members of this generation than any other generation
have a positive opinion about the country’s becoming more diverse. Their exposure to
diversity through seeing women and people of color in leadership roles and having a
diverse social circle of friends has lively contributed to their open-mindedness.” (p. 45).

**The Ambitions and Expectations of Millennials**

If one falls into the trap of believe the stereotypes, it might be easy to assume that
Millennials would not be ambitious at all. The literature shows us that thought might be
somewhat true and complicates our understanding of this generation even further. Ambition
can likely be most directly connected to money, prestige, and power. “While money is
important, Millennials do not see money as their only source of happiness,” (Myers &
Sadaghiani, 2010, p 233). Myers and Sadaghiani explain further that, in fact, Millennials are
more likely to feel rewarded by work that allows for flexibility, using new technology, and
an environment where they are recognized.
Interestingly, Smith and Koltz (nd) share that, “Millennials have always been told they are special and that great things are expected of their generation,” (p. 14). Understandably, a generation that has grown up being told that they are hopefully the answer to all the world’s problems might have an inflated ego as well as heightened ambitions. If a reader is following the pattern here, it will not be surprising that overwhelmingly, Millennials expect to graduate from college and work as professionals. In fact, this generation scoffs at the idea of ever becoming a machinist, a secretary, or a plumber because they are certain that they will gain work as a professional. (Schneider & Stevenson, 2000). Having these confident and secure career goals is inspiring, but it is likely not realistic, and it is certainly not healthy for our society as a whole.

Researchers have committed to diving in deeper and reporting numbers about these expectations and the current job market. Keeling (2003) reported that Millennials have limited knowledge about their chosen occupations, the educational requirements of the majors they have declared, or even about the future demand for their career path. “According to the Sloan Study, 56.2% of the adolescents studied have misaligned ambitions expecting to obtain either more or less education than the average person who works in their desired occupation,” (Keeling, 2003, p. 31). This reality becomes even more frightening for Millennials when they honestly report their expectations for the culture they would like to experience at their future careers. Myers and Sadaghiani, (2010) found that Millennials are vocal about their desire for more flexible working conditions and hours. Previous generations easily understood that eight to five business hours in a set office location was the norm, but Millennials are pushing for evening hours and remote locations. Myers and Sadaghiani share that it may be difficult for
supervisors, colleagues, and career counselors to pass along the message that Millennials will likely need to adjust their expectations because for Millennials, building a career is not a primary motivator. In fact, work is a less significant part of their personal identity than with previous generations (2010).

To be fair to Millennials, not all of their expectations should raise red flags and cause anxiety attacks for career counselors who are preparing to work with them. Specifically, some of Millennials’ expectations regarding communication methods might be considerably healthier than the expectations of generations’ past. From Myers and Sadaghiani,

“First, Millennials expect close relationships and frequent feedback from supervisors. Second, they expect open communication from their supervisors and managers, even about matters normally reserved for more senior employees. Third, Millennials prefer to work in teams,” (2010, p. 229).

Chapter Summary

The previous review of literature and background forms a theoretical framework and multiple constructs for the research on the impact of generational and gender identity on the perceived validity of counseling personality assessments.
CHAPTER THREE:

METHOD

Overview

This chapter includes a narrative of the methods with an emphasis on the rationale for a descriptive, quantitative, and analysis of variance methodology. The categories that are included in this chapter are as follows: introduction, participant selection, instruments, procedure, rationale, data collection, data analysis, research questions, limitations, and a chapter summary.

Introduction

The purpose of this study is to discover the perceived face validity of two different styles of personality assessments that are used in counseling sessions and psychological testing and measurement when comparing the level of face validity across three different generations of individuals. Additionally, the levels of face validity will be measured by self-reported gender identity of the participants. It is anticipated that there will be a noticeable difference in the reported face validity measurements depending on which generation the individual belongs to as well as a noticeable difference in the reported face validity measurement depending on the gender identity that individual reports belonging to.

The methodology that was utilized was a quantitative, survey research design. The survey was designed using an online platform called Qualtrics. The survey was then distributed using the snowball method alongside convenience sampling. The sample size goal for each of the three generations that was researched (Generation X, Millennials, and Generation Z) was a minimum of 150 individuals. The sample size goal for each of the two gender identities that was researched (male and female) was a minimum of 75 each. The
survey was distributed using the internet to different groups of individuals that the researcher has access to via survey sharing and social media platforms.

The survey results were kept confidential and secure on the researcher’s computer which needs two levels of account access to be visible. Once the data collection process was complete, the researcher used the data analysis software *STATA* to begin the work of understanding the reported face validity measures. A two way analysis of variance was used with the three generations reported and an independent samples t-test was used with the two gender identities reported. The following sections of the chapter frame the study in full and give justification for the chosen methodology and approach.

**Participant Selection**

Due to the importance of a large sample used in this research, the method for participant selection was a combination of snowball sampling and convenience sampling. Goodman (1961) states, “Snowball sampling procedure is defined as follows: A random sample of individuals is drawn from a given finite population. Each individual in the sample is asked to name different individuals in the population,” (p. 148). From that point, either the research will pass along the survey to the newly names individuals or trust the original population to pass along the survey. Given the fact that the survey was contained in a public hyperlink, the ease of sharing the survey was high, even for the layperson.

Snowball sampling has also been called chain referral sampling. (Biernacki & Waldorf, 1981). It allows new referrals, who likely share similar characteristics as the original sample, to be made that the researcher may not have originally been able to contact or connect with on his or her own.
Alongside the snowball sampling, convenience sampling was used to receive the largest number of completed surveys back.

“Convenience sampling (also known as haphazard sampling or accidental sampling) is a type of nonprobability or nonrandom sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study,” (Etikan et al, 2016, p. 2).

Convenience sampling was used for this particular research by the researcher first contacting colleagues that they have at institutions of higher learning for the Generation Z generation. It was convenient to send out the link to the survey to college age (Generation Z) students via email.

**Instruments**

Two specifically chosen counseling and psychology assessments were utilized for the purpose of this study. In an effort to make the findings of the study as accurate as possible, both of the chosen assessments were in the subtype of personality assessments. Costa and McCrae (1992) define personality as the study of traits or individual differences. “The conceptual status of traits has been clarified, and trait measures have shown evidence of convergent and discriminant validity across instruments and observers,” (p. 5). Of course, assessments of personality, should correctly measure or describe an individual’s personality when compared to others who have taken the assessment or others that the assessment was normed on.

It is essential that of the two personality assessments used in the research that one was projective in nature and the other was objective in nature. For the projective personality
assessment, the Rorschach Ink Blot Test was utilized. The Rorschach Ink Blot Test uses 10 picture cards and is typically administered in 20-30 minutes. The current publisher of the Rorschach is Hogrefe Ltd. Hogrefe is located in Oxford, United Kingdom. Inquiries were sent to the customer support designated email to find the best contact for requesting permission to use sample images from the 10 picture cards of the Rorschach. The first inquiry was sent via email to the main customer support account of Hogrefe Ltd. (See Appendix A). A response was received via email directing me to the appropriate individual, Ms. Slyvia Schlutius. (See Appendix B). An email was sent directly to Ms. Schlutius requesting permission to use sample images from the Rorschach. (See Appendix C). After no response for five months, a follow up email was sent to Ms. Schlutius. (See Appendix D). At that time, Ms. Schlutius replied and granted permission to use two picture cards directly from the Rorschach. (See Appendix F).

For the objective personality assessment, the Big Five Inventory (BFI) was utilized. The Big Five Inventory was designed with 44 total questions and is a self-report inventory that consists of short phrases and relatively accessible vocabulary. The current copyright holder, and author, to the BFI is Oliver P. John who is associated with the University of California Berkeley. The BFI is freely available for non-commercial purposes such as research and the copyright holder only asks that researchers keep them posted on their findings. (See Appendix E).

**Procedure**

Prior to any data collection, approval was requested and received through the North Carolina State Institutional Review Board (IRB). This step was essential given that this research project is to fulfill the requirements for a doctoral dissertation. Once IRB approval
was received, the researcher finalized both an informed consent and an online survey, using *Qualtrics*. The informed consent document was shown to all participants before they could access the survey. The purpose of the informed consent was to formally advise any and all participants of their rights during and after the survey. Additionally, the informed consent indicated that there would be no potential harm sustained by participating in this particular study. A copy of the Informed Consent document is located in the Appendix section of this dissertation. (Appendix H).

Once a potential participant indicated that they agreed to the conditions listed in the informed consent, they were then able to access the online survey through *Qualtrics*. The survey first asked them three basic demographical questions including their gender identity, their year of birth, and their current age. The reasoning behind requesting all participants to indicate their year of birth and their current age was to verify that the responses are legitimate. For example, if the same participant submitted their year of birth as 1950 and their current age as 20, their response would not be included in the data analysis section due to the lack of trustworthiness in that particular participant.

By only requesting participants to submit those three demographical questions, the researcher was able to generate enough information to adequately answer the research questions while at the same time not collect any identifying information. By following this particular protocol, no ethical concerns were raised and the protection and security of all participant’s identities was ensured.

Following the three demographical questions, the survey then went on to the next section which included actual inkblot images from the Rorschach Inkblot Test and actual text questions from the Big Five Inventory personality assessments. Specifically, two cards from
the Rorschach Inkblot Test (Card I and Card II) were shown as the participant scrolled down the survey. Both of these images are shown in the Appendix section of this dissertation. (Appendix G). This procedure gave participants a view of 20% of the entire assessment which was enough for them to make a complete, subjective judgement on its face validity. Immediately following the images of Rorschach Inkblot’s Card I and Card II, the researcher’s text read:

“The two images above are from the Rorschach Inkblot Personality Assessment. Mental health care providers can analyze an individual’s response to what they perceive in the images to assess their personality. Using the scale below, please indicate how valid you believe the Rorschach Inkblot Personality Assessment is by looks alone.”

After the block of text, a Likert scale was then provided with options from 1-7 where the participant must pick a number. The number 1 reflected not valid at all and the number 7 reflected that the assessment was extremely valid.

Once the participant selected their choice on the Likert scale, they were then able to access the next page of the survey which showed 9 questions from the Big Five Inventory. All nine of these questions from the Big Five Inventory will be listed in the Appendix section of this dissertation. (Appendix G). This gave participants a view of 20.45% of the entire assessment which was enough for them to make a complete, subjective judgement on its face validity as well as kept the amount of the assessment shown consistent with the projective personality assessment that was also utilized for this research. Immediately following the images of the 9 questions from the Big Five Inventory, the researcher’s text read:

“The nine images of questions above are from the Big Five Inventory Personality Assessment. Mental health care providers can deliver this assessment that allows the
participant to self-report their strength of agreement on certain personality traits. When combining all the responses, the test measures what many psychologists consider to be the five fundamental dimensions of personality. Using the scale below, please indicate how valid you believe the Big five Inventory Personality Assessment is by looks alone.”

After the block of text, the same Likert scale from before was provided with options from 1-7 where the participant must pick a number. The number 1 reflected not valid at all and the number 7 reflected that the assessment was extremely valid. After the participant picked that number on the Likert scale, the survey showed a summary page which served the purpose of thanking the participant for their time, encouraged them to share the survey hyperlink with others to help advance the research, and finally provided them with the contact information for the Principal Investigator.

**Rationale for a Quantitative, Survey Approach**

The intention of this quantitative, survey approached research design was to potentially establish correlational patterns between face validity rates of certain types of personality assessments when measured by participants who belong to the same generation and who belong to the same self-reported gender identity. Barabas and Jerit (2010) state that survey experiments are becoming more popular among scholars because they seem to possess both a maximum of internal and external validity in their design. This social science research was intended to be generalizable due to the random representative sample that allowed generalization to the larger population of those who fit into the three generations which were studied (Generation X, Millennials, and Generation Z) as well as the two gender identities that were measured (male and female).
Weiner (2001) states that with psychology being a behavioral science and assessment being a particular field of psychology, the credentials of all psychological assessment instruments, including the Rorschach and the Big Five Inventory that are being used here, should be measured against scientific principles for advancing knowledge. Weiner (2001) continues that data sets used to evaluate the clinical utility, validity, and reliability or the Rorschach Inkblot Personality Assessment should be thorough and current, not incomplete or obsolete.

This particular research design inherently had internal validity because it utilized samples of the exact images and questions from two regarded personality assessments. The Rorschach Inkblot Personality Assessment has scholarly evidence of validity found by Weiner (2001), Meyer (1997), and Viglione (1999). The most extensive and methodologically sophisticated work on topic of validity in the Rorschach Inkblot Personality Assessment was completed by Meyer (1997a). In his work, Meyer (1997a) reported a meta-analytic study of interrater reliability data that had been previously published in Rorschach research articles. His findings were coefficients that ranges from 0.72 to 0.98 with a mean value of 0.88. On average, 88 percent of the raters using the Comprehensive Scoring System for the Rorschach, agreed with each other. Meyer (1997a) states that any coefficient greater than a 0.75 generally is considered to demonstrate an excellent beyond chance agreement.

To reinforce the above point, Viglione (1999) stated the following about what he considers adequate interscorer agreement within hundreds of articles on the Rorschach Inkblot Personality Assessment,
“In preparing this article, I had the opportunity to review hundreds of interscorer reliability practices and coefficients for all types of scores with all sorts of base rates; with dichotomous, multiple categorical, or rating-scale distributions; completed in Asia, North America, and Europe; and with all sorts of reliability statistics. The fact is that just about everybody reports adequate interscorer agreement,” (p. 252).

In all fairness, not all researchers are as convinced on the clinical strength, validity, and reliability of the Rorschach Inkblot Personality Assessment. Hunsley and Bailey (1999) refer to the Rorschach Inkblot Personality Assessment as the being simultaneously the most cherished and the most reviled of all psychological assessment tools. They continue in sharing that many point to the Rorschach as a prime example of what an unscientific psychological assessment can look like (Hunsley & Bailey, 1999). Weiner (2001) rebuts the Hunsley and Bailey (1999) argument by sharing,

“The adequacy with which clinical practitioners use methods of evaluation and treatment must always be of concern among helping professionals. However, poor practices reflect of the competence of the clinicians responsible for them, not necessarily on the soundness of the methods they are attempting to use,” (p. 425).

Weiner (2001) reinforces his confidence in the meta analyses that have produced well above an adequate correlation coefficient concerning interscorer validity. Weiner (2001) continues in his article to recommend that practitioners may have more confidence in their ability to score a completed Rorschach Inkblot Personality Assessment if they use the Comprehensive System workbook that provides detailed coding criteria, numerous examples, and an extensive set of practice exercises.
Another important factor to be included in the argument for including the Rorschach Inkblot Personality Assessment as part of this research’s quantitative, survey design is the strength of the test-retest studies that have been reported in the literature. Using the Comprehensive System of scoring the Rorschach, researchers have consistently demonstrated substantial stability coefficients over intervals ranging from seven days to three years (Weiner, 2001).

It is also important to highlight the rationale for including actual questions from the Big Five Inventory Personality Assessment in this research alongside of the actual images from the Rorschach Inkblot Personality Assessment. John and Srivastava (1999) report that the Big Five Inventory Personality Assessment was constructed using items from already existing measurement tools. Some of the particular instruments that were used or referenced in the development of the Big Five Inventory are the California Child Q-sort, California Psychological Inventory, the Adjective Check List, and the Hogan Personality Inventory (John & Srivastava, 1999). The inclusion of this many different instruments to help validate the Big Five Inventory helps legitimize its place in the testing and measurement field of study.

Concerning reliability, the Big Five Inventory was found to have a coefficient alpha of 0.83 which is remarked as being quite impressive by John and Srivastava (1999). In addition to the impressive reliability, the Big Five Inventory also scores highly when tested for cross-instrument convergence with the Team Dynamics Assessment (TDA). The result from the convergent validity correlation between the BFI and the TDA was 0.81 (John & Srivastava).

One of the advantages to using the Big Five Inventory Personality Assessment, as opposed to another type of objective personality assessment, is the shortened length. While
still remaining internally valid, the Big Five Inventory is quite efficient taking approximately five total minutes to complete (John & Srivastava, 1999). Other objective personality assessments can take fifteen minutes or longer. Given that this research was only looking to include 20% of the actual items from the assessment in the survey, utilizing the Big Five Inventory was a much better fit than other objective personality assessments. Approximately 20% of the BFI is only 9 question samples, where another assessment such as the Minnesota Multiphasic Personality Inventory (MMPI) has a total of 567 questions which would require 113 sample questions in this research survey. That would simply not be efficient enough and the survey would likely not be completed by any participants.

**Data Collection**

Any participants choice to engage with, begin, and complete the study through Qualtrics, was completely voluntary. The survey, which included only three demographical questions and then two Likert scale questions, was relatively brief. The briefness of the collective survey was intentional and strategic to attempt to appear that participation in this particular survey was not a lengthy commitment. A realistic estimate for completing this survey in its entirety was between 1-3 minutes.

The researcher marketed the survey using three main platforms. The platforms that were used to market the survey were social media, email, and survey sharing online platforms. The researcher had convenient access to hundreds of individuals who identify as a part of the Millennial cohort and easily passed along the survey hyperlink and requested that they share it within their Millennial cohort social circles as well. Due to how brief this survey was to complete, there was no compensation offered as an incentive to complete the survey.
The data from completed surveys were kept online using Qualtric’s servers. The data was only accessible from the researcher’s computer which required a password to log into. Another password was then required to enter the researcher’s Qualtrics account. With that being said, all the data was kept double locked. Another benefit to this type of research design was that the data itself contained no identifying information.

**Data Analysis**

The four research questions that are presented in chapter one were answered through quantitative data analysis. The first and second research questions detected different measurements of the face validity of projective and objective personality assessments used in counseling when presented to members of Generation X, Millennials, and Generation Z. Because there were three independent variables in use, the researcher used a two way analysis of variance (ANOVA) to analyze the data. It was important to use ANOVA in this particular data analysis because the researcher was looking for both the variance between the different generational cohorts that were included in the study as well as the variance within the same generational cohort. The null hypothesis in the first research question was that there would be no significant variance in the perception of face validity between the different generational cohorts. It was important for the two-way ANOVA to be used to answer these research questions because the survey data needed to be broken down by generational cohort and perceptions of face validity responses for both the projective personality assessment sample questions (Rorschach Inkblot) and the objective personality assessment samples questions (Big Five Inventory).

The third and fourth research questions detected different measurements of the face validity of projective and objective personality assessments used in counseling when
presented to those participants who identify as male compared to those participants who identify as female. In this quantitative analysis, there was only two independent variables resulting in the researcher using an independent samples t-test to analyze the data. After the independent samples t-test was used, a calculation for *Cohen’s d* was run which gave an effect size for both the third and fourth research questions. The null hypothesis in the third and fourth research questions was that there would be no significant difference between the participants who identified as male and the participants who identified as female when comparing their perceived face validity of the projective personality assessments and the objective personality assessment. For all of the research questions, the researcher used alpha 0.05 to determine statistical significance between the generational cohorts and the gender identities.

**Research Questions**

1. Are there different measured preferences in projective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

2. Are there different measured preferences in objective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

3. Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?
4. Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?

**Table 1**

*Research Questions, Hypotheses, Analyses, and Variables*

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<thead>
<tr>
<th>Research Questions</th>
<th>Hypotheses</th>
<th>Analyses</th>
<th>Variables</th>
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<tr>
<td><strong>Research Question 1:</strong> Are there different measured preferences in projective personality assessments used in counseling when presented to member of Generation X, (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?</td>
<td>Participants who are members of Generation Z will indicate a higher level of face validity on the projective personality assessments than Millennials. In turn, Millennials will also indicate a higher level of face validity on the projective personality assessments than Generation X.</td>
<td>ANOVA</td>
<td>The mean reported on the Likert scale from each generation.</td>
</tr>
<tr>
<td><strong>Research Questions 2:</strong> Are there different measured preferences in objective personality assessments used in counseling when presented to member of Generation X, (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?</td>
<td>Participants who are members of Generation X will indicate a higher level of face validity on the objective personality assessments than Millennials. In turn, Millennials will also indicate a higher level of face validity on the objective personality assessments than Generation Z.</td>
<td>ANOVA</td>
<td>The mean reported on the Likert scale from each generation.</td>
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Table 1 (continued).

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<tr>
<th>Research Question 3: Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?</th>
<th>Participants who self-identify as male will indicate a higher level of face validity on the objective personality assessments than those who self-identify as female.</th>
<th>Independent Sample t-test and Cohen’s d Effect Size</th>
<th>The mean reported on the Likert scale from each gender identity.</th>
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<tr>
<th>Research Question 4: Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?</th>
<th>Participants who self-identify as female will indicate a higher level of face validity on the projective personality assessments than those who self-identify as male.</th>
<th>Independent Sample t-test and Cohen’s d Effect Size</th>
<th>The mean reported on the Likert scale from each gender identity.</th>
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Methodological Limitations

In a large, quantitative survey research study such as this one, there are numerous opportunities for limitations to present themselves in the methodology. Limitations that the researcher is acutely aware of are the potential improper representation of the target population, the potential for limited outcomes in the response to the research questions, and the difficulty in the data analysis execution and presentation.

The target population for this study is broken down on two separate platforms. First, the generational cohorts are universal throughout the United States of America. All those who were born between the years 1965-1981 belong to the Generation X cohort, all those who were born between the years 1982-1995 belong to the Millennial cohort, and all those who were born between 1996- present day belong to the Generation Z cohort. In this research study, the attempt will be to have a representative sample that closely relates the general population of those three cohorts, however, there is a chance that improper representation
may occur. For example, if the researcher somehow surveyed every student who attends one particular college that is located in a rural area of eastern North Carolina, the data collected from many of the Generation Z cohort will be too heavily represented from one area. Even worse would be a hypothetical situation where that particular college placed an emphasis on communicating with images. This past experience in their education could influence the students’ ratings of higher face validity on the projective personality assessments they would be shown instead of the objective personality assessments. The second platform of population is by gender identity. A potential limitation could surface with this variable if the researcher is having difficulty achieving an equitable amount of survey responses from those who identify as male and those who identify as female. Being that the researcher intends to market the survey as institutions of higher education, which are typically represented by more female students, this limitation could certainly occur.

To combat the potential limitation of an improper representation of certain generational cohorts, the research will utilize their connections across the North American continent when marketing the survey to ensure that enough individuals of all ages and all backgrounds have the opportunity to complete the survey. To combat the gender identity potential limitation, the researcher will keep a close eye on the data collection to ensure that it is not becoming skewed in one direction of the other. If 75% of the responses collected have self-identified as female, the researcher will know that the survey must remain open until more responses from those who identify as male have responded to even out the representative sample.

The potential for limited outcomes in the research is also a possibility. The nature of quantitative research surveys is that they are made up of close ended questions. The results
may or may not point in the direction of a relationship, however, the results cannot point in the direction of cause and effect. The researcher will work to comment on the findings from the data and how they relate to the Strauss-Howe Generational Theory and the construct of face validity, but the commentary will have to end there. Descriptive research, such as this, can only describe relationships, not predict or control them. One upside to this limitation that will likely occur, is that if the data does reject the null hypothesis, follow up experimental research can be conducted to learn more about this interaction between face validity, generational cohorts, and gender identity.

Another potential limitation in this methodology is the difficulty in data analysis that will impact the researcher. Coming from a non-statistical background, the researcher recognizes the value and necessity of quantitative data analysis in research, but also recognizes the complexities that it requires. The researcher has access to a statistical analysis software package, resources from the University Library, past instructors, and textbooks to combat this limitation. Another rebuttal to this potential limitation is that the methodology of this particular research design only requires a two-way analysis of variance (ANOVA) and an independent samples t-test. Both of these statistical analysis methods are less complex than others that can be used in quantitative research.

**Chapter Summary**

In summary, the aim of this study is to collect data that will determine if there is a relationship between the perceived face validity of certain types of personality assessments when measured among different generational cohorts and different gender identities. The quantitative survey data will be collected from a minimum of 150 participants who complete a survey through the online platform, Qualtrics. Each generation, Generation X, Millennials,
and Generation Z, will have a minimum of 50 participants represented in the data. Male and female gender identities will have at least 75 participants represented in the data. For the data analysis, the researcher will use STATA to conduct analyses of variance (ANOVA) which will determine the relationship between perceived face validity of personality assessments and which generational cohort a participant belongs to. The researcher will also use STATA to conduct an independent samples t-test to determine the perceived face validity of personality assessments and which gender identity a participant belongs to. This study was built upon the existing literature in the fields of measurement and assessment, psychological testing, and adult education. The results of this study may have implications for theory, policy, and practice of assessment, measurement, and testing both in classrooms and in the field of counseling.
CHAPTER FOUR:
ANALYSIS AND RESULTS OF THE STUDY

Overview

The purpose of the fourth chapter in this study is to discuss the process of the data examination and present the results. The chapter will conclude with a summary.

The purpose of this study was to examine the perceived face validity of two different styles of personality assessments that are used in counseling sessions and psychological testing and measurement when comparing the level of face validity across three different generations of individuals. Additionally, the levels of face validity will be measured by self-reported gender identity of the participants. It was anticipated that there will be a noticeable difference in the reported face validity measurements depending on which generation the individual belongs to as well as a noticeable difference in the reported face validity measurement depending on the gender identity that individual reports belonging to.

The methodology that was utilized was a quantitative, survey research design. The survey was designed using an online platform called Qualtrics. The survey was then distributed using the snowball method alongside convenience sampling. The sample size goal for each of the three generations that was researched (Generation X, Millennials, and Generation Z) was a minimum of 150 individuals. The sample size goal for each of the two gender identities that was researched (male and female) was a minimum of 75 each. The survey was distributed using the internet to different groups of individuals that the researcher had access to. Specifically, the survey distribution was through an online website called surveycircle.com and public dissertation sharing groups on the social media website, Facebook.
The survey results were kept confidential and secure on the researcher’s computer which needed two levels of account access to be visible. Once the data collection process was complete, the researcher then used the data analysis software STATA to examine the reported face validity measures. A two way analysis of variance was used with the three generational cohorts reported and an independent samples t-test was used with the two gender identities reported.

The four research questions that were presented in this study were then answered through quantitative data analysis. The first and second research questions detected different measurements of the face validity of projective and objective personality assessments used in counseling when presented to members of Generation X, Millennials, and Generation Z. Because there was three independent variables in use, the researcher used a two way analysis of variance (ANOVA) to analyze the data. It was important to use ANOVA in this particular data analysis because the researcher was looking for both the variance between the different generational cohorts that are being included in the study as well as the variance within the same generational cohort. The null hypothesis in the first research question was that there was no significant variance in the perception of face validity between the different generational cohorts. It was also important for the two-way ANOVA to be used to answer this research questions because the survey data will need to be broken down by generational cohort and perceptions of face validity responses for both the projective personality assessment sample questions (Rorschach Inkblot) and the objective personality assessment samples questions (Big Five Inventory).

The third and fourth research questions detected different measurements of the face validity of projective and objective personality assessments used in counseling when
presented to those participants who identify as male compared to those participants who identify as female. In this quantitative analysis, there were only two independent variables resulting in the researcher using an independent samples t-test to analyze the data. After the independent samples t-test was used, a calculation for Cohen’s d was run which gave an effect size for both the third and fourth research questions. The null hypothesis in the third and fourth research questions was that there was no significant difference between the male participants and the female participants when comparing their perceived face validity of the projective personality assessments and the objective personality assessment. For both of the research questions, the researcher used alpha 0.05 to determine statistical significance between the generational cohorts and the gender identities.

**Research Questions**

1. Are there different measured preferences in projective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

2. Are there different measured preferences in objective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

3. Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?

4. Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?
**Table 1**

Research Questions, Hypotheses, Analyses, and Variables

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Hypotheses</th>
<th>Analyses</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research Question 1:</strong> Are there different measured preferences in projective personality assessments used in counseling when presented to member of Generation X, (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?</td>
<td>Participants who are members of Generation Z will indicate a higher level of face validity on the projective personality assessments than Millennials. In turn, Millennials will also indicate a higher level of face validity on the projective personality assessments than Generation X.</td>
<td>ANOVA</td>
<td>The mean reported on the Likert scale from each generation.</td>
</tr>
<tr>
<td><strong>Research Questions 2:</strong> Are there different measured preferences in objective personality assessments used in counseling when presented to member of Generation X, (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?</td>
<td>Participants who are members of Generation X will indicate a higher level of face validity on the objective personality assessments than Millennials. In turn, Millennials will also indicate a higher level of face validity on the objective personality assessments than Generation Z.</td>
<td>ANOVA</td>
<td>The mean reported on the Likert scale from each generation.</td>
</tr>
<tr>
<td><strong>Research Question 3:</strong> Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?</td>
<td>Participants who self-identify as male will indicate a higher level of face validity on the objective personality assessments than those who self-identify as female.</td>
<td>Independent Sample t-test and Cohen’s d Effect Size</td>
<td>The mean reported on the Likert scale from each gender identity.</td>
</tr>
</tbody>
</table>
Research Question 4: Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?

| Participants who self-identify as female will indicate a higher level of face validity on the projective personality assessments than those who self-identify as male. | Independent Sample t-test and Cohen’s d Effect Size | The mean reported on the Likert scale from each gender identity. |

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**Background of the Participants**

Due to the importance of a large sample used in this research, the method for participant selection was a combination of snowball sampling and convenience sampling. Goodman (1961) states, “Snowball sampling procedure is defined as follows: A random sample of individuals is drawn from a given finite population. Each individual in the sample is asked to name different individuals in the population,” (p. 148). From that point, the researcher either passed along the survey to the newly named individuals or trusts the original population to pass along the survey. Given the fact that the survey was contained in a public hyperlink, the ease of sharing the survey was high, even for the layperson.

Snowball sampling has also been called chain referral sampling. (Biernacki & Waldorf, 1981). It allows new referrals, who likely share similar characteristics as the original sample, to be made that the researcher may not have originally been able to contact or connect with on his or her own.

Alongside the snowball sampling, convenience sampling was also used to receive the largest number of completed surveys back.

“Convenience sampling (also known as haphazard sampling or accidental sampling) is a type of nonprobability or nonrandom sampling where members of the target...
population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study,” (Etikan et al, 2016, p. 2).

Convenience sampling was used for this particular research by the researcher first contacting colleagues that they have at institutions of higher learning for the Generation Z generation. It was convenient to send out the link to the survey to college age (Generation Z) students via email. Additionally, convenience sampling was used on survey sharing websites and social media platforms specifically targeted towards certain generational cohorts.

The three main platforms that were used to gain responses to the survey were websites with a large amount of users. First, the survey was uploaded to Survey Circle, a research platform based on the principle of mutual support. Survey Circle combines research enthusiasts who are interested in taking surveys with survey managers who are actively seeking participants outside of their own circle of friends. The survey for this research was posted on Survey Circle on January 15, 2020 at 1:19pm. The survey for this research was closed from access on Survey Circle on January 21, 2020 at 10:50am. 35 total participants completed the survey after discovering it on Survey Circle.

Facebook, a popular social media platform, has multiple platforms that allow researchers to publicly share their survey hyperlinks. For this research, the page titled Dissertation Survey Exchange was the best fit. The survey for this research was posted on Dissertation Survey Exchange on January 15, 2020 at 7:10pm. The survey for this research was closed from access on Dissertation Survey Exchange on January 21, 2020 at 10:50am. Unfortunately, there is no clear way to know how many participants completed the survey after gaining access through Dissertation Survey Exchange.
After a preliminary data check, it was discovered that the Generation X cohort did not have as many participants complete the survey as the Millennial and Generation Z cohort had. At that time, the researcher found a Generation X cohort specific Facebook page that allowed for public posting of the hyperlink. Righteous Memes from Generation X. The survey link for this research was posted on Righteous Memes from Generation X’s Facebook page on January 17, 2020.

**Data Examination**

When downloading the data from Qualtrics, the survey had been opened a total of 268 different times. After an initial check of the surveys, 61 of them needed to be removed to ensure accuracy. Of those 61 that were removed, 36 of the participants did not finish the survey in its entirety and were removed. 16 of the participants indicated that they were over 54 years old (an age older than any of the generational cohorts being used in this study) and were removed. Five of the participant’s responses were flagged by the software Qualtrics as spam and were removed under the assumption that the data was not completed by a willing and live participant. Three of the participants attempted to answer the survey questions but they also indicated that they *did not give consent to participate* at the beginning of the survey so their responses were removed. Finally, one participant preferred to not indicate their gender identity in the demographics section of the survey. Since the gender identity is essential in analyzing the data accurate, the response was removed. The breakdown of the 61 surveys that were removed and their corresponding reason for removal is included below.
Table 2

Explanation of Participants and Surveys Removed from Study

<table>
<thead>
<tr>
<th>Number of Surveys Removed</th>
<th>Reason for Removal</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>Participant did not finish the survey</td>
</tr>
<tr>
<td>16</td>
<td>Participant indicated they were over 54 years old</td>
</tr>
<tr>
<td>5</td>
<td>Qualtrics software flagged the data as spam</td>
</tr>
<tr>
<td>3</td>
<td>Participant answered that they did not give consent to participate in the survey when answering Question Number 1</td>
</tr>
<tr>
<td>1</td>
<td>Participant preferred to not indicate a gender</td>
</tr>
</tbody>
</table>

After the removal of the 61 non-useable surveys, 207 individual participants were left: 145 female and 62 males. 55 of the participants indicated that they were members of the Generation X cohort. 80 of the participants indicated that they were members of the Millennial cohort. 72 of the participants indicated that they were members of the Generation Z cohort.

Further examination of the participants showed that of the 207 participants, 70.05% of them identified as female and 29.95% of them identified as male. On the generational cohort side, 25.57% of the participants disclosed that they are a part of the Generation X cohort, 38.65% of the participants disclosed that they are part of the Millennial cohort, and the final 34.78% of the participants disclosed that they are part of the Generation Z cohort.

When isolating the Generation X cohort, 42 of the participants identified as female and 13 identified as male. This equaled 76.36% female participants and 23.64% male participants in the Generation X cohort. When isolating the Millennial cohort, 58 of the
participants identified as female and 22 identified as male. This equaled 72.5% female participants and 27.5% male participants in the Millennial cohort. When isolating the Generation Z cohort, 45 of the participants identified as female and 27 identified as male. This equaled 62.5% female participants and 37.5% male participants in the Generation Z cohort. A breakdown of the participant’s gender identity and generation cohort is included below.

Table 3

Participant’s Gender Identity and Generational Cohort Breakdown

<table>
<thead>
<tr>
<th>Generational Cohort</th>
<th>Female N</th>
<th>Female Participants Percentage</th>
<th>Male N</th>
<th>Male Participants Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation X</td>
<td>42</td>
<td>76.36%</td>
<td>13</td>
<td>23.64%</td>
</tr>
<tr>
<td>(1965-1981)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Millennial</td>
<td>58</td>
<td>72.5%</td>
<td>22</td>
<td>27.5%</td>
</tr>
<tr>
<td>(1982-1995)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generation Z</td>
<td>45</td>
<td>62.5%</td>
<td>27</td>
<td>37.5%</td>
</tr>
<tr>
<td>(1996-Present)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals (When Applicable)</td>
<td>145</td>
<td></td>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

Presentation of Data Results

Research Question 1: Are there different measured preferences in projective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?
A two-way analysis of variance (ANOVA) was completed because there were three independent variables in use. The researcher used ANOVA because the study was looking for both the variance between the different generational cohorts that are being included in the study as well as the variance within the same generational cohort. The researcher used alpha 0.05 to determine statistical significance between the generational cohorts.

![Projective Assessment](image)

**Figure 1**

*Projective Assessment by Generational Cohort, Box Plot*

Research Question 2: Are there different measured preferences in objective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?
Again, an analysis of variance (ANOVA) was completed because there was three independent variables in use. The researcher used ANOVA because the study was looking for both the variance between the different generational cohorts that are being included in the study as well as the variance within the same generational cohort. The researcher used alpha 0.05 to determine statistical significance between the generational cohorts.

**Figure 2**

*Objective Assessment by Generational Cohort, Box Plot*

Research Question 3: Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?
In this quantitative analysis, there were only two independent variables resulting in the researcher using an independent samples t-test to analyze the data.

Figure 3

*Projective Assessment by Gender Identity, Box Plot*

Research Question 4: Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?

Again, in this quantitative analysis, there were only two independent variables resulting in the researcher using an independent samples t-test to analyze the data.
Research Question 1: Are there different measured preferences in projective personality assessments used in counseling when presented to members of Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

A two-way analysis of variance (ANOVA) was conducted to test the prediction that participants who are members of Generation Z would disclose a higher level of face validity on the projective personality assessments than Millennials. In turn, the ANOVA was also conducted to test the prediction that Millennials would also indicate a higher level of Face
validity on the projective personality assessments than Generation X. Results of the ANOVA were not supportive of this prediction.

The mean face validity score for Generation X was 3.55 with a standard deviation of 1.26. The mean face validity score for Millennials was 3.56 with a standard deviation of 1.31. The mean face validity score for Generation Z was 3.88 with a standard deviation of 1.34. The f-statistic was calculated at 1.40. The p-value, or probability value, was calculated at 0.25 which allowed the researcher to accept the null hypothesis.

**Table 4**

ANOVA Results of Projective Assessment Face Validity Amongst Generational Cohorts

<table>
<thead>
<tr>
<th>Generational Cohort</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation X 1965-1981</td>
<td>3.55</td>
<td>1.26</td>
<td>55</td>
</tr>
<tr>
<td>Millennials 1982-1995</td>
<td>3.56</td>
<td>1.31</td>
<td>80</td>
</tr>
<tr>
<td>Generation Z 1996-Present</td>
<td>3.88</td>
<td>1.34</td>
<td>72</td>
</tr>
<tr>
<td>Total</td>
<td>3.667</td>
<td>1.31</td>
<td>207</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>4.80</td>
<td>2</td>
<td>2.40</td>
<td>1.40</td>
</tr>
<tr>
<td>Within groups</td>
<td>349.20</td>
<td>204</td>
<td>1.71</td>
<td></td>
</tr>
</tbody>
</table>

p > .05

Research Question 2: Are there different measured preferences in objective personality assessments used in counseling when presented to members of Generation X
(born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present) when calculating face validity?

An analysis of variance (ANOVA) was conducted to test the prediction that participants who are members of Generation Z would disclose a higher level of face validity on the objective personality assessments than Millennials. In turn, the ANOVA was also conducted to test the prediction that Millennials would also indicate a higher level of face validity on the objective personality assessments than Generation X. Results of the ANOVA were not supportive of this prediction.

The mean face validity score for Generation X was 4.69 with a standard deviation of 1.41. The mean face validity score for Millennials was 4.76 with a standard deviation of 1.28. The mean face validity score for Generation Z was 4.72 with a standard deviation of 1.38. The f-statistic was calculated at 0.05. The p-value, or probability value, was calculated at 0.95 which allowed the researcher to accept the null hypothesis.
Research Question 3: Are there different measured preferences for objective personality assessments between male and female participants when calculating face validity?

An Independent Samples t-test was conducted to test the prediction that participants who identify as male gendered would disclose a higher level of face validity on the objective personality assessments than those who identify as female gendered. Results of the Independent Samples t-test were not supportive of this prediction.

Using the objective personality assessments as the dependent variable, those who identified as female gendered had a mean face validity of 4.67 with a standard error of 0.12, and a standard deviation of 1.39. Using the same dependent variable, those who identified as
male gendered had a mean face validity of 4.87 with a standard error of 0.15, and a standard deviation of 1.21. The t-statistic was -0.99 and the p-value was 0.32 which allowed the researcher to accept the null hypothesis. Using Cohen’s $d$ to calculate the effect size, a small effect size of 0.17 was found.

**Table 6**

*Results of t-test and Descriptive Statistics of Objective Assessment Face Validity Amongst Male & Female Gender Identities*

<table>
<thead>
<tr>
<th>Gender Identity</th>
<th>Observations</th>
<th>Mean</th>
<th>Standard Error</th>
<th>Standard Deviation</th>
<th>95% Conf. Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>145</td>
<td>4.67</td>
<td>0.12</td>
<td>1.39</td>
<td>4.44 - 4.90</td>
</tr>
<tr>
<td>Male</td>
<td>62</td>
<td>4.87</td>
<td>0.15</td>
<td>1.21</td>
<td>4.56 - 5.18</td>
</tr>
<tr>
<td>Combined</td>
<td>207</td>
<td>4.73</td>
<td>0.09</td>
<td>1.34</td>
<td>4.55 - 4.91</td>
</tr>
<tr>
<td>Diff.</td>
<td></td>
<td>-0.20</td>
<td>.20</td>
<td>-0.60</td>
<td>0.20</td>
</tr>
</tbody>
</table>

$t = -0.99$

$p > .05$

Research Question 4: Are there different measured preferences for projective personality assessments between male and female participants when calculating face validity?

An Independent Samples t-test was conducted to test the prediction that participants who identify as female gendered would disclose a higher level of face validity on the projective personality assessments than those who identify as male gendered. Results of the Independent Samples t-test were supportive of this prediction.

Using the projective personality assessments as the dependent variable, those who identified as female gendered had a mean face validity of 3.53 with a standard error of 0.10, and a standard deviation of 1.26. Using the same dependent variable, those who identified as
male gendered had a mean face validity of 3.98 with a standard error of 0.18, and a standard deviation of 1.38. The t-statistic was -2.30 and the p-value was 0.02 which allowed the researcher to reject the null hypothesis. Using Cohen’s d to calculate the effect size, a moderate effect size of 0.35 was found.

Table 7

Results of t-test and Descriptive Statistics of Projective Assessment Face Validity Amongst Male & Female Gender Identities

<table>
<thead>
<tr>
<th>Gender Identity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Error</th>
<th>Standard Deviation</th>
<th>95% Conf. Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>145</td>
<td>3.53</td>
<td>0.10</td>
<td>1.26</td>
<td>3.32 - 3.74</td>
</tr>
<tr>
<td>Male</td>
<td>62</td>
<td>3.98</td>
<td>0.18</td>
<td>1.38</td>
<td>3.63 - 4.34</td>
</tr>
<tr>
<td>Combined</td>
<td>207</td>
<td>3.667</td>
<td>0.09</td>
<td>1.31</td>
<td>3.49 - 3.85</td>
</tr>
</tbody>
</table>
| Diff            | -0.45| .20| -0.84| -0.06| $t= -2.30$

p < .05

Chapter Summary

The previous chapter re-introduced the purpose of the research, the four research questions, the hypotheses, discussed the background of the participants and their recruitment, discussed the process of the data examination, presented the basic descriptive statistics for each variable, and presented the statistical data and findings.
CHAPTER FIVE:
CONCLUSION AND DISCUSSION

Summary of Research

The purpose of this study was to discover the perceived face validity of two different styles of personality assessments that are used in counseling sessions and psychological testing and measurement when comparing the level of face validity across three different generations of individuals. Additionally, the levels of face validity were measured by self-reported gender identity of the participants. It was anticipated that there would be a noticeable difference in the reported face validity measurements depending on which generation the individual belongs to as well as a noticeable difference in the reported face validity measurement depending on the participant’s gender identity.

The methodology that was utilized was a quantitative, survey research design. The survey was designed using an online platform called Qualtrics. The survey was then distributed using the snowball method alongside convenience sampling. The sample size goal for each of the three generations that was researched (Generation X, Millennials, and Generation Z) was a minimum of 150 individuals. The sample size goal for each of the two gender identities that was researched (male and female) was a minimum of 75 each. The survey was distributed using the internet to different groups of individuals that the researcher has access to. Specifically, the survey distribution was through an online website called surveycircle.com and public dissertation sharing groups on the social media website, Facebook.

The survey results were kept confidential and secure on the researcher’s computer which needed two levels of account access to be visible. Once the data collection process was
complete, the researcher then used the data analysis software _STATA_ to examine the reported face validity measures. A two way analysis of variance was used with the three generations reported and an independent samples t-test was used with the two gender identities reported.

The four research questions presented in this study were investigated through quantitative data analysis. The first and second research questions detected different measurements of the face validity of projective and objective personality assessments used in counseling when presented to members of Generation X, Millennials, and Generation Z. Because there will be three independent variables in use, the researcher used a two way analysis of variance (ANOVA) to analyze the data. It was important to use ANOVA in this particular data analysis because the researcher is looking for both the variance between the different generational cohorts that are being included in the study as well as the variance within the same generational cohort. The null hypothesis in the first research question was that there was no significant variance in the perception of face validity between the different generational cohorts. It was also important for the two-way ANOVA to be used to answer this research questions because the survey data needed to be broken down by generational cohort and perceptions of face validity responses for both the projective personality assessment sample questions (Rorschach Inkblot) and the objective personality assessment samples questions (Big Five Inventory).

The third and fourth research questions detected different measurements of the face validity of projective and objective personality assessments used in counseling when presented to those participants who identify as male compared to those participants who identify as female. In this quantitative analysis, there were only two independent variables resulting in the researcher using an independent samples t-test to analyze the data. The null
hypothesis in the third and fourth research questions was that there was no significant
difference between the participants who identify as male and the participants who identify as
female when comparing their perceived face validity of the projective personality
assessments and the objective personality assessment. For both of the research questions, the
researcher used alpha 0.05 to determine statistical significance between the generational
cohorts and the gender identities. Additionally, in Research Questions 3 and 4, Cohen’s $d$
was used to calculate the effect size of the difference between the means.

**Research Questions**

1. Are there different measured preferences in projective personality
   assessments used in counseling when presented to members of Generation X
   (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born
   1996-present) when calculating face validity?

2. Are there different measured preferences in objective personality assessments
   used in counseling when presented to members of Generation X (born 1965-
   1981), Millennials (born 1982-1995), and Generation Z (born 1996-present)
   when calculating face validity?

3. Are there different measured preferences for objective personality assessments
   between male and female participants when calculating face validity?

4. Are there different measured preferences for projective personality
   assessments between male and female participants when calculating face
   validity?
Implications for Theory

Throughout this study, the Twenge Generational Theory (2010) and the concept of face validity have been discussed and essential in the survey and findings. In the Definition of Terms section, face validity is defined as the extent to which a test is subjectively viewed as accurately covering the concept(s) it purports to measure. In the field of measurement and assessment, face validity can be measured as a yes or no questionnaire or on a continuum where participants report how much the assessment appears to measure what it claims it was designed to measure.

For this study, Mosier’s (1947) definition of face validity was largely the focus. Mosier provided the assessment world three definitions for face validity, “The three meanings which have been attributed to the term may be characterized as: (1) validity by assumption, (2) validity by definition, and (3) the appearance as well as the reality of validity,” (Mosier, 1947, p. 191).

Mosier’s (1947) first definition, validity by assumption, is a dangerous foundation for a characterization and he eventually exposes the lack of scholarship in that definition. Additionally, the third definition that Mosier (1947) provided could be argued as not as useful due to the field of assessment already having commonly accepted other types of validity that we utilize such as content and criterion.

Given a careful and intentional research design, face validity can be tested through survey or correlational methodologies. With data analysis being conducted, the face validity rates can then be calculated as a correlation or a p score to show levels of statistical significant that can supplement the theory and argument that face validity can be considered
a stand-alone concept and not solely a framework. In this study, face validity rates were calculated using a p score.

As the field of measurement and assessment has evolved and expanded, face validity has resurfaced in the classroom and in scholarly research. (Betts & Taran, 2012). In fact, some scholars have even proved how impactful face validity alone can be on the actual results of assessments, (Sato & Ikeda, 2015). “If students fail to recognize the abilities that the test developers intend to measure, they are less likely to learn what the test developers wish them to learn,” (Sato & Ikeda, 2015, p. 1). This idea is especially important for those who develop assessments to recognize. Specifically in the fields of Counseling and Psychology, if there is a gap between what the assessment developers are looking to measure and what the test takers believe they are being measured on, not only could there be false negative or positive diagnoses, but the severity of symptoms could also be impacted.

Although this study is primarily focused around face validity, Content, Criterion-Related, and Construct Validity all play an essential part in the field of assessment. While the argument for this study is that face validity is where all designers and developers of assessments should begin, it is not the end all be all. “An instrument is content valid when its questions or items sufficiently sample from the entire universe of items for which the instrument was designed to sample,” (Watson & Flamez, 2015, p. 90). Just because an assessment appears valid to a lay person, does not mean that the designers samples questions correctly which could result in a lack of content validity.

“Criterion-related validity assesses whether a test reflects a certain set of abilities. To measure the criterion validity of an instrument, test scores are compared to a known standard or outcome measure,” (Watson & Flamez, 2015, p. 93). The most common example in
education that is cited when discussing criterion-related validity is measuring a student’s SAT or ACT score when compared to their college level academic performance.

Finally, the field of assessment also looks for sound construct validity. Construct validity looks to how effectively a test measures a particular construct or trait, Watson & Flamez, 2015). An example that would work well for this study is the construct of extraversion when considering personality assessments.

In this study, a survey was used which did not allow the researcher to ask the participants any open ended questions. Beyond their submitted Likert scale scores, it will remain unknown how the participants viewed the face validity of the Rorschach Inkblot Test and the Big Five Inventory. However, it is encouraging to see that the participants appeared to understand the concept of face validity as they completed the survey with minimal instruction.

With Research Question number 4 rejecting the null hypothesis, it could be possible that those who identify as male gendered prefer, at least on a surface level, prefer assessments that use images such as the Rorschach and other projective assessments. This hypothesis has a stronger argument when the calculated moderate effect size of 0.35 is taken into consideration.

Focusing on the Generational Theory, generations have been defined as a cohort group whose length approximated the span of a phase of life and whose boundaries are fixed by a peer personality, (Keeling, 2003). The Strauss-Howe Generational Theory describes how each generation spans approximately twenty years and classifies each generation with a certain archetype. There are four specific archetypes that rotate in the same order: prophet
Howe and Strauss (2007) share that generations are among the most powerful forces in history. Tracking their defined and distinct generations, lends order, and even a measure of predictability, to long term trends. Howe and Strauss define the four distinguishing traits and how they correspond to the four recent generations. Additionally, the authors describe the cyclical nature of the Strauss Howe Generational Theory. For example, once the fourth generation is coming to a close, the cycle begins at the first one again.

The theory is quite detailed and remarkably defined as Strauss commits to aligning his theory of the rotating generations all the way back to what he calls the “Arthurian Generation” in the mid-15th century. However, scholars are not convinced or backing the theory one hundred percent due to the lack of empirical data presented, (Jones, 1992). Ultimately, I would argue that the Strauss-Howe theory can be tested by applying the certain archetypes to past historical figures that would fit into each generation. Although it would be considered subjective, detailed literature does exist on certain famous individuals that can be put to the test for this theory.

The implications of the Generational Theory from this study are that, although not statistically significant, there are still recognizable differences in the face validity of projective assessments when compared across three generations. The same was not true for objective assessments which will be discussed in detail in the next section.

Professionals in the field of Psychology, Counseling, Adult Education, and especially Tests and Measurement may utilize this study to reinforce that face validity is a respected
concept and that practitioners should consider carefully choosing tests and measurements to
best align with their students or clients demographics and needs.

**Generalization of Findings**

When isolating Research Question #1, which was exclusively focused on projective
assessments, the mean response of participant’s perception of face validity rose slightly with
each younger generational cohort. The participants in the oldest generational cohort,
Generation X, had a mean of 3.55, the participants in the next youngest generational cohort,
Millennials, had a mean of 3.56, and finally, the participants in the youngest generational
cohort, Generation Z, had a mean of 3.88. The generalization of this data is that the older a
potential client or student is, the less likely they will believe projective assessments are valid
just by look alone. In the same breath, younger clients or students would believe projective
assessments are more valid just by look alone. However, it is important to note the small
increase in the mean and that after data analysis was completed, the differences were not
statistically significant.

Research Questions #2 focused exclusively on the face validity of the objective
assessments when compared across the three generational cohorts. Findings for this question
shows that there was almost no difference in the face validity means at all. Generation X, had
a mean of 4.69, the participants in the next youngest generational cohort, Millennials, had a
mean of 4.76, and finally, the participants in the youngest generational cohort, Generation Z,
had a mean of 4.72. The generalization of this data is that objective assessments appear valid
at the same level for all generational cohorts.

The mean face validity for all participants rating the projective assessment was 3.67
and the mean face validity for all participants rating the objective was 4.73. This equates to a
difference of 1.06 or 15.14% between the two means in favor of the objective assessment. There participants may believe that objective assessments look 15.14% more valid than projective assessments do. This finding seems to align with the decline the field is seeing in the use of projective assessments. The decline in interest and use of these projective methods in the classroom and professional internship sites has been noted for the past decade. The decline in use of projective assessments has been attributed to recent developments such as managed care policies, changing professional psychology curriculum emphases, and challenging critiques of projective assessments in professional literature reviews (Piotrowski, 2015).

Another finding to isolate is that the participants who identified as male gendered indicated higher levels of face validity on the projective assessments with a mean of 3.98, than those participants who identified as female gendered who measured at a mean of 3.53. This difference between the means was 0.45. If one is assuming that projective assessments tend to be more attractive to participants who are comfortable using their creativity and right side of their brains, then this finding does not match the existing literature which suggests that those who identify as female gendered tend to be more creative than those who identify as male gendered. In the literature, when creativity was judged beyond the classroom, women proved to score higher in creativity than men. In the 2009 article by Ivcevic and Mayer, creative life style was found to be greater in females than in males. Ivcevic and Mayer (2009) state, “Creative Life-Style was described by five areas of everyday creativity (crafts, cultural refinement, interpersonal creativity, self-expressive creativity, and sophisticated media use) as well as the visual arts and writing areas of artistic creativity.” (p. 160).
Limitations

While this study primarily showcased literature from Twenge’s Generational Theory and Strauss and Howe’s Generational Theory, there are dozens of theorists with different exact generational cohort defining birth dates. Generational Theory, in modern literature, began with German researcher, Karl Mannheim in the 1920s and 1930s, (Codrington, 2008). Beyond that, this study could have used the specific generational cohort defining birth years outlined by other researchers who write about Generational Theory including Pierre Bourdieu, Jose Ortega y Gasset, Julius Peterson, Willhelm Pinder, Julian Marias, Bruce Talgan, Claire Raines, Ken Dytchwald, Warrin Bennis, Don Tapscott, and the list goes on. Clearly, this particular theory may not ever receive complete consensus amongst researchers. It is possible that some researchers may disregard the findings of this research simply because they prescribe to another Generational Theorist’s advertised birth years that do not line up with Twenge’s.

When designing the survey, the Rorschach Inkblot Test may be the ideal choice for the assessment that could provide an accurate representation of a projective personality test. The Rorschach is particularly easy to explain in a survey question, and it is also somewhat well known in 21st century popular culture. One limitation to using the Rorschach was that the research needed to obtain permission from the copyright owner of the assessment. To increase the chances of Hogrefe, AG, who currently owns the copyright to the Rorschach Assessment, granting permission for use, the research only asked if the study could use the first two cards of the Rorschach’s ten total cards. It is possible that with only two cards visible in the survey, participants may not have been able to be exposed to the Rorschach, or
projective assessment sample, as much as they needed for them to be able to provide an accurate face validity rating for the study.

The potential for limited outcomes in the research was also a possibility. The nature of quantitative research surveys is that they are made up of closed-ended questions. The results from most of the four research questions appears to point in a specific direction of a relationship, however, the results cannot reach statistical significance levels. Also, descriptive research, such as this, can only describe relationships, not predict them. Researchers may continue to study these research questions by using other designs such as experimental research to learn more about this interaction between face validity, generational cohorts, and gender identity.

A great deal of thought went into the participants that would be included and recruited in this research. The recruitment of the participants in this study did not go exactly as planned and reflecting on the participants included in the data, there are several important limitations to discuss. One of the online platforms that the used to distribute the survey, Surveycircle.com, is specifically designed for researchers who are looking to have their scholarly studies put in front of potential participants. One positive piece of using Surveycircle.com’s online platform is that it can be assumed the participants completing the survey are educated, versed in research, and will likely complete the survey to the best of their ability. The glaring limitation here is that a group of scholarly researchers making up a group of the study’s participants is not a random sampling of the population.

Two limitations concerning the gender identity variable included in the study were also considered. First, of all the participants, there was a large majority of those who identified as female gendered when compared to those who identified as male gendered.
Specifically, 70.05% female and 29.95% male gendered. When designing the study, the researcher was not going to close the survey if there was a difference of 50% or more between the participants who identified as female and the ones who identified as male. Before the survey even went live, the researcher was anticipating a higher number of female gendered participants because of the higher number of females in higher education overall. Although this ratio of participants worked for the parameters of the study, it still remains limited in the difference between genders. The second limitation concerning the gender identity variable was that this particular study and research question excluded non-binary participants. The researcher had to sacrifice using data from anyone who did not identify as either male or female gendered for the required number of participants to be reached. This is unfortunate and a known limitation in the study.

Finally, during the research design process, the decision was made to divide participants by gender identity and not by sex. In the definition of terms section of this research, gender identity is defined as the personal conception of oneself as male or female. Regardless of biological sex, gender identity is self-identified as a result of a combination of inherent and extrinsic or environmental factors. The definition of sex would be the two main categories living things are divided into on the basis of their reproductive organs. As a piece of scholarly work in the field of counseling, it was important to mirror a commitment to multicultural acceptance and inclusion that is expected by those in the helping professions. The decision to allow participants to self-select their own gender identity as opposed to being limited to the sex choice that their reproductive organs match to was a research design choice that the researcher recognizes may be critiqued or inconsistent with other scholarly work.
Recommendations for Future Research

Although research questions one and two, which were specifically focused on generational cohort, were not found to be statistically significant, there was still an interesting difference in the mean scores when focusing exclusively on the projective assessment. Looking specifically at the mean difference between Generation Z’s reports of face validity and the Millennials’ there was a 0.32 difference which is 5% on a Likert scale from 1-7. Given this, there is an argument to be made concerning further research with generational cohorts.

When considering the type of further research that could be the most beneficial to contributing to new literature on generational theory and face validity, it is believed that a more sophisticated, experimental survey design could be created. Although the surveys allowed the researcher to obtain a large amount of data quickly, an experimental research design could potentially highlight a cause and effect relationship beyond just a directional one.

Another recommendation for further research would be to focus primarily on Research Question #4 which rejected the null hypothesis and found that, in this instance, those who identified as male gendered, believed that projective assessments had higher levels of face validity than those who identified as female gendered. As with all research, it would be important to replicate these findings with different researchers and different participants. One idea to do this would be to use the same research design but to change the sample of projective assessment. Instead of using the Rorschach Inkblot Test a researcher could choose to utilize the Thematic Apperception Test (Murray, 1943), another known projective psychological assessment.
Finally, focusing on the generational cohorts variable in the research again, additional research could benefit from including more than the three generational cohorts that were used in this particular study (Generation X (born 1965-1981), Millennials (born 1982-1995), and Generation Z (born 1996-present). Adding the generational cohort of Baby Boomers (1946-1964) could further enhance the findings between the different generational cohorts. Thankfully, there are many potential Baby Boomer participants who could contribute data. Many generational theorists are already discussing that after Generation Z (1996-present) will come Generation Alpha. This brings in a whole new dynamic to future generational theory studies such as this, but it certainly should be considered when researchers are looking to further the work of this study.

**Conclusion**

This chapter has presented the summary of the research, the implications for theory, the generalization of the findings, the limitations of the study, and the recommendations for future research.

In the summary of the research section, the methodology was discussed, the research questions were listed out, and the data analysis that was used. In the implications for theory section the researcher re-introduced the generational theory and the concept of face validity. Beyond that, the researcher discussed how professionals in the field should be reacting to the findings of the study. In the generalization of findings section, the mean increases as the generational cohorts became younger was introduced, the similar means across the three generational cohorts was discussed, and the data rejecting the literature’s theory that females are more creative than males was introduced. In the limitations section, the researcher shared potential limitations in that there are so many differences among all the generational theories,
that the survey only included two cards from the actual Rorschach Ink Blot Test, the
descriptive research design left a lot up to interpretation, and the participants’ recruitment
and lack of inclusivity were evident. In the recommendations for future research section, the
researcher suggested an experimental researcher design and a research design that includes
more than only three generational cohorts could be beneficial.
REFERENCES


Smith, A., & Koltz, R. L. *Counseling supervision: Where is the manual for working with the millennial generation?* Unpublished manuscript.


Appendix A

North Carolina State University Mail - Permission to Use Rorschach... https://mail.google.com/mail/u/1/?ui=2&ik=16d7586dca&jsver=k...

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Permission to Use Rorschach for Doctoral Dissertation

1 message

Joseph Dlugos <jadlugos@ncsu.edu>  Sun, Mar 11, 2018 at 6:27 PM
To: customersupport@hogrefe.co.uk
Cc: Siu-Man Raymond Ting <ting@ncsu.edu>

Hello,

My name is Joseph Dlugos and I am a current Doctoral Candidate at North Carolina State University in Raleigh, NC, United States of America.

I am currently completing research for my dissertation under the advisement of Dr. Siu-Man Ting. My research question is related to projective personality assessments and their perceived validity with younger generations.

I was hopeful you could share with me the contact information for the individual I could reach to request permission to use approximately 2 cards directly from the Rorschach Inkblot Assessment in a survey I plan to distribute as part of my research.

Thank you very much,
Joe Dlugos

**

Joe Dlugos, MS, LPCA, NCC
Appendix B

Permission to Use Rorschach for Doctoral Dissertation

Gough, Helen <helen.gough@hogrefe.co.uk>         Thu, Mar 15, 2018 at 9:31 AM
To: "jadlugos@ncsu.edu" <jadlugos@ncsu.edu>
Cc: "ting@ncsu.edu" <ting@ncsu.edu>, "Sylvia.Schlutius@hogrefe.ch" <Sylvia.Schlutius@hogrefe.ch>

Dear Joe

Thank you for your email. The Rorschach Inkblot Assessment is published by Hogrefe's Swiss office. For permission to use the cards in your research, please contact Sylvia.Schlutius@hogrefe.ch, copied here.

Best wishes

Helen

Helen Gough
Senior Production Editor

helen.gough@hogrefe.co.uk
01865 797925
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Hogrefe House, Albion Place
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Fax. +44 (0)1865 797949
www.hogrefe.co.uk
Registered in England and Wales, No. 48833
Permission to Use Rorschach for Doctoral Dissertation

Joseph Dlugos <jadlugos@ncsu.edu>

To: Sylvia Schiliter@hogrefe.ch
Cc: Su-Mai Raymond Ting <ting@ncsu.edu>

Sun, Mar 25, 2018 at 9:35 AM

Good Morning,

I was forwarded this address from Helen Gough, Senior Production Editor for Hogrefe Ltd.

My name is Joseph Dlugos and I am a current Doctoral Candidate at North Carolina State University in Raleigh, NC, United States of America.

I am currently completing research for my dissertation under the advisement of Dr. Su-Mai Ting. My research question is related to projective personality assessments and their perceived validity with younger generations.

I would like to formally request permission to use approximately 2 cards directly from the Rorschach Inkblot Assessment in a survey I plan to distribute as part of my research. The survey would be distributed electronically with the 2 images scanned directly into the survey question.

Please let me know if you request any other information regarding my research or the use of the Rorschach Inkblot Assessment.

Thank you very much,

Joe Dlugos

Joe Dlugos, MS, LPCA, NCC
Appendix D

Permission to Use Rorschach for Doctoral Dissertation

Joseph Dlugos <jadlugos@ncsu.edu>
To: Sylvia Schirius@hagrefe.ch
Cc: Su-Man Raymond Ting <ting@ncsu.edu>

Good Afternoon,

I was forwarded this address from Helen Gough, Senior Production Editor for Hogrefe Ltd.

My name is Joseph Dlugos and I am a current Doctoral Candidate at North Carolina State University in Raleigh, NC. United States of America.

I am currently completing research for my dissertation under the advisement of Dr. Su-Man Ting. My research question is related to projective personality assessments and their perceived validity with younger generations.

I would like to formally request permission to use approximately 2 cards directly from the Rorschach Inklot Assessment in a survey I plan to distribute as part of my research. The survey would be distributed electronically with the 2 images scanned directly into the survey question.

Please let me know if you request any other information regarding my research or the use of the Rorschach Inklot Assessment.

Thank you very much,
Joe Dlugos

On Sun, Mar 25, 2018 at 8:35 AM, Joseph Dlugos <jadlugos@ncsu.edu> wrote:
Good Morning,

I was forwarded this address from Helen Gough, Senior Production Editor for Hogrefe Ltd.

My name is Joseph Dlugos and I am a current Doctoral Candidate at North Carolina State University in Raleigh, NC, United States of America.

I am currently completing research for my dissertation under the advisement of Dr. Su-Man Ting. My research question is related to projective personality assessments and their perceived validity with younger generations.

I would like to formally request permission to use approximately 2 cards directly from the Rorschach Inklot Assessment in a survey I plan to distribute as part of my research. The survey would be distributed electronically with the 2 images scanned directly into the survey question.

Please let me know if you request any other information regarding my research or the use of the Rorschach Inklot Assessment.

Thank you very much,
Joe Dlugos

--
Joe Dlugos, MS, LPCA, NCC

--
Joe Dlugos, MS, LPCA, NCC
Appendix E

Berkeley Personality Lab
Director: Oliver P. John

The Big Five Inventory
Frequently Asked Questions

The Big Five Inventory (BFI) is a self-report inventory designed to measure the Big Five dimensions. It is quite brief for a multidimensional personality inventory (44 items total), and consists of short phrases with relatively accessible vocabulary.

Is the Big Five Inventory (BFI) in the public domain and available for use? I hold the copyright to the BFI and it is not in the public domain per se. However, it is freely available for researchers to use for non-commercial research purposes. Please keep us posted on your findings.
Permission to Use Rorschach for Doctoral Dissertation

Sylvia Schlütius <Sylvia.Schlütius@hogrefe.ch>
To: Joseph Dlugos <jadlugos@ncsu.edu>

Dear Mr. Dlugos,

thank you for contacting us. You may use the two cards for your dissertation. Please add "With kind permission of Hogrefe AG, Switzerland"

Best regards
Sylvia Schlütius

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sylvia.schlütius@hogrefe.ch
Tel. +41 (0)31 300 46 32

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CH-3000 Bern 12
Fax +41 (0)31 300 45 90
http://www.hogrefe.ch

[Quoted text hidden]
Appendix G

Perceptions of Face Validity when Utilizing Projective and Objective Personality Assessments

Start of Block: Participating in This Survey

Q1 Would you like to participate in this survey? (Participants must be between 18 and 54 years old)

○ Yes- I am 18- 54 Years Old (1)

○ Yes- I am Over 54 Years Old (2)

○ Yes- I am Under 18 Years Old (4)

○ No (5)

End of Block: Participating in This Survey

Start of Block: Informed Consent

Q11 Did you read the Informed Consent found at this link?

○ Yes (1)

○ No (2)

End of Block: Informed Consent

Start of Block: Demographic Questions
Q2 What is Your Gender Identity

- Male (1)
- Female (2)
- Prefer Not to Answer (3)
- Neither (4)

Q3 What Year Were You Born?

- 1965-1981 (1)
- 1982-1995 (2)
- 1996-2002 (3)

Q5 What Is Your Age?

__________________________________________________________________

End of Block: Demographic Questions

Start of Block: Projective Personality Tests
Q6 The two images above are from the Rorschach Inkblot Personality Assessment. Mental health care providers can analyze an individual’s response to what they perceive in the
images to assess their personality. Please note that the purpose of this particular study is for research only. It is not intended for any diagnosing or personality analyzing. Using the scale below, please indicate how valid you believe the Rorschach Inkblot Personality Assessment is by looks alone.

▼1- Not Valid at All (1) ... 7- Extremely Valid (7)

End of Block: Projective Personality Tests

Start of Block: Objective Personality Tests

Q10

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is outgoing, sociable</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Is compassionate, has a soft heart</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Tends to be disorganized</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Is relaxed, handles stress well</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Has few artistic interests</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Has an assertive personality</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Is respectful, treats others with respect</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Tends to be lazy</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
<tr>
<td>Stays optimistic after experiencing a setback</td>
<td>Strongly Disagree 1 - 5</td>
</tr>
</tbody>
</table>

Q11 The nine images of questions above are from the Big Five Inventory Personality Assessment. Mental health care providers can deliver this assessment that allows the participant to self-report their strength of agreement on certain personality traits. When combining all the responses, the test measures what many psychologists consider to be the five fundamental dimensions of personality. Please note that the purpose of this particular study is for research only. It is not intended for any diagnosing or personality analyzing. Using the scale below, please indicate how valid you believe the Big five Inventory Personality Assessment is by looks alone.

▼1- Not Valid at All (1) ... 7- Extremely Valid (7)

End of Block: Objective Personality Tests
Appendix H

North Carolina State University
INFORMED CONSENT FORM for RESEARCH

Title of Study: Perceptions of Face Validity when Utilizing Projective and Objective Personality Assessments: The Impact of Generational Cohort and Gender Identity (15505)
Principal Investigator: Joseph A. Dlugos, 203-218-0684, jadlugos@ncsu.edu
Faculty Point of Contact: Dr. Siu Man Ting, 919-515-6362, ting@ncsu.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate and to stop participating at any time without penalty. The purpose of this research study is to gain a better understanding of generational preferences. We will do this through an online survey that will ask individuals which images and statements they prefer.

You are not guaranteed any personal benefits from being in this study. Research studies also may pose risks to those who participate. You may want to participate in this research because you like helping others or are curious about personality tests. You may not want to participate in this research because you don’t like filling out online surveys about yourself.

In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher(s) named above or the NC State IRB office (contact information is noted below).

What is the purpose of this study?
The purpose of the study is allow the researcher to collect data from multiple generations and both genders about their preference between two different types of personality assessments.

Am I eligible to be a participant in this study?
There will be approximately 40 to 100 people from each of the following three generations: Generation X, Millennials, and Generation Z. The total number of participants will range from 120 to 300 individuals.

In order to be a participant in this study you must be born between 1965 and 2002, be sighted, and have not taken this survey before. You cannot participate in this study if you were not born between 1965 and 2002, have vision impairments, or have taken this survey before.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to do all of the following:

1. Complete online consent form. You will need to complete this form in a private location (e.g. your home) with the browser in private/incognito mode. This will take 3 – 5 minutes.
2. After completing the consent form, you will complete 5 questions: 3 that are demographic and 2 that are content questions. This will take 3 – 5 minutes.
3. After you complete these tasks, please erase your browser history and close the browser. This is a participant protection for your privacy and should take 1 minute.

The total amount of time that you will be participating in this study is 7 – 11 minutes.

Risks and benefits
There are minimal risks associated with participation in this research. There are no direct benefits to your participation in the research. The indirect benefits are that you are helping others understand perspectives of different ages and gender expression of people.

Right to withdraw your participation
You can stop participating in this study at any time for any reason. If you choose to withdraw your consent and stop participating, simply clear your browser history and close your browser.
Confidentiality
The information in the study records will be kept confidential to the full extent allowed by law. Data will be stored securely on an NC State managed computer. Unless you give explicit permission to the contrary, no reference will be made in oral or written reports which could link you to the study. Individual data with identifiable details removed may be made available to the public as required by a professional association, journal, or funding agency.

Compensation
There is not compensation for participating in this research.

What if you are an NCSU student?
Participation in this study is not a course requirement and your participation or lack thereof, will not affect your class standing or grades at NC State.

What if you are an NCSU employee?
Participation in this study is not a requirement of your employment at NCSU, and your participation or lack thereof, will not affect your job.

What if you have questions about this study?
If you have questions at any time about the study itself or the procedures implemented in this study, you may contact the researcher, Joseph Dlugos at 203-218-0684 or jadlugos@ncsu.edu, or the faculty point of contact, Dr. Ting at 919-515-6362 or ting@ncsu.edu.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the NC State IRB (Institutional Review Board) Office via email at irb-director@ncsu.edu or via phone at 1.919.515.8764. An IRB office helps participants if they have any issues regarding research activities.

Consent To Participate
I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled.

If you consent to participate in this research, please continue on to the next question in the Qualtrics Survey.

If you do not consent to participate in this research, please close the Qualtrics Survey.