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The College at
BROCKPORT
STATE UNIVERSITY OF NEW YORK

TRiO
RONALD E. McNAIR
POST-BACCALAUREATE
ACHIEVEMENT PROGRAM

2017 Ronald E. McNair Summer Research Journal Volume 22

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About TRiO Programs

TRiO refers to six programs funded by Title IV of the Higher Education Act of 1965. The original TRiO Programs are Upward Bound, Talent Search, and Student Support Services. The name TRiO was retained even though more programs were added. The additional programs are Educational Opportunity Centers, the Ronald E. McNair Post-Baccalaureate Achievement Program, and a training program for TRiO staff. In general, TRiO programs are focused on providing educational opportunities to first-generation college students who come from low-income families and students with disabilities.

About Ronald E. McNair

Ronald Erwin McNair was born on October 21, 1950, in Lake City, South Carolina. He attended North Carolina Agricultural and Technical State University, where he graduated magna cum laude in 1971 with a Bachelor of Science in physics. He continued his education at the Massachusetts Institute of Technology, earning his PhD in 1976, and went on to become a recognized expert in the field of laser technology with the Hughes Laboratory. In 1978, McNair realized his dream of becoming an astronaut; selected from a pool of 10,000 applicants for the space shuttle program, McNair became the second African American to fly in space. After his death aboard the space shuttle Challenger in 1986, Congress approved funding for the Ronald E. McNair Post-Baccalaureate Achievement Program, which is dedicated to the support and promotion of the high standards of achievement exemplified by McNair. Those who knew McNair characterized him as fearless, determined, and accustomed to applying all available resources to any problem he faced.

The McNair Program at The College at Brockport, State University of New York

Designed for first-generation and low-income students as well as students from groups underrepresented at the doctoral level, the Ronald E. McNair Post-Baccalaureate Achievement Program at The College at Brockport encourages talented students to pursue a doctoral degree. The program promotes graduate studies by providing participants with seminars and workshops germane to the pursuit of graduate education, a mentored summer research experience, and opportunities to present this research at professional conferences.

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Introduction and Acknowledgements

Barbara J. Thompson

Executive Director, TRiO and CSTEP Programs;
Past-President, Association for Equality
and Excellence in Education, Inc.

Dear Readers:

I am pleased to introduce you to the 22nd volume of the *Ronald E. McNair Summer Research Journal*. This journal is a compilation of the work our scholars complete each summer as they learn to conduct research in their chosen field. Under the guidance of dedicated faculty members, McNair scholars design and implement projects that teach them the fundamentals of creating and using knowledge and provide them with their first taste of the graduate and professional world they are preparing to enter. The Summer Research Program takes our students beyond the average undergraduate experience, setting them apart from their peers as it elevates their education to a level not usually available to students pursuing a bachelor's degree. I am sincerely grateful to the 40 faculty members who invest so much of themselves in moving our students forward. The expertise and encouragement they provide is critical to the success of our McNair scholars, not only during their undergraduate years, but most importantly when they enter the competitive world of graduate school. The fact that 297 of our 722 McNair alumni have successfully earned master's degrees, 26 professional degrees, and 51 doctoral degrees is a tribute to the quality of the work our mentors expect and elicit from their students. Those involved in nurturing our future professionals in this manner deserve to be highly recommended. I look forward to seeing our scholars enter the ranks of academia and continue the process of personally investing in future generations, passing on what they have received through the dedication of our mentors, program staff, and campus community.

Acknowledgements

The McNair staff would like to take this opportunity to thank **Dr. Heidi Macpherson**, **Dr. James Haynes**, and **Dr. Eileen Daniel** who have assisted in strengthening our program this past year. While the Office of Academic Affairs administers the program, the support base represents a university-wide commitment to achieving our program goals. The US Department of Education, other TRiO Programs, the Research Foundation, and the entire institution collectively lend their efforts to the program's success.

Is Subsidized Housing Really a Home?

Melissa Brown

Psychology and Women & Gender Studies

Mentor: Barbara LeSavoy, PhD

This research considers ways low-income housing policies impact residents who reside in low-income housing. Uncovering policy impact on residents is important in understanding factors that contribute to social and emotional well-being of low-income populations navigating low-income housing regulations. Some of the underlining questions this research seeks to uncover include: How do low-income populations experience low-income housing policy and regulations? What obstacles, if any, do low-income housing policies introduce to low-income residents? What are the challenges to being poor and residing in low-income housing? The research will be conducted using a literature review of the policies that regulate low-income housing divisions located in St. Joseph, MO, and ways these policies operate at state and national levels. The purpose of this research project is to understand how well the policies at the housing division located in St. Joseph reflect both the federal and the state of Missouri's policies and requirements.

Based on a qualitative research method, the study also will include personal interviews with residents living in St. Joseph's neighborhoods and the collection of graphic data depicting housing eviction notices. Both random sampling and convenience sampling will be used in the collection of participants. Family and friends living in the neighborhood will be chosen, and other participants will be chosen by distributing a small questionnaire asking residents if they would like to be included in the research. Contact information will be included in the questionnaire so the residents can contact the researchers if they want to be included in the interviewing process. Five to ten participants will be interviewed for this research. Some potential limitations of this research include the limited population for the interview process. A biased result could also result from interviewing family and friends living in the subsidized housing neighborhood. Because of the location of the policies and notifications, the study will have to depend on the timeframe of participants in Missouri to send the information needed to do the literature review and interviews.

The finished research will include a photo series and analysis of housing authority policy notifications distributed to the residents. Research conclusions will highlight the effects low-income policies have on people living in low-income housing and recommendations for policy improvements that support low-income families. After this research is conducted, the analysis will be based on the collected results while highlighting the most common factors from statements made by participants. There will be a link of listed policies and how participants reflect on them. After this research is completed, we hope it will help people living in subsidized housing understand they have the right to get fair and equal treatment. We also hope that this research will help others who have not experienced living in subsidized housing understand the obstacles that people might face while living in them.

What Is Best for Recovery: A Comparison between the Efficacy of Branched Chain Amino Acids and L-Carnitine on Muscle Damage

Levi Clarke

Exercise Science and Kinesiology

Mentor: Barbara Thompson, MA

The purpose of this experiment is to compare the efficacy of Branched Chain Amino Acids (BCAA) and Antioxidants on short-term anaerobic induced muscle damage. Muscle damage starts occurring when there is significant amount of stress placed on muscles fibers. Muscle cell walls are broken open due to the significant stress and free radicals begin entering the cell cytoplasm, tearing the cell apart and increasing the damages to the muscle cell even more. This is the reason for DOMS occurring in individuals after strenuous exercise. Consuming antioxidants can void off those free radicals that may enter the cell, which could possibly reduce the amount of muscle damage that occurs in the cell without stunting hypertrophy. BCAA are often touted to help repair damaged muscles, decrease muscle soreness, and increase muscle function. Some data shows that BCAA supplementation before and after exercise has beneficial effects for decreasing exercise-induced muscle damage and promoting muscle-protein synthesis.

This research involved a strenuous amount of muscle damage to be placed on the individual. The tests performed included high intensity anaerobic exercise such as multiple abdominal crunches and bench presses to create the highest amount of muscle damage on the upper body abdominal area. After the exercises either BCAA or L-carnitine was taken. Before each exercise period an endurance pre-test was conducted to set a standard of strength for comparison. During the end of a period an exercise endurance test was performed to see how much it differed from the pre-test at the beginning of the period.

From this comparison assessment, we were unable to come to a proper determination of which supplement is actually more efficient due to limitations such as small sample size, limited time and possibly not creating as much muscle damage as needed. We hope to determine through future research how well L-carnitine as an antioxidant matches up with BCAA, seeing that BCAAs have shown to be very effective in reducing muscle soreness and helping muscle regeneration.

The Role of the Nuclear Gene RAD54 in the Stability of the Mitochondrial Genome in *Saccharomyces cerevisiae*

Maame Esi Aggrey

Biology and Medical Technology

Mentor: Rey Sia, PhD

Mitochondria are essential organelles in eukaryotic cells that synthesize adenosine-triphosphate (ATP) through cellular respiration. ATP produced by the mitochondria provides most of the energy necessary for metabolic processes. Mitochondria contain individual genomes, separate from nuclear DNA, that encode proteins essential for cellular respiration. In humans, mutations in mitochondrial DNA (mtDNA) result in compromised mtDNA stability, leading to neuromuscular or neurodegenerative diseases such MELAS (Mitochondrial Encephalopathy, Lactic acidosis, and Stroke-like episodes) and LHON (Leber's Hereditary Optic Neuropathy). The purpose of these experiments is to determine the role of the nuclear gene, *RAD54*, in maintaining mtDNA stability in the budding yeast, *Saccharomyces cerevisiae*.

The *RAD54* gene is a member of the *RAD52* epistasis group. Members of the *RAD52* epistasis group are involved in double-stranded break (DSB) repair via single-strand annealing, break-induced replication, and non-homologous end joining (NHEJ) repair pathways. The purpose of my project is to determine the effects caused by the loss of *RAD54* function on mitochondrial stability. By completing respiration loss and direct repeat-mediated deletion (DRMD) assays, the quantitative impact of a *rad54Δ deletion* mutation on mtDNA stability in budding yeast will be determined. The respiration loss assay displayed a ~1.66 fold decrease (p = 0.0035) in spontaneous respiration loss for the mutant strain *rad54Δ* when compared to the wildtype strain. The mutation rate of direct repeat-mediated deletion events in the nuclear and mitochondrial genomes in a *rad54Δ* were also determined, showing a ~3.25 fold increase (p = 0.027) in spontaneous mutation rates in nuclear DNA and little significant change in mitochondrial DNA mutation rates.

Colorism: Exploring its Impact in the African American Community

Brenda Jackson

Sociology and African & African American Studies

Mentor: John K. Marah, EdD

This study attempts to examine critically the impact of color variations in the African American community as depicted in Hurston's *Their Eyes were Watching God*, Morrison's *The Bluest Eye*, and Griffin's *Black like me*. This examination will also present a comparative perspective of the issue of colorism in the larger African American world as presented in Marita Golden's 2004 *Don't Play in the Sun* and Russell, Wilson, and Hall's 1993 *The Color Complex: The Politics of Skin Color* among African Americans and Euro-American communities.

There are questions about whether it is African American women who are affected the most in terms of the value and emphasis allegedly placed on color differentiations in the Black community in the United States. This research will utilize qualitative methodologies based on critical reading and content analysis of the selected works of Hurston, Morrison, and John Howard Griffin for the themes on intra-racism and the uses and misuses of color variations in the black community in the United States compared to the experiences of African people in Africa. We will be using keywords such as colorism, African American community, Euro-American community, African American women, literary artists, and politics of skin color.

Historically, the color complex has been a problem with African Americans since the days of slavery where the lighter skinned slaves were given preferential treatment over the darker ones. Light-complexioned or mulatto skin toned slaves were valued by white slave owners and slave traders at a higher rate than dark-skinned slaves, creating a legacy of intra-racial prejudice that still informs African American society today. This research is significant because it investigates the experiences of black women who are categorized according to their self-ascribed skin tone group.

Our findings might indicate that women of different hues have distinctive experiences based on their skin tone, and these experiences influence how they may feel about themselves and interact with others. The final aspect of this project will endeavor to make some pertinent recommendations for the psycho-social health of African people in our global village.

Trans and Non-Binary Students Navigating Relationships

Lucky Summer Light
Social Work and Healthcare Science:
Concentration in Alcohol and Substance Abuse
Mentor: Milo Obourn, PhD

The Beginning

There are pockets or subcultures within a larger scale culture of identities that do not have a precedent voice in popular culture (pop culture) or within a heteronormative foundation. Within the last decade there has been a growing fascination surrounding identities, perseverance strategies, resilience, and experiences of queer youth of color. Specifically, how Trans and Non-binary students of color navigate their education and how they utilize structures that give them supporting/protective factors while navigating their intersecting identities alongside sharing their experiences within environments that do not constantly validate their existence.

Resilience can be defined as the capacity to accept, move forward, and overcome staggering bouts of stress that strengthens individuals and make them resourceful (Stone Fish & Harvey, 2015). This paper discussed how stress manifests different bodies of knowledge within each social environment for Trans and Non-binary students.

Much has been done by Brockenbrough and Boatwright (2015) in helping us to understand the unique, highly underrepresented, and overshadowed environments that Trans and Non-binary students of color navigate through in order to survive. There are many testaments to be understood, thus, a problem at hand is treating Trans and Non-binary students of color homogenously and expecting the same results. In short, this present paper will reflect on the complex and diverse identities and realities of Trans and Non-binary students navigating relationships.

In recent years, many universities and colleges across the United States have begun to seek diverse students across many gender and sexual identities. Much research has been conducted by sociological scholars, concluding the wellness, gender and sexually diverse students bring to a university/college campus. However, with much research done, there seems to be a lack of asking an imperative question, "How are Trans and Non-binary students doing?"

Garvey and Rankind (2015) found discrepancies of comfortability on college and universities across fifty states between cisgender queer-identified women and men in contrast to Trans-spectrum and Non-binary students. Interestingly, this study found miraculous data that expressed insights that Trans-spectrum and cisgender queer-spectrum students do not necessarily share the same experiences of "coming out."

Moreover, on many college and university campuses there still remains a "comfortable" barrier that Trans-spectrum students have to navigate, "a heterosexist climate that inhibits the acknowledgement and expression of Gender and Sexually diverse perspectives…" (Garvey & Rankin, p.378, 2015).

Navigating heterosexist environments is a definite reality that many Trans-spectrum students have to navigate within the classroom as many Trans-spectrum students "were afraid to disclose their identity in situations in which they felt the instructor might retaliate by grading them lower, might make them 'an object' in class or might patronize them by giving them special treatment" (Garvey & Rankin, p.378, 2015). One can imagine how these instances makes a Trans and/or Non-binary student feel cornered, silenced, or invisible which in turn will inhibit students to disclose and discuss their identities in class and other social spaces.

Z. Nicolazzo (2017) established that Trans and Non-binary students face so many perils of having to navigate social codes and social environments that were built for perceived cisgender, able-bodied, heterosexual people. For example, Z. Nicolazzo expressed in their book that tiredness is an experience shared by many Trans and Non-binary students because of the reality of constantly having to "bring up gender." Moreover, many Trans and Non-binary students only "bring up gender" within certain environments and with certain people. Thus, practicing a sense of self-care and self-protection; also known as resilience (Nicolazzo, 2017, p. 119). Making the tough and often abstract decisions of not "bringing up gender" and sharing their own experience as a Trans and/or Non-binary identified person, often allowed Trans and Non-binary students to save their energies for people who were invested in them as people and save their energies for people and environments that made them feel refreshed, rejuvenated, and able to cope with the cultural realities of gender binary discourse and compulsory heterogenderism (Nicolazzo, 2017, p. 110).

To define, gender binary discourse is a term that represents a constellation of words, phrases, actions, rules (written and unwritten), and social realities that regulate what are considered to be appropriate gender identities, expressions, and embodiments. Continuing, compulsory heterogenderism is a neologism created by Z. Nicolazzo, 2015, 2016, in press, to describe how Trans and Non-binary people's genders are misunderstood as sexualities. To explain further, this social coding/conceptualization is believed to occur because of many people's reliance on sexuality-based stereotypes, thus, erasing and culturally rendering Trans and Non-binary identities unknowable or impossible. Lastly, this phenomenon also has the effect of making Trans people feel not Trans enough, as their Trans ness is continually being questioned or not recognized (Nicolazzo, 2017, pp. 166-167).

In this next section, I will discuss how Trans and Non-binary students utilize code-switching to navigate hostile environments and (wanting to prevent) negative relationships. First, to define code-switching, modifying one's behaviours, appearances, et cetera to adapt to different sociocultural norms (Dictionary.com, 2017). For an example, Z. Nicolazzo (2017) gives us a clear image when Megan does not reveal her identity as a (Trans) woman because she is read as a cisgender gay male. This is an example of stealth, not being open about one's identity in all or most social situations; a (social) code that many Trans and Non-

binary people have to indulge within in order to survive and maintain resilience within many social environments.

Many Trans and Non-binary students have learned throughout their lifetime two (or more) different codes and behaviours. For example, if a woman with Trans experience is perceived as a cisgender gay male, she is expected, socially, to behave with more feminine grace, but, her aesthetic is supposed to maintain different masculine attributes (i.e. jeans, t-shirt, shorts) instead of revealing her true identity and wearing lipstick and a floral dress. Given, not every woman has to or wants to perform hyper-femininity in order to "be" a woman.

Within this example, the idea of "passing" comes into play. Passing is defined as the ability to be socially (mis) read as having a particular gender identity. Moreover, for some Trans people passing is positive, whereas most Trans and Non-binary people find passing to be a burden or feel it must be done in order to stave off or prevent the reality of violence (Z. Nicolazzo, p.168, 2017). Within a thought, the idea of passing is socially constructed because one could not (and would not have to) "pass" without the environment making assumptions.

Within the States, there is a gender ideology that explains gender is static. Of course, as we see across cultures we are alluded to the fact that not every culture believes that gender (or sexuality) is static. In addition, the ideal cultural standard within the States for Trans and Non-binary people is to pass and "look normal" in order to be considered as a woman or man. Of course, this is a superfluous and narcissistic ideology that stems from many malevolent rhetorics. This rhetoric does not encompass the gender identity or expression of those who do not identity as a woman or man.

There are culturally some examples of women with Trans experience who pass well into the ideals of the normalcy of femininity and womanhood. Laverne Cox is a dynamic and stunningly beautiful Trans woman of color, yet, we are now using Laverne Cox as a means of fabricating Trans beauty standard. This is a belief that even Laverne Cox herself has negated in many of her shows and talks she gives around the States.

Laverne Cox is so beautiful and passes so well that we use her as a token and put her on a diamond pedestal as the epitome of what it means and what it is like to "be" Trans. This lacks accordance with personal experiences of many Non-binary persons who are perceived as Trans simply because they do not fit within the gender binary. Most Non-binary people are not Trans simply because they do not

personally identify as Trans and do not fit within the traditional social context of experiencing a dramatic negation towards their own body. Explicitly, many Trans people do not fit the idea that one must be Trans because they "hate their body." This systemic ideology is not realistic to the diverse and complex experiences of Trans and Non-binary people.

In a broader cultural context, the word and/or idea of Trans does not exist. Many cultures across the globe understand gender and sex to be two distinct facets of a human being but within their own language and cultural framework. For example, within the Navajo tribe there are people called, Nádleehé, which (loosely) translates into English as "The Changing One" or "One Who Constantly Changes." Within the translation one can claim that this person's gender is not seen as static, rather as a fluid experience, not a stagnant experience. Many may lay claim that this person is a "woman" one day, a "man" the next day, and then a "two-spirit" the day after (Singh & dickey, p.21, 2017).

This may be an easy way to conceptualize a person who is called Nádleehé, but this idea fails to understand the cultural framework of understanding gender as a fluid experience not within the idea that "from birth this is what you are and then you want to change"; instead the idea within many Native American tribes is a sense of unity within their existence that is abstract, complex, and diverse. Lastly, a good claim to make is that "Two Spirit" is a concept that the "white people" (colonial settlers) constructed to understand the native people of this land and their ways, thus, Two Spirit tries and remains to be understood within the cultural framework within the Native American culture (Singh & dickey, p.21, 2017).

All in all, this argument is within the understandings of ethnocentrism, the tendency to look at the world primarily from the perspective of one's own culture and cultural relativism, the belief or principle that concepts and values of a culture cannot be fully understood or translated in other languages.

A Modern Understanding

As noted before, within the year 2017 there has been a lot of push for research and evidence amongst Trans and Non-binary persons' health and wellbeing. Singh & dickey (2017) are accredited authors who guide many healthcare practitioners to understand their clients who identify as a Trans and/or Non-binary person with compassion and trust that the client knows themselves better than the healthcare practitioner (Singh & dickey, p.4, 2017).

When talking about Non-binary gender identities, Singh & dickey are explicit in assisting the reader in understanding that the reduction of gender within two dichotomous categories is an act of colonization that is a historical fact firmly rooted in racial oppression and the erasure of indigenous people and/or people of color (Singh & dickey, p.21, 2017). Thus, one can understand that it is imperative to note within knowledge and schools of thought that the existence of Non-binary people is not a new, modern, or solely a western phenomenon (Singh & dickey, p.21, 2017).

The Keys of Resilience

There are many schools of thought about resilience. Many of the perspectives of resilience tend to focus on resilience being a noun, thus, the understanding that resilience is something that one possesses. There is a different idea about resilience posed by Z. Nicolazzo (2017) that paints resilience as a verb; an action that one can practice.

This is an interesting concept because seeing resilience as a set of actions one can practice over one's lifetime and within certain social contexts and environments is more congruent to how many Trans and Non-binary people understand resilience. For example, instead of seeing resilience as a set of skills or an ability one can possess, we can begin to understand how Trans and Non-binary people have to develop and use a variety of resilience strategies in order to navigate different social oppressions and social codes, gender binary discourse and compulsory heterogenderism.

Moreover, understanding resilience as a sense of practice tools also allows for recognizing varying degrees of success. Meaning that just because there is a set of resilience for a Trans and/or Non-binary person within one social environment does not mean that the same resilience method can be practiced within another. To give an example, coming out within a classroom setting during a lesson takes a different set of resilience than coming out to one's coworkers at an internship (Z . Nicolazzo, 2017, p.92).

Trans and Non-binary students have to develop and practice resilience on campus to negate and/or maneuver through cultural ideas that everyone must have a gender, in addition to navigating the different social ideas that one must look and perform their gender a particular way. For example, in Z. Nicolazzo's research (2017) they found that navigating and developing resilience can be more complex for Trans and/or Non-binary persons who "pass." What this means is that many Trans students who work very hard to pass as a cisgender

woman or man are now subjected to the ideas of heteronormativity and cisnormativity, meaning that the student's Trans identity was erased from social contexts and made irrelevant. For some Trans students, this is a privilege that many Trans students strive towards, for others, this is a burden because of the unrealistic ideologies of cultural notions of beauty and attractiveness (Z. Nicolazzo, 2017, pp.92-93).

For many Trans and/or Non-binary students practicing resilience could be an example of walking with headphones around campus listening to music so that they can ignore or tune out their peers' remarks towards their gender expression/presentation. Another practice is finding and/or creating a safe space on campus that is their space. What this can mean for a Trans and/or Non-binary student is a carved out space on campus where they are aware they can go for safety, especially after having to navigate and be within hostile collegiate environments (Z. Nicolazzo, 2017, p.91).

Another means of resilience for many Trans and Non-binary students is to create a space that validates one's gender identity and/or expression. Consequentially, creating and/or finding a space where gender is not the primary focus of identity is another source of resilience for many Trans and Non-binary students to escape and decompress from constantly facing the gender binary discourse and compulsory heterogendersim in addition to constantly being misgendered (Z. Nicolazzo, 2017, pp.92-93).

Adding one more layer to the development and practice of resilience, many Trans and Non-binary students have to navigate being a person of color (POC) but also have to navigate being a person with a disability and/or being neurodiverse. This new claim of identity, neurodiverse, is a current approach to understanding the complexity of one's neurological condition. As discovered with research done by Z. Nicolazzo (2017) there is a student by the name of Silvia who is a Black, agender (without a gender) student who experiences post-traumatic stress disorder (PTSD), temporomandibular joint dysfunction (TMJ), in addition to being diagnosed throughout an academic semester with fibromyalgia. Thus, these experiences began to shake Silvia in her own belief and understanding of practicing resilience. Despite these experiences and conditions placed upon Silvia, Silvia is able to practice resilience by leaving her university campus and going back to her comfortable home. To her, Silvia expressed this gives her time to decompress and gives her the feeling that she is back to who she was before her diagnoses. This is a positive implication of practice of resilience as this then

allows us to understand the limitless options and opportunities of resilience and what that could look like for a Trans and/or Non-binary student (Z. Nicolazzo, 2017, p.95).

Staying with the multi-facet of experience for many Trans and/or Non-binary students whose identities manifest intersecting oppressions within different systems, Silvia was able to create and practice resilience by challenging pathologizing definitions and ideas of health and ableism. Silvia was able to reconstruct a new idea of health by reevaluating the idea(s) of "health" and "healthy" altogether (Z. Nicolazzo, 2017, p.97).

Mirrors of Resilience

When speaking about Trans and Non-binary experiences with practicing resilience, it is easy to make assumptions that all Trans and Non-binary persons experience the gender binary discourse and compulsory heterogenderism the same way. Fortunately, we need to possess an understanding that every Trans and Non-binary person's experience with oppression is different.

Singh and dickey (2017) make a great case on understanding the practices of resilience and understanding the role of posttraumatic growth for Trans and Non-binary people of color. For example, many Trans and Non-binary POC develop resilience in the following areas: (a) developing pride in one's own gender and racial/ethnic identity, (b) recognizing and negotiating gender and racial oppression, (c) accessing financial and healthcare resources, (d) connecting with a community of color, and (e) cultivating spirituality and hope for the future (Singh & dickey, 2017, p.54).

Another important shard to understand is the high importance Trans and Non-binary persons place upon community building. That being said, it is known that many Trans and Non-binary persons of color create and practice different resilience strategies for different environments and social contexts through experience and community building. There are two types of community building to note, thick trust and thin trust. Thick trust is formed through friendship and social network interaction while thin trust is formed through interactions across disparate groups, including racial and class groups (Singh & dickey, 2017, p.54).

As expected, thick trust appears to be more concrete and useful in creation for many Trans and Non-binary persons as this type of trust allows for collection of information, insights, and other resources for Trans and Non-binary people to navigate legal, health care, employment, housing, and other systems of oppression. For example,

a study on Latina and African American women revealed that these women established support and information to access hormones and medical feminizing procedures they identified as critical to reinforcing their gender identities through their thick trust networks and connections (Singh & dickey, 2017, p. 55). In sum, it is apparent that Trans and Non-binary persons have to navigate and negotiate within more than one path at a time.

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Designing Culturally Relevant Mathematical Demonstrations to Engage Youth from Underserved Communities

Anthony (Akil) Manning
Mathematics

Mentor: Algernon Kelley, PhD

This research involves mathematical demonstrations that are culturally identifiable to children from low-income, underserved communities. This is important because the number of children from this observed group who are successful in STEM fields is low in comparison to many other groups. This project is conducted by researching what the children's shared interests are and developing mathematical demonstrations to help engage them more effectively. We hope/expect to find that after the children participate in the demonstrations that they are exposed to STEM concepts enough for them to find a newfound interest and appreciation for mathematics.

Our Research Question is as follows: Would students from underserved communities be more likely or willing to pursue careers or major in STEM fields if they are taught mathematical and/or scientific concepts through culturally relevant demonstrations during their primary school years or before entering college? The first step in our methodology involved interviewing students from 4th and 5th grades and analyzing the information gathered. We then used this analysis to look at activities that are effective with students that capture their attention. We followed this with a 'brain drain process' in which many demo ideas were created, then narrowed down the list of ideas to a select few, taking into consideration that the demos could be practiced by various age groups.

Since the initial interviews showed that students were interested in basketball, soccer and money, we used that knowledge for a final elimination of ideas. Finally we took the remaining demo ideas and fine-tuned them for application to different age groups (primary and secondary school). During this process we encountered several limitations: the time frame to come up with suitable demos was short, the observed students only spent 15 minutes participating in the demo, and only a few students were able to take part in the graphing portion. The students involved were all female and from rural towns near Brockport, NY, and the majority of students surveyed were in a summer program where STEM is taught.

Reviewing the data from the Likert surveys and feedback from the demonstrations shows that the students were a bit scattered in survey result, but most commented in the feedback section that they enjoyed the hands-on approach and that they did not dislike anything. Because the students were all female, we hope this project can be the beginning of another study into women in STEM fields. To continue this particular project, we hope to pull together a more diverse sample pool of students; we also hope to study how female students from underserved communities exclusively interact and succeed in STEM fields.

A Critical Analysis of College Graduate Destinations and Career Outcomes

Kaleem T. Mogent
Social Work

Mentor: Daniel Kandris, PhD

This research examines the post-graduation accomplishments of baccalaureate and master's graduates at The College at Brockport. This study is important due to the increase of higher education expenses as well as the United States job market, which is balancing in a state of constant flux. Many college students are influenced every day to pursue specific degrees or enroll in certain universities because they are told that they can earn a great yearly salary upon completion of their degree program. This study aims to elucidate which graduates from New York State universities are employed and their salary amount according to their prospective degree earned. Secondly, college expenses are increasing every year and many high school graduates are wondering whether college is worth the time and financial burden. The greatest concerns revolve around student loans and whether they will earn enough money to pay off their debts with a degree. Thus, where a student receives an education and what degree is pursued become the primary forces that determine how a prospective student views his or her future. With this in mind, several universities have started to create graduate surveys that extract information from their graduates to learn about where they are after they receive their degree. Some universities use this information for advertisement purposes to attract more students or to outperform other colleges academically. Overall, this project was conducted by analyzing data that was collected and provided by the Career Services office at The College at Brockport, State University of New York, as well as analyses of data collected from other New York state schools for the purpose of comparative success rates. All of the data found was from completed graduate surveys that were conducted previously by the universities chosen and those that accepted a request for knowledge about their graduates. The total list of schools that were included in this study were SUNY Oswego, SUNY New Paltz, SUNY Cortland, SUNY Oneonta, SUNY Geneseo, SUNY Fredonia, and The College at Brockport. We expect to find that various improvements can be made at the college level to enhance students' ability to exhibit self-efficacy when navigating the job market. Career preparedness is an important component when examining employment rates for any college or university. Numerous surveys examined did not contain a question asking former students if they felt prepared for their jobs. This is connected to self-efficacy because if the results show that graduates did not feel prepared, it will yield a low self-efficacy percentage. Furthermore, in the future, in order to broaden the scope of this independent study, universities from across the U.S. can be compared to further analyze how various state economies affect graduate success in the differing job markets.

Are College Students Utilizing Healthcare Resources and Facilities on Their Campuses?

Bridgett Oyeyemi

Nursing

Mentor: Paula Barbel, PhD, PNP

Introduction

This literature review examines utilization of on-campus health care resources by college students. This research is important because studies have shown that the transition to college can cause significant sleep disturbances, poor dietary practices and experimentation such as increased engagement in illegal substances, unsafe sexual practices, and binge drinking. The majority of traditional college students fall within this age category, therefore, examining utilization of resources available is necessary to identify what services are being sought and received, which services are being utilized most frequently, and to identify any barriers to seeking and/or utilization of services or any needed gaps in the services provided.

Methods

The approach used was literature review and interviews conducted with faculty of the Hazen Health Center from The College at Brockport, State University of New York.

Procedures and Data

The research for the literature review was conducted through The College at Brockport's online library database. Both CINAHL and MEDLINE were used with keywords "college students," "health center," and "on-campus health." The search was limited to the last ten years. The interview was conducted after the literature and questions were asked specific to The College at Brockport.

Results

During the 2016-2017 academic year, Brockport had 8,413 students in attendance. An average of 6,300 students reportedly used the Hazen Health Center and 4,200 used the counseling center. This did not account for repeat visits by students.

Nancy R. Ahern, PhD, RN, 2009 study found the following:

- 34.1% reported stress as the top impediment to academic performance (n = 23,752).
- 26.1% reported sleep difficulties as interfering with academic performance (n = 18,223).
- 24.7% reported working 20 hours or more per week (n = 17,327).
- 13.6% reported being in an emotionally abusive relationship (n = 9,712).
- 22.2% reported being overweight (n = 15,298).
- 38% of sexually active students reported condom use (n = 27,330).
- 38.3% reported consumption of one to four drinks the last time they partied (n = 27,128).
- 36.1% reported doing something they regretted after drinking (n = 20,110).
- 18.4% reported feeling depressed (n = 12,906).

Limitations

Limitations included only using two databases. In the future interviews can be conducted with more faculty, students, and other health centers at various institutions.

Discussion/conclusion

In conclusion, the majority of students at Brockport are aware of and use the Hazen Health Center. However, there is more research that needs to be done in order to identify the gaps between students' needs and service availability and awareness. There is also more to be done in order to increase our utilization rates, such as the continuing and expanding of programs such as Party Smart and Eagle Check. On a wider scale most students are utilizing services after a problem occurs, when the goal should be prevention. College campuses should continue taking initiative and reaching out to all students, especially since targeting incoming freshmen with information could be the key to ensuring a healthy college experience.

Machismo in Relationships: How Latinx People Navigate Intimacy and Sexuality

Christopher W. Rivera
Sociology

Mentor: Tristan Bridges, PhD

Author Note

Machismo is a subject that has been studied since the 1950s. However, the application of this term to intimacy and relationships is scarce. While some research has been done to discover college student sexual attitudes and systems, not much research makes the connection between machismo and sexual behaviors.

This ongoing research project is a case study analyzing Latinx students' beliefs about other Latinx students in intimate, sexual, or colloquial settings. By rejecting machismo and analyzing its meanings, students express progressive mentalities and ideas to reform what it means to be masculine. It is with these tools that Latinx students in higher education navigate their identities and relationships. Although these interpretations may be subconscious, in this research I will argue that the identification, and/ or enactment, of machismo provides a lens for Latinx college students to navigate their intimate relationships and encounters with other Latinx college students. In addition, I will also argue for how machismo functions as a resource for Latinx students' positioning toward feminist ideologies regarding ideal perceptions and strategies within relationships.

Theoretical Framework

The concept of machismo is often associated with negative stereotypes of what are imagined to be typical Mexican or Mexican-American men. Thus, machismo has been traditionally associated with qualities such as: sexism, hypermasculine displays, emotional stoicism, violence, womanizing, being honorable, and alcoholism (Strong, McQuillen & Hughey, 1994; Mirandé, 1997; Arciniega, Anderson, Tovar-Blank, & Tracy, 2008). A great deal of research has been done to demonstrate that "machismo" often means something very different, and less toxic, to those typically targeted with the term (Gutmann, 1996; Hurtado & Sinha, 2016). For example, scholars now understand that machismo is not specific to Mexican or Mexican-American men, but that different Hispanic cultures have noteworthy variations of machismo (Strong et al., 1994). While some believe in the form of machismo that illustrates a lack of emotion (Mirandé, 1997) and the domination of women that thrives on power (Hurtado & Sinha, 2016), other research has shown that machismo is much more about avoiding being subordinated by other men than it is about demonstrating dominance (Gutmann, 1996). This is consistent with Anderson's (1999) findings in low-income Black neighborhoods that young men perform tough masculinities in public to collect "respect"– which provides safety.

In addition, characteristics that are not defamatory are important to include in the conversation of Latinx masculinity. Researchers have measured Latino masculinities on a spectrum ranging from "traditional machismo" to what scholars call "caballerismo"–a concept most easily translated as positive machismo (Arciniega et al., 2008). Traditional machismo encompasses

the negative aspects of Latino masculinities mentioned above, while caballerismo refers to the positive features such as masculine chivalrous behavior (Arciniega et al., 2008), providing for and protecting the family, collecting and demonstrating dignity, and emotional connectedness (Gutmann, 1996; Hurtado & Sinha, 2008). Theorizing Latino masculinities in these ways allows for individuals to enact characteristics associated with both traditional machismo and caballerismo at the same time.

The continued progression of Latinx studies is important because much of Latinx research has historically ignored the different factors that affect identity such as class, region and ethnicity. The discount of integrating multiple perspectives is damaging because the deficiency of research creates stereotypes (Gutmann, 1996). When discussing masculinities, we must consider the "patriarchal dividend," a term coined by R.W. Connell, referring to the collection of advantages men benefit over women based on their gender (Connell, 1995). However, Connell also theorizes that not all men benefit from the patriarchal dividend to the same extent due to their different marginalized identities. In consideration of how several aspects of Latinx masculinities rely on gender differences (Gutmann, 1996; Hurtado & Sinha, 2008, 2016; Laborde, vanDommelen-Gonzalez & Minnis, 2014; Stephens, Eaton & Boyd, 2016), and that Latinx people are considered to be a marginalized group based on their ethnicity, we must be sure to consider this group intersectionally when studying this subject.

This study also serves to compare questions of sexual and intimate relationships throughout different genders. When discussing masculinities, it is important to recognize that they are subject to change based on the intersectional perspectives offered by different sexualities and genders (Pascoe & Bridges, 2016). In other words, manliness and womanliness are constantly shifting and not gender definitive (Gutmann, 1996). With this in mind, I add ethnicity to the spectrum of gender expression. Latino men understand their male privilege when recognizing their disparaged identity as a mixture of race and gender (Hurtado & Sinha, 2008). Both men and women exhibit forms of machismo and caballerismo and are able to collaborate their perspectives of the topic within a queer framework. As Pascoe and Bridges (2016) argue, we cannot assume that masculinities are only derived from or enacted by male bodies.

Latinx Relationships

Among Hispanic college students, it is often taken for granted that men are expected to be dominant in most aspects of their romantic encounters (Eaton & Rose, 2012). These include initiating sexual relations based on men's perceptions of the relationship, beliefs about consensual desire, and the understanding of how long to wait before initiating sexual intimacy (Stephens, Eaton & Boyd, 2016). Although it is the case that Latino men are usually those who initiate sexual relations more broadly (Eaton & Matamala, 2014; Stephens et al., 2016), it is not uncommon for Latina women to use verbal coercion techniques to instigate intimacy as well (Eaton & Matamala, 2014). So, it is important to acknowledge women's involvement too, even when their strategies are more subtle. While some scholarship suggests that these gender differences are rooted in biology (Dantzker and Eisenman 2003), psychological scholarship on this topic suggests that sexual scripts are organized not by biology, but by culture, tradition, and upbringing (Eaton and Rose 2012).

Some researchers have found anecdotal evidence supporting the notion that parents teach sexuality to their children – particularly the children that share their parents' gender identities. As a result, boys know less about their bodies and reproduction (Gutmann 1996: p. 114). Others stipulate that when it comes to parents speaking to their children about sexuality, mothers and daughters report more frequent communication about the subject (Raffaelli & Green, 2003). Though these findings refer to early childhood and adolescence, education within the family can play an important role on Latinxs' beliefs over the course of their lives. For example, common practices by Latinx college students, in relation to sexuality, include less frequent use of condoms during intercourse, which could also be due to the influence of attending a predominately white institution (Espinosa-Hernández & Lefkowitz, 2009). Specifically, in México, Mexican men find condoms to be painful, leaving women with the responsibility to seek out birth control (Gutmann, 1996). In addition, specific beliefs about sexual differences between men and women vary by gender. Men are more likely than women to agree with macho statements such as, "Males should be experienced prior to marriage," "Any type of homosexual behavior is wrong," and "Kissing always leads to other sex behavior," to name a few (Dantzker & Eisenman, 2003).

Understanding what Latinx college students feel about gender roles more broadly is important for developing research on this dynamic population. What research fails to address, however, is how Latinx college students feel about and toward one another between, and across, genders regarding their intimate relationships. Some research has

expressed machismo to be a valuable aspect of Latinx culture (Mirandé, 1997). While some would argue that concepts of machismo share similarities with non-Latinx hypermasculinity (Stephens et al., 2016), it is still very important to study how Latinx people utilize Latinx masculinities to navigate their sexual and intimate lives. Missing in the literature is the meanings that Latinx students in higher education attribute to machismo and how those meanings may be relied on to understand their own identities as well as strategize, interpret and interact with other Latinx students in in their relationships.

Data and Methods

Participants in this research were undergraduate students attending a small liberal arts institution in the northeast United States. In order to meet the criteria to be interviewed, each student needed to be attending the institution and be between the ages of 18 and 24, so that the data could adequately represent the traditionally-aged college student. Participants were also required to self-identify as Latinx or Hispanic to give meaningful responses regarding Latinx culture and identity. Participants were not required to have already been in a relationship because their responses regarding their taught morals would greatly contribute to the data. While some may have been in a relationship, others were allowed to express ideas about relationships learned from friends, family, or media.

Upon receiving IRB approval, students were recruited via an email server of a Latinx-based student organization. All participants were asked to read and sign an informed consent form, indicating the research's purpose, and their rights as a participant. The primary investigator scheduled meeting times at a mutually agreed upon location with interested participants to conduct interviews. Interviews ranged in time from 45 minutes to 1 hour. Students were interviewed and asked a series of open ended questions relating to their subjective definitions of machismo, intimacy, sexuality, peer and familial influence and the impact of machismo on their lives and relationships. The data was open coded in order to identify emerging patterns and themes. See the full interview schedule in the Appendix.

There were a total of 3 participants involved in the study. Study participants had a median age of 19 years (range: 19-20), two of the participants identified as female and one participant identified as male. All participants were undergraduate students: two sophomores and one junior. Two participants were first generation citizens, people born in the United States whose parents emigrated from a foreign country, and one was a second generation citizen. The students identified as either Dominican, Ecuadorian or both. All participants were first generation college students, the first in their family to attend a four-year college or university. All participants had experienced a relationship with another Latinx person, whether sexually, intimately or a friendship. Having an close-knit extended family was common among the group.

Findings

Machismo as a Resource

The aggregate conclusion amongst participants was that machismo can be used as a resource to justify their non-traditional beliefs. Battling with identified characteristics of machismo, including emotional stoicism, hypermasculinity, domination, avoiding being labeled as weak, and endorsing misogynistic household gender roles, allowed participants to position their identity toward an equitable gender structure. Craig Sanchez, a 19-year-old Dominican student, believes in redefining machista characteristics to erase gender exclusive stereotypes. "We should intertwine masculinity and femininity and intertwine our roles so we can be more versatile rather than conforming to the roles that society places upon us." Craig supports implementing ideologies displayed in the caballerismo ideology, such as nurturance, chivalry and being family oriented, into his relationship practices. Equally, Cisne Cruz, a 19-year-old Ecuadorian student, identifies machismo to be a source of inequality:

> If machismo is not there I feel like both partners are equal. But if machismo is there I feel like the guy will try to be very dominant over someone else and I don't want to be submissive to anybody.

The concepts offered by traditional machismo portray unhealthy hierarchies that perpetuate toxic practices such as the subjugation of women and suppression by social norms. They also perpetuate stereotypes that demean women including women being "hotheaded," loud, attitudinal, maintainers of the house, and sexy. With this in mind, some participants rejected using manifestations of traditional machismo as a means to behave within their relationships with other Latinxs. The presence of machismo in a relationship was connected to destructive practices such as infidelity, domination of women, and being taken advantage of. Participants identified these behaviors based on personal encounters or witnessing their parents experience these damaging habits. While some participants

completely rejected gender roles endorsed by traditional machismo, Rosa Abreu, a 20-year-old Ecuadorian and Dominican student, excluded these ideals from her beliefs with reservations.

> Men are expected to be tough, rugged, emotionless, robot creature, who provides for the family and maintains a structure in the household while the women are meant to be the nurturers, caregivers, express love and emotion, and help raise the children. I don't agree with it but I do believe that there are certain things men can do that women can't and vise-versa.

Others outright prohibited machista beliefs to factor into their relationship practices and experienced repercussions as a result.

> Listening to [my family's] advice, I felt very outcasted in my family because I have very different views... I'm living like the opposite of what my family suggests me to live... The way my family does it is more detrimental and doesn't contribute towards building relationships toward people.

The understanding of the meanings of machismo ultimately leads the participants to enact nuanced feminist approaches to intimate and sexual relationships that highlight the use of caballerista mannerisms. A common theme of rejecting the subjugation of women emerged from all three participants. Interviewees provided examples of relationships amongst their mothers, fathers, grandparents, and themselves to display how Latino males suppress Latina women in relationships. "Every time my grandma does something that my grandpa doesn't agree with, he just immediately called her, '*Estupida*'" (Craig Sanchez). "I've never let a guy try to dominate me or to put me in my place. According to my mom, my dad did that to her. My dad was the dominate one and she was literally the submissive one" (Cisne Cruz). Tactics for navigating relationships involved participants referring to their family as examples of how not to behave or be treated in their own relationships.

In all, these findings implicate the rejection of machismo as a means of self-identification and protection from unsafe relationship conditions. The women of the study rejected machismo as an empowerment strategy while the male participant used it as a resource to position himself as opposed to the traditional machismo mentality in order to practice self-taught morals.

Discussion

This finding contrasts with Saez et. al. (2009) findings on ethnic expression affecting perceptions on traditional machismo as well as Espinosa-Hernández & Lefkowitz (2009) study regarding sexual attitudes in college. Saez et. al. argue that greater connection to your ethnic roots are associated with endorsement of machismo among Latino men. Espinosa-Hernández & Lefkowitz agree with Saez et. al. in that the extent to which Latinx people identify with their ethnicity does not affect their beliefs and practices of sexuality. However, the participants in this study, both men and women, rejected machismo, as well as using it to understand their sexual and relational preferences, while strongly identifying with their Ecuadorian and Dominican roots. Participants in this study relied heavily on concepts portrayed by caballerismo when navigating their personalities, relationship practices, and outlook on their partners.

This study also adds substance and credibility to research (Pascoe & Bridges, 2016) concerning masculinity as not restricted to the male gender. Participants in this study were mostly women who were able to give relevant interpretations of what it means to display machismo. Their commentaries depicted common stereotypes of Latina women, perceptions of Latino men, the derivation of knowledge of machismo, and roles within a relationship that the Latino male in this study did not explicate. While it is typical to focus on masculinity as a male feature (Connell, 2016), women, and those who identify outside of the gender binary, deserve a seat at the machismo table.

Conclusion

The principles of traditional machismo are an important gauge for how college students interpret their relationships, friendships, and self-identity. In this research, I have explained the rejection of machismo among the participants as a guide to self-perception. As this is an ongoing study, there are other findings not listed nor explained in detail in this manuscript, such as definitions of machismo, perceptions of other Latinx people, and where the understanding of machismo comes from.

Latinx millennials are transforming the way machismo can be utilized by crafting meaning from masculine ideology and renovating it in a way that fits their self-perception and relationship strategies. In short, Latinx millennials treat traditional machismo to be outdated within intimate, sexual, personal and interpersonal practices. Since the sample in this study is in no way representative of all Latinxs in the United States, further research should be conducted to expand this research to be applicable nationally, as well as to provide insight to practices of machismo in relationships within

the diverse makeup of Latin American identities. In addition, lack of age, education, immigration status and other variations limited the findings of this research. Equally as important, concentrating on how machismo can be used as a resource through rejecting it will provide more insight as to how people in the Latinx community relate to other Latinx people, as well as form stereotypes, attract one another, and pass on information to their kin.

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Appendix

Interview questions and probes for *Machismo in Relationships: How Latinx People Navigate Intimacy and Sexuality*

1) How old are you?
2) Do you have any assigned pronouns?
   a. If so, what do you identify as?
3) Where are you from? (Where do you live?)
4) What Latin American identity do you identify as?
   a. Are you first generation?
5) Do you speak Spanish?
6) How has your experience been living of Latinx descent?
   a. Have you faced any challenges as a Latinx? [If yes] What are they?
7) How would you define the term machismo?
8) How would you define the term masculine or macho?
9) Have you ever had a relationship with a Latinx person, including an intimate or sexual relationship or any kind of a friendship?
   a. [If yes] What was it like to be with this person?
   b. What were your favorite parts of the _____?
      i. Why?
   c. What were your least favorite parts of the _____?
      i. Why?
   d. Has this relationship affected the way you think or view other Latinx people? How so?
10) Have you ever had a relationship with a Latinx person of the same gender, including an intimate or sexual relationship or any kind of a friendship?
11) Did your parents teach you about being in a sexual or intimate relationship?
   a. Which parent?
   b. [If yes] How has their advice helped you navigate how you deal with relations with Latinx people whether it be intimate or sexual?
   c. Have there been other family members who taught you about these things?
12) What is your family structure?
13) [If they have a Latinx friend] Did your Latinx friends teach you about being in a sexual or intimate relationship?
   a. [If yes] Were you aware of their gender? What was/were their gender(s)?
   b.[If yes] How has their advice helped you navigate how you deal with relationships with Latinx people whether it be intimate or sexual?
14) Does machismo impact, structure, or play a role in your intimate and sexual relationships?
   a. Does it help or hurt these relationships?
   b. Are there other factors?

Exploring Role Ambiguity of School Social Workers

Gloria Schou
Social Work

Mentor: Jason Dauenhauer, PhD

School social work is a complex field that uses a multidimensional approach to problem solving. With students becoming increasingly impacted by negative social, emotional, and psychological forces, the utilization of school social workers has become a necessity. In most school settings, social workers are expected to provide services such as psychosocial assessments, individual and group counseling, and crisis intervention. However, research hints to apparent distinctions in role definition of school social workers. This research project focuses on exploring and finding clarity in the specifics of the broadened school social worker role.

According to the Bureau of Labor Statistics, there are 298,840 child, family and school social workers working in the United States, not including school social workers who are working under a different title (such as parent liaison, or school- based advocate). Part of the problem in clearly defining the school social worker role is the lack of consistency within job titles. Many school social workers experience a lack of administrative understanding of their job responsibilities. School administrators are often uninformed about the complex approach taken by social work professionals. This is especially noticeable because of school administrations' tendency to compare school social workers to other school-based support staff, counselors and psychologists. Some school social workers are even evaluated using standards based on teacher evaluations. Certification requirements are also inconsistent amongst states. New York State, for example, requires social workers to have a master's degree as well as a license in clinical social work in order to qualify for a school-based career, while other states will only require a bachelor's level degree. These are just a few examples that have played a part in the marginalization of social workers within the school community.

Moreover, there is a great presence of role ambiguity of school social workers amongst states and districts. As a result of this ambiguity, legitimacy of the profession is often questioned. Some of the research literature has revealed a desire for school social workers to return to community based advocacy, instead of its current focus on case management. Other research highlights the need for school social workers to focus on academic achievement. However, a more comprehensive approach would be for school social workers to focus on implementing the School Social Work Association of America practice model. This model outlines three main goals: providing educational, behavioral, and mental health services that is evidence-based, promoting a school climate that is conducive to learning, and increasing access to community and school based resources.

School social workers have consistently been shown to be an asset in assisting students with social, emotional, and psychological barriers. This is what makes their lack of role definition shocking, as it is important to understand the aspects of the practice that make it effective. In order to combat this issue, it is clear that there is a need for the development of consistent standards of practice, training, and certification, for school social work at both a national and federal level.

Corporate Social Responsibility to Promote Diversity

Sakeena Sogren

Business Administration

Mentor: Holly Cicconi-Eggleston, PhD

In the United States, big businesses play a large, influential role in society. The role these businesses have in society affects societal perspectives on these companies. There are also large minority populations of immigrants, and diverse ethnic groups in our society. Often times, these minority groups face adversity when trying to obtain a job or ensure equal pay. The problem then falls on the government to remedy with laws and social programs.

The purpose of this research is to analyze the influencing factors businesses have on impacting social change. For instance, companies can enact a Corporate Social Responsibility model to promote diversity in the workplace.

The process used for this research was the qualitative method by reviewing articles and credible online sources to understand the corporate social responsibility tactics used by businesses. Through the *GWB Law Firm* and *SHRM* (Society of Human Resource Management), we found that diversification is not only beneficial to the people but also to the organization itself because it helps them get a competitive advantage over their rivals and remain true to the goals of the EEOC (Equal Employment Opportunity Commission). The diversity in the workforce ensures there are new ideas and perspectives that benefit the company and help tackle new demographic markets.

In conclusion, this research project suggests that organizations have to be interactive when promoting diversity in their workplace. There need to be hiring practices that will alleviate the challenge. Recruiters will have to market their job openings in other demographic areas and be open to networking outside of their normal groups. The company can also set a strategic plan with specific goals and share it with the employees when the goals are achieved. This will ensure that they are being more active to promote diversity.

The Connection between Education, Race, and Incarceration in the Rochester Area

Michelle Thomas

Health Studies

Mentor: Jessica Sniatecki, PhD, CRC

This research project explores the connection between inmates, education, and race within the Rochester area. The research involves concepts and ideas from Shirley Better's *Institutional Racism*, census data for inmates that are currently in custody, interviews from faculty within the Monroe County jail, research on the Monroe County jail system and other research articles. Based on preliminary results, educational programs within the jails and prisons were shown to help lower the recidivism rates and improve inmates' educational aptitude. Shirley Better (2007) claims, "The quality of education, like housing, depends on what you can afford. Minorities restricted to certain living areas, often regardless of income, have their life chances curtailed by the quality of the schools in their neighborhood" (Better, 2007,p. 118). According to Better, "huge sums of money illegally and legally flow through low-income communities," (Better, 2007, p.118); unfortunately, these areas do not receive any benefits from the money. Instead, these areas are becoming more impoverished. Based on Ms. Better's findings and allegations, a research project was designed to comprehend better what roles lack or poor educational opportunities within jails and prisons have on minorities who are in correctional facilities.

After obtaining information from the census data of the local areas such as Rochester, Gates, Greece, Irondequoit, Monroe County, Fairport, Pittsford, and Webster, and the incarceration census data for both Monroe County Jail and Monroe Correctional Facility within June 2017, the inmate data collected showed the following:

- There were more African American men incarcerated than any other race; there were more Caucasian men incarcerated than women

- There were more Caucasian women incarcerated than African American women
- There was a low rate of Asian men incarcerated, and as of this month there were no Hispanics incarcerated
- 23.3% were repeat offenders
- 22.2% were probation violators
- 10.9% were convicted of grand and petty larceny
- 6.5% committed burglary
- 6.3% had other uncommon charges, such as false business cards
- 6.1% had criminal possession of illegal items
- 5.7% committed robbery
- 4.2% were convicted of physical intent
- 3.8% were convicted of criminal contempt
- 2.6% were convicted of criminal possession of substances
- 2.3% were convicted of criminal mischief
- 2.0% were convicted of driving while intoxicated
- .08% were convicted of resisting arrest
- .07% were convicted of rape
- .07% were convicted of attempted murder.

Percentages for crimes committed in the various regional locations of Western New York are: 59.9% in Monroe County, 30.9% in Rochester, 5% in Greece, 2.6% in Irondequoit, 1.5% in Gates; there were four people in Fairport that committed crimes, and none were indicated for the areas of Webster, Pittsford, and Brighton.

According to data report in the U.S. Census of 2011 to 2015, Pittsford, NY, had the highest percentage of high school graduates; in contrast, Rochester, NY, had the lowest percentage of high school graduates. A list of towns and cities in New York State, ordered from highest to lowest, displays citizens who earned their bachelor's degree and higher degrees as follows: Pittsford, Brighton, Fairport, Webster, Monroe, Irondequoit, Greece, Gates, and Rochester. The data from the U.S. Census Bureau also illustrated that there were more Caucasians than African Americans in Pittsford, Fairport, Webster, Brighton, Greece, Irondequoit, Monroe County, and Gates. However, in Rochester, there are more African Americans than Caucasians. Also, Rochester had the second highest number of crimes being committed in Monroe County. According to Duwe and Clark:

- Several studies have linked poor academic performance among adolescents to juvenile delinquency and future offending, although the direction of the causal relationship remains unclear (e.g., Farrington, 2005; Hagan & McCarthy, 1997; Huizinga, Loeber, Thornberry, & Cothern, 2000; Maguin & Loeber, 1996; Moffitt, 1993).

- A large proportion of adult offenders lack a GED or high school diploma (Harlow, 2003).

- Although corrections administrators usually value educational programming (Adams et al., 1994), these programs require funding from prison budgets that have not kept pace with growing prison populations and operations costs.

A 2017 research study conducted at Boards of Cooperative Educational Services (BOCES) agency, located in western New York, examined the educational functioning level of 212 prison inmates. For 80 of the participants, their educational levels were between elementary and middle school educational level, 80 participants had a high school level education, and 52 participants were focusing on a different subject. Out of 212 participants, 41 obtained their Test Assessing Secondary Completion (TASC). This indicates that the inmates with the higher level of high school education are more likely to complete their educational goals than the inmates with elementary and middle school education levels. In high school, students are exposed to more types of Math and English material than middle school and elementary students. The TASC certification test has algebra and precalculus, a subject which many inmates struggle to pass. The study suggests that inmates who only have an elementary and middle school education

are limited when it comes to job opportunities, which impacts their life outcomes and results in issues throughout later years. According to Mrs. Arlene from BOCES, "The new requirement across the nation is for employees to have their G.E.D. or TASC certificate." In 2012, the Bureau of Labor Statistics stated, "the unemployment rate is highest for individuals who have less than a high school diploma (12.5% as of April 2012), and lowest for individuals who hold a bachelor's degree or higher (4% as of April 2012)."

To help inmates surpass elementary and middle school educational levels, the inmates need time, and the programs need more volunteers and more funding. More funding can enable the programs to have more qualified instructors, the newer textbooks, and technology to help the inmates learn more quickly and be able to obtain their TASC certificates. The programs within the jails are important; according to Duwe and Clark (2014), these programs may offer public safety benefits and future savings in corrections spending by reducing recidivism. The public would be safer, future inmate populations could be reduced, inmates would be more prepared/employable, thus increasing their employment opportunities, and states would increase their tax revenues. Unfortunately, the inmates with lower educational levels are not able to pay for a learning disability specialist, and they are also embarrassed to ask for help with their learning disabilities, which makes things very hard for the inmate and the instructor.

While conducting this research, there were limitations such as laws that protect inmates from being interviewed and restrictions that prevent faculty/staff from asking inmates if they have learning disabilities. Therefore, information gathered was based on data available and an interview with Mrs. Arlene from BOCES. Also, duration of the study could be considered a limitation, as this study was conducted for seven weeks, from April to July. The data used reflected a limited time frame (June 2017).

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What Are Judges Really Seeing When They Sentence Someone?

Denise Torres

Criminal Justice and Spanish

Mentor: Megan Kienzle, PhD

Our research seeks to examine potential disparities in and perceptions of judicial sentencing in lower level courts. According to recent studies, discrimination can be found at federal and state courts due to race, ethnicity, gender, and other characteristics (e.g. Spohn & Sample, 2013; Goodman-Delahunty & Sporer, 2009). The first study will demonstrate if/how much disparity exists in sentencing, primarily focusing on race while holding all other factors constant (age, gender, offense type, etc.). The second study in this project will examine the awareness of the general public in regards to disparities that may exist.

Institutional racism refers to specific policies and/or procedures of institutions (i.e., law enforcement agencies, government, businesses, schools, churches, etc.) which consistently result in unequal treatment for particular groups (Chaney, 2015). As judicial sentencing is one method of social control, a logical place to focus is on whether and how punishment severity may be influenced by extralegal factors, especially race or ethnicity. Black defendants are more likely to be sentenced to prison than their White counterparts, even after controlling for legally relevant variables, but when Black defendants are sentenced in districts with increased representation of Black prosecutors, they have a decreased likelihood of being imprisoned, resulting in more racially equitable sentences (Farrell, 2009). Even if these biases are prevalent in our system, there are ways to address the issue and ensure just outcomes for all involved; we simply need to know how pervasive the issue is, and take active steps towards educating the public

about the problem. The search for racial influences on legal and criminal justice outcomes has been and continues to be a major enterprise in law, criminology, and the social sciences more generally (Steffenmeier, 2001).

This project will be conducted through two studies: 1) An online survey that measures the awareness of the Brockport public when asked about the way the judicial system sanctions criminal offenders; 2) A content analysis of previous court cases in the Brockport village court. The short, anonymous survey consists of both open-ended and close-ended questions assessing respondents' beliefs about if and how non-legal factors might play a role in the judicial sentencing of offenders. The content analysis of court cases will be conducted at the Brockport village court and assess the same variables at work in the lowest level courts in the area. Specifically, we will examine defendant, offense and disposition characteristics, and any relationship among the variables.

The project is ongoing, data collection is underway and results and implications will be discussed. Regardless of the outcome, the project will show important details about how our primary courts are working. If there is no presence of disparity in the court then the public can be more confident about decisions made here and use it as a model for other, more often impacted areas of our system. However, if disparities are present then we see just how deeply entrenched these biases can be, how far into our system they have moved, and how paramount it is to address the problem and try to find a solution.

Memory and Cognition: Same Race Advantage and the Verbal Overshadowing Effect

Shaday Turner

Psychology

Mentor: Stacy Birch, PhD

Due to the widespread use of eyewitness testimonies in the judicial system, the reliability of memory has become a subject of great importance. This study looks at the verbal overshadowing effect, which describes the impairment of visual memory due to verbal descriptions of the stimulus, and the effects of race during this phenomenon. It is our hypothesis that the verbal overshadowing effect will be less prominent when the observer is identifying someone outside of their own race. Our hypothesis is in accordance with the findings of previous studies which found that having expertise with faces increases the effects of verbal overshadowing. The Same Race Advantage describes the idea that people are generally experts at identifying faces of people within their own race. This expertise serves as a disadvantage, making it easier for them to succumb to the verbal overshadowing effect. Schooler and Engstler-Schooler's (1990) methodology, with some adjustments, was used to test for an interaction between the verbal overshadowing effect and the Same Race Advantage.

This study consisted of two phases in which the steps were almost identical. In phase one, we asked participants to watch a video of a staged bank robbery, with the robber being either black or white (race of robber was reversed in phase two), followed by an unrelated 15-minute filler task. After that, participants completed a 5-minute task which tested for the verbal overshadowing effect. The control group completed an unrelated task while the experimental group provided a verbal description of the bank robber. Participants were then asked to identify the bank robber from a 6-person line-up, and rate their confidence in their answer on a scale of 1-7, with 1 being guessing and 7 being certain. In phase two of the experiment all the same steps were repeated from phase one, with adjustments to the race of the robber. Upon completion of both phases, participants were asked to complete a survey reporting their vision and demographic data.

An analysis of variance (ANOVA) revealed participants were more likely to identify the robber whose race was the same as their own, i.e., a significant Same Race Advantage (SRA). On the other hand, verbalization did not significantly reduce performance of participants in the experimental group, i.e., we did not obtain a significant verbal overshadowing effect. Similarly, the interaction between race and verbalization was not significant. These results support previous work on the SRA, but not on verbal overshadowing. There was no significant interaction between the SRA and the verbal overshadowing effect, contrary to what we predicted. Surprisingly, our results indicated that not only did verbalization fail to impair facial recognition when participants were identifying faces outside of their races but that it actually showed a trend of improving their performance. Additional research will be needed to investigate this unexpected finding.

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