QuaesitUM is an annual publication that provides an academic forum where University of Memphis undergraduate students can showcase research from all disciplines.
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To Our Readers

In the pursuit of knowledge, research is the foundation on which we must build. In my 14 years at the University of Memphis, I have seen students engaged in an impressive array of research – from participating in large research teams that are funded through national grants, to performing their own self-directed empirical and experimental studies. I have also seen the University grow into a space that has tried to support and facilitate research by our undergraduates as part of a larger quest for knowledge and the global exchange of ideas. A clear example is the number of our students who presented their work at the National Council for Undergraduate Research (NCUR) conference that was hosted by the U of M in April 2017. The 80 University of Memphis presentations reflected the high-caliber research that we pursue here and that can easily ‘hold its own’ on a national stage. *Quaesitum* (kwáy-zee-tum) is an attempt to showcase this type of work – by students in all disciplines, whether they participated in the NCUR conference or not.

Since 2014 when we completed the inaugural issue, we have received truly outstanding submissions from disciplines all over campus – including Business, Health and Sports Sciences, Counseling and Educational Psychology, Physics, Biology, History, Anthropology, Sociology, Communication, Archeology, Social Work, and English. The diverse representation of disciplines from Social & Behavioral Sciences to STEM fields to Humanities to Professional fields has allowed us to create a publication that highlights the very best of the University of Memphis.

There are many people who contribute at all levels to make a publication like this possible, and I am grateful for their hard work in
brining Volume 4 to fruition. First, I would like to offer my sincerest thanks to the Director of the Helen Hardin Honors College, Dr. Melinda Jones, and the Technical Editor, Mr. Scott Dutt. Their contributions and hard work have been, and will continue to be, vital to this publication’s success.

The three of us would also like to express our appreciation to the Provost, Dr. Karen Weddle-West for continuing the administrative support that makes Quaesitum possible.

For four years now, Mr. Gary Golightly has created cover designs that capture the energy and innovation that reflect our mission, and the Executive Director of the FedEx Institute of Technology and U of M Chief Innovation Officer, Dr. Jasbir Dahliwal, has once again provided his support by graciously funding prizes for the best papers.

The faculty sponsors who have encouraged their students to submit their work are also a critical part of this process. Without their guidance, the authors represented here would not have begun the projects that are represented in this volume, and the quality of the submissions we have received is a clear reflection of the time and effort that faculty mentors invest in their students. Thanks also go to Ms. Rhonda Powers who served as a journal consultant.

Finally, the students themselves are also deserving of our thanks. It is fulfilling to conduct research and thereby try to answer questions that you feel passionate about. It can be risky, however, to submit that work that you have toiled and slaved over to be critically evaluated by someone else. The students whose work appears in this volume took that leap in order to allow their work to become part of the scholarly conversation that is the foundation of the academy. For that we offer our congratulations and thanks.

Dr. Sage Lambert Graham
Editor-in-Chief
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Alexis’s paper received a *Quaesitum* outstanding paper award.
Alexis Boucher
Race and Feminism: The Evolution of Black Feminist Resistance

Faculty Sponsor
Dr. Terrence Tucker
Abstract

This article analyzes Ann Petry’s *The Street* and Alice Walker’s *The Color Purple* and *Everyday Use*, showing how each author successfully challenges the expectations placed on women of color in white society through their writings. Through the careful analysis of these authors we can see how black feminism has evolved through literature over time and how it critiques and rejects the censorship of black, middle-class respectability imposed on women of color.
Introduction
“Behind every great man is a good woman.” Whether you agree or disagree, you are most likely familiar with the phrase. The patriarchal idea that women should step aside (and stay in the background) in order to uplift men, which stems from the expectation that men should be given opportunities while women should offer moral support as traditional housewives, is absurd. Black men, however, often romanticize the concept of the traditional housewife to emulate the white man’s middle-class lifestyle. These beliefs are then imposed on black women, who are told, “You are not white and will never be white, but you should act as a white woman does, or is believed to act.” Women of color must then strive for this goal, knowing they will never be seen as equals of white women. Ultimately, their aspirations become futile. This way of thinking damages not only women of color, but the community as a whole. It is this situation in which women of color are held to an unattainable “white” standard that raises the question, “How have these women of color rejected (or accepted) the patriarchal, societal expectations that are imposed on them?” I answer this question by exploring African American authors who challenge societal norms through the use of feminist characters in their literature. Additionally, I also critique the censorship of black, middle-class respectability and illustrate how feminism has evolved through literature.

Feminism
Due to the efforts of those within the first wave of feminism—Mary Wollstonecraft, Elizabeth Cady Stanton, and Lucretia Coffin Mott—women were able to gain their “demands for higher education, entrance into trades and professions, married women’s rights to property, and the right to vote” (Sandbox Networks, 2015). At this time, by law, women could not possess land, hold offices of power, participate in business, exercise control over their children, or even their own persons (Sandbox Networks, 2015). Within the workplace, there were limits on how much a woman could work per week in comparison to men, and women were excluded from some places of work that were deemed a better fit for those of the male sex, as these jobs were labeled as “high-risk” (Sandbox Networks, 2015). These limitations served as the primary motivation for the second-wave of feminism. While the second-wave yielded positive results for women as a whole, the feminist movement of the 1970s was circumscribed so that women of color, specifically black women, would be more tractable.
Second-Wave Feminism

After being able to participate in the workforce during World War II, women were used to working and earning a living for themselves and for their families. When the men returned, women were expected to return to the way their lives had been pre-WWII. However, the role that women held outside of the home had shifted. Women were no longer content with being docile homemakers, and wanted to make names for themselves, or simply just to be heard. Betty Freidman, a psychologist and author of *The Feminine Mystique*, suggested that women wanted to be allowed to celebrate themselves and what made them women whether they were homemakers or worked outside of the home (Friedan, 1963).

Women within the second-wave feminist movement were hard-pressed in getting their voices heard, or having their concerns addressed as their movement paralleled the Black Power Movement and the war in Vietnam. As a result, women turned to literature in order to achieve firmer footing amongst the other movements.

[With the use of pamphlets] like “The BITCH Manifesto” and “Sisterhood is Powerful,” feminists advocated for their place in the sun. The second wave was increasingly theoretical, based on a fusion of neo-Marxism and psycho-analytical theory, and began to associate the subjugation of women with broader critiques of patriarchy, capitalism, normative heterosexuality, and the woman’s role as wife and mother (Rampton, 2015: npg.).

In spite of the progress it brought, the feminist movement was not changing the lives of, nor helping to alleviate problems for, those within the black community. In her book *Feminist Theory: From Margin to Center*, bell hooks (2010) critiques second-wave feminism and explores the limitations set by the movement. Hooks felt that the agenda set out by second-wave feminists did not include the concerns of black women. According to Kimberly Springer, hooks felt that feminism was an “emotional appeal [meant only to mask] the opportunism of bourgeois white women” (Springer, 2005: 114). Hooks felt that the idea of all women being oppressed is in a sense partially false; rather, to be oppressed one had to be without choices or opportunities, as is the case with black women.

Furthermore, hooks explains that feminists slogans such as “organize around your own oppression” delivered the much-needed excuse white women required to further disregard the inconsistencies that existed between black women and white women in social status. Moreover, the
ideals addressed within *The Feminine Mystique* coincided with the official start of the second-wave of feminism, amidst the growing concerns surrounding the Civil Rights Movement and anti-war protests.

**Black Feminism**

Another branch of feminism, black feminism, can trace its origins to that of the Black Power Movement. Black Power, when it began, was just a slogan (after the shooting of James Meredith during the March against Fear) that soon took on a life all its own. The focus of the Black Power Movement was to enable blacks to have autonomy, especially political independence from their “white oppressors” and others who were deemed incompatible with the beliefs of the movement (Black Nationalism and Black Separatism). Although the Black Power Movement and those within the Black Panther Party promoted the liberation of the black community, their motives and actions were primarily meant to uplift black men, not women. As Kimberlé Crenshaw notes, “Black women are frequently absent from analyses of either gender oppression or racism since the former focuses primarily on the experiences of white women and the latter on black men” (Crenshaw, 1989). Therefore, women of color could find hope neither within the feminist movement nor within the Black Power/Black Panther Movement. This posed a problem for black women as they had concerns that needed to be addressed as well.

Black women found themselves lost and without a place within either movement. The concerns of black women could not be taken seriously by white feminists due in part to the fact that many white women could not empathize with women of color. Preoccupied with their own agendas related mainly to reproductive rights and workplace equality, white women did not have the ability to analyze society through the political and racial lenses needed for women of color. In addition, many black men, including those active in the Civil Rights Movement, could not and did not want to see “implications of sexual politics in black women’s lives” (Hull, et al., 1982). The black man’s identity rested within his power, masculinity, virility, and self-worth, all of which were dependent on the black woman since he was not permitted to exude any of these characteristics anywhere in white society. Therefore, interactions with women and interactions at home were his main outlets for expressions of black masculinity, and oftentimes he had to overcompensate for not being allowed to be a man by exacting his will over his woman. It is thus not astonishing that
black women were unable to receive support from their male counterparts. An article published in the Massachusetts Institute of Technology school paper states that:

> Freedom was equated with manhood and the freedom of blacks with the redemption of black masculinity. Take, for example, the assumption that racism is more harmful to black men than it is to black women because the real tragedy of racism is the loss of manhood; this assumption illustrates both an acceptance of masculinity defined within the context of patriarchy as well as a disregard for the human need for integrity and liberty felt by both men and women (Massachusetts Institute of Technology, npg.).

As mentioned earlier, the primary focus of the movement within the black community was on the betterment of men. But this way of thinking did not help in any way the women of the black community. Bell hooks (2000: 238-40) argues that black men have a fascination with masculinity and have a historical tendency to romanticize the role of man and how one can attain it; they have not evolved in regards to the social movements enacted to uplift the black community, specifically black women. For example, Lutie Johnson (the main protagonist of Ann Petry’s The Street) is brought down and/or looked down upon by all of the male figures in her life. Her husband, feeling emasculated because he could not provide, turned to the comfort of another woman who would look to him for safety and shelter. Her father was a gambling man who resorted to drugs and sold hooch out of his apartment with his young girlfriend. Boots and Junto, only saw her as a sexual being to be used for pleasure and monetary gain. And the superintendent of her building only lusted after her and wanted to use her body for his pleasure despite her reluctance towards him as a person. As they are continually beaten down by white society and forced to repress and/or censor themselves, these women must find some way to lift themselves up in their minds and in their community.

**Womanism**

Although black feminism offered more solutions than that of its white counterpart, there were still issues that the movement could not address. Carmen Mojica argues that a “womanist” is one who is devoted to the existence and completeness of all people, including men. Where feminism and even black feminism supports female independence, womanism promotes universalism (Mojica, 2011).

> Although she has sometimes used the terms black feminist and
womanist interchangeably, Alice Walker defines the term womanist as:

A woman who loves other women, sexually and/or non-sexually. Appreciates and prefers women’s culture, women’s emotional flexibility (values tears as natural counterbalance of laughter), and women’s strength. Sometimes loves individual men, sexually and/or non-sexually. Committed to survival and wholeness of entire people, male and female. Not a separatist, except periodically, for health. Traditionally Universalist… Loves music. Loves dance. Loves the moon. Loves the Spirit. Loves love and food and roundness. Loves struggle. Loves the Folk. Loves herself. Regardless (Walker, 1983a: 45).

Walker’s definition of womanism allows for a deeper understanding of women’s literature, especially as it relates to female roles and empowerment. This is particularly true in lesbian literature, which focuses on the relationships between women, both sexual and nonsexual. This can be seen in Walker’s novel *The Color Purple* with Celie’s romantic as well as platonic relationship with Shug Avery and in the platonic relationship between Sophia and Celie in Toni Morrison’s *Sula*. According to Fraile-Marcos (2000), *Sula* is characterized by Barbara Smith (1977) as a lesbian novel, “not because [the] women are lovers, which they are not, but because in the novel Morrison is critical of the heterosexual institutions of marriage and the family, and because black women’s autonomy and bonding [is portrayed]” (Fraile-Marcos, 2000: 71-92).

Sojourner Truth’s 1851 speech “Ain’t I a Woman” also gives rise to the ideals of womanism by criticizing the American public for failing to realize the difficulties faced by not only black men, but black women as well. As Mary Butler notes, the speech expressed concern about the black feminist movement’s future, fearing that by its end the plights of women (both black and white) would not be considered in regards to the political rights of women (M. Butler, 2016). Sojourner Truth’s entrance into the feminist argument is significant because of the dual roles in which black women exist within society: they are women, and yet they are hard workers (roles that are stereotypically associated with men). As stated in her speech, she was just as able to work like a man, and could work harder than any man if she put her mind to it. She was just as capable, if not more, at working and earning a way as any man and she had done, as expressed in her speech, when she was still a slave working in the fields (Truth, 1851).

Like her predecessor Truth, Frances Harper gave a rousing speech
to the members of the National Women’s Rights Convention of 1866 in which she insisted on equal rights for women, specifically black women. Her speech for women’s rights inspired the poems she published in a volume of collected poems entitled *Sketches of Southern Life* (Hine, et al., 2011). In a speech given after her husband’s death, she says that being at the mercy of men and having nothing left to her was the catalyst she needed in order to see that she too had been wronged and could identify with the women of the feminist movement. At the Eleventh Annual Woman’s Rights Convention in New York of 1866, Harper (as quoted in M. Bacon, 1989) said,

> I did not feel as keenly as others that I had these rights in common with other women… Had I died instead of my husband, how different might have been the result? By this time he would have another wife, it is likely; and no administrator would have gone into his house, broken up his home. (as quoted in M. Bacon, 1989: 21-43)

Like many other women, Harper felt that she was treated unjustly for simply being born a woman. Just as Sojourner Truth had stated in her speech “Ain’t I a Woman”, Harper felt that she too was entitled to the same rights as men if she was able and willing to work just as a man would.

This sentiment echoes through the waves of black feminism and serves as the basis for activist and author Anna Julia Cooper. Cooper was an educator, an intellectual, and an activist. Her academic success and work ethic only further affirmed her belief that with the proper tools anyone could achieve the same accomplishment. Although more commonly known as a term coined by author Alice Walker, Cooper is credited with the early origins of womanist theory in regards to the fundamental concepts of the theory and its relation to feminist philosophy. In LaRese Hubbard’s (2010) essay “Anna Julia Cooper and Africana Womanism: Some Early Conceptual Contributions” Hubbard states that Cooper did not make a formal announcement to her feminist approach (womanist theory), but that she is responsible for the key concepts instrumental to its theoretical being (2010: 31-53).

**The Street**

**Feminist Roots**

In a review of *Black Women’s Intellectual Traditions: Speaking Their Minds* by Kristin Waters and Carol B. Conaway, writer Jacqueline Ba-
con explains that when most encounter black feminist literature they are unaware of the historical context of the argument(s) being made. She notes that, for some, these pieces of literature are unique and looked at as a singular or isolated event, but this is not so. Black feminist literature has “a long history of black women’s ideas that move alongside, or in opposition to, the white discourses of feminism, liberalism, socialism, [and] conservatism” (J. Bacon, 2008: 584-88).

The Street

This way of thinking, that anyone can accomplish anything with the right tools, mirrors that of Benjamin Franklin, an intellectual and inventor who is credited with the concept of the self-made man. This concept is the very basis of the American Dream in which anyone who works hard enough can achieve status and success. Because of their double identities, as women and women of color, black women must strive harder in order to achieve status, or at least comfortable stability, in a society that condemns them for their race and sex. However, it is the belief in the self-made woman which motivates protagonist Lutie Johnson, a recently separated, single mother who struggles to survive in New York while raising her young son in Ann Petry’s novel The Street. Historically, women have always been marginalized as the lesser sex in politics, education, and in the workforce. This is especially hard for women of color as they are treated as inferiors in comparison to their white counterparts.

This is the dilemma for protagonist Lutie Johnson, who embodies the epitome of the American Dream disciple. “Lutie’s hard work is driven by her belief that it will bring her out of poverty and into better situations in life”(Petry, 2014). Lutie believes in this wholeheartedly after overhearing Mr. Chandler, her former employer, state, “Richest damn country in the world…Hell! Make it while you’re young… Anyone can do it” (Petry, 2014: 42). His comment was in reference to Benjamin Franklin, who believed that if people would simply lift themselves up by their bootstraps they could successfully make it in America.

Lutie’s faith in this white-society-imposed dream is so unflinching that she does not consider whether or not the American Dream is possible for a black woman. The Street’s status as a feminist novel emerges from Lutie’s fight to rebel against the society that has failed her and her son.

Her journey begins with her realizing that the first part of her
American Dream, the American nuclear family, is not achievable. Her out-of-work husband cannot find work anywhere, cannot keep money, and cannot remain faithful to his wife. The latter occurs because of his inability to provide as a man should; it is the traditional belief that it is to be the man who provides for his family. Additionally, it was considered to be the obligation of the male figurehead to work, earn a living, and provide food, shelter, and protection to his family, and servants should he own such persons. This paradigm, already in practice throughout white society amongst white males, has propelled fascination and resentment of white manhood within the black male community. This traditional white model of men’s and women’s roles, however, is not practiced in the Johnson home, as times and expectations have changed. During the time period of The Street, black men were struggling to find employment and/or earn enough money to support their families. If a black man found work, the expectation was that he would make less than a white man.” Additionally, it was foolhardy for black men to hope for advancement in jobs as they would be seen as lofty, presumptuous, and covetous, which was deemed inappropriate for men of their status and color. One might dare to say that for a black man to even expect to have the equalities of his white counterpart during this time period was a form of lurid recalcitrance.

Furthermore, it was difficult for black men to find work. Black women were becoming more and more qualified and taking over many jobs. Rather than hire a butler, nanny, and maid, white families could instead hire one black woman to do the work of three people for the salary of one. With his inability to provide, the black man’s reliance on his wife’s income created questions of his masculinity. This would lead him to believe that he could only salvage his lost manhood through extramarital affairs.

Disappointed in the breakdown of her marriage, Lutie takes her son, Bub, to Harlem in the hope of raising him away from the negative influences of her a philandering husband and a grandfather who sells hooch with his girlfriend. Rejecting her family, she retreats, leaving behind any and all things that would prove to be a bad example (her father, his girlfriend, and her cheating husband) on her young son. Lutie is well aware of how an environment can hold sway on a person’s choices, opportunities, and quality of life. She hopes that by removing her son from a lifestyle wrought with deprecation, she will strengthen their chances at making a
better life.

Despite the negative aspects of her life that compelled her to leave, upon arriving in Harlem, Lutie struggles to feel positive about the apartment building as well as the street that they live on. Lutie continues to try and reach for her fair share as she works while also studying for an exam that she believes will help her acquire a decent, well-paying job as a secretary. Despite her best efforts, the environment, as well as white society, plays a major role, as do her own choices, in why she is not able to get ahead in life. Her environment, the street, is depicted as a bleak place; it is devoid of all light and has the atmosphere of being perpetually dirty despite all efforts to clean it. Furthermore, the very atmosphere of the street and the buildings that reside there give off the feeling of impending doom. Lutie can feel the walls closing in, and can feel herself struggling to make room for herself and her son whilst waiting for the proverbial other shoe to drop. “And Lutie thought no one could live on a street like this and stay decent. It would get them sooner or later, for it sucked the humanity out of the people – slowly, surely, inevitably” (Petry, 2014: 229).

In addition to the physical environment, one must also look at how the social and societal environment shaped Lutie’s choices and influenced the outcomes of struggles she and Bub have endured. She chose to leave home and live with her father and his girlfriend rather than staying with her husband or demanding that he leave. This is a prime example of how the social environment influenced her choice. Even though Lutie was the sole provider for the house, and she paid for the mortgage, food, and other necessities on her own with no help from her husband, she could not demand that her husband leave her house. The Street is set during the era of World War II, and during this time, whether employed or unemployed, men still ran the household. Asking her husband to leave was not an option that Lutie could be realistically consider or carry out to fruition.

Another of Lutie’s choices was her desire to leave her father’s home where he sold hooch to vagrants, criminals, and his young girlfriend. Lutie knows what her father is doing is wrong -- he does not have a steady, respectable income, and is complacent with getting by through illegal means. This is not the life she wants to live and this is not the example that she wants to be set for her son. She therefore chooses to go to a place where she has no connections, no friends or family, in the hopes that this new place “devoid” of evil influences will provide a better envi-
ronment for Bub. Although the choices made by Lutie were done in good conscience, the society where Lutie and her son reside will conflict with Lutie’s plans for their futures. No matter what Lutie decides to do, she is propelled into the path of destruction. One example can be seen when Lutie is asked to become a paramour of sorts to Junto, the older white man who owns most of the buildings frequented by the black community (including a bar and most of the apartment buildings on the street where Lutie lives). Lutie refuses his offer as she feels it to be beneath her to be a sex worker to any man, especially a white man. Lutie is a woman of morals and, naively, feels that she can get by with her acquired skills and education.

The biggest choice that she makes in the novel will thrust Lutie over the dangerous edge she has been heading toward throughout the entirety of the novel. Bub is caught up in some trouble, a matter of trifling with the mail of the building’s residents. This could have been cleared up entirely if Lutie Johnson had opened a letter she received that same day, presumably from the Children’s Court. If Lutie had read the letter herself, she would have seen that the letter was meant to inform her that, although Bub’s tampering with the mail was a federal offense, Bub would have been let off with a warning as he is a minor. But Lutie fears that Bub will end up like all the other black boys, in jail with no hope for a future and lost to the system created to trap them, and this fear is only heightened by this unopened letter. “She held the crisp, crackling white paper in her hand. And they recognized it for what it was—a symbol of doom—for the law and bad trouble were in the long white paper. They knew, for they had seen such papers before” (Petry, 2014: 367). Because of this crippling fear she refuses to open to the letter, allowing her fear-induced imagination to push her into thinking the worst. Unaware that upon appearing in court the charges will be dropped because Bub is a minor, she believes that her son will be lost to her forever, and so she goes to find a lawyer. Because Lutie did not read the letter and is naïve to legal matters, she is tricked by the lawyer into believing that she needs a large amount of money to pay his fees in order for her son to be freed. “And then, as the case unfolded, he began to wonder why she didn’t know that she didn’t need a lawyer for a case like this one. He went on scribbling notes on a pad” (Petry, 2014: 368). Desperate for money she goes to Boots in the hopes that, as a friend, he will loan her the money and let her pay him back.

“Lutie, being low-income, goes to Boots Smith to borrow money, but
instead of getting help, she murders him out of fear. While this act could be seen as one where she asserts herself and is empowered, it is an act motivated by distress rather than strength.” (Deshmukh, 2015: 4).”

As Deshmukh argues, she has chosen to let fear lead her through life’s decisions. Throughout the novel, Lutie Johnson makes a series of choices in response to the environments and situations that she and her son are in (within the frame of traditional masculinity and disempowered femininity). Her feminist intent is evident in her reaction to her husband’s infidelity and her decision to leave her father’s house because of the negative influences he and his girlfriend imposed on Bub. Although a pragmatic decision, there is still feminist intent in her choice to be independent instead of returning to her husband’s home. Despite the outcomes being the opposite of what she had intended or expected, Lutie’s choices still matter in that she chose not to give up and be beaten down by the environment around her. In other words, the environment acts a catalyst to induce an independent decision. Lutie chose to fight for something better because she knew she deserved it, thereby modeling the ideas of black feminism.

The other female characters also embody some elements of black feminism, although in different ways. Min’s character is a traditional depiction of the quiet and meek woman who is eager to please. Like a lot of women of this time, Min has a complacent countenance. She has been taken advantage of by men throughout her life, but for the first time, she is content with her life. She works, is able to put money away for future use, and is able to do things for pleasure such as shopping. But unlike Mrs. Hedges and Lutie Johnson, Min has a deep fear of what life will be like without a man by her side. Although she has no true love for William Jones, and he too has none for her, she clings to him still as she realizes she could lose him to his obsession with Lutie Johnson. Rather than face a life where she will have to work twice as hard in order to survive, she conceives a plan to ensure her place in William Jones’ life.

Min is not entirely anti-feminist though. She is opposite to that of Mrs. Hedges, yet she still struggles to survive just as Mrs. Hedges does. Min accomplishes this through her symbiotic relationship with William Jones. As stated before, Min is able to enjoy a comfortable life while still maintaining her independence due to the fact that she shares a home with William Jones. Jones receives food and, later in the novel, a clean home. Furthermore, during the final moments of the novel, Min finds strength
and is able to come into her own. This is essential for her as a black feminist character in that she has decided to take back control of her life in order to not fall victim to the wills of men. This is evident in her scheme to stay in the William Jones’ home through the use of voodoo spells.

While the females struggle to achieve the rights contained in black feminism, the male characters take on traditional patriarchal models to challenge them. Boots Smith is Junto’s henchman as well as one of the many men who admire Lutie sexually. Although Junto has plans to make Lutie his sexual companion, Boots feels that he can have Lutie anyway. He does not see Lutie as a woman, or even a person due to his belief that women are inferior to men. To Boots, the matter of who she will and will not sleep with is not a subject that is up for questioning; she is a black woman admired for her body, by both black and white men, and there is no other reason for her existence than to supply pleasure to those above her.

The building’s superintendent, William Jones, is one of the darker men in the story, both in appearance and in spirit. William Jones has grown tired of his pseudo-wife, Min, and wants someone who is more appealing. Lutie is young, well-groomed, and has a spirit within her that appears brighter than that of the quiet woman Min. Jones lusts after Lutie and imagines himself having her, owning her in every way possible. He also thinks that Lutie lusts after him and is simply playing hard to get. It is this patriarchal mentality, as well as an element of insanity, that make him a negative, if not dangerous, influence in Lutie’s life.

Having explored the ways that environment, society, and one’s own choices can influence one’s life, another salient subject to explore is where this novel falls in terms of feminist literature. In the previous section, I discussed the differences and similarities in second-wave feminism, black feminism, and womanism. Based on the terms given, Petry’s novel cannot be considered a womanist novel, but instead a feminist novel that crosses over to that of a black feminist novel. In order for The Street to be considered a womanist novel, it would need a positive, male figure within the story. The primary focus of womanism is to commit oneself to the community as a whole in regards to its well-being. In this instance, the community as whole includes both men and women. There has to be positive male and female figures striving for the same cause, the betterment of all and not just one particular sex. This is simply not the case in The Street.
Excluding Bub, a mere child, there are no male characters in the novel that can be depicted in a positive light. Lutie’s husband, her father, Boots Smith, William Jones, and Junto are all seen as either evil, or as men who offer no positive future for her and her son.

Petry’s *The Street* can best be described as a feminist novel and serves as a prominent milestone for the black feminist movement. It was the first successful novel authored by a black woman that focuses on a black, female protagonist. Additionally, *The Street* sold over one million copies, a feat unheard of for a black, female author in 1946 (Jimoh, 2002). Traditionally, female protagonists in black literature were not seen as self-sufficient. Although they could certainly work and take care of the home and children, it was inconceivable to depict a positive, black woman living on her own and surviving. Lutie Johnson represents a new type of female protagonist for black literature (Jimoh, 2002).

Black women are often stereotyped as women of loose morals, or as the archetypal, angry black woman. Another depiction of black women to be considered is that of the masculine female character: a woman unable to hold any real power in society due to her sex, who then must behave in masculine ways to compensate for what she is lacking. We see this in the character of Mrs. Hedges, Junto’s right-hand man, a black woman scarred from a horrible fire, but useful in her strength and resilience. These particular qualities are what makes her valuable to Junto. Mrs. Hedges is described as rather large and crafty. Even while living off of what she could collect from the streets to sell she was thinking of ways to maximize profit and get ahead in life. She was proud and able to live on her own without the help of a man, and she did not want for one either. Despite this, Mrs. Hedges is not seen as a positive character. She is portrayed as a madam who runs a whorehouse, although it is a very tasteful one, from the confines of her apartment.

**The Color Purple and “Everyday Use”**

**Historical Feminism**

In an article entitled “The Second Wave: Trouble with White Feminism,” Jessie Daniels states that “any discussion of second wave feminism must start with *The Feminine Mystique*” (npg.; 2014). Betty Friedman’s (1963) *The Feminine Mystique* has been attributed to the birth of the second wave feminist movement. At that time, women were tired of their roles being
regarded as strictly within the home. They wanted a new form of independence that was, until Friedan’s work, an unrealistic idea that could not be seriously entertained. Women wanted more than the dream house with the kitchen of tomorrow. They wanted more than the average 2.5 children and wanted to be seen as more than helpmates to their husbands. In his discussion of Friedman’s work, Daniels notes:

Friedan’s argument in the book is often boiled down to her famously coined phrase, the problem that has no name, which she used to articulate the malaise felt by college-educated, middle- and upper-class, (heterosexually) married white women who were bored with leisure, with the home, with children, with buying products, who wanted more out of life (Daniels, npg.; 2014).

There had to be life outside rearing children, keeping home, and giving moral and sexual support to their husbands. In 1963, the year Friedan published her landmark novel, the idea that a woman could have something more than home and family was radical by many traditional definitions. According to Friedan, the more that women sought after were careers. Friedan’s forward way of thinking shaped the lives of many white women and offered them the chance to be able to do more in the world.

But Friedan’s ideal was not perfect and had its faults. The Feminine Mystique failed to address the problem of who would have to step in and care for the children, as well as the household chores, that were being left behind while women joined the workforce. And as Daniels observes, The Feminine Mystique failed to account for women “[whose] highest aspirations included neither men nor children” (Daniels, npg.; 2014). Bell hooks also attended to the failures of Friedan in her book Feminist Theory: From Margin to Center (2010), and stated that:

She did not discuss who would be called in to take care of the children and maintain the home if more women like herself were freed from their house labor and given equal access with white men to the professions. She did not speak of the needs of women without men, without children, without homes. She ignored the existence of all non-white women and poor white women. She did not tell readers whether it was more fulfilling to be a maid, a babysitter, a factory worker, a clerk, or a prostitute than to be a leisure-class housewife. … When Friedan wrote The Feminine Mystique, more than one-third of all women were in the work force. Although many women longed to be housewives, only women with leisure time and money could actually shape their identities on the model of the feminine mystique (hooks, as quoted in Fetters, npg.; 2013).
Any woman who has used her free time on the weekends and even during the work week can attest to the fact that keeping up with household chores and maintenance is hard work that should not be taken lightly. In addition, raising children is hard, back-breaking work at times, and it takes the most dedicated of souls to make it a career. With that being said, if white women abandoned their posts at home and entered the workforce in order to be equal to their male peers, who would care for the home?

In 1963, the answer would have been “mostly poor, working-class, women of color” (Daniels, npg.; 2014). Daniels goes on to further explain this reasoning by using her own mother as an example. She states that before her second marriage to her father, her mother was unable to live out her dream as a housewife.

She imagined something different for me. When I would ask her to teach me something having to do with housework – how to do laundry, for example – she’d shoo me away, with a dismissive “you don’t need to know how to do that” (Daniels, npg.; 2014).

Her mother, like many women of the time, assumed that if she allowed her daughter to work outside of the home, then she would obviously seek assistance from the colored help.

Friedan thought of “the problem with no name” as a universal plight, but in actuality, it was really only the plight of “an elite segment of women” (Daniels, npg.; 2014). The issue is that Friedan positions the lives and issues of white women at the center of every woman’s experience when in fact it is only the aspect of a certain few. It is because of this issue that black feminism was born, in addition to the issues that black women endured with their male counterparts within the Black Arts Movement and the Black Panther Movement.

The Color Purple

In his 1962 speech, Malcolm X states, “The most disrespected person in America is the black woman. The most unprotected person in America is the black woman. The most neglected person in America is the black woman.” These lines could not be truer than in the case of the female characters in Alice Walker’s *The Color Purple*. Published in 1982 Alice Walker’s *The Color Purple* is an epistolary novel that focuses on the life of Celie, the protagonist, as well as two other women, Sophia and Shug Avery. Like Ann Petry’s *The Street, The Color Purple* explores the themes
of racism, sexism, and the disruption of gender roles. It is in this regard that Walker’s novel is a feminist protest novel. The women within the novel seek to liberate themselves through the rejection of societal norms (subservient housewives who are pliant to the wills and desires of men). This rejection of patriarchal expectations is evident in the portrayal of Celie’s liberation from her abusive home life, Sophia’s aggressive nature and her determination to not bend to any one person’s will, and Shug Avery’s lesbian lifestyle as well as her initial unwillingness to marry in order to pursue a career.

Having been born in an abusive home combines with her timid and insecure nature to propel Celie in the cycle of abuse that she endures when she is sent to live with Albert, or Mister. She is raped by her father, who we later find out is only her stepfather, and bears two children under him who are taken away to prevent emotional harm to Celie’s mother. Celie is then “sold” into a loveless marriage to a begrudging Mister, who in actuality had wanted to marry her sister Nettie, but in the end got stuck with the other one. Mister has a farm, a young brood of children of his own, and a big house in need of tending. This is reason Mister took Celie on, echoing her father who says: “She ugly…But she ain’t no stranger to hard work. And she clean. And God done fixed her. You can do everything just like you want to and she ain’t gonna make you feed it or clothe it” (Walker, 1982: 14).

It is here that we as readers should take note that the men speak of Celie as if she is not even a human. Women were considered ‘others’ during this time period (1910-1940, rural Georgia), and were treated as property much like slaves on the auction block. In this instance, we can see that although this lifestyle was forced upon her, Celie does not see herself as having certain expectations imposed on her; this life is all she has ever known, and therefore, she does not see the need to liberate herself from her self-imposed silence. Until she meets Shug, she is mentally and physically cut off from anyone would want to help her or has tried to help her (her sister Nettie). The only person she can actually rely on and call upon to speak her mind and heart is God.

In a sense, her letters to God are a form of resistance, although subtle and unknown to anyone at the time, Celie’s being able to read and write is an act of resistance. Although it was not uncommon for young girls to be educated, as is the case with Celie’s sister Nettie, Celie was not
supposed to be educated in the ways of reading and writing. As the oldest
girl in her family household, and a girl who had been “ruined” by pregnan-
cy, Celie’s education had not been a concern. No one expected her to be
able to read and write; her only concerns, in the eyes of her male superi-
ors, were to cook, clean, and raise children. Her learning how to read and
write is in itself an act of defiance because she is taking some part of her
life into control. She is also using this form of control as an escape outlet
for her abusive surroundings. Despite the fact that Mister tried to exercise
every ounce of control he had over Celie by sending her sister away and
keeping Nettie’s letters hidden from her, Celie’s secret letter-writing gave
her the chance to have some autonomy in her life.

Violence is a reoccurring theme throughout the novel within love-
less relationships like that of Mister and Celie, and even within relation-
ships full of love like Harpo and Sophia. Although he truly does care for
her, Harpo beats Sophia because that is what is expected of a man. A wom-
an is supposed to mind her husband, and the only way to make a woman
mind is to beat her. Sophia, however, is not the average woman. She is a
prime example of a feminist character who takes it upon herself to defend
herself. Unlike the other women in the novel, she is not afraid to physical-
ly fight back and does not care if her attacker is a woman or a man, black
or white. Although commendable in that Sophia will not allow herself to
be the doormat of society, her aggressive nature gets her in trouble with
the law when she speaks up in defense of her children and herself toward
Miss Mille, a prominent white woman who is also the wife of the mayor.
Nevertheless, Sophia fought the system and pledged that she would not be
beaten down again by man or any person within the patriarchal system.

Just like in Petry’s The Street, the environment plays a role in The
Color Purple. Although free, blacks are still slaves to white society in the
novel and are made to realize their place – which at that time was to be
subservient to white people as maids and servants. White people did not
want an uppity black woman who thought that she was beyond her place
in society talking back to them. When asked, “Would you like to work
for me,” instead of feeling grateful for the offer to work in Miss Millie’s
home, Sophia was insulted and had the audacity to say so. This put her in
a defensive state when onlookers felt insulted by her disrespectful manner.
In this case, the environment seeks to keep control over Sophia and does
so by punishing her for her brazenness. Sophia is imprisoned and kept
from her children. Upon her release she is expected to work for the same woman who she insulted and was consequently sent to jail for defying.

In the article “Cultivating Black Lesbian Shamelessness: Alice Walker’s ‘The Color Purple’”, author Christopher S. Lewis states that “Black lesbian and lesbian-allied writers brought attention to the fact that sexualized shame often dictates what is representable in African American literature” (Lewis, 2012: 158-75). This idea is referencing the opinion expressed by E. Patrick Johnson in which he argues that the “representation of effeminate homosexuality [within black writing is] disempowering,” (as quoted in Lewis, 2012: 158-75). Alice Walker proves that this is not so in her character Shug Avery. Shug is a singer and a former love interest of Mister’s who’s life openly rejects the expectations imposed on women.

Although a natural thing, as well as an act that is heavily portrayed throughout the novel, the act of sex itself is discouraged with regard to women. For men, sexual desires are seen as normal and they are encouraged to partake in such acts that are pleasing to them. This is not so for women. As I mentioned before, women are not truly seen as equals to men, let alone human beings, and their sexual appetites are regarded with shame. Additionally, for women to step out of their imposed, societal norms and to embrace their sexual natures and/or desires is regarded as unnatural. Having said that, one must consider why Alice Walker would choose to portray a lesbian relationship in her novel. As stated earlier, Walker’s definition of womanism created room for discussion in understanding women’s literature, especially as to how it relates to female roles of empowerment. This is evident in lesbian literature that focuses on the relationships between women, both sexual and nonsexual. This can be observed in Celie’s romantic as well as platonic relationship with Shug Avery. Shug’s character, I would argue, is meant to represent the sexual liberation of women within the feminist movement. In a sense, Walker is trying to remove the shame imposed on sex and the exploration of one’s sexual conscience.

This is extraordinary in that not only is Shug rejecting societal norms of heterosexual relationships, but she is also embracing the myth that black people, especially women, are highly sexual creatures. Historically, blacks were portrayed as creatures who could not contain their sexual desires (which made them dangerous). Black men wanted to rape white women, and black women wanted to seduce white men. To combat
this popular opinion, blacks took to adopting an air of respectability in that they censored themselves. Blacks behaved and spoke so as to not draw unwanted sexual attention to themselves. Women especially were under high scrutiny as they were regarded as temptresses. Instead of continuing this tradition or trying to shy away from such attention, Shug embraces it. She is best described as a lover: she loves to love and loves to be loved. Instead of finding shame in her sexuality, she finds power from it and is able to liberate herself from the stifling confinements that most black women find themselves in.

Although Walker’s and Petry’s novels share some attributes such as gender roles, racism, and feminism, there is a distinct difference between the two protest novels. Walker’s novel is a protest novel because it rejects the patriarchal expectations that are imposed on black women and their bodies. Unlike Petry’s *The Street*, Walker’s novel focuses on the relationships between women within the novel and how these relationships help to heal and enlighten each character.

Shug and Celie’s relationship, though strange, is one of healing, love, and friendship. Walker’s purpose for portraying such a strong bond between the two is essentially for the uplifting of women in general, but specifically Celie. Strong bonds among women, black women especially, have the power to heal the emotionally and physically wounded, as well as the power to give courage and strength to those that society would perceive as weak. Shug teaches Celie to see herself as beautiful and to see her own worth, something that she is sorely lacking due to the emotional and physical abuse she has endured. When Shug leaves to be with a younger man, Celie must learn that in order to survive in a cruel world she must rely on herself, and to do that she must find strength and love within herself. In this regard, Shug acts as a catalyst that allows for Celie to harness her own potential and her own strength and leave Mister.

“And then, just when I know I can live content without Shug, just when Mr. ___ done ast me to marry him again, this time in the spirit as well as in the flesh, and just after I say, Naw, I still don’t like frogs, but let’s us be friends, Shug write me she’s coming home. Now. Is this life or not? *I be so calm.* If she come, I be happy. If she don’t I be content. And then I figure this the lesson I was suppose to learn” (Walker, 1982: 99).
“Everyday Use”

Originally published in 1973, Walker’s short story focuses on three women and their struggle to find and/or celebrate their identities, as well as their heritage, during the trying time of the 1960s and 1970s. During this time, blacks were desperate to find themselves; they were children of Africa who had lost themselves and were in need of guidance from the various movements taking place (Black Arts Movement, Black Panther Party, Civil Rights Movements, and Black Nationalism). It is during the height of these movements that Walker places us within the story. The narrator, who is not given a name other than Mama, and her young daughter, Maggie, are awaiting the arrival of Mama’s oldest daughter Dee, who left home in order to find herself and escape the life her mother created. While gone, Dee gets an education and changes her name in order resist the oppressive lifestyle imposed on blacks by white society. This is evident when her mother calls her by her name, and Dee responds that she is no longer Dee but “Wangero Leewanika Kemanjo.” Like others of the various black movements, she does this in order to distance herself from her slave past and create a new life separate from “the people who oppress [her]” (Walker, 1973:271).

Although Dee goes through this metamorphosis in order to find her authentic self, she only succeeds in isolating herself. She is not being authentic: she is playing dress-up. She is so worried about being black, that she turns into something unrecognizable and becomes mentally and spiritually lost. This is most evident when she asks her mother for two quilts she finds in her mother’s trunk. Upon learning that these quilts will go to Maggie, Dee is outraged. How can something so precious be given to someone who will only spoil it with everyday use? A hand-crafted quilt is like an old photo album. Patches, like photos, hold memories of the past. For Dee, the quilt represents an extraordinary practice of art; antiquated with its unsophisticated characteristics and qualities, but attention-grabbing nevertheless. Furthermore, the quilt embodies Dee’s heritage. Not as a time piece that she finds in a store and has to buy, but as a family heirloom that has been passed down like old portraits of aristocrats of blue-blood families. If left with Mama and Maggie, it won’t be preserved as the prized possession that Dee sees it to be. They would actually use it; wear it out; damage it. But with Dee, it will be protected so that it may be bestowed to the next generation.
In some respects, Dee is like Sophia from *The Color Purple*. Although free of her perceived chains, her feminist liberation does not give her the results or the satisfaction that she is seeking. As Tuten (1993) observes, instead of finding her heritage, she rejects it (her mother, her sister, and the everyday use of the quilt).

Dee’s feminist liberation, as well as her aggressive attitude toward the life she sees as beneath her, is similar to that of Sophia in *The Color Purple*. Both Mama and Maggie express resistance in their own ways. Maggie was badly burned in a house fire as a child and was kept hidden away because of her appearance. However, Mama’s desire to protect Maggie from the outside world has made her timid and subservient in that she cannot stand up for herself and attempts to make herself invisible. “She will stand hopelessly in corners, homely and ashamed of the burn scars down her arms and legs…”’How do I look, Mama?’ Maggie says showing just enough of her thin body enveloped in a pink skirt and red blouse for me to know she’s there, almost hidden by the door” (Walker, 1973: 268-9). Maggie is quiet and does not like to intrude upon the goings on of life, but when Dee states that she wants the quilts, she speaks up, albeit nonverbally. She is defiant in this instance, expressing outrage that her sister Dee, the one who has everything (beauty, education, and a will of her own), should get something that she truly desires. It is here that we learn that Maggie does have a will of her own, but does not feel the need to exert unless it is for something of true value to her. For her it is the quilts. These are not mere scraps of fabric used to fend off the cold, and they are not pieces of art meant to be admired from a distance as if in a museum. The quilts symbolize the enduring bonds amongst family and the women of different generations. As Houston and Pierce-Baker (1985) note, the quilts are the last piece of history that they have in order to connect with the past and move on into the present.

Mama’s resistance stems from her rejection of societal gender roles. Instead of trying to marry and rely on a man in order to succeed in life or simply get by, Mama rejects traditional housework and other feminine roles in order to work the land herself. She has hands and legs that work and she provides for her family just as any man can. Mama is proud of this and even more so of her appearance. Because she has chosen a life of hard labor rather than the more “comfortable” life of housework, she has taken on the appearance of a man. She is Hardy, wears men’s clothes
(as it is the practical thing to do for her chosen line of work), and has even taken on the rough personality of a man. Additionally she has taken on the male role of protector. It is up to Mama to be Maggie’s voice as well as to make life choices for her as a man would do.

Conclusion

This article has explored the idea of the woman behind the man. It is immoral and unjust that men should have such freedoms as education, voting rights, job opportunities and the like while women are meant to be helpmates, shapeless figures in the background, in order for men to feel good about themselves. Furthermore, it is absurd to reduce a woman to nothing more than a housewife meant to raise children and not her voice in politics and business. Women were created for much more, and have the potential to be much more as is the case with the women of The Street, The Color Purple, and “Everyday Use.” Each author in her own way uses her female characters to express feminist thoughts and feelings and how they have evolved.

Petry showcases this through the subtle subversionary acts of Lutie Johnson in her struggle for independence in a society that longs to oppress her despite all her efforts and Walker demonstrates how Shug’s lack of shame in her sexual exploits reimagines the imposed censorship on black women in addition to giving life to the very definition of womanism within lesbian literature culture. This is evident in Celie’s awakening and evolution in mind, body, and spirit via reading and writing, sexual exploration, and confidence gained from her friends and sister.

In contrast with the spiritual awakening observed within Celie and Shug in The Color Purple, in her short story “Everyday Use,” Walker explores the vast complexities of black womanhood through Dee and Maggie. Both women struggle with their identities as black women. Dee, who only wanted to be free of her perceived shackles, loses her true self as she struggles to find her black identity: a distinctiveness she feels has been stolen from her by white society. Maggie struggles to see herself as strong and confident in spite of her disfigurement. She gains confidence through the quilt, a source of power for the women of her family, as well as through her choice to live the life that her mother lived. For Maggie, feminism and being strong was not about going out and changing who she was to fit in, but to find happiness in her simple life as she so chose.
The Street, The Color Purple, and “Everyday Use” all challenge the barriers placed on black women while opening doors for the women of both the novel and the audience to see themselves changed -- negatively or positively -- by overcoming their struggles. This paper has examined this evolution, and also how the relationships forged among black women make them stronger, both mentally and physically, and act as a catalyst for further progress in their empowerment.
References


Hull, Gloria T., Patricia Bell Scott and Barbara Smith. *All the Women are White, All the Blacks are Men, But Some of Us are Brave: Black Women’s Studies*. New York: The Feminist Press, 1982.


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Emily’s paper received a *Quaesitum* outstanding paper award.
Emily Adamic

Measuring and Monitoring Training-Induced Subjective Fatigue During a Collegiate Soccer Pre-season: A Case Study

Faculty Sponsor
Mr. Robert Townsend
Abstract
Quantifying and monitoring training load in athletes is crucial to ensure optimal competitive performance. In this case study, we assessed the relationship between training load and subjective fatigue in intercollegiate soccer over the course of the pre-season period. We did not find meaningful relationships (r<0.5) between training load and fatigue, limited by the precision of our measures. However, there may be differences in mental and physical fatigue responses between individuals. Therefore, it may be important for coaches and practitioners to differentiate between physical and mental fatigue, while accounting for individual differences, when monitoring subjective training load.
Introduction

Intercollegiate athletics impose both physical and psychological stressors upon the athletes. The type and magnitude of this stress are dependent upon the frequency, duration, and intensity of training and competition, and furthermore upon each athlete’s individual response. In turn, this imposed stress dictates the nature of the training adaptations that occur. Because performance in competitive sport is a cornerstone over other health or fitness outcomes, it is crucial that these training adaptations are purposeful and sport-specific. These adaptations run along a continuum of too little training stress (resulting in detraining) to too great training stress (resulting in overtraining and maladaptations). Optimal performance falls in the middle, a delicate balance between fitness and fatigue that results in readiness to compete. With this relationship in mind, it is crucial to design a training program that will maximize performance and minimize fatigue for competition.

In order to do this, practitioners have used numerous evidence-based methods to quantify training stress and monitor fatigue in their athletes. Training stress is quantified through training load (TL), defined as the product of training volume (duration times frequency) and training intensity. TL can be divided into two categories: 1) external TL, defined as the objective physical work performed, such as distance run; and 2) internal TL, defined as the physiological stress imposed by the external load, such as VO$_2$ or heart rate. Importantly, internal TL has direct implications for training adaptations, increasing its relevance in eliciting the desired performance outcomes. Fatigue imposed by TL can then be measured using subjective measures, biochemical analyses, or performance tests, all of which have important implications for readiness to compete. Additionally, training-induced fatigue can be reflected in abstract psychological variables such as mood, motivation, and stress. Researchers and practitioners have used combinations of these methods to manage athletes in the competitive, off-season, and pre-competitive periods for a variety of sports.

As a prevalent sport both worldwide and in the National Collegiate Athletic Association (NCAA), the physical demands of soccer have been well documented; however, the optimal methods to monitor performance and measure training-induced fatigue in this sport remain elusive. While past researchers have used a combination of objective and subjective
measures\textsuperscript{1-6}, many of these methods can be costly, time-consuming, easily misinterpreted, require substantial expertise, or have great variation either within or between individuals, all of which deem them unfeasible and ineffective. In fact, because of the diverse nature of the sport and its athletes, one single, comprehensive measure may not exist. In light of this, researchers and practitioners alike continue to search for the fewest number of measures at that are the most simple and cost-effective to use that will provide the most pertinent and useful information on player fitness and fatigue. This need for simple measures of athlete readiness becomes especially important in college soccer, where the playing season is condensed and the operating budget is minimized in comparison to professional clubs. Additionally, this becomes more relevant during the pre-competitive period, where training load is maximized and there are no NCAA-mandated restrictions on hours of training per week.

Rated Perceived Exertion (RPE) has been used as an inexpensive and convenient means to measure perceptual training-induced fatigue. RPE can be used in favor of common heart rate-based methods, which may underestimate the plyometric or anaerobic components of soccer that are crucial to performance\textsuperscript{7}. Furthermore, session-RPE (sRPE, the product of RPE and training duration, in minutes) has been proposed as a means to quantify global training stress, shown to correlate with heart rate-based methods\textsuperscript{7}. Foster et al.\textsuperscript{7} found that sRPE had a similar pattern of response to summed heart rate zones in a wide variety of activities, and Borresen and Lambert\textsuperscript{6} attributed 71\% of the variance in sRPE to these summed zones. Impellizzeri et al.\textsuperscript{4} found sRPE to be correlated not only to summed heart rate zones (r=0.54-0.78, p<0.01), but also to heart rate zones specific to each individual’s ventilatory threshold (r=0.61-0.85, p<0.01).

However, these methods come with their limitations; RPE has been shown to correlate more strongly with consciously perceptible aspects of fatigue, such as heart rate, skin temperature, breathing rate, or perception of pain\textsuperscript{6}. sRPE may not be as accurate for subjects who perform mostly high or mostly low intensity exercise\textsuperscript{6}. As well, RPE does not differentiate between the physical and mental aspects of fatigue, and mental aspects of fatigue (such as decreased mood or increased stress) may potentiate these physical responses and/or the perceived training load. This attests that age, gender, external life stressors, environmental factors, intensity of exercise, or personality types may play a role in the global RPE response.
Despite these limitations, RPE-based methods have been used with success to monitor internal TL and subsequent performance in professional or competitive club soccer athletes, but have not been examined in female collegiate athletes. Additionally, the effects of sRPE on fatigue status, including the respective physical and mental aspects, have not been well characterized. In order to further examine the merit of this simple, subjective measure of TL and how it effects both the physical and mental aspects of training-induced fatigue, we performed a case study examining sRPE versus ratings of subjective fatigue in female collegiate soccer players during the pre-competitive period. We expected to find a negative correlation between TL and readiness to play, in that as TL increased at any point during pre-season, subsequent readiness to play (reflected in the following day’s questionnaire) would decrease.

**Methods**

**Experimental Approach to the Problem**

In this case study, we monitored TL (sRPE) and subjective fatigue responses (daily global fatigue questionnaires) in three collegiate soccer players over the course of one pre-season period. We used these measures to both evaluate the chronic fatigue imposed by pre-season training and assess the athletes’ daily readiness to play, evaluating the merit of these measures to reflect both physical and mental training-induced fatigue.

**Subjects**

Three female collegiate soccer players (characterized in Table 1) participated in this case study. All players competed for the same school in the NCAA Division 1, with a minimum of 2.5 years of collegiate playing experience and a minimum of two years playing as a starter. All subjects were highly trained and injury-free (an injury that caused them to miss training) for at least three months prior to at the start of training camp (the duration of off-season training). With the exception of Subject 2, who missed two training sessions during the last week of training due to injury, all subjects participated in all training sessions through the pre-season period. All subjects agreed to study protocol prior to beginning.
Table 1. Subject Characteristics

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<td>Yrs. soccer-specific training (total)</td>
<td>9</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Soccer-specific endurance test</td>
<td>21:00 (min:sec)</td>
<td>25:00 (min:sec)</td>
<td>26:55 (min:sec)</td>
</tr>
<tr>
<td>Yo-Yo intermittent recovery level 1</td>
<td>50</td>
<td>32</td>
<td>34</td>
</tr>
</tbody>
</table>

Note: Team fitness standards, as imposed by the head coach, were <27:00 for the soccer-specific endurance test, and ≥30 for the Yo-Yo Intermittent Endurance Test, Level 1. If players did not reach these standards, they were to retake the tests before they could dress for a game.

Training Log

We monitored sport-specific training for the 2.5-week pre-season period of the 2015 NCAA soccer season. This pre-season period spanned 17 days, from the beginning of the pre-season training camp (August 5) to the season-opening competitive game (August 21). Training included on-field sessions with the sport coaching staff and weight room session with the strength and conditioning coaching staff. During this pre-season period, there are no NCAA restrictions on training hours per week, including on-field, off-field, or weight room sessions. The sport coaches and strength coach controlled all training variables; we did not intervene in any aspect of prescribed training. The following variables regarding each training session were recorded: length in minutes (encompassing both the on-field and weight training portions of the session, since weight training occurred immediately after on-field training), time of day, temperature, humidity, and heat index.
Calculations of Training Load

We calculated training load using session-RPE (sRPE). As per Foster et al., each player’s rating of perceived exertion (RPE) was recorded on a 10-point scale (Figure 1) 30-60 minutes after each training session⁷. Whole integrals or scale intervals of 0.5 were allowed. Players were instructed to provide global RPE, answering the question “How was your workout?” for the whole training session, including both on-field and weight room sessions. sRPE was calculated by multiplying RPE by the length of the training session in minutes⁷. To calculate the cumulative TL for each day, including both the morning and afternoon sessions, we calculated the sum of sRPE for each session.

![Figure 1. 10-point RPE Scale (as per Foster et al.)](image)

<table>
<thead>
<tr>
<th>Rating</th>
<th>Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Rest</td>
</tr>
<tr>
<td>1</td>
<td>Very, very easy</td>
</tr>
<tr>
<td>2</td>
<td>Easy</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>4</td>
<td>Somewhat hard</td>
</tr>
<tr>
<td>5</td>
<td>Hard</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Very hard</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Maximal</td>
</tr>
</tbody>
</table>

Measurements of Subjective Fatigue

A subjective fatigue questionnaire (Figure 2) was administered to each player at least 15 minutes before the first training session of each day, after the player had been awake and ambulatory for at least 20 minutes. Adapted from Buchheit et al.⁹ and McLean et al.¹⁰, this questionnaire was designed to assess global fatigue using a 5-point Likert Scale. For each of the seven categories, the descriptor with a score of 5 indicates the highest response for readiness to compete, whereas the descriptor with a score of 1 indicates the lowest response.
**Figure 2. Subjective Fatigue Questionnaire**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydration Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Very dehydrated</td>
<td>Could drink more</td>
<td>Very well hydrated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<table>
<thead>
<tr>
<th><strong>Caffeine Intake</strong></th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Much less than usual</td>
<td>Average</td>
<td>Much more than usual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>3</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Soreness</strong></th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>It hurts to move</td>
<td>Some light soreness</td>
<td>Feeling fresh!</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<table>
<thead>
<tr>
<th><strong>Readiness to Play</strong></th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Need more time, heavy legs</td>
<td>A little tired but can push through</td>
<td>Put me in, Coach. Rested and ready</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
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<table>
<thead>
<tr>
<th><strong>Mood</strong></th>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Horrible, don’t feel like doing anything</td>
<td>Normal, generally good</td>
<td>Great, happy, motivated, hopeful!</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th><strong>Stress</strong></th>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Super stressed, cannot focus</td>
<td>Some stress but able to focus</td>
<td>Life’s a beach. Clear mind, no stress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<td>5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sleep Quality</strong></th>
<th></th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Terrible, short and restless</td>
<td>Average, could have been longer</td>
<td>Very restful, long, like a baby</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<td>3</td>
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</table>
Players were instructed to provide an honest answer according to how they felt at the moment they were taking the questionnaire, without factoring in past or future training demands. This was emphasized in order to eliminate confounding effects if players anticipated physically demanding training sessions. Items 1 and 2 on the questionnaire were excluded from correlation comparisons due to their limited translation to training-induced fatigue.

**Categorization of Personality Types**

In order to control for differences in personality type in how they relate to perceptual TL and subjective fatigue, we administered the Preference for and Tolerance of the Intensity of Exercise Questionnaire (PRETIE-Q). The PRETIE-Q is a 16-item questionnaire as outlined by Ekkekakis et al.\textsuperscript{11} that assesses preference for and tolerance for high-intensity exercise. The PRETIE-Q has been used in college-aged females to predict the intensity of self-selected exercise (preference), as well as the time of exercise beyond the ventilatory threshold (tolerance)\textsuperscript{12}. Subjects were instructed to provide honest answers regarding their own personal exercise habits, not their habits during training or competition. As these subjects are all competitive soccer players, it is likely they approach high-intensity, structured training in a similar manner, whereas their personal exercise habits and attitudes may differ.

**Statistical Analysis**

Using Microsoft Excel, we ran correlation statistics (Pearson product moment correlation coefficients and $r^2$ values) to compare training load (sRPE) with subjective fatigue (questionnaire responses) on both the day of the training load (fatigue before training: prospective) and the day following the training load (fatigue the next day after training: retrospective). We compared TL with the following variables from the questionnaire: mean score for questions 3-7, sum of the scores for questions 3-7 (with a maximum of 25 indicating full readiness to play), subjective physical fatigue (sum of questions 3 and 4), subjective mental fatigue (sum of questions 5 and 6), and questions 3-6 individually. Based on Hopkins’ interpretation, we considered an $r$ value of $>0.5$ to be large, 0.5-0.3 to be moderate, 0.3-0.1 to be small, and $<0.1$ to be trivial\textsuperscript{13}. For questionnaire data, we interpreted a difference of $\pm 1$ SD from the mean to be meaningful.
Results

Quantification of Training Load

We found fluctuations in TL for the entire preseason period until the first competitive game (Figure 3).

![Training Load](image)

**Figure 3.** Training load and daily readiness to play (questionnaire score: sum of questions 3-7) over the course of the pre-season period (17 days). If there were two training sessions per day, the first session is shown as morning session and the afternoon session is included in the cumulative day TL. If there was only one training session per day, data are shown as cumulative day TL, regardless of the time of day that session was held. # indicates day of a pre-season exhibition game. ^ indicates the first competitive game. n=3, data are presented as mean ± SD.

Relationship Between TL and Subjective Fatigue Variables

We found trivial to moderate correlations in all of the following comparisons: TL and retrospective fatigue variables (r≤0.42, Figure 4), TL and prospective fatigue variables (r≤0.32, Figure 5), and TL and environmental variables (r≤0.37, Table 2). Differences in TL accounted for no more than 18% of the variation in any variable of fatigue status the following day. Differences in any variable of fatigue status before training accounted for
no more than 10% of the variation in TL for that day. Environmental variables, namely temperature and heat index, account for no more than 14% of the variance in TL for that day.

**Figure 4.** Correlation Summary: TL vs. Next-day fatigue variable. n=3, O=subject 1, □=subject 2, ●=subject 3, X=mean of absolute value for correlation coefficient. Absolute values were taken to calculate means in order to eliminate directionality and assess the magnitude of the correlation.
**Figure 5.** Correlation Summary: Pre-training fatigue variables vs. same-day TL. n=3, ○=subject 1, □=subject 2, ●=subject 3, X=mean of absolute values for correlation coefficient. Absolute values were taken to calculate means in order to eliminate directionality and assess the magnitude of the correlation.
Characterization of Personality Types

Subject 3 displayed a meaningful difference from the mean in preference for high-intensity exercise (Table 3), whereas Subjects 1 and 2 were similar. Subject 1 displayed a meaningful difference from the mean in tolerance for high-intensity exercise, whereas Subjects 2 and 3 were similar.

### Table 3. Preference and Tolerance for Exercise Intensity [PRETIE-Q Score (percentile rank, based on college-aged females) \(^{12}\)]

<table>
<thead>
<tr>
<th>Subject</th>
<th>Preference</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>34 (94(^{th}))</td>
<td>33 (96(^{th}))*</td>
</tr>
<tr>
<td>2</td>
<td>38 (99(^{th}))</td>
<td>28 (80(^{th}))</td>
</tr>
<tr>
<td>3</td>
<td>26 (62(^{nd}))*</td>
<td>30 (88(^{th}))</td>
</tr>
<tr>
<td>Mean</td>
<td>32.67</td>
<td>30.33</td>
</tr>
<tr>
<td>SD</td>
<td>6.11</td>
<td>2.52</td>
</tr>
</tbody>
</table>

*Indicates meaningful difference from mean (± 1 or more SD).

Discussion

We assessed the relationship between perceptual TL (sRPE) and subjective fatigue (questionnaire responses) as a means to monitor training-induced stress in three collegiate soccer athletes throughout the pre-competitive period. Mean TL varied from 140-1715 AU over the course of the pre-season period, and this variation was expected. This is comparable to others that have examined RPE-based TL in field sports: Buchheit et al.\(^{9}\) found mean...
sRPE values between 135-1904 AU during a pre-season camp in Aussie Rules Football players, and Impellizzeri et al.\(^4\), found mean sRPE values between 180-848 AU in college-age soccer players over seven weeks of the competitive season. However, normative data or other studies examining the same outcomes are not available for sRPE-based TL in a college soccer pre-season, so it is hard to assess how our pre-season demand compares to other similar teams during the same time of year.

While sRPE has been validated against heart rate-based methods for TL in a single session\(^4,5,7,9\), we did not take the objective measures needed to validate our calculation of cumulative sRPE for the whole day (sum of sRPE for both sessions each day). This calculation is assuming that the morning session does not affect the physiological variables and thus sRPE for the second session, but it is likely that the morning session, including environmental differences in the time of day, can potentiate the physiological responses to training in the second session, and thus invalidate the relationship with sRPE. This remains a limitation to our case study.

**Is subjective TL related to overall fatigue status?**

As we found TL fluctuated over the course of the pre-season, it is reasonable to expect similar changes in fatigue status. However, we did not find meaningful correlations (r=0.00-0.27) between subjective TL (as assessed by sRPE) and overall fatigue status (as assessed by the questionnaire score or mean score, either prospectively or retrospectively). This is in contrast to Buchheit et al.\(^9\), who found that changes in TL had a significant (p<0.05) effect on next-day overall wellness scores, and McLean et al.\(^10\), who found a similar 5-item questionnaire sensitive to fatigue-induced changes in performance following a match. Our findings could be due to one of two reasons: 1) sRPE as a method of monitoring TL did not reflect physical demands of training, or 2) our questionnaire was not valid and not sensitive to changes in fatigue status to find meaningful changes. It is likely the latter, as different authors have shown sRPE to correlate to objective heart rate-based measurements\(^4,5,7\), thus making it a valid measure for aerobic-based activities.

A limitation of our case study was the subjective nature of our responses: due to limited resources, we did not take any objective measures of internal TL (i.e. heart rate), objective measures of fatigue status (i.e. performance tests) or measures of external TL (i.e. distance ran). All
of these would have given physiological insight into the validation of sRPE and the questionnaire used in our case study. Had we been able to validate our measures, we could definitively attribute the weakness of our correlations to one variable. Additionally, although it is likely that greater levels of pre-training fatigue cause an increase in RPE for that day’s training session, we did not control training duration or intensity. It is likely that variations in these training variables masked any differences to RPE caused by pre-existing fatigue. Measuring RPE for a specific, consistent exercise task (such as a uniform warm-up) would have given more insight into the effects of pre-training fatigue.

Is TL better related to individual fatigue variables?

Though we did not find strong or moderate correlations between TL and overall fatigue status, or TL and prospective fatigue variables, we examined trends between the individual physical and mental variables of retrospective fatigue. The lack of correlation found between TL and overall fatigue could be due to the opposing relationships between TL and physical and mental fatigue, respectively. As was expected, TL had negative correlations with next-day physical readiness for all subjects, in that as TL increased, physical readiness decreased, indicating higher levels of physical fatigue. However, this correlation was small for Subjects 1 (r=-0.24) and Subject 3 (r=-0.27) and moderate for Subject 3 only (r=-0.44), accounting for 6%, 7%, and 19% of the variance, respectively. Conversely, TL Subjects 1 and 3 had positive correlations (r=0.29-0.30) with mental fatigue, indicating the greater the TL, the greater the mental score (lower stress and better mood). Contrary to our expected results, one reason for this relationship may be that stress is decreased and mood is elevated after completing a demanding day of training. Along the same avenue, mental readiness to play may relate more closely to training load on that day, as mood may decrease and stress may increase before a difficult session or competition. However, we did not make that comparison, as subjects completed the questionnaire without anticipating future training.

In addition to physical and mental fatigue, we found small to moderate correlations between TL and individual retrospective fatigue variables. This is similar to Buchheit et al.⁹, who found small to moderate correlations between TL and respective responses for fatigue, sleep, soreness, stress, and mood respectively, despite large correlations between overall wellness and performance. While TL accounted for 6%-19%
change in the next-day physical variables, it was more closely related to soreness ($r=0.34\pm0.9$, accounting for 6%-17% of the variance), than readiness ($r=0.22\pm0.18$, accounting for 0%-17% of the variance). This is in line with Buchheit et al, who found moderate correlations ($r=0.3$) between TL and soreness. While TL accounted for 7%-9% of the variance in mental fatigue, it was more closely related to stress ($r=0.38\pm0.04$, accounting for 12%-18% of the variance) than mood ($r=0.09\pm0.04$, accounting for 0%-1% of the variance). Notably, this relationship was reversed in Subject 2 compared to Subjects 1 and 3, further supporting individual differences in subjective training response. This is also related to Buchheit et al, who found small correlations ($r<0.3$) between TL and mood and soreness, respectively. While they displayed differences, these correlations are too weak to find meaningful relationships, indicating the need for more specific and training-sensitive measures of subjective fatigue.

**Does personality play a role in TL and the fatigue response?**

Because our measures of TL and fatigue were subjective and thus at high risk for inter-individual differences, we assessed personality differences in preference for high-intensity exercise and exercise tolerance using the PRETIE-Q questionnaire. Based on normative data for college-age females from Ekkekakis et al.\textsuperscript{12}, Subjects 1 and 2 were in the upper 6% of individuals for exercise preference, substantially higher than Subject 3, indicating they prefer high-intensity exercise over low-intensity. All subjects were in the upper 20% of individuals for exercise tolerance, indicating they can tolerate high-intensity exercise to a greater degree than average individuals. Because they are college athletes playing a high-intensity aerobic-based sport, this is expected. Only Subject 1 was substantially higher than Subjects 2 and 3 in this category, indicating higher tolerance for high intensity exercise. This could indicate lower RPE for the same training session as Subject 2 and 3. Additionally, differences in playing position (Table 1) could indicate different external TL, and thus different internal TL, for each subject in the same training session or game. This speaks for the need to individualize training response, like Manzi et al.’s\textsuperscript{2} use of individualized training impulse throughout the soccer pre-season that accounted for differences in aerobic fitness and external load.
Implications for performance

Monitoring TL and fatigue is only important if the practitioner can assess the point at which an increase in these measures becomes physiologically relevant to changes in performance. Had we found large correlations between TL and fatigue status, we still could not definitively say that these changes are meaningful until we could measure a decrease in performance. Buchheit et al.\textsuperscript{9} examined soccer-specific performance (high speed running total distance covered) on standardized training drills and the Yo-Yo Intermittent Recovery Level 2 test, and found a large correlation between these measures and mean wellness score. This suggests that wellness score can predict performance, which has important implications for exercise prescription. Adjustments in training programming can be crucial to competitive success. In high-level sport such as intercollegiate soccer, even small decrements in performance can have large effects on the outcome of competition.

Conclusion And Practical Application

Despite the relationships between TL and fatigue variables in preexisting literature, we cannot draw definitive conclusion from our data because the effects were small to moderate. While the gold standard of measuring TL remains unknown, sRPE may be a feasible method if combined with valid and objective measures of fatigue status and performance. Additionally, it may be warranted to examine aspects of physical and mental fatigue separately in addition to overall fatigue, while accounting for individual differences.
Endnotes


Jordan E. Goss received her Bachelor of Arts with a double major in Anthropology and Archaeology from the University of Memphis in May 2016; she graduated *summa cum laude* with University Honors with Thesis. Jordan is currently an Anthropology Masters Candidate at the University of Memphis, serving as a research and graduate assistant in the Department of Anthropology. Some of the projects that Jordan has been assisting with consist of: data collection on multidisciplinary research interested in how residents use spaces in residence halls; head technical coordinator in the Department of Anthropology’s crowdfunding campaign; and Food Bank of Northeast Arkansas Program Evaluator. Jordan’s research interests include food access, food insecurity and food security, food banks and pantries, and interdisciplinary research.
Jordan Goss

Faculty Sponsor
Katherine Lambert Pennington
Abstract

Food is undeniably one of the most important facets of daily life, not only due to its role in coping with or celebrating human emotions but also as a necessity of survival. However, the access and availability of food is not equal among populations, especially populations that are different in socioeconomic status. In this thesis, I ask and answer questions about the similarities and/or differences in the food choices, and the factors that contribute to these choices such as food access and accessibility, of two socioeconomically but geographically close census tracts in Memphis, TN. These food choices are framed in the context of healthy eating and the different influences that go into creating the concept of healthy eating.
**Introduction**

In this work I focus on whether food access, food choice, and food availability are similar and/or different between two socioeconomically different populations. To understand how the factors are shaped, I analyzed residents’ income, geographical limitations, and the prices, varieties, and quality of foods offered in grocery stores. This work is also concerned with whether the residents of the census tracts practice eating healthy as defined by the United States Department of Agriculture, cultural constructions, personal viewpoints, or a combination of these ideas.

**Literature Review**

**Dietary Guidelines**

Dietary guidelines are composed by the USDA and the United States Department of Health and Human Services (HHS) in order to provide the public with recommendations on how to make their diets and daily lives healthy. Dietary guidelines recommend increasing intake of fresh fruits and vegetables, whole-grain products, seafood, lean meats, poultry, fat-free or low-fat milk, and fat-free or low-fat dairy products (USDA and HHS 2010). Fruit and vegetable consumption is important because these foods provide our bodies with magnesium, potassium, and vitamins A, C, and K while lean meats, seafoods, poultry, and protein foods provide vitamins B and E, and additional nutrients (USDA and HHS 2010). The American Heart Association also publishes its own dietary guidelines focused on heart health; their recommendations consist of reducing fats, cholesterol, salts and sodium, and sugars, while increasing fruits and vegetables, whole-grain and starch products, high fiber foods, lean meats, poultry, and seafood (AHA, 1996).

**Perceptions of Eating Healthy**

Valerie Richardson et al. (2009, p.50) use a definition provided by Duke University in her research of healthy eating perceptions stating, “‘Healthy eating’ is defined as how frequently you eat, the function food has in one’s life, how one utilizes food and how one thinks about food.” Perceptions of eating healthy are influenced by dietary guidelines, media, fads, culture, and personal preferences (Paquette, 2005). Food choices are influenced by individual assumptions about foods and whether they are contradictory to food rules or not, indicating control, power, knowledge, moral superiority,
high status, and restraint over one’s own diet to produce a healthy body are extremely important concepts (Counihan, 1992; Paquette, 2005).

**Food Trends: Fast Food/Restaurant Use**

An extremely popular food trend today is consuming food away from the household at fast food/restaurant outlets (French et al., 2001). Fast food restaurants are known to feature high calorie and high fat foods at cheap, inviting prices, and regardless of dietary guidelines Americans are consuming this food at an increasing rate. The higher calorie and fat content of ubiquitous fast food has contributed to American obesity and health issues that have risen dramatically over the past few decades. Rates of fast food consumption and the geographical location for fast food restaurants are increased for non-white and low-income populations, but there have also been studies that reveal a lack of definitive evidence for relationships between fast food, race/ethnicity, and income (Block et al., 2004). As fast food chains are growing, expanding, and catering to customers’ wants and needs, so are their menus; apple slices, salads, oatmeal, fat-free and low-fat milk, yogurt, and smaller kids portions are now common healthier menu options in chains such as McDonald’s and Burger King.

**Food in Low-Income Areas**

Typically it has been shown that the foods, specifically fruits and vegetables, offered in low-income area grocery stores are commonly lower in quality and availability and higher in price, which often influences these residents to shop outside of their neighborhoods (Curtis & McClellan, 1995; Freedman & Bell, 2009; Goodman, 1968; Hendrickson et al., 2006; Valera et al., 2009). There is also research that addresses the belief that over time fruit and vegetable prices have increased while starch based and filler food prices have declined, which would greatly influence barriers to food availability and food access for lower income families (Curtis & McClellan, 1995). This finding suggests that lower-income families are at a greater chance to sacrifice fresh fruits and vegetables in their diet for more filling foods such as macaroni and rice. However, there has also been research that indicates that prices of commodities very seldom increase as the median income of surrounding families decrease and that prices of fruits and vegetables have actually experienced a price decline parallel with that of filler foods (Ambrose, 1979; Kuchler & Stewart, 2008). Low-income areas are not charged more for healthy or unhealthy food items based on their income levels but because of their available market-
place options (or a lack thereof).

**Methodology**

My research takes place in two Memphis census tracts 007200 and 007300 (Tract A and Tract B respectively) that are geographically close but socioeconomically and racially different; see Tables 1 and 2 (World Media Group, 2015) and Figures 1a and 1b.

*Table 1: Income and Population Demographics*

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Income Population</td>
<td>248</td>
<td>681</td>
</tr>
<tr>
<td>Total Population</td>
<td>2,480</td>
<td>1,962</td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>10.00%</td>
<td>34.70%</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$59,298</td>
<td>$21,711</td>
</tr>
</tbody>
</table>

*Table 2: Racial Demographics*

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasians</td>
<td>92.10%</td>
<td>55.60%</td>
</tr>
<tr>
<td>African Americans</td>
<td>5.30%</td>
<td>37.40%</td>
</tr>
<tr>
<td>Hispanics</td>
<td>1.80%</td>
<td>2.10%</td>
</tr>
<tr>
<td>Asians</td>
<td>0.80%</td>
<td>3.80%</td>
</tr>
</tbody>
</table>
Figure 1a: Map of Tract A
I created a map of the two census tracts overlain with 128 squares that measure roughly 400’ by 400’ on ground and contain approximately 20-25 houses from which I randomly selected a number of 4 or 5 squares per tract and went door-to-door with student volunteers, recruited from anthropology classes at the University of Memphis, with surveys. The survey was the primary method of data collection, each survey lasted approximately 10 minutes with 31 questions about food access, food choice, perspectives of eating healthy, and demographics. Groups of two volunteers,
with surveyor scripts and surveys, went door-to-door and asked residents if they were willing to participate in this research study after giving a verbal explanation of the study. I left a survey with willing residents, with an agreed scheduled pickup time, so that I could retrieve the completed survey if they did not wish to participate at that specific time due to time conflicts. Upon my return, if there was not a completed survey or note retracting their participation placed outside their residence in plain sight, I left a note indicating a new pick up date. The respondents were given two chances to place their completed surveys outside their apartment/house door for pickup. To ensure that as many residents as possible had a chance to participate, I varied the days and times the surveys were administered and we returned to each area at least twice.

After the survey process, respondents were asked to participate in an interview. The interview lasted approximately 20-25 minutes and consisted of 23 questions, featuring some of the same topics found in the survey but with more detail-oriented questions. A card with my information was left with the respondent if they did not want to participate in the interview at that specific time.

**Methods of Analysis**

I am operationalizing fast food consumption as an unhealthy eating behavior and consumption of organic foods as a healthy eating behavior based on embedded assumptions of the nutritional value of these foods. One reservation of this operationalization consists of a respondent answering that while eating at fast food venues they only consume salads, grilled chicken, and low-fat milk; if this is the case, fast food consumption will be recorded as healthy eating.

The survey data was input manually into Qualtrics, a software tool used to analyze data, and I compiled a Word document of descriptive statistics and a Word document of relevant information. Using the survey data and the relevant data document I created household level data summaries for every survey/household to improve my familiarity with the data as well as to help me identify potential relationships between data such as income and food choices, income and food access, and perceptions of healthy eating and food choices. In addition to these tools, I also used the USDA’s Dietary Guidelines to operationalize eating a healthy versus unhealthy diet. For example, I focused on three types of food: vegetables, fruits, and fresh seafood as being a part of a healthy diet when comparing
the price, quality, and variety of frequently purchased foods across the tracts.

I used Google Map directions to evaluate the mean distances that residents have to travel to their frequently used grocery stores and fast food/restaurant outlets. These distances and times helped me to determine whether the tracts were traveling comparable distances to the stores and food outlets they were frequenting, indicating equal or unequal access. The directions show multiple travel distances and times to the destination, of which I took the average.

After completing this process for each of the household’s frequently visited grocery stores I was able to arrive at final averages of distances and times traveled per household to frequented stores for the entire tract; I also used this process to get a final average of the distance and time traveled to frequented fast food/restaurant outlets for the entire tract.

Once this process was completed for each household I was able to calculate average distances and times to stores and food outlets to produce an average approximation for the distance and time it takes for the census tract as a whole to arrive at frequented stores and food outlets. After the calculations were completed for Tract A and Tract B, I was able to make comparisons in the distances and time traveled to both stores and food outlets.

There are some important reservations in the average distances and times the residents travel to their selected grocery stores and fast food/ restaurants. Some of the survey respondents did not write down the specific store or food outlet that they frequent. In some instances this is not an obstacle because there is only one location in Memphis; such as RP Tracks. However, for stores such as Kroger and Fresh Market, and food choices like McDonald’s and Chick-fil-A there are numerous locations that the residents could patronize. When there was not a specific address or location given for these types of businesses, I used Google Maps to find the location that was closest to the residents’ households. Another reservation in this data is that I assumed the ‘starting point’ was the resident’s household instead of another location such as their workplace or their personal preference, which would influence which store or food choice they frequent. Finally, the time it takes for residents to travel to their destinations will always be dependent on their travel speed and the amount of traffic or congestion.
While using Google Maps, I was able to view the descriptive cost of the resident’s fast food/restaurant choices. I used this information to make descriptive averages of the approximate cost of the fast food/restaurant outlets the residents frequent per household and then for the census tract as a whole. A limitation of this approach is that Google Maps only provides price estimates on a 3 point scale while some fast food/restaurants do not have a cost designation. Furthermore, if a specific location/address is not given for a food outlet, I assumed the location of the fast food/restaurant outlet based on the closest distance to the resident’s household.

By compiling the names of the stores and food products, I found the three most frequently visited stores for each of the two tracts and the three most frequently bought vegetables, fruits, and fresh seafood products. The two tracts share a common frequently used store (Kroger) meaning that I only traveled to five different stores instead of six different stores. I compared the prices for the most frequently purchased food items in Tracts A and B. This gave me the average prices for popular food products in each tract, which allowed me to see if there were price differences for the same products across the tracts. I made two trips to these stores several weeks apart in order to have a complete pricing data set not affected by sale/conditional prices. It is important to recognize that the prices, quality, and variety of fruits, vegetables, and seafood products are dependent upon factors such as seasonal availability, sales/specials, and the types of products the stores offer.

Furthermore, I used a TI-84 Plus graphing calculator to help determine if there were any correlations between factors such as a household’s monthly income, a household’s frequency of eating fast food, likelihood of purchasing organic foods, and the approximate distance traveled to grocery stores, fast food outlets, and restaurants. In order to do this, I coded resident’s survey responses and data into exclusive digits. A ‘yes’ response to purchasing organic foods was coded as 1 while a ‘no’ was coded as 2, and a household with a monthly income of $1,200-$1,599 was coded as 8 while an income of $800-$1,199 was coded as 9, and so on. This process was carried out with other responses and data mentioned above such as approximate mileage to grocery stores, household monthly incomes, and the frequency of eating out. After each possible response was given an exclusive coded number, I graphed two factors of interest side by side and calculated their correlation to each other. I would then use the TI-84 Plus
calculator to calculate the amount of correlation. This process was carried out for all of the factors of interest to determine if any of these factors was impacted, affected, or predicted by another factor.

**Statistics and Data**

**Demographics and Frequently Purchased Food Groups**

As can be seen in Table 3 below, there are different racial makeups of the two tracts. Tract B has a lower number of Caucasians than Tract A but has a higher number of African Americans, Hispanics/Latinos, and Middle Easterners/Asians. A large proportion of survey respondents from Tract B were composed of Caucasians and Middle Easterners/Asians while almost all of the survey respondents from Tract A were Caucasians. Tract B respondents also had more diversity in their household monthly incomes, see Table 4 below. Interestingly, almost half of Tract B’s respondents have household monthly incomes below $1,999 while more than half of Tract A’s respondents have household monthly incomes of $4,000 or more. These monetary and financial differences materialize through how much of the household’s monthly income is spent on groceries; 50% of Tract B’s respondents spend below $350 per month for groceries while 50% of Tract A’s respondents spend $501 or more per month on groceries; see Table 5 below.
**Table 3**: Racial Demographics of Surveys

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>95% (20)</td>
<td>48% (19)</td>
</tr>
<tr>
<td>African American</td>
<td>5% (1)</td>
<td>5% (2)</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>3% (1)</td>
<td></td>
</tr>
<tr>
<td>Middle Eastern/Asian</td>
<td>45% (18)</td>
<td></td>
</tr>
</tbody>
</table>

*21 answered from Tract A, 40 answered from Tract B; number of respondents in parentheses

**Table 4**: Household’s Monthly Incomes

<table>
<thead>
<tr>
<th>Monthly Income</th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0-$399</td>
<td>3% (1)</td>
<td></td>
</tr>
<tr>
<td>$400-$799</td>
<td>5% (2)</td>
<td></td>
</tr>
<tr>
<td>$800-$1,199</td>
<td>5% (1)</td>
<td>8% (3)</td>
</tr>
<tr>
<td>$1,200-$1,599</td>
<td></td>
<td>18% (7)</td>
</tr>
<tr>
<td>$1,600-$1,999</td>
<td>11% (2)</td>
<td>13% (5)</td>
</tr>
<tr>
<td>$2,000-$2,399</td>
<td>5% (1)</td>
<td></td>
</tr>
<tr>
<td>$2,400-$2,799</td>
<td></td>
<td>8% (3)</td>
</tr>
<tr>
<td>$2,800-$3,199</td>
<td>5% (1)</td>
<td>11% (4)</td>
</tr>
<tr>
<td>$3,200-$3,599</td>
<td>5% (1)</td>
<td>11% (4)</td>
</tr>
<tr>
<td>$3,600-$3,999</td>
<td>5% (1)</td>
<td>3% (1)</td>
</tr>
<tr>
<td>$4,000 or more</td>
<td>63% (12)</td>
<td>21% (8)</td>
</tr>
</tbody>
</table>

*19 answered from Tract A, 38 answered from Tract B; number of respondents in parentheses
Table 5: Household’s Monthly Income Spent on Food

<table>
<thead>
<tr>
<th>Monthly Spending</th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>$51-$100</td>
<td>3% (1)</td>
<td></td>
</tr>
<tr>
<td>$101-$150</td>
<td>13% (5)</td>
<td></td>
</tr>
<tr>
<td>$151-$200</td>
<td>6% (1)</td>
<td>8% (3)</td>
</tr>
<tr>
<td>$201-$250</td>
<td>11% (2)</td>
<td>3% (1)</td>
</tr>
<tr>
<td>$251-$300</td>
<td>11% (2)</td>
<td>15% (6)</td>
</tr>
<tr>
<td>$301-$350</td>
<td></td>
<td>8% (3)</td>
</tr>
<tr>
<td>$351-$400</td>
<td>6% (1)</td>
<td>10% (4)</td>
</tr>
<tr>
<td>$401-$450</td>
<td>17% (3)</td>
<td>8% (3)</td>
</tr>
<tr>
<td>$451-$500</td>
<td></td>
<td>13% (5)</td>
</tr>
<tr>
<td>$501-$550</td>
<td>6% (1)</td>
<td>5% (2)</td>
</tr>
<tr>
<td>$551-$600</td>
<td>6% (1)</td>
<td>3% (1)</td>
</tr>
<tr>
<td>$601 or more</td>
<td>39% (7)</td>
<td>13% (5)</td>
</tr>
</tbody>
</table>

*18 answered from Tract A, 39 answered from Tract B; number of respondents in parentheses

Frequently Purchased Foods

Both Tracts A and B have many common frequently purchased food groups in which five food groups are identically ranked: fresh fruits, fresh vegetables, chicken products, dairy products, and snack foods, see Tables 6a and 6b below. The two tracts also share identical fresh fruits and fresh seafood choices, see Table 7 and 9 below, but different fresh vegetable choices, see Table 8 below. The respondents also frequent different grocery stores but the underlying reasons of grocery store choice are very similar, most being attracted by the close location, quality of food, and cheap product prices, see Table 10 and 11 below.
<table>
<thead>
<tr>
<th>Food Group</th>
<th>Percentage (Count)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Fruits</td>
<td>95.24% (20)</td>
</tr>
<tr>
<td>Fresh Vegetables</td>
<td>90.48% (19)</td>
</tr>
<tr>
<td>Dairy Products</td>
<td>76.19% (16)</td>
</tr>
<tr>
<td>Chicken</td>
<td>76.19% (16)</td>
</tr>
<tr>
<td>Snack Foods</td>
<td>66.67% (14)</td>
</tr>
<tr>
<td>Frozen Fruits &amp; Vegetables</td>
<td>66.67% (14)</td>
</tr>
<tr>
<td>Red Meat</td>
<td>61.90% (13)</td>
</tr>
<tr>
<td>Canned Fruits &amp; Vegetables</td>
<td>61.90% (13)</td>
</tr>
<tr>
<td>Fresh Seafood</td>
<td>42.86% (9)</td>
</tr>
<tr>
<td>Frozen Seafood</td>
<td>38.1% (8)</td>
</tr>
<tr>
<td>Canned Seafood</td>
<td>28.57% (6)</td>
</tr>
<tr>
<td>Frozen Meats</td>
<td>23.81% (5)</td>
</tr>
<tr>
<td>Other</td>
<td>23.81% (5)</td>
</tr>
</tbody>
</table>
Table 6b: Frequently Purchased Food Groups for Tract A and Tract B

<table>
<thead>
<tr>
<th>Tract B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>92.5% (37) Fresh Fruits</td>
<td></td>
</tr>
<tr>
<td>87.5% (35) Fresh Vegetables</td>
<td></td>
</tr>
<tr>
<td>77.5% (31) Dairy Products</td>
<td></td>
</tr>
<tr>
<td>65% (26) Chicken</td>
<td></td>
</tr>
<tr>
<td>57.5% (23) Snack Foods</td>
<td></td>
</tr>
<tr>
<td>47.5% (19) Red Meats</td>
<td></td>
</tr>
<tr>
<td>45% (18) Frozen Fruits &amp; Vegetables</td>
<td></td>
</tr>
<tr>
<td>35% (14) Fresh Seafood</td>
<td></td>
</tr>
<tr>
<td>30% (12) Canned Fruits &amp; Vegetables</td>
<td></td>
</tr>
<tr>
<td>22.5% (9) Some Other Food Group</td>
<td></td>
</tr>
<tr>
<td>12.5% (5) Frozen Meats</td>
<td></td>
</tr>
<tr>
<td>10% (4) Frozen Seafood</td>
<td></td>
</tr>
<tr>
<td>7.5% (3) Canned Seafood</td>
<td></td>
</tr>
<tr>
<td>2.5% (1) Canned Meats</td>
<td></td>
</tr>
</tbody>
</table>

*Tract A had 5 non-specific answers, tract B had 9 non-specific answers; number of respondents in parentheses; each respondent allowed to answer with more than one category*
**Table 7:** Top 3 Frequently Purchased Fresh Fruits for Tract A and Tract B

<table>
<thead>
<tr>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples 100% (20)</td>
<td>Bananas 48.6% (18)</td>
</tr>
<tr>
<td>Bananas 65% (13)</td>
<td>Apples 48.6% (18)</td>
</tr>
<tr>
<td>Oranges 45% (9)</td>
<td>Grapes 29.7% (11)</td>
</tr>
</tbody>
</table>

*20 answered from Tract A with 4 non-specific answers, 37 answered from Tract B with 13 non-specific answers; number of respondents in parentheses

**Table 8:** Top 3 Frequently Purchased Fresh Vegetables for Tract A and Tract B

<table>
<thead>
<tr>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lettuce 36.8% (7)</td>
<td>Tomatoes/ Potatoes 25.7% (9) each</td>
</tr>
<tr>
<td>Onions 31.6% (6)</td>
<td>Carrots 20% (7)</td>
</tr>
<tr>
<td>Tomatoes/ Broccoli 26.3% (5) each</td>
<td>Peppers 20% (7)</td>
</tr>
</tbody>
</table>

*19 answered from Tract A with 5 non-specific answers, 35 answered from Tract B with 12 non-specific answers; number of respondents in parentheses

**Table 9:** Top 3 Frequently Purchased Fresh Seafood for Tract A and Tract B

<table>
<thead>
<tr>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salmon 55.56% (5)</td>
<td>Salmon 35.7% (5)</td>
</tr>
<tr>
<td>Tuna 55.56% (5)</td>
<td>Shrimp 28.6% (4)</td>
</tr>
<tr>
<td>Shrimp 33.33% (3)</td>
<td>Catfish 21.4% (3)</td>
</tr>
</tbody>
</table>

*9 answered from Tract A with 2 non-specific answers, 14 answered from Tract B with 7 non-specific answers; number of respondents in parentheses
Table 10: Top 3 Frequently Used Grocery Stores for Tract A and Tract B

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kroger</td>
<td>95.2% (20)</td>
<td>100% (40)</td>
</tr>
<tr>
<td>Fresh Market</td>
<td>47.6% (10)</td>
<td>Walmart 22.5% (9)</td>
</tr>
<tr>
<td>Whole Foods</td>
<td>38.1% (8)</td>
<td>Aldi’s 17.5% (7)</td>
</tr>
</tbody>
</table>

*Number of respondents in parentheses; respondents allowed to answer with more than 1 store

Table 11: Reasons Why Grocery Stores are Chosen

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Location</td>
<td>100% (21)</td>
<td>88% (35)</td>
</tr>
<tr>
<td>Quality of Food</td>
<td>71% (15)</td>
<td>63% (25)</td>
</tr>
<tr>
<td>Cheap Prices</td>
<td>38% (8)</td>
<td>58% (23)</td>
</tr>
<tr>
<td>Good Sales</td>
<td>33% (7)</td>
<td>33% (13)</td>
</tr>
<tr>
<td>Other</td>
<td>10% (2)</td>
<td>20% (8)</td>
</tr>
</tbody>
</table>

*Number of respondents in parentheses; respondents allowed to answer with more than 1 reason

Fast Food and Restaurant Consumption

Around half of the fast food/restaurant outlets in both tracts fall into the moderately priced category, see Table 12 below. The two tracts also eat the same types of foods with ethnic foods being number one and salads, sandwiches, and hamburgers/cheeseburgers all being similar in percentages, see Table 13 below.
Perceptions of Eating Healthy

Eating a well balanced diet of vegetables, fruits, a variety of proteins, fewer processed and fewer preservative-filled foods, fresh foods, and foods with low salt and fat content are some of the ideas and concepts that Tract A’s residents have of what eating healthy is. Similarly Tract B’s residents view eating enough vitamins/nutrients, vegetables, a well-balanced diet, proteins, watching calorie and fat intake, fewer sweets/sugars, and avoiding red meats as being associated with eating healthy, see Table 14 below.

Table 12: Descriptive Price of Fast Food/Restaurant Outlets in Tract A and B

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>$$</td>
<td>31.48% (17)</td>
<td>45.9% (34)</td>
</tr>
<tr>
<td>$$</td>
<td>51.85% (28)</td>
<td>50% (37)</td>
</tr>
<tr>
<td>$$$</td>
<td>5.56% (3)</td>
<td></td>
</tr>
</tbody>
</table>

*Number of food outlets in parentheses; 6 places unidentified in Tract A, 3 places unidentified in Tract B; respondents allowed to answer with more than 1 outlet

Table 13: Top 5 Foods Consumed While Eating Out/Getting Takeout in Tract A and Tract B

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Foods</td>
<td>90% (19)</td>
<td>Ethnic Foods</td>
</tr>
<tr>
<td>Sandwiches</td>
<td>38% (8)</td>
<td>Fried Chicken</td>
</tr>
<tr>
<td>Salads</td>
<td>33% (7)</td>
<td>Sandwiches</td>
</tr>
<tr>
<td>Hamburgers &amp; Cheeseburgers</td>
<td>24% (5)</td>
<td>Hamburgers &amp; Cheeseburgers</td>
</tr>
<tr>
<td>Fried Foods</td>
<td>24% (5)</td>
<td>Salads</td>
</tr>
</tbody>
</table>

*Number of respondents in parentheses; respondents allowed to answer more than 1 food
Table 14: Perceptions of Eating Healthy in Tract A and Tract B

<table>
<thead>
<tr>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating a Well-balanced Diet</td>
<td>Eating Enough Nutrients/Vitamins</td>
</tr>
<tr>
<td>Eating Vegetables</td>
<td>Eating Vegetables, Eating Well Balanced Diet</td>
</tr>
<tr>
<td>Eating Fruits</td>
<td>Eating Proteins</td>
</tr>
<tr>
<td>Eating a Variety of Proteins</td>
<td>Eating No Sweets/ Sugars and Watching Daily Calorie and Fat Intake</td>
</tr>
<tr>
<td>Eating Unprocessed Foods, Foods with Less Preservatives</td>
<td>Eating Fruits</td>
</tr>
<tr>
<td>Eating less salt, low/ less fat, and more fresh foods</td>
<td>Avoiding Red Meats</td>
</tr>
<tr>
<td>Eating Moderate to Small Portions</td>
<td>Eating Carbs, Knowing What to Eat and When to Eat, Eating Smaller Portions, and Eating Unprocessed Foods</td>
</tr>
<tr>
<td>Eating Fewer Fried Foods, Consuming less Caffeine, Having Adequate Fiber Intake, Eating Organically Raised Meats, and Providing Body with Nutrients</td>
<td>Eating Low Carbs, Something You Should Do, Drinking Water</td>
</tr>
</tbody>
</table>

*21 answered from Tract A, 38 answered from Tract B; number of respondents in parentheses; respondents allowed to answer with more than one definition*
Prices of Frequently Purchased Food Items

The prices of ‘fresh’ seafood products are higher in tract A than in Tract B while the prices for organic and non-organic fruits and vegetables are cheaper for Tract B’s residents, see Tables 15, 16, and 17 below.

*Table 15:* Average Price for Top 3 Fresh Seafood Products in Tract A and Tract B

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuna Steaks</td>
<td>$18.32/lb</td>
<td>$13.99/lb</td>
</tr>
<tr>
<td></td>
<td>(σ = $6.13)</td>
<td></td>
</tr>
<tr>
<td>Atlantic Salmon</td>
<td>$9.99/lb</td>
<td>$7.99/lb</td>
</tr>
<tr>
<td></td>
<td>(σ = $1.63)</td>
<td></td>
</tr>
<tr>
<td>Shrimp</td>
<td>$14.49/lb</td>
<td>$12.49/lb</td>
</tr>
<tr>
<td></td>
<td>(σ = $2.06)</td>
<td>(σ = $0.50)</td>
</tr>
<tr>
<td>Catfish</td>
<td>$7.99/lb</td>
<td>$7.99/lb</td>
</tr>
</tbody>
</table>

*Average approximate prices; stores chosen based on closest distance to residence if specific store/address not given*
Table 16: Average Prices for Top 3 Fruits (Non-Organic and Organic) for Tract A and Tract B

<table>
<thead>
<tr>
<th></th>
<th><strong>Tract A</strong></th>
<th><strong>Tract B</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apples</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Singles $1.81/lb, σ= $0.53;</strong></td>
<td><strong>Singles $1.58/lb, σ= $0.09;</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $2.32, σ= $0.41)</td>
<td>(Organic $2.14, σ= $0.14)</td>
</tr>
<tr>
<td></td>
<td><strong>3lb Bag $6.24, σ= $1.78;</strong></td>
<td><strong>3lb Bag $3.88, σ= $0.92;</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $6.87, σ= $1.34)</td>
<td>(Organic $5.74, σ= $0.24)</td>
</tr>
<tr>
<td><strong>Bananas</strong></td>
<td><strong>$0.62/lb, σ= $0.04</strong></td>
<td><strong>$0.53/lb, σ= $0.08</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $0.79/lb, σ= $0.08)</td>
<td>(Organic $0.69/lb, σ= $0.01)</td>
</tr>
<tr>
<td><strong>Grapes</strong></td>
<td><strong>Seedless $3.99/lb</strong></td>
<td><strong>Seedless $4.66/lb, σ= $1.34</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic Seeded $4.99/lb)</td>
<td>2lb Bag $3.59, σ= $0.39</td>
</tr>
<tr>
<td><strong>Oranges</strong></td>
<td><strong>Singles $1.33/lb, σ= $0.24</strong></td>
<td><strong>Singles $1.25/lb, σ= $0.25</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $1.82/lb, σ= $0.62)</td>
<td>(Organic $0.99)</td>
</tr>
<tr>
<td></td>
<td><strong>4lb Bag $4.49, σ= $0.50</strong></td>
<td><strong>4lb Bag $3.32, σ= $0.94</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $6.24, σ= $0.25)</td>
<td>(Organic $6.70, σ= $0.23)</td>
</tr>
<tr>
<td><strong>Strawberries</strong></td>
<td><strong>1lb $5.49, σ= $0.50</strong></td>
<td><strong>1lb $3.99, σ= $1.00</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $6.99)</td>
<td></td>
</tr>
<tr>
<td><strong>Blueberries</strong></td>
<td><strong>6oz $3.99</strong></td>
<td><strong>6oz $3.99</strong></td>
</tr>
<tr>
<td></td>
<td>(Organic $4.49, σ= $0.50)</td>
<td>(Organic $4.73, σ= $0.26)</td>
</tr>
<tr>
<td></td>
<td><strong>16oz $4.74, σ= $0.25</strong></td>
<td><strong>16oz $3.49, σ= $1.00</strong></td>
</tr>
</tbody>
</table>

*Average approximate prices; stores chosen based on closest distance to residence if specific store/address not given; organic prices in parentheses
Table 17: Average Prices for Top 3 Vegetables (Non-Organic and Organic) in Tract A & Tract B

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Head $1.89, σ= $0.54;</td>
<td>Head $0.99, σ= $0.14;</td>
</tr>
<tr>
<td>Lettuce</td>
<td>(Organic $2.99)</td>
<td>(Organic $2.77, σ= $0.22)</td>
</tr>
<tr>
<td></td>
<td>8oz Shredded Bag $1.85, σ=</td>
<td>8oz Shredded Bag $1.84, σ=</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onions</td>
<td>Singles $1.27/lb, σ= $0.27;</td>
<td>Singles $1.30/lb, σ= $0.29;</td>
</tr>
<tr>
<td></td>
<td>(Organic $1.73/lb, σ= $0.21)</td>
<td>(Organic $1.84/lb, σ= $0.25)</td>
</tr>
<tr>
<td></td>
<td>3lb Bag $2.69;</td>
<td>3lb Bag $2.29, σ= $0.40;</td>
</tr>
<tr>
<td></td>
<td>(Organic $4.39, σ= $0.80)</td>
<td>(Organic $3.38, σ= $0.38)</td>
</tr>
<tr>
<td>Broccoli</td>
<td>$1.87/lb, σ= $0.21;</td>
<td>$1.66/lb, σ= $0.21;</td>
</tr>
<tr>
<td></td>
<td>(Organic $2.92/lb, σ= $0.33)</td>
<td>(Organic $2.64/lb, σ= $0.14)</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>$2.55/lb, σ= $0.98;</td>
<td>$2.24/lb, σ= $0.42;</td>
</tr>
<tr>
<td></td>
<td>(Organic $3.87/lb, σ= $0.54)</td>
<td>(Organic $3.49/lb, σ= $0.50)</td>
</tr>
<tr>
<td>Potatoes</td>
<td>Singles $0.99/lb;</td>
<td>Singles $0.99/lb;</td>
</tr>
<tr>
<td></td>
<td>(Organic $1.89/lb, σ= $0.37)</td>
<td>(Organic $2.19/lb, σ= $0.30)</td>
</tr>
<tr>
<td></td>
<td>5lb Bag $3.49, σ= $0.50;</td>
<td>5lb Bag $2.98, σ= $0.77;</td>
</tr>
<tr>
<td></td>
<td>(Organic $6.74, σ= $0.43)</td>
<td></td>
</tr>
<tr>
<td>Carrots</td>
<td>Singles $0.69/lb;</td>
<td>Singles $0.66/lb, σ= $0.03</td>
</tr>
<tr>
<td></td>
<td>(Organic $0.99/lb)</td>
<td>1lb Bag $0.89, σ= $0.10;</td>
</tr>
<tr>
<td></td>
<td>1lb Bag $0.99;</td>
<td>(Organic $0.98)</td>
</tr>
<tr>
<td></td>
<td>(Organic $1.49)</td>
<td></td>
</tr>
<tr>
<td>Peppers</td>
<td>Singles $2.02ea, σ= $0.90;</td>
<td>Singles $1.40ea, σ= $0.44;</td>
</tr>
<tr>
<td></td>
<td>(Organic $3.62ea, σ= $1.27)</td>
<td>(Organic $2.21ea, σ= $0.93)</td>
</tr>
<tr>
<td></td>
<td>Pkg Trio $4.99</td>
<td>Pkg Trio $3.22, σ= $1.36</td>
</tr>
<tr>
<td></td>
<td>(Organic $5.99)</td>
<td></td>
</tr>
<tr>
<td>Spinach</td>
<td>Bundled $1.79ea, σ= $0.20;</td>
<td>Bundled $1.59ea;</td>
</tr>
<tr>
<td></td>
<td>(Organic $2.25ea, σ= $0.25)</td>
<td>(Organic $1.99ea)</td>
</tr>
<tr>
<td></td>
<td>10oz Bag $2.59</td>
<td>10oz Bag $2.49, σ= $0.10</td>
</tr>
</tbody>
</table>

*Average approximate prices; stores chosen based on closest distance to residence if specific store/address not given; organic prices in parentheses
Distances and Times to Arrive at Frequently Used Stores

Tract B’s residents have to travel an approximate 1.37 miles and 3.03 minutes longer than Tract A’s residents to arrive at their top three frequented grocery stores, see Table 18 below.

Table 18: Average Distances & Times to Top 3 Frequent Grocery Stores in Tract A & Tract B

<table>
<thead>
<tr>
<th></th>
<th>Tract A</th>
<th>Tract B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.13 miles (σ = .21 mi.); 3.62 minutes (σ = 1.11 min.)</td>
<td>1.19 miles (σ = .6 mi.); 4.51 minutes (σ = 1.38 min.)</td>
</tr>
<tr>
<td>Kroger</td>
<td>2.89 miles (σ = .4 mi.); 6.99 minutes (σ = .84 min.)</td>
<td>7.53 miles (σ = .03 mi.); 16.96 minutes (σ = .46 min.)</td>
</tr>
<tr>
<td>Fresh Market</td>
<td>4.23 miles (σ = .39 mi.); 11.57 minutes (σ = .32 min.)</td>
<td>Aldi’s 3.64 miles (σ = .33 mi.); 9.80 minutes (σ = 1 min.)</td>
</tr>
<tr>
<td>Whole Foods</td>
<td>Top 3 Frequent Stores</td>
<td>2.75 miles (σ = 1.7 mi.); 7.39 minutes (σ = 3.26 min.)</td>
</tr>
</tbody>
</table>

*Average distances and times; stores chosen based on closest distance to residence if specific store/address not given

Discussion

My research indicates that Tracts A and B share many of the same food shopping characteristics such as their fruit and vegetable choices, store choice, traveling distances to grocery stores, and perceptions of what eating healthy means. Through the data collected it can be determined that there are no significant inequalities between the quality of produce products or the traveling distances to grocery stores or fast food/restaurant outlets. While there are differences in the availability of produce (organic and non-organic) and seafood, these differences were not statistically significant.
Both sets of residents say that they participate in a healthy eating lifestyle based on their individual definitions of what eating healthy is as well as definitions created by national health organizational definitions, such as the USDA and AHA. The ease of transportation allows both tracts the opportunity to participate in a diet/lifestyle consisting of quality fruits, vegetables, dairy products, seafood, and poultry. In terms of food access, each tract has access to supermarkets and grocery stores at close distances that feature healthy foods. The USDA’s definition of food choice consists of choices being determined by factors such as product prices, family structure, nutritional information and time constraints.

Interestingly, there are some large differences in the average *prices* of fruits, vegetables, and seafood between the stores that the two tracts patronize. It is apparent that the food choices of Tract B’s respondents are influenced by the price of the products they are consuming because of the distance they travel outside of their census tract to get to low priced stores like Walmart and their frequent use of low priced stores inside their tract like Aldi’s. Tract A’s residents frequent higher priced stores for their higher quality foods and ‘fresh’ seafood counter that makes the seafood appear fresher and healthier.

Both tracts report that they purchase and consume fruits, vegetables, and seafood on a regular basis, and, perhaps because they share a commonly frequented store (Kroger), both tracts have very similar rates of food availability. In these particular tracts, no strong correlations were found between factors like a household’s monthly income, how much is spent on food monthly, if a household purchases organic foods, how often a household goes out to eat or gets takeout, or the distance they travel to grocery stores and fast food/restaurant outlets. The highest correlation was a 0.21 between a household’s monthly income and how often they eat out or get takeout, which indicates that there is not even a moderate relationship between the two factors. These low rates of correlation are likely due to the wide diversity and equality of responses; there were no data trends that could be followed. A household that makes $2,000-$2,399 monthly has just as much of an opportunity to purchase organic foods as a household that makes $4,000 or more monthly. Similarly, a household from Tract A has approximately the same traveling distances as a household from Tract B regardless of external factors.
Conclusion

Residents of Tracts A and B share many of the same food shopping characteristics. Amongst their similarities are their fruit and vegetable choices, a store choice, traveling distances to grocery stores, and perceptions of what eating healthy means. Through the data collected it can be determined that there are no significant inequalities between the quality of produce products or the traveling distances of grocery stores or fast food/restaurant outlets. While there are some differences in the availability of some produce, organic and non-organic, these are few and far between and are not very significant to the ability of residents to still purchase and consume produce products. The data does suggest that Tract A residents, the higher income tract, are paying more for their fruits, vegetables, and seafood products. Both sets of residents participate in a healthy eating lifestyle based on their own personal and individual definitions of eating healthy as well as organizational and professional definitions. These two tracts have a seemingly positive relationship with food and do not experience a lack of food access or food availability. Overall, it seems that the literature describing low-income populations as being at a disadvantage compared to middle or high income populations in terms of being able to access affordable and quality of fruits and vegetables at a close distance to their residence is not apparent in my research. It is important to note, however, that these results are not representative of Memphis as a whole and that these results may not be replicated with other tracts.
References


Jacqueline Murray graduated from the University of Memphis in December of 2016, obtaining a Bachelor of Arts degree in Social Work with a minor in Sociology. She graduated *magna cum laude* and University Honors with Thesis. Jacqueline is a member of Phi Kappa Phi National Honor Society and Phi Alpha Honor Society for Social Work. Her undergraduate research pursuits investigated gender and sexual minority (GSM) disparities in healthcare settings. She plans to pursue a master’s degree in public health, and aims to focus her continued studies on gender and sexual minority populations.

Jacqueline’s paper received a *Quaesitum* outstanding paper award.
Jacqueline Murray
Healthcare Disparities Among Transgender Individuals

Faculty Sponsor
Dr. Lamont Simmons
Abstract

Disparities among the healthcare experiences of transgender individuals can result in poor health outcomes and decreased quality of life. This qualitative research study explored how three transgender individuals perceived the quality and accessibility of their healthcare experiences. Findings suggest that healthcare disparities disproportionately impact transgender individuals. Two themes emerged: (1) lack of knowledge among health care professionals, and (2) mistreatment by medical professionals. The study illustrates the need for medical providers to be competent in providing transgender-inclusive care and conscious of how their professional behaviors and practices may be more inclusive of transgender patients.
Introduction

Problem Statement
In American society, transgender individuals experience violence, institutional oppression, barriers to expressing their sexual orientation, and disparities in accessing resources that address their biopsychosocial and physical health needs. Most noted are disparities that impact their healthcare experiences. These disparities often result in poor health outcomes and a decreased quality of life. Despite this extensive problem, there is little research showing how transgender individuals experience and negotiate the American healthcare system. The purpose of this research was to understand healthcare disparities among transgender individuals. The rationale for this study emanates from the need to understand how transgender individuals make meaning of their healthcare experiences. It aims to increase awareness about the discriminatory healthcare practices that negatively impact transgender people, as well as support the need for further clinician training about transgender-specific health issues to promote quality healthcare for transgender patients. This study was designed to answer the following question: “What factors create health care disparities among transgender individuals?”

Literature Review

Sexual Minority Discrimination
Sexual and gender minority groups have long been the subject of discrimination. In a society where heterosexuality is the norm, lesbians, gay men, and bisexual individuals make up a sexual minority population. Transgender individuals, or people who identify with a gender that does not correspond with their biological sex assigned at birth, are also regarded as gender minorities (University of Michigan, 2016). It is not uncommon for lesbian, gay, bisexual and transgender (LGBT) people to experience discrimination and face stigma from other members of society. A report from the Center for Disease Control and Prevention (2016) show that compared to the general public, sexual minorities are eight times more likely to attempt suicide, six times more likely to report high levels of depression, and three times more likely to use illegal drugs. They are also three times more likely to engage in risky sex behaviors, which may consequently result in becoming infected with HIV or other sexually transmitted diseases.
Homophobia is also the basis for discrimination and hate crimes committed against sexual minorities. In 2007, the FBI recorded 1,265 LGB-biased hate crimes including murder, forcible rape, aggravated assault, simple assault, and intimidation (Marzullo & Libman, 2009). Transgender individuals are particularly vulnerable to prejudice and formally sanctioned forms of discrimination. Similarly to the LGB population, transphobia, or a prejudice against transgender people, is the fuel for many violent hate crimes. A 2009 study found that 17 percent of reported hate crimes against LGBT people were directed against transgender individuals and 50 percent of people who were killed in LGBT hate crimes identified as transgender (Office of Justice Programs, 2014). The Office of Justice Programs (2014) further states that 15 percent of transgender individuals report being sexually assaulted while in police custody or jail, between 5 and 9 percent of transgender individuals report being sexually assaulted by police officers, and 10 percent report being assaulted by health care professionals (although these numbers may be low since sexual assault crimes often go unreported). The risks increase for transgender people of color, people with disabilities, and homeless individuals.

**Official Identification Policy**

In the United States, many states have strict identification policies that marginalize transgender individuals. In Tennessee for example, in order to update a name or gender on a piece of identification (ID), individuals are required to obtain a physician’s note stating that medical procedures have occurred which serve to complete the gender changing process (National Center for Transgender Equality, 2016). While some transgender individuals decide to undergo gender reaffirming surgery, or surgery to change the physical appearance of their genitals, the high risk, cost, and lack of access dissuade many people from undergoing the medical process. In reality, only one in five transgender women and one in twenty transgender men have undergone gender reaffirming surgery; and a large percentage of transgender men and women report that they have no interest in ever having genital surgery, likely due to the associated costs and risks (Sukurs, 2014). In addition, Tennessee, Idaho, and Kansas are among the few states that prohibit amending sex on a birth certificate, regardless of whether an individual has undergone gender reaffirming surgery (National Center for Transgender Equality, 2016). It is clear that these identification laws overlook the needs and realities of many transgender individuals. Having
a license or ID card that does not accurately reflect a transperson’s gender identity can be very damaging for their mental health, and can compromise their safety when they are required to present their ID. Moreover, some states such as Indiana require voters to present a government-issued photo ID at the polls. For transgender individuals whose appearance does not reflect their birth gender on their ID, voting can become impossible and lead to harassment. Sukurs (2014) reported that 27 percent of transgender individuals do not have an ID that reflects their current reaffirmed gender; strict voter registration laws in many states, in fact, effectively strip from transgender individuals their ability to vote.

Finally, daily activities are often obstacles to transgender individuals. In North Carolina, simply using a public restroom has become a major safety concern for the transgender population. In March of 2016, North Carolina’s legislature passed House Bill 2, or HB2, which prevents transgender individuals from using bathrooms that correspond with their gender and instead force them to use bathrooms that correspond with their biological sex. The bill also prevented cities and counties from establishing different rules for public restroom use (Gordon, et al., 2016). The thought behind North Carolina’s House Bill 2 was that transgender individuals posed a threat to women and children in public restrooms. Evidence shows zero reported incidences of transgender individuals verbally or physically assaulting someone in public restroom; although 68 percent of transgender individuals have experienced verbal harassment and 9 percent have experienced physical assault when trying to access a public restroom (Herman, 2013). The U.S. Department of Justice has ruled that the North Carolina bill violates Title IX and Title VII of the Civil Rights Act. However, North Carolina state legislators claim that it is constitutional and the bill has yet to be repealed (Morrill, 2016). The portrayal of transgender people as predators by state and federal legislators demonstrates how transphobia transcends law and health policy.

Health Care Disparities among Transgender Individuals

A major barrier that faces transgender population is a lack of access to healthcare. Scout (2005) describes transgender health disparities as an effect of “compromised survival,” or compromised life chances due to unequally distributed societal resources and perceived potential for success. For example, gender dysphoria (a condition where individuals experience discomfort, stress, or other negative emotions because their biological sex
does not match their gender identity (National Health Service, 2016), is often treated with cross-sex hormones, but transgender individuals may have difficulty finding a doctor who is knowledgeable about the treatment and its side effects. If they cannot find a doctor, transgender individuals often inject the hormones themselves, frequently sharing needles. The rate of HIV/AIDS infection among the transgender population is over four times the national average, and they have a higher infection rate than gay men. Transgender individuals also have much higher rates of depression, self-harm, substance abuse, and suicide when compared to the national average (Roller et al., 2015). Scout (2005) argues that these higher rates are caused by societal factors, or social determinants, such as social exclusion, a lack of social support, and stress, specifically noting how stress often leads to drug use and how a lacking support system can have severe negative implications for an individual’s mental health.

Another factor that contributes to transgender healthcare disparities is the lack of health care providers who are knowledgeable or willing to provide health services to transgender patients. The discrimination and stigma that faces transgender individuals in the general population is also present in the medical field; up to 27 percent of transgender individuals have reported being turned away by health care providers who refused to provide care for them (National Center for Transgender Equality, 2012). Additionally, 28 percent of transgender individuals reported that they had been harassed in a doctor’s office, which can turn the care-seeking process into a life-threatening situation (Human Rights Campaign, n.d.). The process of finding an accepting doctor is enough to keep many transgender individuals from seeking much needed healthcare.

The National Center for Transgender Equality (2012) reports that 48 percent of transgender men have delayed or avoided preventative reproductive health care, including HIV and sexually transmitted infection (STI) screenings and annual pelvic exams, for fear of discrimination or disrespect. Within the healthcare delivery system, there are core elements that create barriers to care for transgender individuals. Electronic Health Records, which are designed to record patient history and needs, can pose a problem as they are not designed to address the documentation needs of transgender patients (Vanderbilt University School of Medicine, 2016). The nature of this system can result in confusion regarding the patient’s biological sex and gender (thus potentially compromising medical records).
and patients feeling misunderstood, having their identity exposed to other patients in waiting rooms. Even when doctors who accept transgender patients are available, it is likely that they will not know how to treat transgender-specific health concerns.

Nationwide, 50 percent of transgender individuals reported that they had to teach their health care provider how to provide transgender-appropriate care (National Center for Transgender Equality, 2012). Some health care organizations have begun to use a rights-based approach to explicitly target transgender health care needs, but Marks (2006) notes that the refusal to acknowledge the health care needs of the transgender population continues to persist. To combat the lack of attention to transgender-specific health issues and educate healthcare providers, Goldberg (2006) proposed training frameworks for medical providers that attempt to reduce transgender health disparities by focusing on promoting quality and consistent healthcare.

In an attempt to provide health care options for transgender populations, community clinics have begun to open in underserved and low-income areas. Community clinics provide transgender patients with safe and affordable health care, and many are able to offer hormone replacement therapy (Transgender Law Center, 2012). Community clinics may still face under-skilled or insensitive staff problems, but they are quickly becoming an ally to the transgender community in many parts of the country by providing important medical care when there is nowhere else to go.

Methodology

The purpose of this qualitative research study was to understand the factors that create healthcare disparities among a sample of transgender individuals. Qualitative research is a relevant methodological choice for this study. Inherently, this approach is grounded in a constructionist philosophy, which entails how people make meaning of their experiences, and illustrates that their experiences are constructed in different ways. Ultimately, these meanings help in the formation of themes which lead to insight on how study participants experience some phenomenon (Crotty, 1998). In this study, the findings were generated according to how participants experienced healthcare disparities.
Sampling

This study used a non-probability sampling technique called snowball sampling to recruit and select the study’s participants. In snowball sampling, the researcher identifies one potential participant who is then used to refer the researcher to other participants (Atkinson & Flint, 2001). By and large, this method allows researchers to access populations that would otherwise be hard to reach. Hard to reach populations include, but are not limited to, drug dealers, prostitutes, active criminals, gang leaders (Schutt, 2014), and sexual minorities who experience social pressure or marginalization from the larger society (Shaghaghi et al., 2011). There exists a personal relationship between the investigator and the first study participant, but there were no pre-existing relationships between the researcher and other participants. Once potential participants were identified, they were sent a recruitment letter via email soliciting their participation in the study. A total of three participants gave consent to participate in this study. The pseudonyms Sarah, William, and Mary were assigned to protect the personal identities of the study participants. Each participant met the inclusion criteria for this study:

• Be over age 18
• Self-identify as transgender
• Willing to talk and share openly about their health care experiences

Data Collection

A university institutional review board (IRB) reviewed and approved the study prior to data collection. In-depth interviews were used as the data collection method to understand the experiences of 3 transgender individuals in the healthcare-seeking process. Each participant took part in one semi-structured interview (which lasted one hour on average), and an interview protocol composed of eight open-ended questions about the participant’s healthcare experiences. All interviews were digitally recorded with participant permission and transcribed verbatim after the interviews. Given the nature of this study, any specific references to participants through written documentation used pseudonyms. Written documents remained secure and were maintained in a metal electronic safe. Electronic information was also secured on a private laptop computer with password protection. All information was only accessible to the researcher.
Data Analysis

A general inductive approach was used to analyze the interview data and to identify emergent themes most relevant to the research question (Thomas, 2006). Analysis for this study began with an open coding process. Merriam (2009) noted that open coding is a useful data analysis technique because it allows the researcher to record personal interpretations of the participant data. In this study, data analysis formally began with a thorough review of the interview transcripts which revealed common themes that support the study’s question, “What factors create health care disparities among transgender individuals?”.

Findings

From the interview data, two themes emerged as key factors in health care disparities among transgender individuals:

- Theme 1: Lack of knowledge among healthcare professionals
- Theme 2: Mistreatment by medical professionals

Lack of Knowledge among Health Care Professionals

Theme 1 relates to the participants’ experiences with health care professionals with little knowledge about transgender-specific healthcare. Two participants in particular expressed discomfort during interactions with medical doctors who, through the participants’ lenses, seemed uninformed about transgender-specific healthcare needs. One participant, Sarah, for instance, was met with confusion and frustration when she tried to explain her gender identity to her doctor. William (participant 2) described feeling awkward around his primary care provider. He stated, “She knows [about his gender identity] but she [his doctor] just doesn’t understand me.” Mary (participant 3) felt embarrassed and uncomfortable during an exchange with a pharmacist who questioned her estrogen prescription. She remarked, “it was embarrassing for me especially for the first time [picking up an estrogen prescription], and it was kind of awkward.” Mary felt awkward because the pharmacist drew unwanted attention from customers and pharmacy staff by loudly questioning the validity and purpose for her estrogen prescription.

The collective experiences of the participants suggest a pervasive problem in how health care professionals interact with transgender persons. Their experiences may also indicate that health care professionals
are unwilling to acknowledge and respond to their medical needs. Fundamentally, providers or professionals who are uninformed or insensitive toward transgender patients can be a significant deterrent to care. Sarah, for instance, explained that she struggled with trying to have her hormone prescriptions (estrogen and spironolactone) transferred from a transgender gender-specific provider to her primary care provider. In clarifying her frustration, she shared this message from her provider:

I am really not sure I will be able to manage your transition. It is a lot of new information and will require a significant amount of my time to learn about something that I do not think will be used a lot at [university name withheld].

Sarah’s comment seems to indicate that many health care providers perceive that they will probably not encounter and be responsible for managing the healthcare needs of transgender patients. Despite some truth to this perception, still 0.6 percent of adults in the United States identify as transgender (Flores et al., 2016). Even with this small proportion, it seems irresponsible for providers to assume that their lack of knowledge about transgender-specific healthcare will be supplemented by other providers who may have experience and expertise in treating this population.

Because of the shortage of transgender-specific healthcare providers, many transgender people are less likely to receive quality care, and may feel let down by the medical system. Sarah expressed her frustration with the medical system, saying that “I can’t get the medication that I need…that I’ve been taking…because it’s an inconvenience for them to learn about it.” Seemingly, the ease with which medical providers dismiss transgender healthcare as a niche specialty demonstrates not only a lack of understanding about transgender healthcare, but a willful ignorance about transgender populations as a whole. This lack of provider understanding is detrimental to doctor-patient relationships and can result in feelings of distrust toward the provider and become a major cause of healthcare disparities among transgender individuals (Gay and Lesbian Medical Association, 2006; Grant et al., 2011).

Fear of Mistreatment by Medical Professionals

The second theme relates to fears and anxiety about being mistreated by medical professionals. While studies have shown that these fears are justified, they are not limited to transgender specific healthcare (Robinson, 2010; National Center for Transgender Equality, 2012; Human Rights
Campaign, n.d.). In his interview, William shared his fear of disclosing his gender identity to his gynecologist for fear that he (the gynecologist) would disregard William’s medical problems or the reason for his appointment and instead, direct attention toward making sense of his identity. While it is not always medically necessary for patients to be open about their gender identity with their providers, the pressure of having to hide one’s identity can have serious negative impacts on the patient’s overall mental health and treatment outcomes. Patients who do not feel comfortable being open with their providers may experience a lessened quality of care as a result.

It is important to note that discrimination and judgment from medical professionals can affect more than just the patient under care. Mary shared her experience with trying to access healthcare for her young daughter, a situation which she described as “very disheartening.” Although Mary was not the patient in this situation, she faced hostility from her daughter’s surgeons and doctors who were only interested in speaking to her daughter’s biological mother. Mary’s poor treatment in this situation caused her to feel excluded from her family and her daughter’s care team. It is clear that provider judgment and bias had a negative effect on Mary, but it likely also caused strain on her family and her daughter during what was already a difficult time.

Both Mary and William discussed feelings of being treated with suspicion by healthcare providers. Mary described a time when she pulled several ligaments in her arm, which caused severe pain and disrupted many of her normal activities. She shared that despite seeing three or four different doctors, none of them would provide her with pain medication while she was taking hormones. Mary felt that the doctors associated her hormone use with drug abuse, a speculation that allowed them to deny her pain management. After being held in a Midwestern hospital following a second reconstructive chest surgery, William shared that he was told to take Advil for his pain. Thinking back on the experience, he said, “I was in the hospital for a really extended period of time, and they didn’t manage my pain, they didn’t take care of me at all.” The experience of being treated with suspicion by medical providers is not new for many transgender individuals, and it likely stems from medical professionals’ biases and ideas rooted in negative stereotypes of transgender individuals. Mary and William both felt that they were not being treated effectively, which
can put strain on patient-provider relationships and have negative medical consequences.

**Discussion**

The study’s findings were congruent with the literature showing that healthcare disparities disproportionately impact transgender individuals (Scout, 2005; Grant et al., 2011). The lack of knowledge about transgender issues among healthcare providers, personal fears of discrimination from medical professionals, and experiences of being treated with suspicion by providers all contribute to these disparities. When medical providers are uninformed, the burden of knowledge falls on the patient to articulate their personal health circumstances. All three participants described circumstances where they had to clearly express their needs to their provider; including requests for hormone prescriptions. Providers who are uninformed about the treatment regimen and potential side effects of hormone replacement therapy rely on their patients to provide them with that information.

The participants in this study were between 30 and 55 years old, college educated, and one participant had an extensive background in medical and scientific knowledge. These factors provided the participants with the privilege and agency to make their own informed decisions about their healthcare. The nature of doctor-patient relationships and authoritative knowledge, however, means that many younger or less educated transgender patients may feel uncomfortable and be unable to express their needs to their healthcare providers.

**Conclusion**

This study illustrated the need for more medical providers who are competent in providing transgender-inclusive care. Cultural competency and sensitivity training for healthcare professionals could potentially improve the quality of care that transgender patients receive, and would likely lead to more providers offering transgender-specific care. Similar to cultural competency training for racial and ethnic minorities, sensitivity training for working with transgender patients should be led by transgender physicians, scientists, or other medical professionals. Although most providers do not receive this type of training while in school, any training that they do receive is likely taught by cisgender, heterosexual providers. Ensuring that there is representation in the medical field is a major step to ending
healthcare disparities among transgender populations. Continuing educa-
tion training regarding cultural sensitivity and transgender healthcare con-
cerns is also necessary for practicing providers to ensure that they remain
current on best practice policies.

From a practice standpoint, the knowledge from this study can be used to ensure that patients are not being disrespected or mistreated by medical professionals. The experiences shared by the participants outline negative interactions with medical providers, and these accounts should allow providers to analyze their own behaviors and practices in order to make their services more inclusive to transgender patients. The participant interviews also revealed underlying notions of racism and sexism, which had an effect on the participants’ healthcare experiences. The participants made several comments alluding to the idea that transgender women have a harder time navigating the healthcare system than transgender men. Additionally, issues of racism play into both healthcare experience and accessibility. This intersectionality means that transgender women of color likely experience the greatest amount of discrimination in healthcare settings. Qualitative research on the healthcare experiences of transgender women of color is needed to fully understand the roles of race and sex within the medical system.
References


Lauren Stout graduated from the University of Memphis in December of 2016 with her Bachelor of Arts in Sociology. She graduated *magna cum laude* with a 3.6 GPA. She is now working on her Masters in Clinical Mental Health Counseling at Freed-Hardeman University. She hopes to become a licensed counselor in the future and continue research on religion and mental health.
Lauren Stout
The Effect of Religion and Belief in Life after Death
on Opinion of Suicide if Tired of Living

Faculty Sponsor
Dr. Junmin Wang
Abstract

This work focuses on individuals’ beliefs regarding life after death as they relate to the religion in which they were raised and how these beliefs affect their opinions on suicide if tired of living. Through literature review and data taken from the 2014 General Social Survey datasets, I found no statistical significance in the link between the religion in which the respondent was raised and their opinion on suicide if tired of living. I did find a statistical significance in the respondent’s belief in life after death and his/her opinion on suicide if tired of living. Through my research, I was able to come to the conclusion that the belief in an afterlife had an effect on participants’ opinion of suicide. The research into this topic should be expounded upon to yield further results.
Introduction

Suicide has been a growing national concern in the US in recent years. According to the The Center for Disease Control (2016), the suicide rate in the US increased 24 percent between 1999 and 2014, and causes have been a topic of interest among psychologists and other social scientists. The argument of nature vs. nurture, which postulates the importance of an individual’s biological nativism versus his/her experiences and how these experiences affect their behavior, will always be a topic of debate in the scientific world. My research will examine the nurture component of individuals’ opinions of suicide as it relates to religious views. My research question asks if the religious denomination in which an individual was raised and his/her opinion on life after death has any effect on his/her opinions towards suicide. There have been no in-depth studies into the effect of religion on thoughts of suicide or belief in life after death as a contributing factor to an individuals’ opinion on suicide. This research is important to further investigate what factors influence individuals’ ideas about suicide and whether this might play a role in their willingness to follow through with this course of action. Religious beliefs and belief in life after death can be seen as a deterrent for individuals considering suicide if they believe they will experience repercussions in the afterlife.

My study looks at respondents from religious groups with varied notions of life after death and compares these notions with their opinions on committing suicide. I will be using data collected for the National Data Program and complied in the General Social Survey (GSS) for the year 2014. My research will focus on the following variables: 1) opinion on suicide if tired of living, 2) respondent’s religion he/she was raised in, and 3) belief in life after death. For the suicide variable, respondents were asked their opinion about someone taking his/her own life if he/she were tired of living. It is important to note that this reason for suicide may be distinct from other motivations such as alcoholism, chronic disease, etc. which, if investigated, might yield different results. For the purpose of this paper, all references to suicide reflect suicide motivated by being tired of living as opposed to other possible motivations unless stated otherwise.

The religion variable was based on the religion in which the respondent was raised. The afterlife variable was based on respondents stating his/her belief in life after death. My findings have shown little to no association between the religion a respondent was raised in and opinion
of suicide. However, I have found a statistically significant association between the respondents’ belief in life after death and their opinion on suicide.

**Literature Review**

In *Religion and Suicide*, Gearing and Lizardi (2009) look at the link between religiosity and suicide. Using the PsychINFO and MEDLINE databases, they examine secondary sources published between 1980 and 2008 that use the keywords, “religion, Christianity, Catholicism, Judaism, Islam, Muslim, Hindu, attempted suicide, suicide, suicide prevention, and related mapped terms.” They found that religion functions as a protective factor against suicide. Not only do most religious denominations prohibit suicide, the involvement in organized religion creates a support network within the members of said congregation which may act as a deterrent. Gearing and Lizardi (2009) state that within Christianity, there are higher suicide rates seen in Protestants. Hindus are one of the most tolerant religions of suicide, but there is limited research on suicidality and Hinduism. Although there is limited research on suicide within the Muslim community because of underreporting, suicide rates are lower in Islamic countries in comparison to those that are not. It must also be noted that suicide statistics in Muslim countries differentiate between religiously/politically-motivated suicide versus suicide committed for reasons such as dishonor, mental illness, bankruptcy, etc. In the U.S., Jewish individuals have lower suicide than Christians. Jews in Israel have some of the lowest suicide rates in the world. To conclude, research has established a correlation between suicidality and religiosity.

In their later research, Lizardi and Gearing (2010) expand their exploration of the link between religious belief and suicide by examining additional practices such as Buddhism, African, Native American, Agnosticism and Atheism. Using PsycINFO and MEDLINE, Lizardi and Gearing looked at articles through 2008. The keywords used were, “religion, religious beliefs, spirituality, faith, Buddhism, Buddhist, Atheist, Atheism, Agnostic, Agnosticism, Native American, African, attempted suicide, suicide, suicide prevention, and other mapping terms.” They found that suicide rates were high among Asian/Pacific-Islander women, but there is no correlating link with Buddhism. They further concluded that suicide rates among Native Americans were 1.7 times higher than the overall US population, but in these cases the suicide rates were linked to alcoholism.
Native Americans with a high involvement in cultural/spiritual activities were less likely than other religious denominations to commit suicide. Limited research has been done with traditional African religions and suicide. Also, HIV stigma and euthanasia are confounding factors in suicide studies in Africa. They note that few studies have been done on religiosity and suicide within the Agnostic and Atheist populations because of their lack of religiosity. They conclude with discussing that various religions, large or small, conceptualize life and death differently within their respective religions. Nothing conclusive was found in their study.

While Lizardi and Gearing’s research has revealed important links between religion and suicide, their studies are oriented toward use in a clinical setting by a counselor or psychologist, mostly as a preface to suicide and cultural sensitivity/multi-cultural counseling. With this exception the existing research tends to focus only on the specific beliefs of the individual rather than patterns across the denomination. They conclude with discussing that various religions, large or small, conceptualize life and death differently and this can correlate with suicide rates.

In *The Effects of Religion and Feminism on Suicide Ideology: An Analysis of National Survey Data*, Stack, Wasserman, and Kposowa (1994) examined feminism and religiosity levels through views on suicide. They hypothesized that religiosity shapes feminist beliefs and suicide ideology, and that feminism increases suicidality because of decreased association with religion. They predicted that this would be true for both males and females. Data taken from the GSS between 1972 and 1990 was aggregated together while looking at full probability sampling of individuals 18 and older in the US. Suicidal ideology was the dependent variable. The first independent variable, feminism, was conceptualized as liberal attitudes about traditional gender roles, and the second independent variable, religion, is measured by frequency of church attendance. With political ideology or political liberalism as the controls, they found that religion shapes feminism and feminism shapes suicide ideology. The limitation found in the study was the attitudes towards suicide, not the behavior.

Stack and Wasserman (1992) examined network theory in religion and how it affects suicide ideology. Data is taken from GSS surveys between 1972 and 1990 and then aggregated together. Gathered through full-probability sampling, individuals 18 years or older in the US were interviewed in their homes. The dependent variable, attitude toward
suicide, was measured through four questions. The first independent variable was within denomination Protestantism, and a coding scheme was used to separate Protestants into 45 separate Protestant denominations. The second independent variable was frequency of church attendance. Controls were introduced for income, education, gender, age, geographic region, and urban vs. rural residence. They concluded that reduced suicide ideology was seen in churches that had Presbyterian polity, conservative churches, churches with high tension between teachings and the culture, and nonecumenical churches.

Ellison, Burr, and McCall (1997) hypothesized that religious homogeneity has a predictive effect on suicide rates and factors of suicide. The data was measured using standard metropolitan statistical areas (SMSAs). The dependent variable was suicide rates, as grouped by age and sex, and measured on occurrence/exposure rates over a three-year period. The independent variables were religious denomination and religious homogeneity which were operationalized using the Herfindahl index. The control variables used were divorce rate, single-person homes, race, population size, unemployment, income, region, and population change. The study concluded that homogeneity was a stronger predictor of suicide rates than any other religious variables used in studies such as these. Homogeneity increases the likelihood that interaction will occur and social bonds will occur between individuals with similar religious backgrounds. Thus, religious homogeneity can contribute to social and moral community in an area. Religious institutions that exist within the public sphere often leave their impact on the civic life and local culture, which in turn often coincides with lower suicide rates.

Whalen (1964) discusses suicide within the Judeo-Christian communities. With 60 percent of the US population claiming membership to a church or synagogue and 95 percent of the US population claiming the existence of a Supreme Being, how do these religious individuals contemplate or attempt suicide, based on their religious doctrines? Although there are many statistics on suicide, Whalen (1964) asserts that the taboo nature of suicide itself could skew the results. Durkheim (1958) viewed religion as an anti-suicidal force, but often the data show differently. Louis Dublin (1963) released suicide statistics that indicate in the US and Canada, Protestants are most likely to commit suicide, followed by Catholics and then Jews. Dublin’s study, however, also found that in Europe, Jewish suicide rates had surpassed those of the Protestants, displaying the effect
of the sociopolitical climate of the time. This research displays limitations in variables, such as religiosity, which tend to be a less reliable scientific tool. Also, many studies of suicidal behavior do not contain proper measures of association. Oftentimes a belief is either an opinion or conviction, but Whalen (1964) states religion is often the final thing on someone’s mind while attempting to commit suicide.

Simpson and Conklin (1989) critique Durkheim’s idea that religion suppresses suicide by questioning the statistical data he looked at during this time. Counter to Durkheim’s idea of the independence of suicide and religion, Simpson and Conklin (1989) propose that different religions need to be compared. They performed a cross-national comparison, using data from the *Demographic Yearbook* and the World Bank’s Tables from about or around 1970. The predictor variables used are suicide, agricultural employment, affluence, schooling, urbanization, female employment, sex ratio, age, living in Sub-Saharan Africa, divorce rate, living in an Eastern block nation, and religious adherents. Seventy-one nations were used with no missing values. Simpson and Conklin (1989) concluded that Muslims have lower suicide rates, economically underdeveloped areas have lower suicide rates, and suicide is a function of the demographic structure of society. Durkheim was proven to be correct in his assertion that traditional religion plays a role in the suppression of suicide.

Van Tubergen, Grotenhuis, and Ultee (2005) discuss Durkheim’s theory that involvement in religious communities inversely affects suicide attempts. Using the Dutch Registry of Death, collected from the 1999 Netherlands Statistics, data was collected on Catholics, Reformed Protestants, Re-reformed Protestants, and non-church members who committed suicide in the Netherlands. Data was available in digital form for several years between 1936 and 1973, namely 1936–39, 1947–52, 1955, 1957, 1962, 1965, 1967, and 1969–73. A total of 14,744 digitally registered suicides were available for analysis. The major limitation was lack of controls, such as age and sex. Contextual variables used were percentage of church members in a municipality, such as Catholics, Reformed Protestants, and Re-reformed Protestants. They also applied multilevel regression analysis. Van Tubergen et al. concluded that the proportion of religious members in a municipality is inversely related to the chance of suicide for both church members and non-church members and the probability of members of a denomination committing suicide is not influenced.
more strongly by the presence of that denomination (or other denomina-
tions) in the community. Lastly, they also concluded that it is not social
support from others that prevents people from suicide, but instead a shared
religious norm prohibiting suicide, which extends to those who are not
affiliated with any denomination.

Much of the previous research pertaining to specific religious de-
nominations’ views on suicide have been inconclusive. My study attempts
to address these topics. My first hypothesis is that Christians will be more
likely to respond ‘yes’ to the opinion of suicide (if tired of living) than
respondents of any other denomination. My second hypothesis is that indi-
viduals who believe in life after death will be more likely to reject suicide
(if tired of living) than individuals who do not believe in life after death.

Data and Methods

Data

The dataset I am using is from the General Social Survey (GSS) database
(2014). The sample includes both men and women, 18 and older, living in
households in the U.S. The sample is a multi-stage area probability sample
using quota sampling. The sample was collected in three ways: through
access to USPS, census geographies, and geocoding. Once the sample had
been obtained, face-to-face interviews were conducted. The sample size
for the 2014 GSS dataset was 2,538 respondents (http://gss.norc.org)

Measures

1. Dependent Variable(s). The dependent variable used in my study was an
individual’s opinion on a person’s right to commit suicide. My dependent
variable’s name in the codebook is suicide4. The respondents were asked,
“Do you think a person has the right to end his or her own life if this
person is tired of living and ready to die?” The possible responses for this
question were, “Yes, No, Don’t know, No answer, and Not applicable”. I
did not recode this variable.

2. Independent Variable(s). The first independent variable I used was the
religion in which a person was raised. This independent variable’s name
in the codebook is relig16. The question was based on the variable, “In
what religion were you raised?” The possible responses for this question
were, “Protestant, Catholic, Jewish, None, Other (Atheist, Agnostic, etc.),
Buddhism, Hinduism, Other Eastern (Confucianism, Taoism, etc.), Muslim/Islam, Orthodox-Christian, Christian, Native American religions, Inter-nondenominational, Don’t know, No answer, and Not applicable”. I have recoded this variable so that Protestant, Catholic, Orthodox-Christian, and Christian are all listed as Christian.

The second independent variable was an individual’s belief in life after death. My second independent variable’s name in the codebook is postlife. The question this variable was based on was, “Do you believe there is life after death?” The possible responses to this question were, “Yes, No, Don’t know, No answer, and Not applicable.” I did not recode this variable.

**Analytic Plan**

For this analysis, I used SPSS 24 as the statistical analysis software to cross tabulate variables.

**Results**

Table 1 displays the percentages for each of the variables used. The dependent variable used was the respondents’ opinion on suicide if tired of living. I found that 51.5 percent of respondents believe that someone does not have the right to commit suicide if they were tired of living. The first independent variable examined was the religion the respondent grew up following. There was an overwhelming majority of respondents (89.2 percent) who stated they were raised Christian; this being the majority denomination. The last independent variable used was the respondents’ belief in life after death. As Table 1 indicated, there is a high rate of belief in life after death (70.3%).
Table 1: Descriptive stats for all variables in analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Suicide if Tired of Living</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>13</td>
</tr>
<tr>
<td>No</td>
<td>51.5</td>
</tr>
<tr>
<td>IAP (Inapplicable)</td>
<td>34</td>
</tr>
<tr>
<td>DK (Don’t Know)</td>
<td>1.3</td>
</tr>
<tr>
<td>NA (No Answer)</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Religion in Which Respondent Was Raised</td>
<td></td>
</tr>
<tr>
<td>Christianity</td>
<td>89.2</td>
</tr>
<tr>
<td>Jewish</td>
<td>8.1</td>
</tr>
<tr>
<td>None</td>
<td>0.4</td>
</tr>
<tr>
<td>Other (Atheist, Agnostic, etc.)</td>
<td>0.4</td>
</tr>
<tr>
<td>Buddhism</td>
<td>0.7</td>
</tr>
<tr>
<td>Other Eastern (Confucianism, Taoism, etc.)</td>
<td>0.5</td>
</tr>
<tr>
<td>Muslim/Islam</td>
<td>0</td>
</tr>
<tr>
<td><strong>Belief in Life after Death</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>70.3</td>
</tr>
<tr>
<td>No</td>
<td>18.1</td>
</tr>
<tr>
<td>DK (Don’t Know)</td>
<td>11.5</td>
</tr>
<tr>
<td>NA (No Answer)</td>
<td>0.2</td>
</tr>
</tbody>
</table>
In Table 2, the cross tabulation analysis shows us that the “Other” (Atheist, Agnostic, etc.) religious preference had the highest percentage of respondents, at 37.5 percent, stating they believe someone has the right to commit suicide. Comparatively, the “Other Eastern” religious preferences (Confucianism, Taoism, etc.) had the lowest percentage (0%) stating they did not believe someone has the right to commit suicide if he/she were tired of living. According to the Chi-square test ($X^2=15.381$, $P<.000$), this difference is statistically significant at the 0.000 level. The Lambda value is .000 ($p<.01$), indicating a very weak association between the religion a respondent was raised and his/her opinion on someone committing suicide if tired of living. The research hypothesis for these two variables show no statistically significant association; The null hypothesis is therefore confirmed.

<table>
<thead>
<tr>
<th>Should Someone Have the Right to Commit Suicide if Tired of Living?</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christianity (19.2%)</td>
<td>281</td>
<td>1185</td>
<td>1466</td>
</tr>
<tr>
<td>Jewish (31.5%)</td>
<td>41</td>
<td>89</td>
<td>130</td>
</tr>
<tr>
<td>None (28.6%)</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Other (Atheist, Agnostic, etc.) (37.5%)</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Buddhism (11.1%)</td>
<td>1</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Other Eastern (Confucianism, Taoism, etc.) (0%)</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: General Social Survey [2014], N=1,627
Table 3 shows that 82.4 percent of respondents who believe in life after death do not agree that someone has the right to commit suicide if tired of living. Comparatively, 27 percent of respondents who do not believe in life after death agree that someone has the right to commit suicide if tired of living. According to the Chi-square test (X=13.479, P<.000), this difference is statistically significant at the 0.000 level. The Lambda value is .000 (p<.01), indicating a very weak association between the respondent’s view on someone’s right to committing suicide if tired of living and the respondent’s belief in life after death. The null hypothesis can therefore be rejected and the research hypothesis accepted since there is a statistical association between these two variables.

Discussion and Conclusion
My study adds to the literature on suicide and religious preference by looking further at various religious groups, other than Christianity. Most of the existing literature on religion and suicide focuses primarily on Protestantism and Catholicism, the two largest denominations in the United

![Table 3: Opinion on Suicide if Tired of Living by Belief in Life after Death](image)

<table>
<thead>
<tr>
<th>Should Someone Have the Right to Commit Suicide if Tired of Living?</th>
<th>Do You Believe in Life after Death?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Yes (%)</td>
<td>205</td>
</tr>
<tr>
<td>(17.6%)</td>
<td>(27%)</td>
</tr>
<tr>
<td>No (%)</td>
<td>961</td>
</tr>
<tr>
<td>(82.4%)</td>
<td>(73%)</td>
</tr>
<tr>
<td>Total (N)</td>
<td>1166</td>
</tr>
<tr>
<td>(100%)</td>
<td>(100%)</td>
</tr>
</tbody>
</table>

Source: General Social Survey [2014], N=1,466
States. By looking at the percentages in my research, we see that the “Other” (Atheist, Agnostic, etc.) religious denomination had the highest percentage of respondents stating they believe someone has the right to commit suicide if they are tired of living, which was 37.5 percent, compared to the “Other Eastern” (Confucianism, Taoism, etc.) religious denominations which have the lowest percentage at 0 percent. Overall, I did not find a significant link between the religion in which an individual was raised and his/her opinion on suicide. The Chi-square test also revealed no statistical significance at the .000 level. These results are consistent with previous research, although in all cases the lack of data availability was a limiting factor. In addition, there were some context-related limitations, such as a limited number of respondents of some religious backgrounds. Future studies could look into other populations outside of the US, or suicide in a different conceptualization. For example, not just respondents’ view of others committing suicide, but of respondents’ personal belief about suicide. Also, future studies could compare and contrast the concept of afterlife for different religions and compare them (Christian afterlife vs. Hindu afterlife).

Alternatively, I did find a link between an individual’s opinion on suicide and his/her belief in life after death. The results showed that 82.4 percent of individuals who believe in life after death do not think someone has the right to commit suicide if he or she is tired of living. 27 percent of individuals who do not believe in life after death think someone has the right to commit suicide if he or she is tired of living. Although these are two separate variables in my study, they are correlated because of their association with an afterlife or specific religious belief in an afterlife. I found that individuals who believe in life after death are far more likely to respond “no” to suicide if tired of living, in the context of the respondent’s opinion on someone else committing suicide. As stated previously, much of the literature focuses on religion and suicide, but my study sheds light on the belief in an afterlife within specific religions and how said afterlife affects an individual’s response to suicide. To generalize that an entire religion takes a specific stand on suicide would be inappropriate, but I can say the specific belief of an afterlife affects the way a respondent answers the question about suicide.


John T. Prescott will graduate from the University of Memphis in the Spring of 2017 with a bachelors degree in Communication. He is a follower of Jesus Christ and a friend of people. John loves learning about other cultures, learning to speak other languages, and making new friends.
John Prescott
Intercultural Communication among Syrian Refugees

Faculty Sponsor
Dr. Joy Goldsmith
Abstract

This is an ethnographic study on the lives of Syrian refugees in Memphis, TN. This study focuses on the influences of media on the process of acculturation in the lives of Syrian refugees as well as the role that religion has played in the process of forming relationships between Syrians and Americans. Participants were accessed through a local refugee resettlement organization and also through cold call. Interviews were conducted in the homes of participants and the audio recordings of these interviews were transcribed and analyzed for common themes. This study has yielded significant findings related to the process of acculturation in the lives of refugees and the factors which influence this process. The data gathered in this study directly contradicts Oommen’s theory of a positive relationship between the strength of an individual’s religious identity and heightened feelings of depression and anxiety within the sojourner.
Introduction
There are a growing number of Muslim people living in the United States today. In 2015 the Pew research group stated there are about 3.3 million Muslims living in the US now (Mohammed, 2016). According to their data, that number is expected to double in the next 30 years. In recent years we have seen American media give a lot of attention to Muslim people, often painting them in a negative light. Even more recently the refugee situation in Syria became a very controversial topic for debate in the 2016 US presidential election.

In 2010, a civil war started in Syria that has spun out of control to the point where now more than half of the country’s population has been displaced by the fighting. According to the United Nations High Commissioner for Refugees, more than 6.3 million Syrians have been displaced within their own country (Syria Emergency). World Vision states that 5 million Syrians have become refugees forced to flee from their home country due to the circumstances of the war (Syria Refugee Crisis). In areas of Syria that are controlled by opposing forces, the Syrian government has imposed sieges as a weapon of war that have led to the starvation of innocent civilians; in those same areas, civilians are often the victims of the Syrian government’s artillery. In August 2016, the government dropped two barrel bombs on a children’s funeral wake that was being held in the city of Aleppo (McKirdy, 2016). This is without a doubt the most devastating humanitarian crisis of our generation.

Politicians and government officials in the US have been fighting with each other over whether or not to let these refugees into our country, with many arguing that refugees from Syria should be denied entry because they are Muslim. Muslims are often labeled as dangerous and called “radicals,” or “terrorists.” Although there are those who disagree and say that Muslims are people just like anyone else, while debate goes on, real men, women, and children are suffering and dying because so many countries have refused to open their doors for these sojourners.

Most every problem can be viewed in some ways as a communication problem, and the lack of communication competence surrounding this particular subject is rendering grave consequences. There are fundamental misunderstandings in the American worldview of what it means for a person to be a Muslim, and the American media is capitalizing on these misunderstandings, making American citizens believe Muslims are
dangerous, heartless, or hateful. As of November 19, 2015, there have been 31 United States governors who have openly stated that they would not allow the resettlement of Syrian Refugees in their home states (Fantz & Brumfield, 2015). Texas Governor Greg Abbott said in an open letter to president Obama that, “Neither you nor any federal official can guarantee that Syrian refugees will not be part of any terroristic activity…” (Strickland, 2015). Critics would say that this move has been motivated by Islamophobia, meaning the fear of the unknown regarding the Islamic faith. As Strickland (2015) notes, Omar Hossino, the communications officer of the Washington DC-based Syrian American Council, made a statement in 2015 saying that “Syrians are the ones fleeing both ISIL and [Syrian President Bashar al-Assad] because they will be slaughtered if they don’t….” and further argued that American people are mistakenly buying into a negative stereotype that Syrians are dangerous when in fact they are the real victims of terrorism.

In order for the American public to sympathize with the people of Syria, there has to be a door to understanding the true culture and the communicative needs of the Syrian community internationally. Although there has been such a political outcry against the resettlement of Syrian refugees, approximately 20 families have still managed to be resettled in Memphis, Tennessee.

**Literature Review**

**Intercultural Competence**

Intercultural Communication Competence (ICC) is the ability to encode and decode meanings in matches that correspond to the meanings held in the other communicator’s repository (Beamer, 1992). In the context of American society, there is an exceedingly low amount of competence concerning the communication between Syrians and Americans. This is evident from the many stereotypes in the media concerning Syrians that show them as potentially dangerous or radical because of their faith. Understanding how to communicate with someone from another culture requires adjusting to the context that the other-culture individual lives in. Beamer’s studies have determined 5 parts to learning competence:

1) Acknowledgement of diversity
2) Stereotypic organization of information
3) Posing questions to challenge stereotypes
4) Analysis of communication episodes

5) Other culture generation of messages

This framework can be applied to any person trying to understand how to communicate with Syrian people seeking refuge here in the United States.

**Acculturation and Media**

Acculturation is defined as the process through which an individual adjusts to a new culture; this is particularly important to refugees and immigrant populations. Some studies suggest there are many barriers as well as bridges to acculturation (Keshishian, 2000). While reflecting on his own experiences as an Iranian immigrant in the U.S., Keshishian found that mass media can either impede acculturation by propagating negative stereotypes, or it can assist the process by shedding light on the true aspects of a culture. It is highly likely that American media has been affecting communication between Syrians and Americans for years in a very negative way. The ways in which an entity like the U.S. communicates its understanding of a foreign people can heavily influence American citizens in their perceptions of Syrian refugees and result in either pathways, or barriers to effective communication. Effective communication is essential to the process of Syrian refugees adjusting to life in the United States.

**Religious/Cultural Identities and Assimilation**

In terms of religion, studies suggest a positive relationship between the strength of an individual’s religious identity and heightened feelings of anxiety and depression when living in the context of a foreign culture (Oommen, 2013). When people have strong cultural identities, their desire to assimilate decreases, and in a foreign environment filled with pressures of assimilation and adaptation this could adversely affect mental well-being (Ghaffarian, 1987; Neto, 2002). People with strong cultural identities who are unwilling to assimilate often communicate with divergent messages that highlight the strong aspects of their own culture. Based on such studies, Syrian Muslims with a strong cultural and religious identity are expected to experience difficulty adapting to the culture of America and may be subject to adverse effects on mental well-being as a result of the pressures in place to assimilate into American society.

**Differences in Nonverbal Communication**

Nonverbal communication breaks down into three categories: 1) para-linguistics, 2) kinesics, and 3) proxemics. Paralinguistics refers to the
elements such as tone of voice, volume of speech, speech rate, etc… (Crystal, 1971; La Barre, 1976), while kinesics focuses on a wide range of body-related cues, such as facial expressions, eye contact, head movement, gesture, and body ornaments (Birdwhistell, 1970). Proxemics refers to the study of how interpersonal distance and space is maintained between people from the same or different cultural backgrounds (Hall, 1963). The rules and social norms that have been established in Islam differ dramatically from what is commonly accepted in American culture. For example, many Islamic rules specifically related to women, like female head coverings, have the potential to send nonverbal cues to individuals from different cultural backgrounds. It is possible for an individual from a much more conservative Islamic society like Syria to experience tension while living in America based on differences in the norms of nonverbal communication.

Conceptual Network

The goal of this study is to begin understanding the world of Syrian refugees in the United States, and I have used these questions as a guide to begin a meaningful conversation with Syrians:

1. What kinds of barriers exist between Syrians and Americans?
2. What is it like to be Syrian while sojourning in the Southern United States?
3. What are the underlying communicative needs of the Syrian community in the United States?
4. What effect is American media having on the process of acculturation from the perspective of Syrian refugees?

Methods

To answer these questions, I used elements of Ethnography and the Grounded Theory research method to gather data from Syrian families residing in Memphis, TN. I conducted inductive interviews and observed my surroundings as I entered the homes of willing participant families for the purpose of recording the stories and responses in order to have a better understanding of the culture and the struggles of the Syrian community.

Study Design

Using volunteer participants, I gathered data consisting of inductive interviews, participant observation, and audio recordings of interactions
with Syrian families. After gathering the data in the field, I transcribed and analyzed the audio recordings looking for reoccurring themes across the responses to the interview questions.

**Participants**

Syrian families were sought out primarily through pre-existing personal connections to individuals associated with the Memphis Islamic community and a local refugee resettlement organization called Asha’s Refuge. Potential participants had the opportunity to decide whether or not to include themselves after receiving information about the purpose of the study, the type of data and data collection methods. Participants were also informed that they had the freedom to exclude themselves from the research at any time during the study.

**Procedure**

To conduct this study, I conducted participant observation as well as inductive interviews in the participants’ homes. I asked each participant to respond verbally to a list of open-ended questions about barriers and bridges to communication between Syrians and Americans. I took notes on their responses as well as recorded the audio from the interviews. Participants in group settings were given the opportunity to work together in responding to my questions.

**Data Analysis**

The first part of analyzing the data consisted of transcribing interviews and cataloging observational notes. After coding and reducing the field notes I analyzed reoccurring themes in communication barriers and bridges between Syrians and Americans. As I coded data I looked for potential topics of conversation that create fear, and especially paying close attention to cultural expressions that cause Syrian people to feel misunderstood while living in American society. Because my study is situated in ethnomethods, thematizing and coding were inductive processes.

**Results**

Two participant families were contacted through connections with the organization Asha’s Refuge and a third participant was contacted through cold call. In total, 3 Syrian refugee families chose to participate in this study. I was accompanied by a translator to meet with the first 2 families; for the 3rd family I was alone. The first group consisted of three young
participants who were related to one another. They had the opportunity to work together to respond to the interview questions and were assisted by a translator when needed. During this interview the participants requested that I not record any audio or reveal identifying information, but they did allow me to take notes.

The second group of participants was a Syrian couple in their mid-60s with many children. The interview took place between the husband and wife of the family and myself; this interview again was facilitated via translator. The majority of our time together was spent in mourning for the hardships being faced by their loved ones who have sought refuge in other countries. No audio was recorded during this interview, however much was gained in understanding concerning the needs of the Syrian refugee community through the means of participant observation and researcher fieldnotes.

The third group of participants consisted of two middle-aged Syrian men, one of whom spoke sufficient English as to allow for a substantive open-ended interview which was audio-recorded. Every family that chose to participate immigrated within 6 months prior to the interview. The findings from these interviews are best represented in categories as follows.

**Media and Acculturation**

Each of the participants expressed that they had learned a lot about America from movies, TV shows, music, etc. One of the middle-aged men from the third group of participants talked about how he grew up listening to American artists like Tim McGraw. At one point during our time together he requested to stop the interview so that he could show me a video of a country singer on the TV show *The Voice* performing a rendition of Miley Cyrus’s, “The Climb.” He showed me this video and he said, “Man! This takes me back to my childhood!” He talked about how American movies made him feel hopeful that one day he could taste the American dream; he always made plans to travel to America and then the war came and he fled to Jordan with his wife and children.

In the Fall of 2015, American news outlets published a statement made by the White House that the United States would receive 10,000 refugees by the end of fiscal year 2016, and this made him begin to hope even more that he could make it here (Omri, 2016). A little while later he got the phone call from the International Organization for Migration that
said he and his family could begin the 3 year interview process to make it into the United States with refugee status. When he came to the U.S. he was told that his family was being resettled in Memphis, TN. In his interview, he stated that he had to Google Memphis because he didn’t know anything about it. He said that he found a map on the internet of the U.S. which highlighted the states that said they would not be receiving refugees and Tennessee was one of the states. He was really nervous about this and said that he is thankful to be here now. Internet search engines like Google have played a vital role in shaping the perceptions of life in the United States for Syrian refugees by giving them broad access to countless American media outlets. This means that the articles being published by American news outlets are being analyzed and criticized by Syrians all over the globe; however, the response of Syrian refugees to these articles is seldom recorded. For this particular man, his first media contact with Memphis, TN was a giant map that explicitly stated that he and his family were not welcome here. This has massive implications for his mental well-being as he goes through the arduous process of adjusting to a new culture.

One young Syrian woman that I spoke with said that American media had influenced her expectations of life in America in both positive and negative ways. She had learned about bad things like alcoholism and anger problems. She was under the impression that drugs were a huge problem with most people in America. She also said that she had learned a lot about the freedom that women have here in America: they can drive cars and dress however they want to, there is ample opportunity for education and they enjoy freedom of religion. All of this she learned through the media before her arrival to the U.S.

**Religion**

The theme of religion presented itself in each interview. During the interview with the third group of participants, the two middle-aged Syrian men, the conversation included a great deal of discussion about God. The participant who spoke the most English told me that once he learned that Memphis is a “Church City” many of his fears were relieved. He said that he felt much more comfortable coming to live here when he learned that many people in Memphis worship God. The strength of his religious identity coincides with the religious culture of the South and has worked in his favor to lessen anxiety and relieve depression. He told me that his closest American friend is his downstairs neighbor that just so happens to be a
minister in a local church. He said that they meet together to read from the Bible and talk about the similarities and differences between Islam and Christianity. In the audio recording of the interview I asked this participant what he would say if he could say anything to American people, and he responded, “If you like and love to do what Jesus tells you and what he teaches you, then do it. Because that is really loving people and it makes the space between them close and their hearts start to beat.”

In the first group of participants in which I spoke with the Syrian woman, she told me that one of the best things about America is the religious freedom. She said that she loves that there is no pressure to assimilate into a certain religious identity. A part of this religious freedom that she appreciates is the right to wear the kind of clothes that you want to.

**Difficulties/Barriers**

The needs of the Syrian community in Memphis are overwhelming. Each group of participants has been experiencing major difficulties since arrival. The most common and most obvious barrier has been language. Of the three groups of participants, only one individual spoke passable English. Of all the participants in this study the longest residents have only been in Memphis for 6 months. There are over 20 new Syrian refugee families in a similar situation who are trying to figure out basic things like how to enroll their children in school. While this task might seem simple, it is complicated by the fact that most of these children have been out of school for the past 3 to 5 years because of the war in Syria and are therefore difficult to place. Upon arriving, 2 of the 3 families had to be taught how to use central heating and didn’t understand the financial cost of running the heat in their apartments. After arrival in the U.S. they have a grace period of 3 months before they have to begin paying for the plane tickets that brought them here. That gives the heads of the family a very limited amount of time to find a job, which can be exceedingly difficult when you can’t speak English.

While I was with the second group of participants I observed the conversation that was taking place between them and a case worker with a local non-profit organization. The mother of the family burst into tears while she was talking about trying to see her two daughters, one of whom had fled to Turkey, and the other to Libya. We spent a long time brainstorming about the different ways to get her daughters a visa in the U.S. or how to find enough money for her to go and see her daughters.
During the interview with the third group of participants we talked about listening. The English speaking participant explained that people need someone to listen to them. He said that the experiences he is going through have been very emotional, and it’s not healthy to bottle up these emotions, or in the end they will destroy you. I asked if he had anyone that listens to him like that and he told me about one friend who is in San Diego, CA. They talk on the phone from time to time, unpacking the experiences that they have been through. When asked if he has any American friends who listen to him like that, he lit up and started to tell me about his downstairs neighbor who is a minister and has in-depth conversations with him. His children are bullied at school sometimes since “some people don’t accept the new arrivals…” and he is able to talk to her about these experiences. In addition to providing someone for him to talk to, she helps to take care of his children and tutor them after school.

**Discussion**

The effects of American media on the process of acculturation have been significant in the lives of these participants. In most cases the American media has positively influenced perceptions of the American lifestyle that these Syrians had before they got here. It was very surprising to discover the resolve of these participants in the face of opposition to the resettlement of refugees in the United States as portrayed by U.S. news outlets. Though they knew about the politicians who spoke directly against the inclusion of Syrian refugees into American society, the hopes of finding peace and refuge in this country have remained unharmed. This reinforces Keshishian’s findings concerning the impact of media on the process of acculturation in the life of an immigrant, and even takes this concept a step further seeing that it applies to more than just immigrants, but even extends to a certain set of refugee populations.

Surprisingly, religion has been a pathway to communication between Syrians and Americans so far. The findings in this study directly contradict Oommen’s theory on religious identity having a positive relationship with heightened feelings of anxiety and depression when an individual is placed into a foreign religious context. It appears as though the existence of a devout monotheistic culture has positively affected the process of acculturation and the mental well-being of Syrian refugees in the United States even though the religious culture is different from Islam. It is interesting to note that the participants in this study have all been
assisted and resettled by faith-based non-profit organizations here in the United States. Most of the early interaction that these refugees have with Americans is happening with devoted Christians. It appears as though so far, the participants have yet to encounter a significant population of Americans that are characterized by anti-immigration sentiments.

The biggest and most obvious barrier between Syrians and Americans has been language. I anticipate that this barrier will remain for a while due to the short amount of time which most Syrian refugees have lived here so far. The language barrier is, for most Syrians, the most difficult barrier to navigate. Aside from language, Syrians face a laundry list of logistical matters which must be taken care of. They are currently among the neediest communities in our society based on their lack of resources.

**Implications**

The findings of this study suggest that more work should be done to understand the process of acculturation among Middle Eastern peoples, and more specifically how that process is different for refugees than it is for immigrants. Immigrants get to choose where they want to live, and how they want to start out pursuing life in America. Refugees have an entirely different experience as it relates to adjusting to a new culture and coping with the difficulties that this process presents. It will take some time for the Syrian refugees who have come to the United States to break the language barrier and carve out their place in society. The participants in this study were all located in the Southern region of the U.S. which is known for hospitality and a Christian worldview. Other refugee populations have most likely had very different experiences and more needs to be done in the world of academics to understand what is happening to these populations. For instance, the Somali refugees in St. Cloud, MN or the Iranian refugees in Los Angeles, CA have most likely had very different experiences than the Syrians who have come to Memphis, TN. These two cities have some of the largest refugee populations in the United States and there is much to learn from their experiences that can be applied to future work with refugees worldwide.

The influence of a strong religious identity has the potential to significantly impact a person’s mental health and well-being when they are placed into a culture with a foreign religious identity. In the lives of Syrian refugees this strong religious identity has had a positive impact on mental
health and well-being since they have been placed into a predominantly Christian culture. Is this positive impact the result of a survival mentality that is specific to the conditions and experiences of a refugee? Or perhaps the positive relationship has something to do with the similarities between Abrahamic religions. More research should be conducted in this regard to yield a more grounded theoretical framework.
References


Bryan Chase began his service as a fire fighter in 2002. Since then, he has worked in both volunteer and career fire departments. In December 2015, he earned his Bachelor of Professional Studies with a dual concentration in Fire Service Administration and Fire Prevention Technology from the University of Memphis. Shortly thereafter, he also achieved the Fire Officer designation from the Center for Public Safety Excellence. Bryan is currently assigned as the Fire Projects Officer for the City of Oak Ridge Fire Department in Oak Ridge, Tennessee. His research is currently being reviewed by the National Volunteer Fire Council and the International Association of Fire Chiefs for possible legislative proposals. His intention is to use this research as a catalyst to bring about the changes proposed in it.
Bryan Chase
Nonprofit Fire Departments as Public Agents

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Abstract

Although essential, a great number of jurisdictions have delegated emergency services to organizations within the private sector. This inadvertently creates a dilemma for these organizations as funding wanes, expenses grow, and volunteer commitments decline. As private, nonprofit corporations, there are limitations to what can be done to address these problems. The tax exempt status of these private entities and inclusion with public agencies for state or federal purchasing agreements has assisted with expenses. However, the labor cost required to supplement paid employees for declining volunteer staffing has prevented many organizations from providing needed service levels. This research considers the issue of labor cost in a comparison between private, nonprofit organizations and public agencies under the Fair Labor Standards Act with a focus on overtime exemptions. Additionally, this research shows how these regulations are limited to municipal organizations and defines the impact of including private, nonprofit providers as public agents.
Introduction

The fire service has been a component of our society since colonial times. Originally organized as volunteer responders, this fraternity quickly grew as the need for such services were recognized by communities as a fundamental resource which should be provided by the local government. To understand the magnitude of this research it is important to first clarify the basic structure of the fire service. The entire United States fire service can be broken into two primary groups, public and private departments. Generally, public departments are organized, financed, and managed by a local government body such as a city or county for public benefit. Conversely, private departments are organized and managed by members of the community. These organizations must be created in accordance with local and state laws to exist in a defined structure of a for-profit or nonprofit corporation. By their nature, nonprofit groups exist for the public benefit while for-profit companies focus more on income from services provided. These distinctions provide the basic divisions of the organization as a public, private, or nonprofit organization. Next, one must consider those who work for these organizations. General categories of employees can include career, part-time, paid on call, or volunteer members. Career staff members function as full time, paid employees, while part-time staff are paid and serve a reduced number of hours or on a seasonal basis. A variation of a part-time employee is one that is paid on call or paid per call. These employees will be paid only for their time when responding to an incident, or be paid a stipend for reimbursement of personal expenses while volunteering their time. These classifications have very strict labor laws and may only be allowed if the organization is a public agency. Employees that receive no pay or compensation of any kind are volunteers. Combinations of all of these employee types may be found in fire departments throughout the United States. Therefore, when considering the application of labor laws to a particular situation, one must evaluate the type of organization as well as the type of employee.

Regardless of the type of organization, or the staffing model it uses, the principal purpose of fire departments across the country is to deliver immediate response to emergency incidents where they provide fire suppression, incident stabilization, and pre-hospital emergency care. Although many of the agencies that deliver this public service are municipal/government departments, the majority of fire departments are private,
nonprofit organizations that predominantly depend on unpaid volunteers. These dedicated men and women typically work other jobs during the business day and provide standby manpower for their fire department whenever possible. This often leads to complications of delayed emergency responses or the inability to provide services during typical weekday business hours or overnight.

In an effort to eliminate this service deficiency, many departments have attempted to transition from an all-volunteer staff into a classification known as a combination department. Combination departments use a mixture of paid employees and volunteer staff to achieve the needed manpower throughout all periods of the day and week. Because these are private organizations, making this transition to a combination structure is very difficult when funding is limited primarily to donation and grant-based systems, and not guaranteed through tax-based systems. One combination department officer in this research stated,

> Currently we fall under state labor laws which do not provide for a firefighter overtime exemption. In order to manage overtime, we pay our firefighters a salary and half time for any hours over 40. They have to deduct sleep time to help with managing overtime hours however they do not lose money because they are salaried. This is very confusing to our firefighters who talk to other firefighters from departments who are municipal/county departments and calculate time on a 56 hour work week. There is the perception in and out of our department that we are doing something wrong or cheating firefighters out of pay.

This officer’s statement shows that the organization has a higher cost for staffing as well as conflict with their employees because they must operate by the private agency rules in lieu of the ones that reduce labor costs for public agencies. These rules are restricted to use by public agencies in the FLSA. The reference to the “56 hour work week” is a part of the FLSA known as the 7(k) exemption. This provides a partial exemption to the employer for the payment of overtime. As a generalization, fire fighters work an average of 56 hours per week. As a private organization, the employer is obligated to pay 16 hours of overtime compensation. However, if they were accepted as a public agency and chose to use the 7(k) rules, only 3 hours of overtime would be due the employee.

Fire departments provide essential services to the communities they serve. These services have expanded through the years to include much more than fire protection. In recent years, the reactive nature of fire
protection has transitioned into a proactive approach through prevention and code enforcement. In spite of this shift, the mission of the fire service remains unchanged; to provide protection services to their communities. In 2013, there were 1.14 million fire fighters protecting the United States with 69% of them being volunteers. Departments that are run by local governments (i.e. public agencies) are afforded cost saving measures, commonly known as the Fair Labor Standards Act (FLSA) 7(k) and 13(b) exemptions which reduce the monetary impact of these services. While these exemptions provide critical financial support for municipal/government fire fighters, the private, volunteer departments are not covered by the 7(k) exemption of the FLSA. The defining feature that restricts the use of these measures is public, municipal, versus private, non-municipal. The FLSA makes a clear distinction between these organizations. However, it will soon be clear that private, nonprofit departments parallel public agencies in nearly every way. Areas outside of municipal jurisdictions that have private, nonprofit corporations providing the public services of fire, police, or emergency medical services should be permitted these cost saving measures. This will allow organizations to afford the citizens of their communities the greatest opportunity to receive consistent service delivery during all hours of the day and night.

Under section 203(y) of the FLSA, an ‘employee in fire protection activities’ means: an employee, including a fire fighter, paramedic, emergency medical technician, rescue worker, ambulance personnel, or hazardous materials worker, who— (1) is trained in fire suppression, has the legal authority and responsibility to engage in fire suppression, and is employed by a fire department of a municipality, county, fire district, or state; and (2) is engaged in the prevention, control, and extinguishment of fires or response to emergency situations where life, property, or the environment is at risk (Robinson, Jr., 2006a).

This definition clearly specifies that the FLSA exemptions can only be used for employees of agencies which have been established by a municipal, county, or state legislative body. However, these laws also refer to employees of a fire district. A fire district is a special tax district that is established by the local government to provide funding for the provision of fire protection of that community. Although these districts are allowed by statute, and may involve paid, combination, or volunteer departments, they must still be established by the county legislature. This method of funding is an available option for some fire departments around the country to establish individual tax districts for each department in order to provide
appropriate funding for their location. With nearly 800,000 fire fighters in more than 25,000 existing volunteer and combination departments, this type of funding, through special tax districts, would not be an ideal option since it would require local governments to individually adopt each area. Consequently, it is obvious to see that the preferred choice will be to update section 203(y) of the FLSA to include private, nonprofit corporations that provide these public services in lieu of any other agency having jurisdiction to do so.

In 2013, there were 1.2 million fires resulting in over 3000 civilian deaths, $11.5 billion in property damage, and nearly 16,000 civilian injuries. In addition, the personnel needed to extinguish these fires suffered nearly 66,000 injuries (National Fire Protection Association, 2015). The National Fire Protection Association (NFPA) has clearly defined the standards for minimum staffing of fire apparatus in NFPA 1710. With this standard, which was established through quantitative testing and research, the safety and effectiveness of suppression personnel is shown to be directly related to the staffing level of the engine companies. The suggested change of including private, nonprofit providers in the 29 U.S.C. §203(y) definition would deliver a significant positive impact to the United States Fire Service. This solution will empower many fire departments with the opportunity to hire employees and minimize staffing deficiencies.

The services provided by fire and police departments play a significant role in the safety of our communities. There are several basic organizational models that are used to define fire service organizations. Public agencies, municipalities, are controlled by the local and state laws that provide legal authority to the agency to have jurisdiction with both operational and financial oversight. Private agencies operate with autonomy from the governing body and resemble a subcontractor, conducting work for the governing body. The control of how the service is provided and in what manner the organizational funds are used is generally under the full choice of the fire department. This private designation includes both nonprofit and for-profit groups.

Within the public and private definitions there is some ambiguity which also results in confusion of the group’s rights and responsibilities. Based on the function of the organization, both public and private agencies can purchase equipment and supplies from state or federal contracts negotiated for public agencies. This includes technology infrastructure, appara-
tus, personal protective equipment, or accessory equipment such as hydraulic, extrication tools. In Tennessee, both fire departments will be given government service license plates for their apparatus. Each has also been given a response area in which they are expected to provide service. However, when hiring employees the FLSA allows only the public agencies the partial overtime exemption cost savings. These issues are sometimes handled at a state or local level but more often go unanswered, causing an unclear guideline for the department administration. Jurisdictions, particularly in the fire service, have delegated these protective responsibilities to private organizations that are independent of the agency having jurisdiction. In each of these cases, these organizations accept this governmental duty to provide for the safety of the community. As an increasing number of local governments reconsider their fiduciary effectiveness, so must those who have been delegated the duties of community protection.

As communities grow, the demand on the fire departments providing these services proportionately grows. The typical progression for these jurisdictions begins with fully donation-based funding and all-volunteer labor. Although funding streams may vary greatly, labor needs are more predictable. Once the demands for service increase beyond the capabilities of the available staff, new staffing options must be considered to meet the service demands. The second stage is a combination of paid staff minority while the majority staff continues to be volunteers. This balance transitions over time to become a majority of paid staff and a minority of volunteers to supplement shortfalls. The final level of service provided is a fully paid organization that has limited or no volunteers. At this stage of development, the agency may be funded by the local government, by private organizations, individual donations, federal grants, or some combination of these. Without the necessary financial support, these progressive steps become exponentially more difficult. Funding for these groups continues to be a concern, as does staffing. It is not unusual for volunteer fire departments to be empty when an incident occurs. In such cases, fire fighters must first travel to the station in order to man the apparatus with which they will respond to the emergency. This delay can be removed if a single employee is on duty at a station with the apparatus. The barriers in acquiring this staff are difficult to overcome. However, with a revision to the Fair Labor Standards Act to include private, nonprofit corporations who provide fire or police protection to a community in lieu of the area having jurisdiction, the labor cost to have full-time employees can be minimized.
for the benefit of the community. Additionally, with the current wording, it may be possible for some fire departments to claim this cost savings through establishing the proper oversight and reporting to qualify as public agencies.

**Background and Literature Review**

It has long been established that the provision of fire protection is a governmental responsibility. Throughout the country, this function has been delegated by the local government to private organizations. Over time, many of these have found that fully donation-based funding has become insufficient. Even public, municipal departments have seen a decrease in available funding to replace aging apparatus and personal protective equipment (Trench et al., 2012, p. 1).

A multitude of source material was reviewed for this study. State and federal laws dealing with fire departments or labor law have been referenced throughout the document. These sources provide the documentation for comparing characteristics of public agency fire departments with the private, nonprofit corporations that also fulfill this governmental function. These sources show that these establishments have significant similarities of purpose and application. The legal references provide a basis to show that all fire departments are created and, to some extent, governed in comparable ways. Local and state laws provide the authority to all fire departments which defines the jurisdiction which they are directed to protect, and requires they take action when an emergency is reported. The case law provides insight of how federal regulations are integrated with local laws and applied to the defined departments. Although the fire service identifies departments as career, combination, or volunteer organizations, it seldom identifies with the public or private associations. However, these classifications are regularly used in association with case law and found in the Department of Labor opinion letters. These literature and law resources show that public and private fire departments primarily differ in the requirements defined and applied by FLSA labor laws.

**Qualification as a Public Agency**

Qualification as public agency is sometimes unclear for nonprofits. Therefore, if a nonprofit mirrors a public agency to provide for the public welfare, is funded by the community they serve, employs fire fighters of equivalent training, and has been issued the authority and obligation to
respond to emergencies by the municipal government having jurisdiction, why, then, are they not allowed the status of a public agency? There are two defining factors which influence the designation outside of simple function or title. The financial oversight and reporting is one of two pivotal components that define a public agency. The second critical component is administrative oversight and responsibility. With some state and local requirements, this definitive line continues to gray. The local government having jurisdiction is a major contributor to meeting these requirements.

A Public-Nonprofit Partnership study conducted in 2009 concluded that “community-based nonprofit partners functioned as a much needed bridge into communities where there was a clear perception that the public agency lacked the capacity to act in the best interests of the citizens” (Alexander & Hawk, 2009, p. 382). In this regard, combination fire companies are ideal solutions for many communities. Since volunteer fire fighters are most often members of the community, the organization has a vested interest in those they serve and will be tailored to meet their needs. This intimate community involvement creates a relationship which propagates an increased desire in the agency to provide quality service their neighbors. Other public agencies, such as county-wide services, may lack this level of involvement because managing officers are often remote from the smaller communities. This affects both the community as well as the employees. “A crucial element of service quality, therefore, is continually meeting or exceeding the demands of the customer. Nowhere is this truer than in the area of service quality” (Gowan et al., 2001, p. 277). Community governance is therefore a pivotal component for the local volunteer or combination fire department. Through its partnership with both its customers and the agency having jurisdiction the organizational oversight is maintained through transparent accountability.

For a fire department to exist in Tennessee, it must first be recognized by the state as a fire department. This is accomplished through The Fire Department Recognition Act (TCA § 68-102 part 3). These laws require state certification that an agency is qualified to act as such a service. Without certification, the department will not be allowed to protect a designated area of responsibility which is defined by the city or county in which the agency is located. Hence, it is clear that in Tennessee there is an extent of governance at state, county, and local levels. In Washington State, a public agency is in part defined as “Any subagency of a public
agency which is created by or pursuant to statute, ordinance, or other legislative act, including but not limited to planning commissions, library or park boards, commissions, and agencies” (RCW § 42.30.020). The combination of this definition in conjunction with The Fire Department Recognition Act could qualify all fire departments within the state as public agencies. However, this is not the case in more than just Tennessee.

Even though private corporations do not meet the FLSA public agency definition, they are considered public in other aspects. For example, financial accountability is considered to be a characteristic of public agencies. In 2010, the State of Tennessee Comptroller of the Treasury performed an audit on the Haletown Volunteer Fire Department (Arnette, 2010). This report provided the county information on the financial activities of the organization and provided recommendations for oversight and policy changes due to irregularities in the records. This transparency and community service accountability is an integral aspect of public agencies. Additionally, nonprofit agencies that operate as fire departments are issued government service license plates when registering fire apparatus with the Tennessee Department of Transportation. This again, produces ambiguity in whether an organization is considered public or private. Since these agencies have been given areas of responsibility, allowed to purchase under public agency contracts, and have obligations of accountability and transparency, the perception of a quasi-public agency exists and causes agencies confusion and conflicts about which organizational rules they must follow. This creates an inefficient environment for the nonprofit. As a result of litigation, the Florida Supreme Court established a set of nine indicators to determine if an organization met criteria to be identified as a public agency. They referred to it as a “totality of factors” by which a determination could be made (News and Sun-Sentinel Company v. Schwab, Twitty & Hanser Architectural Group, Inc., 1992). Therefore, one can see the need exists to clarify this definition at, or above, the state level. In doing so, clear guidance can be given to help maximize the public benefit and service quality of these groups.

**FLSA Exemptions**

The Fair Labor Standards Act provides the employment law which protects the rights of all employees in both public and private organizations. In some states, collective bargaining agreements between the organization and an employment union will be used in place of the general rules. Ten-
nessee does not recognize the collective bargaining agreements and uses the general rules and exemptions defined by the FLSA. As written in the Tennessee Code Annotated, this status is known as the Right to Work and prevents anyone from being adversely affected due to a refusal to join a labor union or entry into any labor union contract with an employer (TCA § 50-1-206 (2015)). In states such as this, it is therefore important to understand the Fair Labor Standards Act (FLSA) and the exemptions which are dedicated to these career fields. The FLSA was first signed into law in 1938 by President Roosevelt. This legislation provides the basic guidelines for the treatment of employees by employers. It was not until 1974 that state and local government employees became subject to these rules which was quickly overturned by the Supreme Court in the case National League of Cities v. Usery, 1976 (Hogan, 2000). Before and after this two year period, public agency workers were excluded from these protections. Following additional litigation, in 1985 the U.S. Supreme Court ruled that state and federal workers were again granted coverage under the FLSA protections (Garcia v. San Antonio Metropolitan Transit Authority, 1985). FLSA revisions made in 1987 further supported the inclusion of public sector employees under the protections of this act. In 1999, this decision was overturned for states but was upheld for county and local government (Alden v. Maine, 1999). Today, all emergency services workers, both public and private, are protected by these rules and the associated exemptions.

Within the FLSA, there are several exemptions provided to public agency fire service employers that allow them to cut costs – many of which relate to providing overtime pay. The law also defines compensable time as any hours spent working as directed by the employer or waiting for work where the individual’s movements and activities are restricted by the employer (29 CFR§785). Since there can be extensive amounts of time engaged to wait, there are provisions which allow employers to opt out of compensating employees for overtime hours, time spent on meals or sleep, and variations in work periods that exceed the standard seven days that most people are familiar with (29 CFR§553 Part C). For each of these rules, there are specific guidelines given in the code which allow the employer to enact these cost saving measures. For the purpose of this research, we will be focused on the work period and overtime exemptions found in 29 CFR§553. To understand the overtime exemptions, one must first consider the definition of the work period. Typical workers have a work period of seven days. If, during this work period, an employee per-
forms more than forty hours of work the FLSA requires that the additional hours be compensated at a rate of one and one-half that of the regular rate. Employers can choose a different work period under the 7(k) exemption rules. The period must be a minimum of 7 and not more than 28 days. The employer reduces labor costs by using the alternate work period and the associated adjusted overtime threshold limits allowed under the 7(k) rules (Passantino, 2009). Consequently, the employer will reduce labor costs by an estimated 5%. These work period adjustments deliver a cost effective alternative when calculating overtime compensation due to the nature of the work and the extended hours during which fire fighters are often simply waiting until they are needed.

When considering the overtime hours that require compensation, the 7(k) exemption allows the agency a partial exclusion of overtime. Although the allowance will extend the standard 7 day work period, or work week, up to 28 days, this discussion will maintain the common 7 day period most employees are accustomed to. For normal employees, any hours worked in excess of the 40 hour threshold will require overtime. For a private sector fire fighter who normally works a 56 hour week, this would require 16 hours of overtime pay. When the 7(k) exemption is applied, this overtime obligation is reduced to 3 hours with 53 hours remaining at the standard pay rate (County Technical Assistance Service, 2015). The second exemption which affects overtime is known as the 13(b) exemption. This works in the same manner as the one previously discussed, except it provides a complete exemption of overtime obligation to employers (CFR 29§213(b)(20)). This, however, is limited to agencies that have five or fewer paid employees who provide this job function (Robinson, Jr., 2006b). With each of these exemptions, the organization and employee have a fair and equitable balance of compensation and work performed for the organization.

**Method**

To accurately compare the positions of public and private fire departments, data was needed regarding multiple elements of each agency. A survey was created through Survey Monkey (http://www.surveymonkey.com) which requested general information about the department, community demographics, and personnel staffing indicators. Specific questions regarding the FLSA 7(k) exemptions were included to quantify understanding and participation under these rules. The questions additionally
helped to determine the attitudes of volunteer, combination, and career fire service groups as they relate to the cost-saving measures provided by the FLSA exemptions to public agencies. Several open-ended questions were included in the survey as well, to allow the participants the opportunity to share unstructured thoughts and provide the researcher insight into participants’ level of understanding and support of the proposed change to include private, nonprofit organizations as public agencies under FLSA rules. The planned survey was then submitted and approved for use by the University of Memphis Institutional Review Board. With the assistance of the International Association of Fire Chiefs Volunteer and Combination Officer’s Section and the Western Fire Chief’s Association, the survey was broadly distributed through email in order to obtain the opinions of a random population of chief officers. Because of the delivery method, it is presumed that the distribution was limited by technological interference associated with email server filters and firewall rules. However, the results provide insights into the attitudes of the fire service community toward the inclusion of private, nonprofit organizations as public agencies under FLSA rules.

**Participating Fire Departments**

During the survey distribution, approximately 700 requests for participation were circulated. From these, 86 fire departments from a total of 26 states provided survey responses. These included career, combination, and volunteer departments.

**Results**

With the many responses received, it was paramount to have accurate analytics of the data. Therefore, the Survey Monkey data analysis tools were employed to tally the results and prepare the following graphs to represent the information collected.

When asked to classify their department type, 80% specified career, and the remaining 20% were private, nonprofit establishments. All of these departments serve municipal or county jurisdictions. By allowing departments the use of the existing FLSA pay exemptions, one respondent observed that “Fire fighters working to protect the general public would be treated equally, regardless of the organizational structure that employs their services.” Volunteer departments are sometimes overshadowed by
the impression that they are inferior or less professional than municipal departments. Such assumptions are made by both fire fighters and the communities. Uniformity of rules creates standardization so that organizations that exist for public benefit will have equivalent labor laws within the profession and acknowledge these fire fighters’ professionalism.

The results were not limited by department size or demographics of a select type of community. The service areas range in size from 1 to 76 square miles and community populations from 600 to 600,000.
The average population protected per department is nearly 45,000 residents. These departments included public and private agencies with a variety of funding strategies. Approximately 90% of these agencies are primarily funded by municipal or state taxes with none of them being funded primarily from donations.

Although the majority of these departments employ paid firefighters, less than half use the 7(k) or 13(b) exemptions allowed in the FLSA rules. One of the chief officers stated, “I think smaller nonprofit agencies could potentially hire exempt employees and provide better services.”
The intent of these exemptions is to create cost effective and fair labor practices when providing for community protection and risk reduction. When any department is able to add paid fire fighters to the protective force, it has a direct impact on the ability to mitigate the situation and increase the potential for a positive outcome. The incident stabilization and mitigation becomes more efficient for the community members and the incident scene hazards are reduced. The National Institute of Standards and Technology has provided a great deal of field research focused on community risk reduction which relates to the response times and crew size. In 2010 a NIST study found the “Results presented in this report quantify the effectiveness of crew size, first-due engine arrival time, and apparatus arrival stagger on the duration and time to completion of key fire ground tasks” (Averill, et al., 2010).
Approximately 30% of the jurisdictions represented by a fire department responding to the survey indicated they would elect to use the FLSA exemptions if they were allowed to do so. In addition, nearly 80% of all departments surveyed supported the inclusion of private, nonprofits as public agencies.

*Figure 6:* If private, nonprofit organizations were allowed to use this exemption, would your department implement it?

![Figure 6: Bar chart showing percentage of respondents who would implement the exemption.]

*Figure 7:* Do you believe the FLSA definition of ‘Public Agency’ should include nonprofit organizations that provide the services?

![Figure 7: Bar chart showing percentage of respondents who believe in the inclusion of nonprofit organizations.]

Furthermore, the results of the survey indicate that an overwhelming majority of the respondents were in favor of updating the public agency definition (29 USC § 203) to include private, nonprofit corporations that provide fire protection services. Moreover, they indicated that if this change were implemented, each department would add an average of 0.337 new or additional employees per department.
This equates to over 10,000 new fire fighter jobs created nationwide. As one officer said, “It would make it attractive to hire additional personnel to reduce overtime costs to the employer.” Another respondent theorized that the “definition change may make the employees eligible for additional benefits such as defined benefit pensions.” As volunteer departments develop into combination organizations, they rarely are able to provide much in the way of benefits. In states such as Tennessee, the inclusion of volunteer fire departments as public agents may allow fire fighters the option to participate in the state retirement system, similar to municipalities. NIST research has proven that adding fire fighters for emergency response creates a work environment for the fire fighters as well as creates safer communities. If the FLSA definition of Public Agency is changed, the survey results indicate the change will add fire fighters in some communities. Furthermore, there is no cost to the federal, state, or local government with

Figure 8: In your opinion, would qualifying for these exemptions allow you to hire or add full time employees?

Table 2: Estimated new employees.

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<td>Average per hiring department</td>
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<td>Average for all departments</td>
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<td>Estimated new fire service jobs</td>
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<td>(assuming average is representative of national results)</td>
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this change since it is a modification of a definition to include private, non-profit organizations. The exemptions are not mandates to the organizations but rather options that they can elect to use if they choose. This combination of survey results and existing NIST research provide strong evidence that it is possible to build safer communities, and create fire service jobs, without introducing unfunded mandates.

**Important Concerns**

Some participants in the survey believed that, “Having multiple standards creates safety, & legal problems.” More often however, the participants focused on a generalized concept that “The laws for first response agencies need to be the same across the board.” In many areas, career fire fighters that are employed by municipal fire departments will also work a second, part-time job as a volunteer fire fighter with a private, nonprofit agency. When the public and private agencies operate by differing rules for employees, it creates confusion and possible ambiguity in the private agency. Establishing consistency in the labor laws creates a standardization which minimizes the division and confusion between municipal and private entities. Another concern was that “There may be some question regarding other benefits or labor-related provisions.” One such concern was the use of these rules in states where labor unions participate in collective bargaining. This situation currently exists in many municipal departments. For example, several agencies in Tennessee operate their municipality under the 7(k) exemption rules and also have active labor unions. Since the application of the exemption rules are optional and not a requirement, collective bargaining agreements are generally unaffected by any change to the FLSA and those agreements would continue to function as they currently do. However, there are some genuine concerns. One possibility is, “…the employee is going to see their overtime payout reduced.” This is a valid issue to that needs to be considered. It will be the obligation of the employer to treat their employees in a fair and equitable manner when transitioning their organization to operate under the exemption rules. A participant stated, “As with the good; comes the bad. To what extent is allowed, is what extent the implications will have an effect.” The accuracy of this statement is made clear when we evaluate the level of understanding in other participant statements. One such participant stated, “If a non-exempt employee is required to work more than the 40 standard week, they should be compensated.” This compensation is a requirement of the FLSA whether operating
under the standard rules or the municipal exemptions. Furthermore, it was also stated that, “All employees should have protection under FLSA.” The essential purpose of the act is to provide this protection for all employees. The confusion shown here indicates that some organizations will need training to clarify their understanding of the labor laws. In addition, when we read that a participant believes “Public safety should be handled through municipalities, not private organizations. This could weaken a system even more,” we see, to some degree, a general lack of knowledge regarding the United States fire service profile. As communities grow and the service demands exceed existing capabilities, it is a natural progression of fully volunteer departments to work to become combination agencies. The deficiencies in the basic understanding of fire service composition will interfere with this progression and must be addressed by the organization. Without this basic knowledge, more advanced understanding, such as the FLSA exemptions, may not be possible.

**Discussion**

This research has been extremely revealing to identify the need for change. Some may debate that adding paid staff to volunteer fire departments could drive away volunteers or create problems with labor unions. On the contrary, the need for paid staff to augment volunteers is driven by the steady decline of volunteer members. “Many areas of the country that traditionally have relied on citizen volunteers to provide fire protection and emergency medical services are finding fewer people available, or willing, to carry on the honorable tradition. The demand for service grows and the number of providers declines.” “It’s an issue of considerable national and local importance” (Scott et al., 2005, p. 1). In addition, municipal fire departments that are not governed by collective bargaining and have labor unions function under these same FLSA exemptions that would be available to the combination and volunteer agencies. Therefore, legal provisions must be enacted to facilitate and support those departments that have this need outside the municipal arena. If the agency having jurisdiction does not have the financial capacity to support the provision of public services, then they will frequently allow private entities to assume this role. This is where the private, nonprofit fire departments provide the public service that was not provided by the public agency. To support this supplementation, laws must be structured to accommodate the use of private organizations to relieve the municipality of its requirement to provide
services while also reducing the financial burden of the private company who takes on this work.

Nonprofit Fire Service Fulfills Public Function

With the benefit of cost savings afforded by the FLSA rules, it would be expected that every organization would want to implement these policies. However, this is also addressed in the special rules and regulations under which employees operate. Before an organization can elect to operate under the 7(k) exemption rules, certain conditions must be met. The first test is on the individual fire fighters to determine if they actually function as and fulfill the duties of a fire fighter. In a Department of Labor opinion letter from 2006, acting administrator Alfred B. Robinson, Jr. stated that section 3(y) of the 7(k) exemption “clarifies the definition of ‘fire protection activities’ for section 7(k) partial overtime exemption purposes.” In summary, the individual must be trained in fire suppression and have the authority to engage in this activity to prevent, control, and extinguish fires as well as respond to other types of emergency situations that threaten life, property, or the environment (Robinson, Jr., 2006a). These requirements apply to nearly every fire fighter from every department throughout the country. However, the last criterion is the defining test of those who may claim the exemptions provided in these statutes. The fire fighter must be employed by a department that is a public agency (i.e. one that is part of a municipality, fire district, county, or state).

With this restrictive definition, it becomes clear that the intent of this law is to provide cost savings to organizations which provide for the public welfare and whose operation is financed by the community it serves. Since private, for-profit corporations who provide fire protection deliver these services for financial gain, they most certainly would not qualify as public agencies. Private, nonprofit fire departments, however, fulfill this public agency role in lieu of the agency having jurisdiction. In other words, the private, nonprofit fire department is used in place of a municipal fire department. “Nonprofit corporations are corporations that are formed for some charitable or benevolent purpose, not to make profits that benefit its owners” (Varone, 2008, p. 51-52). Therefore, the nonprofit agency fulfills a function of community benefit just as a public agency is intended to provide. Likewise, the nonprofit organizations are financially supported by the communities they serve. This has become increasingly difficult for these organizations as the cost of equipment, fuel, and other
supplies continue to escalate over time. In some cases, the classification of an organization is unclear and can be both a public and private sector organization based on what aspect is being questioned. These fire departments are allowed to purchase equipment based on state-wide contracts intended for municipalities and are exempt from sales taxes on all purchases. Although they continue to be nonprofit organizations, some of these agencies (e.g. the Karns Volunteer Fire Department (KVFD) located in the Karns community of Knoxville, Tennessee) have been forced to move to a primarily subscription based funding to support the services they provide (Treich, Wieder, Findle, Somers, & Roche, 2012).

Knowing that organizations such as KVFD are providing a governmental function, the FLSA exemptions could be extended to include such organizations to aid fiscal effectiveness and promote enhanced service to the community. These fire fighters meet all the required criteria of training, legal authority, and responsibility to provide service, but their employer lacks the designation of being a public agency. These groups exist for the public good and fulfill the public function of fire protection as a delegated agent assigned by the local county government having jurisdiction. Furthermore, under Tennessee Code, any person that is participating as a member of a fire, police, or emergency services entity is provided governmental tort liability protection as an employee of that jurisdiction (TCA § 29-20-107). Even though the Department of Transportation and state purchasing contracts grants these private companies public status, the fire departments are still classified as private due to differences in oversight and governance.

13(b) and 7(k) for the Private, Nonprofit Fire Service

The 13(b) and 7(k) exemptions are cost savings measures needed by private nonprofits. The exemptions defined by the FLSA are directed toward one of two classes of fire departments. As previously discussed, fire departments are no longer simply public or private entities. Those quasi-public agencies are suffering the effects of community growth and economic complications. Declines in donations and volunteerism have forced departments to stretch resources to the point of organizational collapse. The extension of FLSA exemptions to private nonprofit fire departments will have a lasting positive impact on the organizations, the fire fighters, and the communities they serve.

“To meet this critical need and serve its constituents regarding ef-
fective methods for obtaining funding, U.S. Fire Administration developed the publication, *Funding Alternatives for Fire and Emergency Services* in 1993 and completed an update and revision of this document in 1999” (Trench et al., 2012, p. 1). This report outlines many of the funding alternatives available for emergency service agencies. These funding issues have been compounded by the accountability requirements for training and professional qualification. The National Fire Protection Association publishes standards for fire fighter professional qualifications. These standards apply to all fire service personnel regardless of the organization with which they serve. This requires additional time and funding to achieve these training needs. With this combination of factors, new solutions are required to support private, nonprofit organizations with the needed assistance to continue to meet the growing needs in their communities.

The FLSA 13(b) and 7(k) exemptions can provide some relief of this financial burden. As seen in the survey results, this relief will facilitate the addition of new employees or the transition of some departments from all volunteer to combination organizations. Adding these employees increases the safety of the working environment for fire professionals as well as creates safer communities through enhanced staffing for incident mitigation.

**Conclusions and Recommendations**

The dilemma faced by modern, nonprofit fire departments is clear. Donations to support the services provided to the residents continue to decline. Additionally, volunteerism is falling as training requirements and competency standards are being applied to the volunteer and combination services. To provide such training is costly to the organization and the financial burdens may fall to the individual fire fighters in order to meet training requirements. In addition, the volunteers are often not compensated for their time or travel expenses required to attend needed educational events. This shortfall of financial support is where the fire service needs a change. This change can occur at the organizational and local level, state level, or federal level. By addressing this problem at the federal level any jurisdictional boundaries become irrelevant and a positive characterization can be established to provide direction to a great majority of the United States fire service. The financial and staffing deficits are compounded as capital improvement and operational cost continue to rise. One step that can help protect these communities is to include the private, nonprofit organiza-
tions as public agencies. Although this can be accomplished at the state level, the resolution which appears to have the broadest effect is to add or update the FLSA definitions at the federal level. To include the private, nonprofit organizations that provide emergency services as public agencies would have a significant, positive impact with no cost to the local, state, or federal budgets. These agencies mirror municipal departments in nearly every aspect of intent, function, funding, and accountability. Similarly, the training requirements and standards are consistent across all of the fire services. This would provide for safer communities, improve fire fighter safety, and create jobs nationwide. Nonprofits do not pay income taxes because they do not make a profit. In addition, they are also granted exemptions of other tax liabilities such as sales or property taxes. They are granted these because they meet the requirements that define them as an organization that exists “for public benefit.” These characteristics place them in the same category as a public agency. Because these groups are already tax exempt, there would be no loss of tax revenue. The labor law exemptions provided by the FLSA are the needed addition that can benefit many community fire departments. This change may also have indirect benefits that cannot be directly assessed. The research survey confirms that the volunteer and combination community strongly supports this proposed change. It also indicates an estimated number of jobs that could result from this change. One of the limitations of this study is that it focuses on reductions of labor cost that could result in the creation of new fire fighter jobs. This study, nor the associated survey, addresses other possible consequences due to a reduced cost of labor. These savings could result in capital improvements to an agency’s infrastructure or reduction in existing debt. Subsequent research is needed to determine if any department adopting the FLSA exemptions would use the funds for a purpose other than to provide for staffing deficits.

During this project, the extent of this problem became apparent. It is a national problem affecting every state to some level. By adding these agencies into the public sector, they will also be included in the oversight and financial reporting requirements of public agencies. Although, this oversight would also ensure that monies given for the benefit of the community would result in the expected return of providing for the public welfare. Additionally, there are concerns that have been raised that adding paid staff would drive away volunteers. These concerns are valid but also must be taken in context to the agency in question. In the IAFC’s (2005)
Lighting the Path of Evolution they discuss this transition from fully volunteer organizations to fully paid entities. This guide, the IAFC’s Lighting the Path of Evolution, will assist any group that is already considering this type of transition regardless of any changes to labor law definitions. Additional concerns have been raised about how this change will affect employees of current combination departments. In these situations, it is the obligation of the company to safeguard the welfare of its employees if the allowed exemptions are adopted.

The goal of the fire service is to protect life and property within the community. By making the legislative change proposed, it will help to serve this goal and propagate the next evolution in the volunteer fire service and create safer communities on a national level.
References


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*Quaesitum* considers submissions from any current University of Memphis undergraduate student; eligibility also extends to those who have graduated within the last two semesters. Research reported must reflect University of Memphis student projects. Submitted texts may be single or co-authored, but all authors must have been University of Memphis undergraduate students during the time the research was conducted. Faculty members and graduate students are not eligible.

Content

Papers must discuss rigorous and analytical research performed by the author(s). Submissions should contain within the body of the text a section in which research methodology is described in detail.

All submitted text is to be the sole creation of the author(s) with the exception of correctly cited paraphrases and properly indicated quotations. Co-authored submissions are acceptable as long as all authors meet the eligibility requirements listed above.

Any research involving human subjects must have approval from the appropriate Institutional Review Board. Submitting authors are responsible for adhering to IRB guidelines. Check with your faculty advisor for further information.

*Quaesitum* understands that various disciplines exhibit a variety of differences regarding textual genres. For this reason, there is not a stated specific minimum or maximum article length. However, *Quaesitum* prefers articles with a length of no more than 8,000 words.
Format

All submissions must conform to the following guidelines. Submissions that do not will be rejected.

1. Remove all occurrences of author(s) names from the manuscript.

2. **Upload your cover sheet as a separate file.** Include author name(s), date, title, and one of the following categories that best describes your work:
   - Humanities
   - Life & Health Sciences
   - Math/Computer Science/Engineering
   - Physical & Applied Sciences
   - Professional
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3. Upload your abstract as a separate file.

4. Your manuscript, cover sheet, and abstract must be .docx or .doc format.

5. Use the citation style (APA, MLA or Chicago) most appropriate for your area of research.

6. Regardless of style used, all papers should conform to the following criteria:
   - Single-space the body of the text.
   - Use 12 point Times New Roman.
   - Include page numbers on all pages.
   - Include a works cited page.
   - Papers may include endnotes. Footnotes are not accepted.

7. Upload figures and tables.
   - Provide a separate file for each figure and table.
   - **Figures must be a minimum of 300 pixels per inch (ppi).**
   - Figures must be 1200 pixels wide.
   - Figures must be JPEG, TIFF, PNG, EPS or PDF files.
   - Tables may be submitted in the formats listed above for figures.
   - Tables may also be submitted as separate Excel documents. Please do not upload tables as Word files.
   - **Excel tables may be no larger than 4.5” wide and 7.5” tall.**
• Clearly indicate the placement of all figures and tables.
• Label all tables and figures and provide a corresponding caption at the appropriate location in your text.

8. Submissions may not be under review for publication elsewhere.

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